Manatee County Government
112 Manatee Avenue West
Bradenton, FL 34205

August 25th, 2026

VIA CERTIFIED **MAIL**
(Tracking Number:_____,

Vanessa Oliver
Ambitrans Medical Transport
4351 Pinnacle Street, Port Charlotte, FL 33980

RE: Approval Ambitrans Certificate of Public Convenience and Necessity (COPCN) Application for Renewal Consideration

On August 25th, 2026, a duly noticed public hearing was held on Ambitrans Medical Transport's application for a Certificate of Public Convenience and Necessity ("COPCN") to provide Advanced and Basic Life Support Transport services within Manatee County, Florida ("Application").

Pursuant to Section 2-13-55 of the Manatee County Code of Ordinances and the specific factors outlined therein, the Manatee County Board of Commissioners (the "Board") reviewed and considered Ambitrans Medical Transport's COPCN Renewal Application and supporting documentation, the Public Safety Director's report and recommendation, and all testimony and information submitted at the public hearing. Accordingly, the Board finds that Ambitrans Medical Transport satisfied its burden and that public convenience and necessity will be promoted with the approval of Ambitrans Medical Transport's COPCN Renewal Application.

Therefore, this letter shall constitute written notice of the Board's approval of Ambitrans Medical Transport's Renewal Application. The Public Safety Director shall issue Ambitrans Medical Transport its COPCN.

On behalf of the
BOARD OF COUNTY COMMISSIONERS
MANATEE COUNTY, FLORIDA

Tal Siddique, Chairman

ATTEST: MANATEE COUNTY
CLERK OF CIRCUIT COURT AND
COUNTY COMPTROLLER
BY: _____
DEPUTY CLERK

Approved in Open Session 8/25/26
Manatee County
Board of County Commissioners

August 25, 2026 - Regular Meeting

Subject
Public Hearing on Ambitrans Medical Transport's Certificate of Public Convenience and Necessity Application Renewal, Sean Dwyer, EMS Chief - Countywide

Category
CONSENT AGENDA

Briefings
Briefing Provided Upon Request

Contact and/or Presenter Information
Sean Dwyer, EMS Chief, sean.dwyer@mymanatee.org, ext 1668
James Crutchfield, Public Safety Deputy Director, james.crutchfield@mymanatee.org, ext 1648

Action Requested
Approval of Ambitrans Medical Transport's Certificate of Public Convenience and Necessity Application Renewal; and Authorization for the Chairperson to sign the Letter notifying the applicant of approval.

Enabling/Regulating Authority
Florida Statue 125.01, Florida Statue 401.25(1), Ordinance 17-041 and Manatee County Code 2-13-55(a)

Applicable Advisory Board
N/A

Background Discussion
Ambitrans Medical Transport has been providing ambulance services in Manatee County for over 10 years, and has previously been approved to provide ALS and BLS transport services within Manatee County. The applicant fulfilled all requirements for renewal, including the payment of applicable fees in accordance with Ordinance 17-041. Following a comprehensive review, staff recommends proceeding with the renewal. The application is now before the Board for consideration of approval or denial.

Attorney Review
Not Reviewed (No apparent legal issues)

Instructions to Board Records
Email a copy of the approved agenda and signed letter to Sean Dwyer

(sean.dwyer@mymanatee.org) and James Crutchfield (James.Cruthfield@mymanatee.org)
Distributed 8/28/26, RT

Cost and Funds Source Account Number and Name
0010007101 EMS Operations

Amount and Frequency of Recurring Costs
No recurring costs

Manatee County Government
112 Manatee Avenue West
Bradenton, FL 34205

August 25th, 2026

VIA CERTIFIED **MAIL**

(Tracking Number:_____,

Vanessa Oliver

Ambitrans Medical Transport

4351 Pinnacle Street, Port Charlotte, FL 33980

RE: Approval Ambitrans Certificate of Public Convenience and Necessity (COPCN) Application for Renewal Consideration

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Therefore, this letter shall constitute written notice of the Board's approval of Ambitrans Medical Transport's Renewal Application. The Public Safety Director shall issue Ambitrans Medical Transport its COPCN.

On behalf of the

BOARD OF COUNTY COMMISSIONERS

MANATEE COUNTY, FLORIDA

_____

Tal Siddique, Chairman

VACANT	AMANDA BALLARD	TAL SIDDIQUE	MIKE RAHN	DR. BOB MCCANN	JASON BEARDEN	GEORGE W. KRUSE
District 1	*District 2*	*District 3*	*District 4*	*District 5*	*At Large*	*At Large*

Department of Public Safety
2101 47th Terrace East
Bradenton, FL 34203
Phone: (941) 749-3500
mymanatee.org

August 5th, 2026

NOTICE OF NEW CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY (COPCN) APPLICATION

To: All Current COPCN Certificate Holders in Manatee County

This notice is to inform you that the Manatee County Public Safety Department has received a complete application for a Renewal Certificate of Public Convenience and Necessity (COPCN) from:

Applicant: Ambitrans Medical Transport **Type of Service**: Advanced Life Support (ALS) and Basic Life Support (BLS) Transport

In accordance with Manatee County Ordinance 17-041, Section 2-13-55(a), this notice is being transmitted to all current COPCN certificate holders upon the complete filing of a new COPCN application.

The application has been filed with the Public Safety Department on the required county form and includes supporting documentation, along with the nonrefundable application fee as set by resolution.

Current certificate holders may review the application at the Public Safety Department during normal business hours. The application will be reviewed in accordance with the procedures outlined in Ordinance 17-041.

Please contact the Manatee County Public Safety Department if you have any questions regarding this notice or the COPCN application process.

VACANT	AMANDA BALLARD	TAL SIDDIQUE	MIKE RAHN	DR. BOB MCCANN	JASON BEARDEN	GEORGE W. KRUSE
District 1	*District 2*	*District 3*	*District 4*	*District 5*	*At Large*	*At Large*

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN, pursuant Section 401.25, Fla. Stat. and Section 2-13-55 of the Manatee County Code of Ordinances, that the Manatee County Board of County Commissioners will hold a Public Hearing on **August 25th, 2026, at 9:00 a.m**. (or as soon thereafter as may be heard), located on the first floor of the Manatee County Administrative Center, 1112 Manatee Avenue West, Bradenton, Florida, to consider and act upon the following matter:

Ambitrans Medical Transport Renewal Application for a Certificate of Public Convenience to provide Advanced Life Support and Basic Life Support Transport in Manatee County

All interested parties are invited to appear at this hearing and be heard, subject to the proper rules of conduct. Additionally, any public comments submitted will be considered by the Board of County Commissioners and entered in the record. Link to: Public Comment

Copies of the application and supporting documents and the Public Safety Director's report and recommendation are available for public inspection from 8:00 a.m. to 5:00 p.m. Monday through Friday at the Manatee County Public Safety Center, 2101 47th Terrace East, Bradenton, Florida. These documents are also available on the County's website. Link to: Agendas

Interested parties may obtain assistance regarding this matter by calling (941) 749-3070 or emailing at planning.agenda@mymanatee.org during normal business hours.
In accordance with Section 286.0105, Florida Statutes, if any person decides to appeal any decision made with respect to any matters considered at such meeting or hearing, that person will need a record of the proceedings, and for such purpose, that person may need to assure that a verbatim record of the proceedings is made, which record would include any testimony or evidence upon which the appeal is to be based.

Americans With Disabilities: The Board of County Commissioners does not discriminate upon the basis of any individual's disability. Manatee County is committed to providing full access to facilities, programs, and services to all, as well as supporting the employment of qualified individuals with disabilities in its workforce in accordance with federal and state laws and regulations, including the Americans with Disabilities Acts of 1990 (ADA) and as amended ("ADAA), and 503 and 504 of the Rehabilitation Act of 1973. Anyone requiring reasonable accommodation for this meeting as provided for in the ADA, or assistance with accessing any of these documents, should contact Carmine DeMilio, ADA Compliance Coordinator, at 941-792-4501 ext. 6016 or carmine.demilio@mymanatee.org, at least 3 business days prior to the scheduled meeting. If you are deaf/hard of hearing and require the services of an interpreter, please contact the Florida Relay Service at 711.

SAID HEARING MAY BE CONTINUED FROM TIME TO TIME PENDING ADJOURNMENTS.

MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS
Manatee County Public Safety Department

Manatee County, Florida
Date Published: 8/5/26

PUBLIC SAFETY DIRECTOR'S REPORT AND RECOMMENDATION FOR AMBITRANS RENEWAL COPCN APPLICATION

EXECUTIVE SUMMARY

The matter for review before the Board of County Commissioners (the "Board") is Ambitrans Medical Transport's application for renewal of its Certificate of Public Convenience and Necessity (COPCN) to provide Advanced Life Support (ALS) and Basic Life Support (BLS) Transport service within Manatee County.

Pursuant to Section 2-13-55 of the Manatee County Code of Ordinances (the "Code"), upon receipt of a COPCN application and all required supporting information and documentation, the Board shall consider the application and the Public Safety Director's report and recommendation regarding the same at a duly noticed public hearing.

The Manatee County Department of Public Safety recommends that the Board approve Ambitrans Medical Transport's application for a COPCN to provide ALS and BLS Transport service within Manatee County. This recommendation is based on review of the applicant's financial readiness, staffing capabilities, and compliance with County Ordinances, as outlined herein.

BACKGROUND

A COPCN is a certification issued by a local government authority that authorizes an emergency medical service provider to operate within a specific jurisdiction. This requirement is established in Florida Administrative Code 64E-2.032, which empowers counties to issue COPCNs to ambulance services proposing to operate within their boundaries, in accordance with Section 401.25(2)(d) and (6), Florida Statutes.

The Florida Department of Health (the "Department") licenses ambulance services, including non-transport and transport, but the service must first obtain a COPCN from each County where it provides or plans to provide pre-hospital ALS (Advanced Life Support) or BLS (Basic Life Support) transportation services, as well as intra-county and interfacility services. Licenses issued by the Department are for ALS, BLS transport, and ALS non-transport, or air ambulance service, consistent with the services authorized by the COPCN. The Department will license an ambulance service in counties that do not require a COPCN, provided the service meets other requirements. Licensed ambulance transport and non-transport services may operate without a COPCN in certain circumstances, such as under mutual aid agreements or in response to disasters or mass casualty incidents.

ALS and BLS transport services are defined more specifically by FAC 64J-1. To provide these services, Each BLS and ALS provider shall ensure and document in its employee records that each of its EMTs and paramedics hold a current certification from the department. Additionally, they must ensure vehicles are equipped and permitted by the state as defined by FAC 64J-1.

Ambitrans Medical Transport is a private entity that began operations in 1983 and currently provides ambulance services in multiple Southwest Florida counties. It has operated in Manatee County for more than 10 years and identifies two local operating locations: 1500 15th Avenue Drive East, Unit 107, Palmetto, and 5620 Tara Boulevard, Units 201 and 202, Bradenton..

On May 8th, Victoira Harris, Executive Administrative Assistant at Ambitrans Medical Transport contacted Manatee County EMS regarding their renewal. An extension was agreed upon to authorize Ambitrans Medical Transport staff to finish compiling the documentation needed.

On or about June 22nd, 2026, Victoria Oliver, on behalf of Ambitrans Medical Transport, submitted a renewal of Ambitrans **Medical Transport's** COPCN application and application fees in compliance with the 90-day advance submission requirement of Section 2-13-55(f)(1) of the Manatee County Code to provide ALS and BLS transport services within the County. A copy of Ambitrans Medical Transport application and supporting documentation is attached hereto as **Exhibit "A."**

Since that time, and County staff corresponded back and forth to solicit clarity in the submitted documentation. The Department of Public Safety investigated and reviewed **Ambitrans Medical Transport's** application and its supporting information and requests. Accordingly, with the issuance of this report, **Ambitrans Medical Transport's** COPCN application is now ready for the Board's consideration.

LEGAL AUTHORITY AND STANDARD OF REVIEW

The State of Florida delegates authority to counties to approve or deny Certificates of Public Convenience and Necessity for emergency medical services providers through the "Emergency Medical Services Act" in Chapter 401, Part III of the Florida Statutes. Specifically:

1. Section 401.25(2)(d) authorizes counties to adopt ordinances providing reasonable standards for ambulance services and issue ambulance licenses.
2. Section 401.25(6) permits counties to adopt ordinances ensuring proper ambulance services, transportation, vehicles, equipment, and personnel are available.
3. Section 401.25(4) requires counties to establish pre-hospital EMS plans addressing system configuration, operations, and providers.

This Act authorizes counties to establish standards, plans, and ordinances governing ambulance services within their jurisdictions.

Accordingly, Manatee County enacted Ordinance No. 17-041 pursuant to the authority provided in Chapter 401. A copy of this Ordinance is attached hereto as **Exhibit "B."** Ordinance No. 17-041 outlines the requirements for obtaining a COPCN for ALS and BLS Transport services within the County. It establishes standards for applications, renewals, staffing, vehicle permitting, and other operational criteria that providers must meet.

Standard Renewal Review:

Pursuant to Code Section 2-13-55(c)(2)-(d), the Board shall consider the following:

- This Report;
- Ambitrans Medical Transport's completed renewal application and any documentation and information submitted in support same;

AMBITRANS COPCN APPLICATION

A copy of Ambitrans Medical Transport's complete COPCN Renewal application is attached hereto as **Exhibit "A"**

Financial Information:

Upon review of Ambitrans Medical Transport audited financial statements and supporting documentation through April 30th, 2026, the Public Safety Department has identified no concerns:

- Total assets were $1,116,557.
- Total liabilities were $357,128, with no long-term liabilities.
- Net position was a positive $759,429.
- Gross profit was $547,282 for Year 9 (May 2024–April 2025) and $563,700 for Year 10 (May 2025–April 2026).
- Total revenues were $2,300,000 for Year 9 and $2,369,000 for Year 10.
- Total expenses were $465,715 for Year 9 and $479,686 for Year 10
- Ambitrans Medical Transport holds a business credit score of 82.

Based on this review, Ambitrans Medical Transport demonstrates adequate financial resources and stability to continue providing ALS and BLS transport services within the County, with sufficient capacity to meet operational requirements consistent with COPCN standards.

Insurance Information:

Ambitrans Medical Transport is insured by Arch Insurance Company, Arch Specialty Insurance Company, and Benchmark Insurance Company. They supplied their certificate of liability.

Vehicle Information:

Ambitrans Medical Transport's vehicle report identifies five dual-stickered ALS/BLS ambulances intend for permitting in Manatee County

Personnel Information

Ambitrans Medical Transport has provided personnel documentation reflecting 79 state-certified paramedics and 73 state-certified EMTs.

Additional Report Findings

The Radio Shop Manager has provided a Service Level Agreement between the Manatee County Radio Shop and Ambitrans Medical Transport, confirming the provider's ability to communicate on the County's emergency radio channels as needed.

Ambitrans Medical Transport reported staffing five units serving Manatee County, as follows.

Unit	Level	Shift Duration	Operational Hours	Days
330	ALS	24 hours	Continuous	7
335	BLS	16 hours	0600-2200	7
636	ALS	16 hours	1000-0200	7
640	ALS	12 hours	1100-2300	7
644	BLS	12 hours	1600-0400	7

Ambitrans Medical Transport maintains contracts with local hospitals for interfacility transport services. Manatee County has no documented performance issues with the applicant on file.

RECOMMENDATION

Based on the Department of Public Safety's review of Ambitrans Medical Transport COPCN renewal application and supporting documentation, as outlined herein, **the Public Safety Director finds that Ambitrans Medical Transport's COPCN renewal should be renewed.**

EXHIBITS

A. Ambitrans Medical Transport COPCN Renewal Application and supporting documentation.

B. Manatee County COPCN Ordinance 17-041

Public Safety Director's Report and Recommendation Regarding Ambitrans Medical Transport COPCN Application is respectfully submitted on August 25th, 2026

Jodie Fiske

Submitted by: Jodie Fiske
Public Safety Director

Exhibit A

Manatee County
Department of Public Safety

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
NON-GOVERNMENTAL ENTITY
MEDICAL TRANSPORTATION SERVICE LICENSE APPLICATION

Please type. Answer all questions that apply to the level of service to be provided. Attach additional sheets as needed.

STATEMENTS AND MATERIALS SUBMITTED WILL BE SUBJECT TO VERIFICATION

CHECK TYPE OF APPLICATION FOR CLASSIFICATION OF SERVICE

☐ New ☑ Renewal

Ambitrans Medical Transport, Inc
Name of Service

4351 Pinnacle Street | Port Charlotte | FL | 33980
Mailing Address | City | State | Zip Code

941-743-3665
Telephone

1. Michael Grant | mgrant@ambitrans.com
Owner's Name | Email Address

4351 Pinnacle Street | Port Charlotte | FL | 33980
Mailing Address | City | State | Zip Code

(Attach names of elected officials)

2. Vanessa Oliver | 941-743-3665 | voliver@ambitrans.com
General Manager/Contact Person | Telephone | Email Address

3. Date incorporated/formation of business association: 03/27/1995 (Attachment # 02)

(Attach articles of incorporation; names and address of shareholders along with number of outstanding shares.)

Additional pages may be added as needed

4. Attach FCC license/communications contract: (Attachment #05)

5. Address of present/proposed main station and any substations (attach list if more than three (3) substations):

Main Station: 4351 Pinnacle St, Port Charlotte, FL 33980

Substation: 1500 15th Avenue DR. E, Unit 107, Palmetto, FL 34221

Substation: 5620 Tara Blvd, Units 201& 202, Bradenton, FL 34203

Substation: _____

6. Financial Information: (Attachment #06)

Provide a financial statement as listed in Manatee County Administrative Code Section 15-37.

7. Insurance: (Attachment #07)

Provide copies of Certificates of Insurance

8. Vehicle information: Complete and attach appropriate form.

9. Personnel information: Complete and attach appropriate form.

10. All COPCN applicants:

A. Attach contract with a medical director as provided by State Law and include copy of DEA license.

B. Attach current medical treatment / transport protocols.

C. Identify staffing patterns and operational hours for each permitted vehicle in your fleet.

Signature of Owner/Manager

CEO
Title

STATE OF FLORIDA
COUNTY OF MANATEE

Sworn to (or affirmed) and subscribed before me this 19th day of June, 20 26, by

Vanessa Oliver (name of person making statement).

Seal

KAREN NOLTON-COX
NOTARY PUBLIC
MY COMMISSION
EXPIRES 1-30-2029
STATE OF FLORIDA
COMMISSION NUMBER HH 634216

(Signature of Notary Public - State of Florida)

(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally Known: ☑ OR Produced Identification ☐

Type of Identification Produced:

Additional requirements:

1. Minimum of three (3) letters of reference **sealed and attached to application packet.**

2. Completed local and state criminal background checks for each owner, manager, officer and/or director. (INTERNET BACKGROUND CHECKS ARE NOT ACCEPTABLE.)

3. Preceding five years business experience.

4. The financial ability of the applicant to provide the proposed services based on, at minimum, attach the following criteria:

    a. Audited financial statements or federal tax returns or, for newly formed corporations, personal audited financial statements from the principal(s), as defined by the county administrator;
    b. Pro forma statements;
    c. Credit and bank references, and current official credit report;
    d. Disclosure of any and all pending liabilities.

5. Attach the management plan of the applicant.

All applicants:

1. Return signed, notarized application along with a non refundable application fee of $500.00, made payable to the Manatee County Board of County Commissioners.

2. Renewal applicants: COPCN/License and Vehicle permit fees will be processed separately (COPCN Application fees will be $500.00 and Vehicle permit fees will be $100.00 per vehicle) see fee schedule for breakdown.

SCHWARZ, KAHLE & GEER, P.A.
Attorneys at Law

Mary L. Geer
Gary A. Kahle
Board Certified Real Estate Lawyer
Stephen dell. Schwarz
Board Certified Wills, Trusts and Estates Lawyer

21229 Olean Boulevard
Suite B
Port Charlotte, FL 33952
Telephone: (813) 625-4158
Facsimile: (813) 625-5460

P95000074839

EFFECTIVE DATE
MAR 21 1995

March 21, 1995

CORPORATE RECORDS BUREAU
Division of Corporations
Department of State
Post Office Box 6327
Tallahassee, Florida 32314

700001440237
-03/27/95--01044--001
****122.50 ****122.50

RE: AMBITRANS MEDICAL TRANSPORT, INC.

Gentlemen:

Enclosed herewith is the original and one copy of the Articles of Incorporation together with the Designation of Registered Agent for the above-captioned corporation. Enclosed also is our check in the amount of $122.50 to cover filing fees, filing tax, and a certified copy of the Articles of Incorporation.

If you find the foregoing to be in order, we would appreciate your returning the certified copy of the Articles of Incorporation to us at your earliest convenience.

MAR 28 1995 BSB

Very truly yours,

SCHWARZ, KAHLE AND GEER, P.A.

By: GARY A. KAHLE

GAK:sb

Enclosures

FILED
95 MAR 27 PM 2:04
SECRETARY OF STATE
TALLAHASSEE, FLORIDA

FILED
95 MAR 27 PM 2:04
SECRETARY OF STATE
TALLAHASSEE, FLORIDA

EFFECTIVE DATE
MAR 21 1995

ARTICLES OF INCORPORATION
OF
AMBITRANS MEDICAL TRANSPORT, INC.

ARTICLE I - NAME

The name of this corporation is AMBITRANS MEDICAL TRANSPORT, INC.

ARTICLE II - DURATION

This corporation shall have perpetual existence, commencing on the date of execution of these Articles.

ARTICLE III - PURPOSE

This corporation is organized for the purpose of engaging in any activity or business permitted under the laws of the United States and the State of Florida.

ARTICLE IV - CAPITAL STOCK

This corporation is authorized to issue ten thousand (10,000) shares of ONE DOLLAR ($1.00) par value common stock, which shall be designated "common shares".

ARTICLE V - PREFERENCE, LIMITATIONS AND RELATIVE RIGHTS OF SHARES OF CAPITAL STOCK

Section 1. Voting Rights. Except as otherwise provided by law, the entire voting power for the election of directors and for all other purposes shall be vested exclusively in the holders of outstanding common stock. At each election for directors, every shareholder entitled to vote at such election shall have the right to vote, in person, or by proxy, the number of shares owned by him for as many persons as there are directors to be elected at that time and for whose election he has a right to vote or to accumulate his votes by giving one candidate as many votes as the number of directors to be elected at that time multiplied by the number of his shares, or by distributing such votes on the same principal among any number of such candidates.

Section 2. Pre-emptive Rights. Every shareholder, upon the sale for cash of any new stock of this corporation of the same kind, class or series as that which he already holds, shall have the right to purchase his pro-rata share thereof as nearly as may be done without issuance of fractional shares at the price at which it is offered to others.

ARTICLE VI - INITIAL PRINCIPAL OFFICE AND AGENT

The street address of the initial principal office of this corporation is 317 Kimble Avenue, Port Charlotte, Florida 33952, and the name of the initial registered agent of this corporation at that address is MICHAEL GRANT.

ARTICLE VII - INITIAL BOARD OF DIRECTORS

This corporation shall have two (2) directors initially. The number of directors may be increased or diminished from time to time as provided in the By-Laws, but shall never be less than one (1). The names and addresses of the initial directors of this corporation are:

MICHAEL GRANT
317 Kimble Avenue
Port Charlotte, FL 33952

LORRAINE GRANT
317 Kimble Avenue
Port Charlotte, FL 33952

ARTICLE VIII - INCORPORATOR

The name and address of the person signing these Articles is:

MICHAEL GRANT
317 Kimble Avenue
Port Charlotte, FL 33952

ARTICLE IX - BY-LAWS

The power to adopt, alter, amend or repeal By-Laws shall be vested in the Board of Directors and the shareholders; however, any By-Laws adopted by the shareholders, with specific provision providing that such By-Laws shall not be altered, amended or repealed by the Board of Directors, shall be effective to prevent such By-Laws being amended, altered or repealed by said Board of Directors.

ARTICLE X - AMENDMENTS

This corporation reserves the right from time to time to amend, alter, repeal, or to add any provision to its Articles of Incorporation in any manner now or hereafter prescribed by the provisions of Chapter 607 of Florida Statutes or any amendment thereto or by the provisions of any other applicable statute of the State of Florida; and all rights conferred upon stockholders by these Articles of Incorporation, or any amendment hereto, are granted, subject to this reservation.

IN WITNESS WHEREOF, the undersigned Incorporator has executed these Articles of Incorporation this 21st day of March, 1995.

MICHAEL GRANT

CERTIFICATE DESIGNATING PLACE OF BUSINESS OR DOMICILE FOR THE SERVICE OF PROCESS WITHIN THIS STATE, NAMING AGENT UPON WHOM PROCESS MAY BE SERVED.

* * * * * * *

Pursuant to Section 607.0501, Florida Statutes, the following is submitted, in compliance with said Act:

First - - That AMBITRANS MEDICAL TRANSPORT, INC., desiring to organize under the laws of the State to Florida with its principal office, as indicated in the Articles of Incorporation at 317 Kimble Avenue, Port Charlotte, County of Charlotte, State of Florida, has named MICHAEL GRANT located at 317 Kimble Avenue, Port Charlotte, County to Charlotte, State of Florida, as its agent to accept service of process within this State.

ACKNOWLEDGMENT:

Having been named to accept service of process for the above-stated corporation, at place designated in this certificate, I hereby accept to act in this capacity, and agree to comply with the provision of said Act relative to keeping open said office.

By: _____
MICHAEL GRANT

FILED
95 MAR 27 PM 2:0
SECRETARY OF S

[GAK:sb]c:\wp51\filer\AMBITRAN

Ambitrans Medical Transport, Inc.

There are 100 shares of Common Stock.

The stockholders are:

(1) Michael J. Grant, as Trustee for the Michael J. Grant Revocable Trust Dated April 10, 2002; and

(2) Lorraine B. Grant, as Trustee for the Lorraine B. Gran Revocable Trust Dated April 10, 2002.

MANATEE COUNTY DEPARTMENT OF PUBLIC SAFETY

COPCN MANAGEMENT INFORMATION FORM

Name of service: Ambitrans Medical Transport, Inc.

Website address: www.ambitrans.com

Manatee County business address:

1500 15th Ave. Dr. E., Unit 107

City and Zip Code: Palmetto 34221

Headquarters business address:

4351 Pinnacle Street

City and Zip Code: Charlotte Harbor, 33980

Dispatch telephone number: 941-629-1009

Management Contact Information

Name: Ryan Lybeck

24 hour contact number: 941-629-1009

Name: Operations Supervisor

24 hour contact number: 941-629-1009

AMBITRANS MEDICAL TRANSPORT, INC.
STATION AND SUBSTATION INFORMATION

HEADQUARTERS
4351 Pinnacle Street
Charlotte Harbor, FL 33980

SUBSTATIONS

Manatee County
1500 15th Ave Dr. E
Unit 107
Palmetto, FL 34221

5620 Tara Blvd
Suite 201 & 202
Bradenton, FL 34203

Sarasota County
2172 51st Street
Sarasota, FL 34234

787 Commerce Drive
Venice, FL 34292

2345 Bobcat Center Village North
North Port, FL 34288

Lee County
935 NE 7th Terrace
Cape Coral, FL 33909

7320 Sanibel Blvd,
Fort Myers, FL 33967

Collier County
8848 Walter Way
Unit 2204
Naples, FL 34120

Industrial Communications.
350 NW 215th Street, Miami Gardens, FL 33169
Office Number: (305) 423-3000

#17311 Alico Ctr Rd. Suite C, Ft. Myers, FL 33967
Office Number: (239) 596-5322

Proposal No.		13124
Date: 06/11/2021	Valid Until: 07/11/2021	Rev. Date: 06/11/2021

Sales Contact

Name: JERRY DILELLA
Email: Jerry.Dilella@Induscom.com
Phone: (305) 423-3041

Customer Contact

Contact: ALAN SKAVRONEK
Email: ASKAVRONECK@AMBITRANS.COM
Phone:

Details:

Ref Name/#: TLK150 MOBILE DISPATCH
Address ID: AMBITRANS MEDICAL TRANSPORT, INC.
Address: 4351 PINNACLE STREET
CHARLOTTE HARBOR FL 33980

Bill To:
AMBITRANS MEDICAL TRANSPORT, INC.
4351 PINNACLE STREET

CHARLOTTE HARBOR FL 33980
USA

We appreciate the opportunity to quote the products and services below. This quote is provided based upon the specifications provided and may be subject to change.

Description	Quantity	UoM	Price	Total
TLK 150 MOBILE TWO-WAY RADIO US	35	EA	[redacted]	
Standard Package Includes: **- Wideband Compact Microphone (PMMN4129A)** **- LTE Dash/Glass Mount Antenna (AN00358A01)** **- GNSS Dash/Glass Mount Antenna (AN00358A01)** **- 10 ft Power Cable (HKN4137B)** **- 3 Year Essential Repair and Radio Software**				
TRUNNION -LOW PROFILE -	35	EA		
DISPATCH CONFIGURATION				
TLK 150 MOBILE TWO-WAY RADIO US	2	EA		
SWITCH MATE II BASE	2	EA		
RADIO MATE FOOT SWITCH -	2	EA		
CABLE TO RADIO	2	EA		
AVTEC COMPLETE HEADSET W N/C PRONG BASE	2	EA		
CONFIGURATION & INSTALLATION BASE RADIOS WITH TRIP CHARGE	1	LS		

TLK150 RADIO PRICING BASED ON A 2 YEAR AGREEMENT
TLK150 IS [redacted] WITHOUT A 2 YEAR AGREEMENT

Notes:

Subtotal:
Tax Amount:
Total Amount: [redacted]

Industrial Communications.

Proposal No.		13124
Date: 06/11/2021	Valid Until: 07/11/2021	Rev. Date: 06/11/2021

Acceptance of Proposal - The above prices and conditions are satisfactory and are hereby accepted and authorized as specified.

Date of Acceptance: 6/11/2021 **Customer Signature:**

Department of
MANAGEMENT
SERVICES

4050 Esplanade Way
Tallahassee, FL 32399-0950

Ron DeSantis, Governor
Pedro Allende, Secretary

May 30, 2025

Ryan Lybeck
Director of Operations
Ambitrans Medical Transport, Inc.
4351 Pinnacle Street
Port Charlotte, FL 33980

Dear Director Lybeck,

This Letter is in response to your request for a radio eligibility determination for Ambitrans Medical Transport, Inc., for operation in Charlotte County, Florida.
I am pleased to inform you that Ambitrans Medical Transport, Inc. has been determined to be eligible for public safety radio communications within the State of Florida, for interfacility-only/non-emergency operation, using the Kenwood TK-8180 mobile radio.
This letter is required to accompany your Federal Communications Commission (FCC) radio license application.

Should you have any questions or concerns, please contact me directly at (850) 922-7419, or email kyle.salas@dms.fl.gov.

Sincerely,

Kyle T Salas

Kyle T Salas
Engineering Specialist III

BRIAN W. CROSLAND, CPA, PL

CERTIFIED PUBLIC ACCOUNTING & CONSULTING

2200 KINGS HIGHWAY #3L242 PORT CHARLOTTE, FL 33980 PHONE: 941.676.8900

BRIAN W. CROSLAND, CPA

SHAWN M. COOLEY, CPA

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS
FLORIDA INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS
MEDICAL GROUP MANAGEMENT ASSOCIATION
COMMUNITY ASSOCIATIONS INSTITUTE

INDEPENDENT ACCOUNTANTS' COMPILATION REPORT

To the Board of Directors
Ambitrans Medical Transport, Inc.
Charlotte Harbor, Florida

We have compiled the accompanying statement of assets and liabilities of the ambulance transportation operations of Ambitrans Medical Transport, Inc. and subsidiaries as of April 30, 2026. This financial statement has been prepared on the income basis of accounting utilized by the Company for federal income tax reporting purposes. We have not audited or reviewed the accompanying financial statement and, accordingly, do not express an opinion or provide any assurance about whether the financial statement is in accordance with the income tax basis of accounting.

Management is responsible for the preparation and fair presentation of the financial statement in accordance with the income tax basis of accounting and for designing, implementing, and maintaining internal control relevant to the preparation and fair presentation of the financial statement.

Our responsibility is to conduct the compilation in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. The objective of a compilation is to assist management in presenting financial information in the form of a financial statement without undertaking to obtain or provide any assurance that there are no material modifications that should be made to the financial statement.

The accompanying statement was prepared for the purpose of presenting the assets and liabilities of the ambulance transportation operations of Ambitrans Medical Transport, Inc. and subsidiaries, and is not intended to be a complete presentation of Ambitrans Medical Transport, Inc. and subsidiaries consolidated assets and liabilities. Accordingly, this report and related financial statement is restricted for use only by known third parties with knowledge of these restrictions and should not be used for any other purpose.

Brian W. Crosland, CPA, PL

June 1, 2026
Port Charlotte, Florida

Ambitrans Medical Transport, Inc. and Subsidiaries
Statement of Assets and Liabilities of the Ambulance Transportation Operations
Income Tax Basis of Accounting
April 30, 2026
(Unaudited)

Assets

Current Assets:	
Cash available for ambulance transportation operations	$ 695,000
Property and Equipment:	
Office equipment and computers	166,605
Machinery and equipment	1,854,047
Medical transportation vehicles	3,644,301
	5,664,952
Less accumulated depreciation	(5,243,395)
Property and Equipment, net	421,557
Total Assets	$ 1,116,557

Liabilities

Current Liabilities:	
Accrued profit sharing	$ 222,329
Other liabilities	37,500
Notes payable to banks	97,299
	357,128
Long Term Liabilities:	
Notes payable to banks	97,299
Less current portion above	(97,299)
	-
Total liabilities	357,128
Net Assets Over Liabilities, income tax basis	$ 759,429

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/30/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Marsh & McLennan (CLW)
101 N Starcrest Dr
Clearwater FL 33765

CONTACT NAME: MMA - Florida Region
PHONE (A/C, No, Ext):
FAX (A/C, No):
E-MAIL ADDRESS: CertsTeam@MarshMMA.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Arch Insurance Company	11150
INSURER B : Arch Specialty Insurance Company	21199
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Grant Medical Transportation, Inc.
4351 Pinnacle Street
Charlotte Harbor FL 33980

GRANTMEDIC1

COVERAGES **CERTIFICATE NUMBER:** 442426913 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			MAPK08386910	7/1/2025	7/1/2026	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 3,000,000
	POLICY X PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 3,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY			MAPK08386910	7/1/2025	7/1/2026	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / X SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB / X OCCUR			MAUM08509610	7/1/2025	7/1/2026	EACH OCCURRENCE	$ 2,000,000
	EXCESS LIAB / CLAIMS-MADE						AGGREGATE	$ 2,000,000
	DED / X RETENTION $ 0							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					PER STATUTE / OTH-ER	
							E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
B	Professional Liability			MAPL20015505	7/1/2025	7/1/2026	Per Occurrence Aggregate	$1,000,000 $3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Supplemental Names below apply to all Policies
First Supplemental Name- Grant Medical Transportation, Inc.
Ambulance Management Services, LLC
Ambitrans Medical Transport, Inc.
Venice Ambulance Service, Inc.

CERTIFICATE HOLDER

Ambitrans Ambulance
4351 Pinnacle St
Charlotte Harbor FL 33980

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Todd George

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 3/19/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Marsh & McLennan (CLW)
101 N Starcrest Dr
Clearwater FL 33765

CONTACT NAME: MMA - Bouchard
PHONE (A/C, No, Ext): 727-447-6481 FAX (A/C, No): 727-449-1267
E-MAIL ADDRESS: CertsTeam@MarshMMA.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Benchmark Insurance Company	41394
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED AMBITMEDIC
Ambitrans Medical Transport, Inc.
4351 Pinnacle Street
Punta Gorda FL 33980

COVERAGES **CERTIFICATE NUMBER:** 1897541564 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$
	CLAIMS-MADE OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$
	POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB / OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB / CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			99WC0000384901	12/27/2025	1/1/2027	X PER STATUTE OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: N	N / A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

For Informational Purposes Only
For Informational Purposes Only

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Todd George

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MANATEE COUNTY DEPARTMENT OF PUBLIC SAFETY

MANATEE COUNTY COPCN CERTIFICATE VEHICLES (5 ACTIVE / 5 RESERVE)

Ambitrans Medical Transport, Inc.

Date: May 4, 2026

Unit #	Vehicle Type:	Year/Make	Model	Vehicle Identification #	Mileage
644	Type III Ambulance	2019 Ford	E 450Ford	1FDXE4FS9KDC09597	303496
640	Type III Ambulance	2018 Ford	E 450	1FDXE4FS9JDC07783	328926
636	Type III Ambulance	2017 Ford	E 450	1FDXE4FS8HDC51865	424187
335	Type II Ambulance	2024 Ram	Promaster	3C6LRVDG4RE107233	51709
330	Type II Ambulance	2023 Ram	Promaster	3C6LRVDG0PE583413	134203
642	Type III Ambulance	2018 Ford	E450	1FDXE4FS2JDC21654	237499
625	Type III Ambulance	2014 Ford	E 450	1FDXE4FS2EDA12033	367369
339	Type II Ambulance	2024 Ram	Promaster	3C6LRVDG0RE107410	49160
333	Type II Ambulance	2023 Ram	Promaster	3C6MRVHG8PE560461	57004
335	Type II Ambulance	2024 Ram	Promaster	3C6LRVDG4RE107233	51709

Form 1C-CERTVEHICLES

Attach additional page(s), if necessary

MANATEE COUNTY DEPARTMENT OF PUBLIC SAFETY

COPCN AMBULANCE
PERMIT APPLICATION FORM

Name of Service: Ambitrans Medical Transport, Inc

Business Address: 4351 Pinnacle St

City and Zip Code: Charlotte Harbor, Florida 33980 Business Phone Number: 941-743-3665

USE SEPARATE APPLICATION FORM FOR EACH VEHICLE

1. Type of Vehicle: ☑ ALS ☑ BLS ☐ AIR

2. Type of Application: ☐ New ☑ Renewal

3. Vehicle Data: State ALS / BLS Vehicle License Number: ALS 25913 / BLS 7349

Manufacturer: FR Conversions Year/Model: 2023 Promaster

Vehicle Identification Number: 3C6CRVDG0PE583413

Mileage: 134203 Color Scheme: White/Orange

(Attach photograph of vehicle)

Unit Number: 330 License Plate Number: MIX50T

4. Please enclose with this application the permit fee of $100.00 plus applicable Inspection Fee:

Make the check payable to: Manatee County

Vanessa Oliver
Signature

Chief Executive Officer
Title

6/22/26
Date

Vanessa G. Oliver
Print Name

MANATEE COUNTY DEPARTMENT OF PUBLIC SAFETY

COPCN AMBULANCE PERMIT APPLICATION FORM

Name of Service: Ambitrans Medical Transport, Inc

Business Address: 4351 Pinnacle St

City and Zip Code: Charlotte Harbor, Florida 33980 Business Phone Number: 941-743-3665

USE SEPARATE APPLICATION FORM FOR EACH VEHICLE

1. Type of Vehicle: ☑ ALS ☑ BLS ☐ AIR

2. Type of Application: ☐ New ☑ Renewal

3. Vehicle Data: State ALS / BLS Vehicle License Number: ALS 26987 / BLS 7774 ____

Manufacturer: FR Conversions Year/Model: 2024 Promaster

Vehicle Identification Number: 3C6LRVDG4RE107233

Mileage: 51709 Color Scheme: White/Orange
(Attach photograph of vehicle)

Unit Number: 335 License Plate Number: DUO4HP

4. Please enclose with this application the permit fee of $100.00 plus applicable Inspection Fee:

Make the check payable to: Manatee County

Signature

Chief Executive Officer
Title

6/22/26
Date

Vanessa G. Oliver
Print Name

MANATEE COUNTY DEPARTMENT OF PUBLIC SAFETY

COPCN AMBULANCE PERMIT APPLICATION FORM

Name of Service: Ambitrans Medical Transport, Inc

Business Address: 4351 Pinnacle St

City and Zip Code: Charlotte Harbor, Florida 33980 Business Phone Number: 941-743-3665

USE SEPARATE APPLICATION FORM FOR EACH VEHICLE

1. Type of Vehicle: ☑ ALS ☑ BLS ☐ AIR

2. Type of Application: ☐ New ☑ Renewal

3. Vehicle Data: State ALS / BLS Vehicle License Number: ALS 25232 / BLS 7015

Manufacturer: Road Rescue Year/Model: 2017 E-450

Vehicle Identification Number: 1FDXE4FS8HDC51865

Mileage: 424187 Color Scheme: White/Orange
(Attach photograph of vehicle)

Unit Number: 636 License Plate Number: MIP58F

4. Please enclose with this application the permit fee of $100.00 plus applicable Inspection Fee:

Make the check payable to: Manatee County

Signature: [signature] Title: Chief Executive Officer Date: 6/22/26

Print Name: Vanessa G. Oliver

MANATEE COUNTY DEPARTMENT OF PUBLIC SAFETY

COPCN AMBULANCE PERMIT APPLICATION FORM

Name of Service: Ambitrans Medical Transport, Inc

Business Address: 4351 Pinnacle St

City and Zip Code: Charlotte Harbor, Florida 33980 Business Phone Number: 941-743-3665

USE SEPARATE APPLICATION FORM FOR EACH VEHICLE

1. Type of Vehicle: ☑ ALS ☑ BLS ☐ AIR

2. Type of Application: ☐ New ☑ Renewal

3. Vehicle Data: State ALS / BLS Vehicle License Number: ALS 25523/ BLS 7166

   Manufacturer: Road Rescue Year/Model: 2018 E-450

   Vehicle Identification Number: IFDXE4FS9JDC07783

   Mileage: 328926 Color Scheme: White/Orange
   (Attach photograph of vehicle)

   Unit Number: 640 License Plate Number: MIU74Y

4. Please enclose with this application the permit fee of $100.00 plus applicable Inspection Fee:

Make the check payable to: Manatee County

Signature

Chief Executive Officer
Title

6/22/24
Date

Vanessa G. Oliver
Print Name

MANATEE COUNTY DEPARTMENT OF PUBLIC SAFETY

COPCN AMBULANCE
PERMIT APPLICATION FORM

Name of Service: Ambitrans Medical Transport, Inc

Business Address: 4351 Pinnacle St

City and Zip Code: Charlotte Harbor, Florida 33980 Business Phone Number: 941-743-3665

USE SEPARATE APPLICATION FORM FOR EACH VEHICLE

1. Type of Vehicle: ☑ ALS ☑ BLS ☐ AIR

2. Type of Application: ☐ New ☑ Renewal

3. Vehicle Data: State ALS / BLS Vehicle License Number: ALS 25915/ BLS 7351

Manufacturer: Road Rescue Year/Model: 2019 E-450

Vehicle Identification Number: IFDXE4FS9KDC09597

Mileage: 303496 Color Scheme: White/Orange
(Attach photograph of vehicle)

Unit Number: 644 License Plate Number: MIX48T

4. Please enclose with this application the permit fee of $100.00 plus applicable Inspection Fee:

Make the check payable to: Manatee County

Signature

Chief Executive Officer
Title

6/22/26
Date

Vanessa G. Oliver
Print Name

Name	Credential	Credential Number
Agee, Taylor	Florida: Paramedic	PMD549648
Aitken, Ronald	Florida: Paramedic	PMD511733
Albritton, Curtis	Florida: Paramedic	PMD3776
Alley, Timothy	Florida: Paramedic	PMD206748
Almanza, Alondra	Florida: Paramedic	PMD525945
Aumick, Sean	Florida: Paramedic	PMD545992
Back, Jeffrey	Florida: Paramedic	PMD548305
Bays, Denise	Florida: Paramedic	PMD13370
Beilstein, Tom	Florida: Paramedic	PMD12207
Bensel, Julie	Florida: Paramedic	PMD526924
Binnall, Kevin	Florida: Paramedic	PMD531583
Bonacquisti, Anthony	Florida: Paramedic	PMD512052
Bushong, Sarah	Florida: Paramedic	PMD510223
Castro, Sebastian	Florida: Paramedic	PMD529936
Coblentz, Paul	Florida: Paramedic	PMD526306
Cross, Isaac	Florida: Paramedic	PMD544986
Davis, Robert	Florida: Paramedic	PMD537626
Diaz, Eddie	Florida: Paramedic	PMD12223
Dodson, Charlotte	Florida: Paramedic	PMD206551
Durand, Jamie	Florida: Paramedic	PMD539784
Dynia, Kyle	Florida: Paramedic	PMD526817
Eldridge, Raven	Florida: Paramedic	PMD543049
Emanuel, David	Florida: Paramedic	PMD550426
Esposito, Tony	Florida: Paramedic	PMD8428
Farrell, John	Florida: Paramedic	PMD550211
Fiala, Todd	Florida: Paramedic	PMD522179
Fields, Denise	Florida: Paramedic	PMD547490
Galavotti, Lynn	Florida: Paramedic	PMD547281
Garcia, Megan	Florida: Paramedic	PMD539037
Gennusa, Joseph	Florida: Paramedic	PMD533891
Gibson, Stephen	Florida: Paramedic	PMD3973
Ginty, Steven	Florida: Paramedic	PMD529875
Guido, Will	Florida: Paramedic	PMD531051
Hadley, Andew	Florida: Paramedic	PMD543688
Hendry, Justin	Florida: Paramedic	PMD534623
Hoelderlin, Logan	Florida: Paramedic	PMD536288
Howe, Mark	Florida: Paramedic	PMD512439
Howerton, Amanda	Florida: Paramedic	PMD513716
Howerton, John	Florida: Paramedic	PMD529109
Kontinos, Laura	Florida: Paramedic	PMD11295
Lada, Chris	Florida: Paramedic	PMD535353

Lopes, Christopher	Florida: Paramedic	PMD508352
Martinez, Oscar	Florida: Paramedic	PMD531859
McCarty, David	Florida: Paramedic	PMD542325
McDonald, Charlene	Florida: Paramedic	PMD526572
McNeeley, Michael	Florida: Paramedic	PMD516540
McVey, John	Florida: Paramedic	PMD543169
Milazzo, Lindsay	Florida: Paramedic	PMD541232
Miller, Denford Maurice	Florida: Paramedic	PMD514536
Muina, Annette	Florida: Paramedic	PMD530691
Muina, Antonio	Florida: Paramedic	PMD531507
Munoz, Malcom	Florida: Paramedic	PMD514681
Nunez, Oscar	Florida: Paramedic	PMD547178
Oliveros, Camilo	Florida: Paramedic	PMD539941
Perrone, Anthony	Florida: Paramedic	PMD524936
Pogan, Valerie	Florida: Paramedic	PMD530290
Potter, Joseph	Florida: Paramedic	PMD549575
Powell, Justin	Florida: Paramedic	PMD544558
Rain, Michael	Florida: Paramedic	PMD517579
Reyes, Anthony	Florida: Paramedic	PMD544820
Rivera, Gabriel	Florida: Paramedic	PMD516672
Rode, Hans	Florida: Paramedic	PMD10239
Rose, Darren	Florida: Paramedic	PMD548234
Rumney, Randall	Florida: Paramedic	PMD515513
Samaniego, Zachary	Florida: Paramedic	PMD543679
Schneider, Joshua	Florida: Paramedic	PMD539572
Sligar, Alexis	Florida: Paramedic	PMD546489
Smith, James	Florida: Paramedic	PMD548304
Smither, Robbie	Florida: Paramedic	PMD536206
Stevens, Craig	Florida: Paramedic	PMD520213
Stewart, Conner	Florida: Paramedic	PMD547831
Stoker, Michael	Florida: Paramedic	PMD536595
Sutton, Christopher	Florida: Paramedic	PMD200695
Swanson, Eric	Florida: Paramedic	PMD526089
Townsend, Michael	Florida: Paramedic	PMD519387
Vets, Dakota	Florida: Paramedic	PMD550407
Viteri, Juan	Florida: Paramedic	PMD507628
Warren, Kyle	Florida: Paramedic	PMD532651
Wilburn, Bradly	Florida: Paramedic	PMD546634
Kuhn, Brandon	Florida: EMT	EMT511803
Lawrence, Brennan	Florida: EMT	EMT576657
Lawrence, Dionte	Florida: EMT	EMT580451
LeBlanc, Caleb	Florida: EMT	EMT595300

Mannino, Jakob	Florida: EMT	EMT600181
Leggett, Anthony	Florida: EMT	EMT593855
Leppek, Cody	Florida: EMT	EMT599142
Leyva, Yordany	Florida: EMT	EMT583554
Libby, Aidan	Florida: EMT	EMT591890
Manzano, Santiago	Florida: EMT	EMT591080
Lybeck, Brianna	Florida: EMT	EMT593593
Parker, Anthony	Florida: EMT	EMT 596410
Pierre, Burtmur	Florida: EMT	EMT599969
Marquez, Crystina	Florida: EMT	EMT599925
Martinez, Jade	Florida: EMT	EMT592192
McCale, D.R.	Florida: EMT	EMT596703
McGinnis, Morgan	Florida: EMT	EMT594732
Miller, Conner	Florida: EMT	EMT574582
Miller, Travis	Florida: EMT	EMT599715
Pina, Stephanie	Florida: EMT	EMT599912
Mishuk, Elizabeth	Florida: EMT	EMT587405
Moctezuma, Courtney	Florida: EMT	EMT579891
Monahan, Brendan	Florida: EMT	EMT559119
Montgomery, Jacob	Florida: EMT	EMT590405
Mora, Raul	Florida: EMT	EMT590888
Motes, ian	Florida: EMT	EMT598758
Murphy, Katie	Florida: EMT	EMT596588
O'Shea, James	Florida: EMT	Emt547547
Osorno, Jesse	Florida: EMT	EMT591732
Quino Nunez, Fernando	Florida: EMT	EMT588008
Patton, Joseph	Florida: EMT	EMT598695
Repice, Edward	Florida: EMT	EMT594505
Pearce, Michael	Florida: EMT	Emt582006
Pearman, Lora	Florida: EMT	EMT300302
Perez, Austin	Florida: EMT	EMT577250
Perez, Nicholas	Florida: EMT	EMT571660
Reyes, Michael	Florida: EMT	EMT595124
Rice, Brayden	Florida: EMT	EMT 598677
Polus, Gage	Florida: EMT	Emt584267
Postma, Nicole	Florida: EMT	EMT587159
Przychodzen, Ben	Florida: EMT	EMT590375
Pugliese, Gene	Florida: EMT	EMT591156
Rivera, Brandyn	Florida: EMT	EMT582327
Ransom, Willow	Florida: EMT	EMT585167
Roman-Kulwicki, Julian	Florida: EMT	EMT596509
Roz, Isaac	Florida: EMT	EMT 597115

Smrekar, jack	Florida: EMT	EMT592343
Stroud, Pierce	Florida: EMT	EMT595463
Roark, Kaleb	Florida: EMT	EMT578586
Roberts, Talon	Florida: EMT	EMT594626
Sutton, Michael	Florida: EMT	EMT569497
Rosas, Jason	Florida: EMT	EMT556539
Swank, Caranton	Florida: EMT	EMT599988
Ruano, Brian	Florida: EMT	EMT555444
Shellhammer, John	Florida: EMT	EMT581835
Shiver, Amber	Florida: EMT	EMT593244
Simac, Bianca	Florida: EMT	EMT569197
Smith, Nicholas	Florida: EMT	EMT595219
Todd, Jacob	Florida: EMT	EMT598500
Spalding, Ava	Florida: EMT	EMT589223
St. Germain, Zara	Florida: EMT	EMT570818
Taylor, Donald	Florida: EMT	EMT536311
Taylor, Stephen	Florida: EMT	EMT575927
Terry, Robert	Florida: EMT	EMT554598
Turner, Ryan	Florida: EMT	Emt548335
Valdes, Yosmani	Florida: EMT	EMT591292
Vega, Elijah	Florida: EMT	EMT585641
Viana, Zackary	Florida: EMT	EMT599747
Waterhouse, Kristen	Florida: EMT	EMT586518
Wollenberg, Wesley	Florida: EMT	EMT576692
Young, Gilbert	Florida: EMT	EMT20217
Zucker, Erik	Florida: EMT	EMT566807
Zupo, Ashley	Florida: EMT	EMT588302

AGREEMENT BETWEEN AMBITRANS MEDICAL TRANSPORT, INC. AND DANIEL O'LEARY

This Agreement made and effective this 1st day of July, 2012 ("Effective Date") by and between Ambitrans Medical Transport, Inc. / Venice Ambulance Service, Inc., a provider of ambulance services and patient transport ("hereinafter referred to as "Ambitrans") and Daniel V. O'Leary, an individual licensed as a Florida Physician ("hereinafter referred to as "Physician").

WHEREAS, Ambitrans provides emergency and non-emergency medical transport services for certain counties in the State of Florida; and

WHEREAS, Florida Statutes mandate that any emergency medical services system and/or ambulance service (the "Service") which staffs Paramedics and Emergency Medical Technicians for basic and advanced life support procedures have a Medical Director for such Services; and

WHEREAS, Daniel V. O'Leary is a licensed physician who has experience and is qualified to act as the Medical Director for the Service; and

WHEREAS, Ambitrans desires to contract with Physician to perform the services of Medical Director for Ambitrans;

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties mutually agree as follows:

ARTICLE 1. DESIGNATION OF THE MEDICAL DIRECTOR

Physician agrees to act as the Medical Director for Ambitrans.

ARTICLE 2. DUTIES OF THE MEDICAL DIRECTOR

In consideration for payments and other value paid by Ambitrans as described in ARTICLE 3 below, Physician agrees to perform the following services:

2.1 Physician shall be the Medical Director for Ambitrans. Ambitrans shall hire and staff the emergency medical technicians and paramedics (hereinafter referred to as "Personnel") for the provision of Services, as well as all supplies, equipment and medications used in the provision of providing Services.

2.2 Physician shall supervise the clinical performance of the Personnel working on behalf of Ambitrans.

2.3 Physician shall participate in Ambitrans Quality Management Medical review and process.

2.4 Physician shall participate in education and in-service training for the Personnel.

2.5 Physician shall review and update medical protocols as needed.

2.6 Physician shall review and approve in-house Continuing Education Program for Personnel.

2.7 Physician shall review those run reports flagged by the Quality Assurance Supervisor as part of the on-going Quality Assurance program and provide feedback as needed.

2.8 Physician shall be available to Personnel and management for questions regarding patient care issues and transports.

2.9 Physician will work with Quality Assurance staff on updating Personnel on new medical procedures and drugs that could affect patient care and transport.

2.10 Physician will meet minimally on a monthly basis with management and designated staff members to discuss training and Quality Assurance issues.

2.11 Physician with assistance from Ambitrans will secure a DEA number for the purposes of providing prescriptions as needed for controlled substances in accordance with Ambitrans' medical protocols. Ambitrans will assume the financial cost of the DEA license to be used for the issuance of controlled substances to be used in the course of Ambitrans day-to-day operations.

2.12 Physician shall be responsible to comply with all Florida Statutes, Section 401.265 and 64J-1.004, as amended from time to time, all applicable rules and administrative regulations promulgated in accordance with Chapter 401, Florida Statutes, as amended from time to time, and all rules of the Department of Health.

ARTICLE 3. DUTIES OF AMBITRANS

3.1 In consideration for the services provided by Physician, Ambitrans hereby agrees to pay Physician, [redacted] per contract year, which shall be payable in monthly installments of [redacted]

3.2 Physician will receive a 1099 tax form at the end of each calendar year in accordance with IRS guidelines. Physician will also be responsible for providing Ambitrans with a completed W-9 form. This is to be updated on an annual basis.

3.3 Physician will be listed as an additional insured on Ambitrans professional liability policy.

ARTICLE 4. DUTIES OF "PHYSICIAN".

4.1 Physician will be required to maintain an active license to practice medicine in the State of Florida and be qualified by training and/or experience to act as Medical Director.

ARTICLE 5. RENEWABILITY AND TERMINATION

This Agreement shall be for an initial term of one (1) year and shall automatically renew on the anniversary date of the Effective Date each year, unless written notice of intent to terminate is given by either party, at least thirty (30) days prior to the expiration date. In addition, either party may terminate this Agreement at any time, with or without cause, during the contract period, including renewals thereof, by providing at least sixty (60) days prior written notice to the other party.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE SET THEIR HANDS WITH SIGNATURES BELOW. The date of this Agreement shall be the date first written above.

Daniel V. O'Leary, M.D.

Alan J. Skavroneck
Chief Operating Officer
Ambitrans Medical Transport, Inc.
Venice Ambulance Service, Inc.

DEA REGISTRATION NUMBER	THIS REGISTRATION EXPIRES	FEE PAID
FO0441218	12-31-2027	$888

SCHEDULES	BUSINESS ACTIVITY	ISSUE DATE
2,2N,3, 3N,4,5	PRACTITIONER	11-04-2024

O'LEARY, DANIEL V MD
AMBITRANS MEDICAL TRANSPORT
4351 PINNACLE ST
PORT CHARLOTTE, FL 339802902

CONTROLLED SUBSTANCE REGISTRATION CERTIFICATE
UNITED STATES DEPARTMENT OF JUSTICE
DRUG ENFORCEMENT ADMINISTRATION
WASHINGTON D.C. 20537

Sections 304 and 1008 (21 USC 824 and 958) of the Controlled Substances Act of 1970, as amended, provide that the Attorney General may revoke or suspend a registration to manufacture, distribute, dispense, import or export a controlled substance.

THIS CERTIFICATE IS NOT TRANSFERABLE ON CHANGE OF OWNERSHIP, CONTROL, LOCATION, OR BUSINESS ACTIVITY, AND IT IS NOT VALID AFTER THE EXPIRATION DATE.

CONTROLLED SUBSTANCE REGISTRATION CERTIFICATE
UNITED STATES DEPARTMENT OF JUSTICE
DRUG ENFORCEMENT ADMINISTRATION
WASHINGTON D.C. 20537

DEA REGISTRATION NUMBER	THIS REGISTRATION EXPIRES	FEE PAID
FO0441218	12-31-2027	$888

SCHEDULES	BUSINESS ACTIVITY	ISSUE DATE
2,2N,3, 3N,4,5	PRACTITIONER	11-04-2024

O'LEARY, DANIEL V MD
AMBITRANS MEDICAL TRANSPORT
4351 PINNACLE ST
PORT CHARLOTTE, FL 339802902

Sections 304 and 1008 (21 USC 824 and 958) of the Controlled Substances Act of 1970, as amended, provide that the Attorney General may revoke or suspend a registration to manufacture, distribute, dispense, import or export a controlled substance.

THIS CERTIFICATE IS NOT TRANSFERABLE ON CHANGE OF OWNERSHIP, CONTROL, LOCATION, OR BUSINESS ACTIVITY, AND IT IS NOT VALID AFTER THE EXPIRATION DATE.

Form DEA-223 (9/2016)

DEA REGISTRATION NUMBER	THIS REGISTRATION EXPIRES	FEE PAID
FO0441218	12-31-2027	$888

SCHEDULES	BUSINESS ACTIVITY	ISSUE DATE
2,2N,3, 3N,4,5	PRACTITIONER	11-04-2024

O'LEARY, DANIEL V MD
AMBITRANS MEDICAL TRANSPORT
4351 PINNACLE ST
PORT CHARLOTTE, FL 339802902

CONTROLLED SUBSTANCE/REGULATED CHEMICAL
REGISTRATION CERTIFICATE
UNITED STATES DEPARTMENT OF JUSTICE
DRUG ENFORCEMENT ADMINISTRATION
WASHINGTON D.C. 20537

Sections 304 and 1008 (21 USC 824 and 958) of the Controlled Substances Act of 1970, as amended, provide that the Attorney General may revoke or suspend a registration to manufacture, distribute, dispense, import or export a controlled substance.

THIS CERTIFICATE IS NOT TRANSFERABLE ON CHANGE OF OWNERSHIP, CONTROL, LOCATION, OR BUSINESS ACTIVITY, AND IT IS NOT VALID AFTER THE EXPIRATION DATE.

Form DEA-223/511 (9/2016)

REPORT

CHANGES

PROMPTLY

REQUESTING MODIFICATIONS TO YOUR
REGISTRATION CERTIFICATE

To request a change to your registered name, address, the drug schedule or the drug codes you handle, please

1. visit our web site at **deadiversion.usdoj.gov** - or
2. call our customer Service Center at **1-(800) 882-9539** - or
3. submit your change(s) in writing to:

Drug Enforcement Administration
P.O. Box 2639
Springfield, VA 22152-2639

See Title 21 Code of Federal Regulations, Section 1301.51 for complete instructions.

You have been registered to handle the following chemical/drug codes:

AMBITRANS AMBULANCE

PROTOCOLS

Introduction:

Ambitrans Medical Transport, Inc. has developed the following EMS Medical Control Protocol and Procedures manual to establish the minimum standard of care, which will be provided by every Paramedic and Emergency Medical Technician under the employment of Ambitrans Medical Transport, Inc.

These protocols and procedures are to be used as guidelines for operation during EMS calls that require medical direction. They are also intended to be guidelines to ensure that personnel are trained in proper pre-hospital and inter-hospital patient care. Procedures are not to be considered rigid rules, but rather established standards against which EMS practice can be measured.

Treatment protocols are specific orders directing the actions pertaining to the techniques and / or medications used by EMS personnel who are required to practice under direct supervision of a physician and under their Medical Control authority with the Department of Health Bureau of Emergency Medicine.

Treatment protocols may and should be initiated without prior Medical Control contact, especially when the patient's condition and / or situation is life-threatening. As soon as the condition and / or situation permits, direct contact must be established with Medical Control for confirmation of medical care and further medical direction.

Ambitrans Medical Transport, Inc. staff who wish to operate under the Department of Health Bureau of Emergency Medicine may do so only with a valid certification from the state of Florida. EMS staff must keep all state required certifications up to date in order to maintain employment at Ambitrans Medical Transport, Inc. This includes but is not limited to EVOC, ACLS and CPR.

Although not identical, these guidelines are derived from the State of Florida Common Protocol. Please note that items in this manual are subject to continuous review for the sake of providing employees with the most current emergency medical information. Updates to this material may be frequent to maintain a current standard of care to benefit both the patient and the provider of emergency medical care. The bottom of the page shows when the most current version was printed. Please replace older versions with newly updated material as soon as it is issued. Once updated, older versions are to be considered obsolete and thus, are to be discarded to help eliminate confusion.

MD is used to describe any licensed allopathic physician (MD or DO) who may be involved with the transport of the patient.

INTENT OF USE

The purpose of these protocols is to establish guidelines between Ambitrans Medical Transport, the provider, and the Medical Director for the management, treatment, and transport of specific medical emergencies.

These guidelines are intended to assist in achieving consistent pre-hospital care for patients. The following guidelines are not intended to provide a solution to every problem, type of injury, or illness which may arise during the course of care. The guidelines set forth are not designed nor intended to limit the provider in the exercise of good judgment or initiative in taking reasonable action in extraordinary circumstances. Pre-hospital care is a partnership between Ambitrans Medical Director, medical control physician, and the provider.

These guidelines utilize a modified "stoplight method". This method uses the primary stoplight colors green, yellow, and red to help guide the provider in the exercise of good judgment, but also adds a category of orange. The color green denotes "go" without hesitation. Yellow denotes "slow down", think before you act. Orange denotes "proceed with cation" and be prepared to stop. Red denotes "stop"; do not proceed without permission from an authorized person.

Color Coded Headers

If **BLS** is in the header for the specific protocol or intervention, **ANY** provider can perform the listed treatment(s) and/or intervention(s). Treatment(s) and/or intervention(s) listed in this section are considered safe with little to no adverse outcomes. The provider may feel free to use the treatment(s) and/or intervention(s) listed in this section.

If **ALS** is in the header for the specific protocol or intervention, **ONLY** paramedics can perform the listed treatment(s) and/or intervention(s). Treatment(s) and/or intervention(s) listed in this section carry a greater level of adverse outcomes. The provider must carefully weigh the risk/benefit of treatment(s) and/or intervention(s) listed in this section.

If **SCT** is in the header for the specific protocol or intervention, **ONLY** Advanced Scope Trained Paramedics can perform the listed treatment(s) and/or intervention(s). Treatment(s) and/or intervention(s) listed in this section carry the greatest risk of adverse outcomes. In addition to standard ALS equipment utilized routinely by paramedics, the Advanced Scope Trained Paramedic with guidance and supervision of the transferring, receiving or EMS MD may be required to manage special equipment/medications being used on a patient that are provided by the transferring hospital. The Advanced Scope Paramedic may need to perform advanced procedures, as well as monitor and administer medications not routinely used by ALS Paramedics. When called for, additional personnel such as a respiratory therapist, ICU nurse, physician, or another paramedic may accompany the patient to assist in providing care. The Advanced Scope Paramedic will be the team member in charge but will recognize and respect the expertise of the other care givers on board

INTENT OF USE

If Physician Orders is listed in the header for the specific protocol, the paramedic must obtain permission for the listed treatment(s) and/or intervention(s) from medical control. The decision to use the specific treatment(s) and/or intervention(s) listed in this section is a shared responsibility between medical control physician and the provider.

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Ambitrans Ambulance Protocol Updates

The following changes have been approved **** and will take effect****:

NEW Version 1.2

Section(s)	Changes

SECTION 1

Policies and Procedures

MEDICAL DIRECTOR'S POLICIES AND PROCEDURES APPROVAL
Section 1.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

TRAINING PROGRAM

Section 1.1

The Training Program for Ambitrans Ambulance is administered by the Medical Director and the Department Training Division.

At a minimum, the training program for EMS personnel will include the following requirements:

1. Successful completion of all field training conducted by the Field Training Officer under the supervision of the Training Division
2. E.M.T.'s:
    a. 30 hour continuing education every 2 years
    b. AHA Basic Life Support for Healthcare Provider every 2 years
    c. Completion of Department conducted Medical In-service Training Classes
    d. Optional attendance at advanced medical courses
    e. Respond to any and all quality assurance issues identified during routine quality review of run reports by the medical director and/or the clinical quality coordinator.
3. Paramedics:
    a. 30 hour continuing education every 2 years
    b. AHA Basic Life Support for Healthcare Provider every 2 years
    c. AHA Advanced Cardiac Life Support every 2 years
    d. Completion of Department conducted Medical In-service Training classes
    e. Completion of all continuing education requirements
    f. Respond to any and all quality assurance issues identified during routine quality review of run reports by the medical director and/or the clinical quality coordinator.
4. Advanced Scope or Critical Care Paramedic
    a. 30 hour continuing education every 2 years
    b. AHA Basic Life Support for Healthcare Provider every 2 years
    c. AHA Advanced Cardiac Life Support every 2 years
    d. Completion of Department conducted Medical In-service Training classes
    e. Completion of all continuing education requirements
    f. Successful completion of Advanced Scope training or an approved Critical Care EMT-P
    g. Maintain competence specific to critical care transfers
        i. Biannual review of equipment and/or medication with Ambitrans Ambulance, Inc. training staff.
        ii. Sixteen hours of continuing education relevant to critical care transfer every two years.
    h. Advanced Scope Paramedic will run a minimum of 3 transfers per year and/or receive approval from the medical director prior to annual recertification.
    i. Respond to any and all quality assurance issues identified during routine quality review of run reports by the medical director and/or the clinical quality coordinator.

Only those personnel fulfilling the above requirements will be given permission to provide patient care under the license of the Medical Director. It is incumbent upon the individual to maintain current certifications and licensure, and failure to maintain said certifications will place the employee in direct violation of state law. (64J-1.008, 1.009).

IN-SERVICE TRAINING

Section 1.2

In-service training is an essential part of the Ambitrans Ambulance educational program. Through regular in-service training, personnel are exposed to medical and administrative changes in the system that affects the provision of patient care. In addition, Quality Assurance review and risk management topics that protect and enhance the overall system can be covered.

Protocol updates or changes that are made by the Medical Director during in-service will be effective upon notification in writing from the Training Division.

In general, in-service training may include updates from:

1. Training Supervisor
2. Medical Director
3. Training Officer(s)
4. Administration
5. Quality Assurance Review

Pre-hospital emergency care lectures and/or practical instruction will be the central focus for in-service training. CEU's for recertification will be issued to all EMTs and Paramedics according to 64J.

QUALITY IMPROVEMENT

Section 1.3

In order to ensure that patient care provided by Ambitrans personnel meets accepted professional standards, a comprehensive Quality Improvement Program has been established. The program is administered jointly by the Medical Director, the Department Training Division and the Department Quality Improvement Coordinator.

1. Prospective QA
    a. Patient care protocols and standards which are reviewed by the Medical Director and the department Training Division

    b. Pre-hire assessment and initial training

    c. Regularly scheduled in-service training

    d. Routine protocol testing and review

2. Concurrent QA
    a. On-line medical control provided by the "Supervising Physicians" provides immediate feedback.

    b. Field observation by any of the following:
        i. Medical Director
        ii. QI Coordinator
        iii. Training Supervisor(s)
        iv. Operation Supervisor(s)
        v. Field Training Officer(s) (FTO)

3. Retrospective QA
    a. Patient Care Report Review.
        i. Reports are reviewed daily by the Quality Improvement Coordinator for completeness and compliance with protocol
        ii. Protocol deviations are reported to the Training Division through the Quality Improvement Coordinator
        iii. The Medical Director and members of Training Division shall periodically and randomly review Patient Care Reports for medical correctness and compliance with protocol
        iv. Any designated individual who reviews Patient Care Reports shall be, at a minimum, the level of care provider for the report being reviewed, i.e. (EMT= BLS, Paramedic= BLS, ALS, SCT)

    b. Quarterly reports of specific treatments reviewed by Training Division
        i. Immediate notification to the Medical Director shall be accomplished for the following:
            1. At the direction of the Department Director, the Training Division or Quality Improvement Coordinator
            2. Controlled Substance Accountability issues

PATIENT INFORMATION TRANSMISSION FORMAT

Section 1.4

The following information should be transmitted in a clear, concise manner to the receiving hospital as soon as possible. Remember that as you speak, the nurse is recording the information on a run form, so adjust your pace to allow for this activity. Clearly identify your unit and the hospital you are calling to avoid confusion with other incoming radio calls.

If radio communication is of such poor quality that instructions are not understood, either switch to a different frequency or use the telephone. If Physician's Orders must be used, document your attempts to reach the receiving hospital on the permanent run report. Any Physician's Orders should be followed noted by utilizing "Contact Medical Control" in the Treatment Tab section of the run report and filling it out completely including the time and Physician.

Minimize the use of abbreviations such as the "10 Codes" and use plain descriptive terms when communicating with the hospital. Avoid frivolity and all comments of a critical or judgmental nature regarding your patient. Never say anything on the radio that you would not like to hear played back in public. It is a breach of confidentiality to provide personal information about the patient on a public-monitored radio frequency. This includes the patient's name and HIV status.

PRIORITY TWO (2) or THREE (3) PATIENTS NOT REQUIRING PHYSICIAN'S ORDERS

1. Unit and hospital identification
2. Patients Priority (Section 1.8)
3. Brief description of patient – Age and sex (weight in kilograms for pediatric patients).
4. Brief chief complaint or statement of problem
5. Obtain confirmation that Receiving Facility will accept patient. If hospital is on diversion, follow hospital diversion policy (Section 1.9) and repeat steps 1 – 5 with the new hospital of destination
6. Vital signs – Pulse, respirations, blood pressure, blood sugar, and pulse ox
   a. If applicable – CO2, rhythm interpretation, 12 Lead findings, and temperature
7. If treatment is in accordance with protocols, state "Followed Protocols". If unable to follow protocols, inform the receiving facility
8. Provide an estimated time of arrival

PRIORITY ONE (1) PATIENTS OR THOSE REQUIRING PHYSICIAN'S ORDERS

As stated above

9. Pertinent present and past history
10. Pertinent positive and negative physical findings
    a. included GCS/level of consciousness, pupils, breath sounds, and skin color/temperature/moisture

11. Relevant medications, home oxygen, etc. (attempt to bring all medications with the patient to the E.R.)

12. Allergies

13. Assessment

14. Treatment rendered prior to establishing communications and time on scene thus far

15. Requests for further orders

PATIENT REFUSAL

Section 1.5

It is the policy of Ambitrans to obtain informed consent for evaluation and treatment of patients whenever possible. This consent may come from the patient, if competent, or from the family or legal guardian if not competent. Consent is implied if the patient is unresponsive or no one is present to give legal consent.

All patients examined and treated by Paramedics or EMTs in the pre-hospital environment will require transport to a hospital emergency department for further evaluation. Sometimes patients will refuse examination, treatment and/or transportation. **Since this is a high risk area in terms of potential EMS system liability, the following policy must be followed exactly:**

1. No Patient contact is defined as no one at the scene can be identified as a patient. Examples of this are:

   "You are dispatched to a scene where no one is physically present; you are dispatched to a minor MVA where none of the people involved claim to have called EMS, nor do they desire to be evaluated upon your arrival."

2. Once patient contact has occurred, a full Patient Assessment (Section 2.5) and (Section 2.6) must be completed and **documented** unless refused by the patient. If the patient refuses all or part of the assessment, this must be **documented carefully** on the Patient Care Report (PCR).

3. Once patient contact has occurred, it is the policy of Ambitrans to transport all patients to a medical facility for further evaluation.
   a. If a competent patient refuses transport to a medical facility, the Provider shall fill out the "Patient Refused Transport" in the PCR. Make sure the patient understands the risks of refusal and obtain the patient's/ guardian's signature.

   b. This form should be signed by a witness.

   c. The patient should understand that he/she may call Ambitrans or EMS again at any time if the condition persists or changes.

   d. Appropriate **documentation** of the circumstances of the patient's refusal, including his/her understanding of the potential consequences of his decision, should be made in the PCR.

4. People **ABLE** to refuse care:
   a. A person can refuse medical care based on the following guidelines:
      i. **Competent** – defined by the ability to understand the nature and consequences of their actions by refusing medical care and/or transportation, and
      ii. **Adult** – eighteen (18) years of age or older, or:
         1. An emancipated minor; a person under 18 years of age who is either married or released from parental care and responsibility by a court order; or
         2. A legal representative for the patient (parent or legal guardian).

5. People **NOT ABLE** to refuse care:
    a. A person may be considered **incompetent** to refuse medical care and/or transportation if the severity of their medical condition prevents them from making an informed, rational decision regarding their medical care. Therefore, they may not refuse medical care and/or transportation based on the following guidelines:
        i. Altered level of consciousness (i.e. caused by head injury or alcohol and/or drugs)
        ii. Suicide attempt or verbal threat
        iii. Severely altered vital signs (Section 1.8)
        iv. Mental retardation and/or deficiency
        v. Not acting as a "reasonable person would do, given the same circumstances"
        vi. Less than eighteen (18) years of age (except those outlined in above section – 4.a.ii)
            1. Minors (except those outlined in above section 4.a.ii) may only be released to a parent, legal guardian, law enforcement, or supervising physician.
            2. Appropriate **documentation** of the circumstances of the minor's release to a parent, legal guardian, law enforcement, or supervising physician shall be made in the PCR
            3. In cases where a patient is a student and the Principal or his/her designee is present (i.e. bus accident), the student may be released to the Principal or his/her designee

6. **Competent** patients with severe injuries or illnesses that are not treated/transported (example – patient adamantly refuses treatment or transport and/or deputy fails/refuses to Baker Act patient) must have all of the Providers efforts and steps to transport to a hospital carefully and explicitly **documented** on the patient run report. The run report must include all of the following:
    a. Name and signature of deputy that was called to the scene for assistance in transport of the patient

    b. Name of service area hospital Supervising Physician that was contacted

    c. Detailed narrative of all efforts and conversations that took place during your attempt to have the patient transported

    d. Signatures of both crew members on the patient refusal form

7. If the charge medic has doubt concerning the competency of the patient to refuse medical care and/or hospital transport, medical direction is mandatory

8. If one of the above patients refuses evaluation, treatment, and transportation to the Emergency Department, law enforcement officers should be summoned to the scene. The patient should be persuaded to allow Ambitrans personnel to care for them. If they

refuse, the law enforcement officer should be requested to either place the patient in protective custody, arrest the patient (if cause exists), or Baker Act the patient. The supervising physician has no legal authority to Baker Act the patient via radio. The rationale for the Baker Act is that the patient is a danger to himself by refusing medical care that a competent patient normally would have consented to. Once the Baker Act is initiated, the patient must be transported to the Emergency Department for clearance prior to transfer to a psychiatric facility.

9. At all times, the safety of Ambitrans personnel and the patient is essential when treating and transporting patients without their consent. Both chemical and physical restraints may be applied. Florida statutes allow for the use of reasonable restraint in these cases and every effort should be made to avoid injury.

DETERMINING HOSPITAL OF DESTINATION

Section 1.6

Although Ambitrans does not normally transport emergency care patients to emergency departments for treatment, situations will occur when such transportation will be necessary. Ambitrans is authorized to transport patients to the following facilities:

1. Fawcett Memorial Hospital
2. Bayfront Health Port Charlotte
3. Bayfront Health Punta Gorda
4. Englewood Community Hospital
5. Venice Regional Bayfront Health
6. Lee Memorial Hospital
7. DeSoto Memorial
8. Sarasota Memorial
9. Hendry Regional Medical Center
10. Doctors Hospital Sarasota
11. Sarasota Memorial Emergency Care Center North Port
12. Gulf Coast Hospital
13. Health Park Medical Center
14. Cape Coral Hospital
15. Manatee Memorial
16. Blake Medical Center
17. Lakewood Ranch Medical Center

If the Paramedic feels that the patient may suffer an adverse outcome due to a longer transport time to honor a patient request, the Paramedic will disregard the patient's request and transport the patient to the closest receiving facility for stabilization.

If the Paramedic does not think that the patient will suffer an adverse outcome, the patient shall be transported to the facility of their choice from the list above. The decision shall be made in conjunction with the patient, their family, and the attending physician where appropriate.

Ambitrans personnel shall refrain from recommending or soliciting patients for a given hospital.

If the clinical condition of the patient dictates one facility over another, the patient shall be so informed. If the patient has no preference and is stable, transport will be to the closest appropriate receiving facility.

The socioeconomic or insurance status of a patient shall have no bearing on determination of the receiving facility, nor shall reference to such matters be made in communications with the facility via telephone or radio.

DETERMINING HOSPITAL OF DESTINATION

Section 1.6

	ICE Alert	STEMI Alert	Stroke Alert	Trauma Alert	OB >20 Weeks	Neonates	Pediatrics	Unstable Pediatrics	Pediatric Ortho	Dialysis
Advent Port Charlotte	✔	✔	✔		✔	✔	✔	✔	✔	✔
Advent Punta Gorda										
Cape Coral Hospital			✔		✔					
Desoto Memorial Hospital					✔		✔			
Englewood Community Hospital		✔	✔							✔
Fawcett Memorial Hospital	✔	✔	✔					✔		✔
Lee Memorial Hospital				✔						
Sarasota Memorial Hospital North Port Campus			✔							
Sarasota Memorial Hospital Main Campus	✔	✔	✔	✔	✔	✔	✔	✔	✔	
Sarasota Memorial Venice	✔	✔	✔	✔	✔		✔	✔		
Manatee Memorial Hospital		✔	✔		✔	✔	✔			
Blake Medical	✔	✔	✔							
Lakewood Ranch Medical Center		✔	✔		✔	✔				
Doctors Hospital Sarasota		✔	✔							

PRIORITY DESIGNATION

Section 1.7

All patients transported by Ambitrans Ambulance will be placed into a category (A), then given a priority (B) based on patient condition and/or treatment level rendered.

A. **UNSTABLE** as defined by the following:
   - An **UNSTABLE** patient has significant abnormality of one or more vital signs, significant abnormality of one or more cardiovascular, neurological, respiratory or trauma parameters. (Section 2.4)

B. **STABLE** as defined by the following:
   - A **STABLE** patient has reasonably normal vital signs, no significant cardiovascular, neurological, respiratory or trauma parameters. (Section 2.4)

Patient category will be used when initially contacting the patient and assessed continuously throughout patient care. The patient category may change at any time during the call. Because a stable patient may become unstable or an unstable patient may improve with treatment a through patient assessment must be done often. (Section 2.5) (Section 2.6)

Priority	Category	Treatment	Color
1	Unstable	ALS	RED
2	Stable	ALS	YELLOW
3	Stable	BLS	GREEN

This priority designation will be used when initially contacting the receiving facility. Once the call has been acknowledged the Paramedic will be sure to repeat the priority designation before beginning the report. This will ensure that the report will receive the appropriate level of on-line medical control. (Section 1.4)

INDICATIONS FOR ALS USE (BLS)

Section 1.8

This standard is intended to provide BLS Providers a standard for the request of Advance Life Support (ALS) resources if the patient's needs exceed Basic Life Support (BLS) scope of practice or capabilities.

1) Basic Life Support ambulance may request an Advanced Life Support (ALS) provider when they think that the patient's needs exceed BLS capabilities. These conditions may include but are not limited to:
   a) Altered level of consciousness
   b) Allergic reaction to medication, or bites with difficulty breathing or swallowing, or known previous reaction; hives within 5 minutes of exposure.
   c) Cardiac symptoms
   d) Cardiac arrest
   e) Diabetic problems (not alert and/or abnormal breathing)
   f) Multi-system trauma, or severe single system trauma
   g) OB/*GYN* (2nd or 3rd trimester bleeding or miscarriage)
   h) Overdose/poisoning (associated with any other categories on this list).
   i) Respiratory distress/arrest
   j) Seizures/convulsions
   k) Entrapment with injuries
   l) Severe blood loss
   m) Shock
   n) Stroke/CVA symptoms
   o) Syncope
   p) Unconsciousness
   q) Severe pain anywhere
   r) A patient with vital signs outside the normal range (Section 2.4)

If transport time by a BLS to an appropriate receiving facility can be accomplished before ALS can initiate care, then BLS service should transport as soon as possible and should not request ALS or should cancel ALS units if they have been requested.

1) BLS crews should not delay patient care and transport while waiting for ALS personnel.

2) If ALS arrival at scene is not anticipated before initiation of transport, arrangements should be made to rendezvous with the ALS service.

REFUSAL OF LIFE PROLONGING PROCEDURES

Section 1.9

Occasionally, the patient, family, legal guardian, or attending physician may request that in the event of acute cardiopulmonary or respiratory arrest, no life prolonging procedures be performed. These procedures for our definition will include Cardiopulmonary Resuscitation (CPR), endotracheal intubation, defibrillation, and the administration of any ACLS medications for the purposes of sustaining life. Medications and other measures designed for patient comfort are not included.

Generally, requests for withholding life prolonging procedures will occur due to a terminal illness where there is no hope of recovery. A properly executed Living Will, as covered in the Florida "Life Prolonging Procedure Act", is the first step necessary to comply with such a request.

However, a Living Will only states that in the event of a terminal illness, as certified by a physician, no life-prolonging procedures will be performed. It is not the same as a "Do Not Resuscitate" (DNR) order, signed by a physician, which certifies that the patient is terminal and should not be resuscitated or otherwise kept alive by artificial means.

It is the policy of Ambitrans Ambulance to **ONLY** honor valid Florida State "Do Not Resuscitate" (DNR) orders, signed by a physician, and present at the time of patient assessment. All patients and families requesting the withholding of life prolonging procedures, in advance, should be referred to their physician for a DNR order which can be kept with the patient and presented to Ambitrans Ambulance personnel on arrival.

In the absence of a valid Florida DNR order or acceptable refusal of care (Section 1.12), the following procedures will be followed when EMS personnel are requested to withhold life prolonging procedures:

1. General BLS Arrest Protocol will be initiated (Section 3.1) or (Section 8.1)

2. Verbal order of the attending physician to cease resuscitative efforts will be accepted if this can be quickly accomplished

3. Contact with the service area hosptial Supervising Physician will be made for further direction in all other cases where proper documents are not present or reasonable doubt exists in the mind of the Provider as to the desire of the patient for life prolonging procedures.
   (Section 1.10)

CARING FOR DNR PATIENTS

Section 1.10

Do Not Resuscitate (DNR) patients are those patients that have a written order, from their physician, specifying that they should not be resuscitated in the event of a cardiac or respiratory arrest (64J-2.018) DH Form 1896. This is usually due to a terminal illness, defined as one which is expected to result in the death of the patient in the near future. When Ambitrans personnel encounter a signed Do Not Resuscitate Order (DNRO) Form and/ or Patient Identification Device from a physician, they will respect those wishes. (Section 1.10)

Patient identification device is a miniature version of DH Form 1896 and is incorporated by reference as part of the DNRO form. Use of the patient identification device is voluntary and is intended to provide a convenient and portable DNRO which travels with the patient. The device is perforated so that it can be separated from the DNRO form. It can also be hole-punched, attached to a chain in some fashion and visibly displayed on the patient. In order to protect this device from hazardous conditions, it shall be laminated after completing it. Failure to laminate the device shall not be grounds for not honoring a patient's DNRO order, if the device is otherwise properly completed.

A Valid Florida DRNO DH Form 1896 must contain the following:

1. Copy, Facsimile, or Original **MUST BE** on yellow or shade of yellow paper
2. The patient is not to be resuscitated statement
3. Effective date
4. The patients full legal name (Verified by ID, other photo or personal witness)
5. Signature of patient, guardian or proxy
6. Physicians Statement, withholding or withdrawing cardiopulmonary resuscitation
7. Signature of physician
8. The physician license number
9. The physicians telephone number

During each transport, the EMS provider shall ensure that a copy of the DNRO form or the patient identification device accompanies the live patient.

A DNRO may be revoked at any time by the patient, if signed by the patient, or the patient's health care surrogate, or proxy or court appointed guardian or person acting pursuant to a durable power of attorney, the revocation may be in writing, by physical destruction, by failure to present it, or by orally expressing a contrary intent.

State of Florida
DO NOT RESUSCITATE ORDER

(please use ink)

Patient's Full Legal Name:_____ Date: _____
(Print or Type Name)

PATIENT'S STATEMENT

Based upon informed consent, I, the undersigned, hereby direct that CPR be withheld or withdrawn.
(If not signed by patient, check applicable box):

- ☐ Surrogate
- ☐ Court appointed guardian
- ☐ Proxy (both as defined in Chapter 765, F.S.)
- ☐ Durable power of attorney (pursuant to Chapter 709, F.S.)

_____
(Applicable Signature) (Print or Type Name)

PHYSICIAN'S STATEMENT

I, the undersigned, a physician licensed pursuant to Chapter 458 or 459, F.S., am the physician of the patient named above. I hereby direct the withholding or withdrawing of cardiopulmonary resuscitation (artificial ventilation, cardiac compression, endotracheal intubation and defibrillation) from the patient in the event of the patient's cardiac or respiratory arrest.

(___)___-____
_____
(Signature of Physician) (Date) Telephone Number (Emergency)

_____
(Print or Type Name) (Physician's Medical License Number)

DH Form 1896, Revised December 2004

CARING FOR DNR PATIENTS

Section 1.10

Unacceptable Do Not Resuscitate Orders:

- Written orders from hospitals or facilities, even if signed by physicians.
- Any written order or form which does not meet the above requirements.
- Any incomplete State of Florida pre-hospital DNRO.
- Any verbal DNRO or sticker on the face sheet.
- "Living Wills" and / or "Advance Directives".

If the validity of any DNRO is questionable, you should initiate resuscitative measures and transport to the closest hospital. However, you must, however document thoroughly specific reasons why validity was in question, and why you decided to continue with treatment. (i.e. patient is alert and oriented, and/or patient has no documented history of a terminal illness).

Documentation

When using the Florida pre-hospital DNRO, all documentation should be completed as required in 64J-2 FAC.

Honoring a DNRO

Do not initiate resuscitative measures (CPR and respiratory measures beyond passive O^2 administration) on any patient with a valid DNRO, although all other medical and supportive care should be continued as usual.

When a patient with a valid DNRO dies during transport:

1. Continue transport to the receiving facility. If the facility refuses to accept the patient, then follow the steps below, otherwise, leave the patient with the facility as you normally would.
2. If any family members accompanied the patient, assist them in any way possible.
3. Contact local law enforcement authorities and advise them of the death and the DNRO.
4. Ask them to initiate local procedures.
5. Obtain and document names, times, and agencies.
6. Document DNRO information as required by BEMS.
7. Whenever possible, cooperate with any reasonable requests from local authorities.
8. As soon as possible, notify base and the receiving facility.

CARING FOR DNR PATIENTS

Section 1.10

DNR patients shall be provided with all emergency treatment except that which is meant to restore ventilation and/or circulation in the event of the patient's cardiac or respiratory arrest. These measures are usually referred to as "comfort care" and generally include (but are not limited to) the following basic and advanced emergency procedures:

1. Immobilization for suspected spinal injuries and fractures
2. Control of hemorrhage
3. Suction and oxygen
4. Cardiac monitor
5. I.V. fluids for dehydration and shock
6. Control of seizures
7. Reversal of hypoglycemia
8. Analgesics for pain control
9. Ventilations

HOSPICE PATIENTS WITHOUT A DNRO (BLS/ALS)

Only those patients being transported to a hospice facility **without** a valid DNRO will be treated under this protocol.

Procedure:

1. Make every attempt to get a DNRO signed prior to transport.
2. Respiratory Distress
   A. If patient is in respiratory distress upon arrival, contact treating physician and assure the following:
      1. Physician knows patient's current condition
      2. Physician wants patient transported in this condition
      3. What treatment Physician wants rendered to patient during transport.
      4. Document all information given by physician, physician name, date, and time physician was spoken to.
   B. If patient begins to experience respiratory difficulty during transport, treat per protocol and transport patient to the closest appropriate emergency room.
3. External Bleeding: standard treatment of direct pressure with dressing
4. Immobilize fractures using skills and devices that minimize pain
5. Uncontrolled pain can be managed with pain medication by paramedics.
6. When in doubt, treat the patient as you would any other patient and transport the patient to the closest appropriate emergency room.

REMEMBER IT IS BEST TO GET A SIGNED DNRO ON A HOSPICE PATIENT PRIOR TO LEAVING THE TRANSFERRING FACILITY, IF AT ALL POSSIBLE.

WITHHOLDING LIFE SUPPORT

Section 1.11

Ambitrans personnel may withhold initiating basic life support and advanced life support measures **ONLY** in the following circumstances:

1. The requirements as set forth in the policy "Refusal of Life Prolonging Procedures" are satisfied, a valid DRNO. (Section 1.10)

- or -

2. The patient has unequivocal evidence that initiating life support measures will be useless. This includes **Unresponsive to all stimuli, Apneic, Pulseless, Pupils fixed and dilated, plus any one or more of the following**:
   a. Rigor mortis
   b. Dependent lividity
   c. Decapitation
   d. Putrefaction
   e. Trauma not consistent with life
      i. Catastrophic brain trauma
      ii. Incineration
      iii. Hemicorporectomy/ morselized body
   f. EKG strips are not necessary in criteria (a) through (e) as stated above
   g. In accordance with Asystole/PEA Protocol in 3 leads (i.e. II, III, aVF or I, II, III)
      i. When the medic determines that life support is withheld in accordance with Asystole/PEA, an EKG strip will accompany report

- or -

3. The service area hospital Supervising Physician has ordered that resuscitation measures be withheld.

In all other cases not listed in section 1 through 3, a physician must give an order to discontinue or withhold life support via radio, telephone, or on scene. The run report should reflect the service area hospital contacted physician's name, and the time of order.

When withholding life support under this policy, request the Sheriff's Department or appropriate law enforcement agency to respond to the scene. Provide appropriate information to law enforcement and turn the scene over to their custody. Depending on location of the deceased (i.e. Hospital or Skilled Nursing Facility) law enforcement may not respond. Contact your Supervisor for further assistance if needed.

FIELD TERMINATION OF RESUSCITATION

Section 1.12

Once the above patient is identified during the course of resuscitative efforts (Section 1.12), the general arrest protocol (Section 3.1) and (Section 3.2) or (Section 8.1) and (Section 8.2) should be instituted. If there is no response to therapy, contact **MUST** then be made with the service area hospital Supervising Physician for permission to terminate resuscitation efforts.

Care must be taken not to disturb the scene to the patient any further once the patient has been pronounced. Do not remove invasive devices (i.e. ET tubes, I.V.'s) unless directed by the Medical Examiner.

If relatives are present, Ambitrans personnel should explain that all possible resuscitative efforts have been attempted and that the physician has stopped the resuscitation. It is very important that relatives be told compassionately that the patient has died and/ or is dead; otherwise the grief process may be delayed or adversely affected. The service area hospital Supervising Physician or the family physician should be contacted if a relative will need further care or desires contact with a physician.

TRANSPORT OF PSYCHIATRIC PATIENTS

Section 1.13

Patients with psychiatric emergencies are considered to be medically unstable and therefore, by State Statute, require transport to a psychiatric receiving facility, or to an emergency department if medical screening is necessary. Organic causes of behavioral changes must be considered first (i.e. low blood sugar; head injury; hypoxia; alcohol and drug related intoxication, etc.). These patients shall be transported to an appropriate emergency department for medical screening.

Baker Act and Marchman Act patients are in protective custody. It is our duty and responsibility to ensure a safe and secure transport for these patients. They are not to be allowed to just walk out of our custody.

There has been some confusion about the ability to restrain Marchman Act and Baker Act patients from crews and whether to utilize the stretcher restraint lock and restraints.

Both Baker Act and Marchman Act patients may pertain to the multiple protocols including the Behavioral Disorders and/ or Excited Delirium protocols. Therefore, the protocol that best fits the patient should be followed. Please refer to section 5 page 5 of the protocols:

5. If the patient is a potential for harm to him/herself or others and restraint can be accomplished safely by personnel on scene, the patient may be restrained (see procedure below) and transported against his/her will:

A: Restrain the patient in the following situations:
(1) Law enforcement personnel order restraints for transport
(2) Medical command physician orders restraint for transport
(3) The patient is a direct threat to EMS personnel and must be restrained to avoid injury.
(4) The patient exhibits suicidal thoughts and actions.
(5) The patient is a flight risk.

When transporting a Baker Act or Marchman Act patient utilize the stretcher restraint lock and restraints. It is in the best interest to keep the patient and crew safe during transport.

Baker Act: The Baker Act provides for an involuntary examination. The following criteria is used:

1. Reason to believe person has a mental illness and because of mental illness, person has refused or is unable to determine if examination is necessary, and either:
2. Without care or treatment, is likely to suffer from neglect or refuse to care for self, and such neglect or refusal poses a real and present threat of substantial harm to one's wellbeing and it is not apparent that such harm may be avoided through the help of willing family members, friends, or the provision of other services; or
3. There is substantial likelihood that without treatment person will cause in the near future serious bodily harm to self or others, as evidenced by recent behavior. Must meet all criteria Initiation of Involuntary

TRANSPORT OF PSYCHIATRIC PATIENTS

Section 1.13

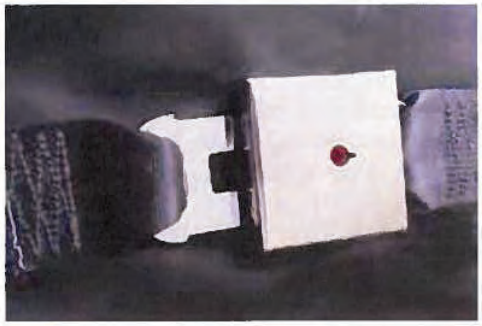
Marchman Act: The Marchman Act criteria is: There is good faith reason to believe the person is substance abuse impaired and, because of such impairment:

1. Has lost the power of self-control with respect to substance use; and either

2a. Has inflicted, or threatened or attempted to inflict, or unless admitted is likely to inflict, physical harm on himself or herself or another; or

2b. Is in need of substance abuse services and, by reason of substance abuse impairment, his or her judgment has been so impaired that the person is incapable of appreciating his or her need for such services and of making a rational decision in regard thereto; however, mere refusal to receive such services does not constitute evidence of lack of judgment with respect to his or her need for such services.

Please make sure that during your truck check that the stretcher restraint lock is available on your truck. If it is not on the truck note it missing on the daily truck checklist and contact your Supervisor. Note ALS trucks may not have the lock due to having the availability of chemical restraints.



Note-

These patients are not allowed to hold or be in close proximity of their belongings

Each patient should be in a hospital gown, not dressed. There may be times this is not possible however they are not to change if they are in hospital gowns to regular street clothes prior to transport.

If you have any questions regarding Baker Act and Marchman Act patients or the stretcher restraint lock, please contact your Supervisor.

RESPONSIBILITIES OF THE ON-SCENE PHYSICIAN

Section 1.14

The transferring physician, the receiving physician, or Emergency Room Physician at the appropriate receiving facility is responsible for on-line medical control of the activities of Ambitrans Ambulance, Inc. personnel.

Occasionally, an on-scene physician may desire to assume responsibility for on-line medical control of the patient. Two circumstances are encountered frequently enough to be mentioned specifically:

1. The attending physician of a patient in the physician's office or outpatient treatment facility

2. A physician present at the scene of an accident or medical emergency

It shall be the policy of Ambitrans Ambulance to cooperate with on-scene physicians when the principles outlined in this policy are operative.

For purposes of this policy, a "Physician" is a Doctor of Medicine (M.D.) or Doctor of Osteopathy (D.O.) currently licensed to practice in the State of Florida. Ambitrans personnel should request identification from an individual identifying himself as a physician. This may not be necessary in the setting of the physician's office. Generally, a valid license to practice medicine is a pre-requisite to allowing the physician to direct patient care activities.

In the case of transporting a patient from the patient's physician's office or outpatient facility, the attending physician will continue medical control of patient care while the physician is in attendance. The provider in charge will assume responsibility for patient care upon leaving the physician's office. The patient's physician is not required to accompany the patient to the Emergency Department.

In all other cases, contact of the service area hospital Supervising Physician in which the patient is being transported to shall be established at the earliest opportunity to advise that an on-scene physician desires to provide medical supervision. Give the physician's name to the Emergency Department and document this in the run report. Having received on-line permission to provide medical control, the on-scene physician-of-record may not abandon the patient. Carefully document when he assumed medical control.

Medical Control should not be relinquished by the Supervising Physician when the on-scene physician is not willing to accompany the patient to the receiving hospital or cannot provide proper identification.

The on-scene physician, just as the Supervising Physician, has the right to modify treatment described in the Protocols in the interest of patient care. However, any modification that breaches the standard of care is not acceptable. In such circumstances, advise the on-scene physician that you must receive approval from the Supervising Physician for any excessive deviation from the standard of care.

INTERFACILITY TRANSFERS

Section 1.15

REFERENCE

Rules of the Department of Health, Bureau of Emergency Medical Services FS Chapter 64J.

The safety of an inter-facility transfer patient is the shared responsibility of the supervising or attending physician ordering the transfer (transferring physician), and the Ambitrans personnel charged with transporting the patient.

Inter-facility transfers shall be considered to be the transfer of a patient from a transferring physician at one facility to a receiving physician at a second facility. Ambitrans personnel shall verify that contact between the two physicians has occurred and that the patient has been accepted by the receiving physician and facility prior to transportation.

It shall be the responsibility of the transferring physician to certify:

1. That the transfer **is** medically necessary, and
2. That the patient **is** medically stable for transport.

For purposes of this policy, the terms "medically stable" and "stability" mean that there is substantial confidence that the patient will suffer no deterioration in his/her condition during the period of the anticipated transfer.

Ambitrans personnel reserve the right to perform a primary and secondary survey prior to transportation to confirm stability of the patient. If there is substantial doubt regarding the stability of the patient, the receiving physician shall be contacted prior to transportation.

Occasionally, an unstable patient may require inter-facility transfer due to the inability of the transferring physician to render definitive care. Under these extenuating circumstances, all reasonable precautions shall be taken to insure a safe transfer of the patient to the receiving facility.

Ambitrans personnel shall insure that all pertinent clinical material, such as the medical record, x-rays, laboratory test results, and transfer forms accompany the patient to the receiving facility.

Ambitrans personnel should carefully document the names of the physicians and facilities involved in the transfer on the run report, as well as any personnel accompanying the patient. In general, Ambitrans will not transport the following types of patients without appropriate personnel from the transferring facility accompanying the patient: balloon pumps, I.V. medications outside those outlined in protocol, critical infants and children, critical trauma patients, and complicated obstetrical cases.

INTERFACILITY TRANSFERS

Section 1.15

During transport, should the patient's condition become unstable [acutely or gradually], the Paramedic or EMT-B attending the patient should contact the on-line physician at the transferring or receiving hospital for direction.
During a long-distance transport, if the patient becomes unstable and no contact can be made with the receiving hospital, the paramedic or EMT-B attending the patient should attempt to stabilize the patient's condition by utilizing the standing orders contained in this protocol.

If, after treatment, the patient's condition continues to deteriorate, or the continued stability of the patient's condition remains in question the paramedic or EMT-B must make a determination to continue or divert the transfer.

Several factors to consider are:

1. What is the remaining travel time to the receiving facility?
2. Is the patient's condition becoming "life-threatening"?
3. What is the travel time to the closest appropriate hospital?
4. If the patient is now stable, is there a high probability that the patient may deteriorate prior to arrival at the receiving facility?

If the decision is made to divert the transfer to the closest hospital you should:

1. Advise the patient of your decision, if conscious and alert.
2. Locate the closest hospital by utilizing the map and State Communications book.
3. Contact the hospital you are diverting to by cellular phone and advise them of the patient's condition and reason for diversion.
4. Ensure contact is made with transferring and receiving hospitals notifying them of change in patient destination.

INFECTION CONTROL / EXPOSURE GUIDLINES

Section 1.16

Florida law provides for the welfare and protection of EMS providers in the following situation.

- If there has been an airborne or blood borne exposure to the EMS provider, every hospital and/or agency must have a policy to follow-up appropriately. This may include testing of the patient source and the EMS provider. It is important to report the exposure so the patient source can be tested at the facility where the patient has been transported.
- There is an obligation of the hospital once a patient has been diagnosed with a communicable disease, to find out if there was an exposure during transport of the patient.

All possible exposures must be documented both at the hospital and at the place of employment. Various forms must be completed.

Report **EXPOSURES** immediately to your Operations Supervisor.

Standard Precautions

Emergency care workers are to consider **ALL** patients as potentially infected with a communicable disease and are to adhere **RIGOROUSLY** to the infection control precautions for minimizing the risks of exposure to blood and body fluids of **ALL** patients.

Guidelines:

1. ALWAYS wear gloves during patient contact.
2. Wear gloves, mask, goggles when performing airway maneuvers such as ventilation via BVM, King Tube insertion, I-Gel, Intubation, and Suctioning.
3. Wear gown when possibility of being exposed to large amounts of blood or body fluids.
4. For **Airborne Communicable Diseases**, care must be taken to wear the proper mask, ventilate the ambulance, and limit exposure of EMS personnel as much as possible. If a patient has a fever, cough or rash, a mask is a good idea.
5. Maintain good hand washing practices after removing gloves.
6. Obtain Hepatitis B vaccine and other testing and vaccines as recommended.
7. Handle "Sharps" carefully – dispose of properly.
8. Wear personal protective gear when cleaning contaminated equipment.
9. Dispose of contaminated waste, equipment and clothing carefully and properly.
10. Report **EXPOSURES** immediately to the Operations Supervisor. Document and Follow-up properly.

PHLEBOTOMY FOR BLOOD TOXICOLOGY

Section 1.17

The Paramedic shall not delay life or limb-preserving interventions for purposes of compliance with a request for a blood toxicology specimen. An Ambitrans unit may not be called to a scene for the sole purpose of performing phlebotomy for blood toxicology In accordance with Florida Statutes 316.1932(2)(b), a law enforcement officer may require a Paramedic to obtain a blood sample for blood alcohol and toxicology testing.

Under most circumstances, it is preferable for the blood specimen to be drawn by a laboratory technician at the receiving hospital however; the Paramedic shall comply with a law enforcement officer's request to draw blood in the field.

When performing venipuncture for blood alcohol or toxicology determination, use only law enforcement approved venipuncture kit provided by law enforcement. The Paramedic will prepare the skin with providone iodine solution (Betadine) rather than isopropyl alcohol.

The Paramedic shall obtain the blood specimen in a professional manner, and should announce his intentions, and the nature of the test, to the patient before proceeding.

In accordance with Florida Statute 316.1933(1), the law enforcement officer may use reasonable force, if necessary, to require an individual to submit to the administration of a blood test. Since this is a law enforcement function, Ambitrans personnel shall refrain from restraining under these circumstances.

In accordance with Florida Statute 316.1933(2)(e), the Paramedic shall be held harmless for compliance with an order, by a law enforcement officer, to obtain a blood specimen for alcohol or toxicology testing.

DOCUMENTATION

Section 1.18

All patients that are treated or transported by Ambitrans will have a Patient Care Report completed within 24 hours unless approved by Training Division or QA. This report will document all interventions performed to include time of intervention, result of intervention (if appropriate), as well as presence of pertinent positive or negative findings according to the patient's chief complaint.

All patients who are transported by Ambitrans will have a minimum of two (2) sets of vital signs documented on the patient care report. Should there be a significant variance from initial blood pressure obtained with electronic monitor, manual confirmation is indicated.

Should the patient require any medications, vital signs will be taken and documented both before and after medication administration.

Patients who are considered **UNSTABLE** will have a minimum of 2 sets of vital signs reassessed at least every fifteen (15) minutes (Section 2.4).

Patients who are considered **STABLE** will have a minimum of 2 sets of vital signs reassessed at least every sixty (30) minutes (Section 2.4).

Whenever a patient is administered medication, when there is a change in cardiac rhythm, or when there is a change in patient status, an EKG strip and vitals signs will be recorded. Cardiac monitor information **shall** be digitally uploaded to the ePCR report.

CONTROLLED SUBSTANCE ACCOUNTABILITY

Section 1.19

Approved "controlled medications" carried on the units are as follows:

Morphine Sulfate	Up to 50 mg
Versed	Up to 20 mg
Fentanyl	Up to 1 mg
Succinylcholine (CCT)	
Etomidate (CCT)	

Conditions:

1. Chapter 64J requires that the Medical Director establish and monitor security measures for controlled medications stored on ambulances. The following shall be strictly adhered to. Failure to follow this protocol shall result in severe disciplinary action.

2. Controlled medications are to be kept in a locked container, within a locked cabinet, in each ambulance. Ambulance doors are to be kept locked when the vehicle is unattended to assure the safety of these medications.

3. A "Controlled Substances Log Book" with numbered pages shall be assigned to each container of controlled substances with the provision to document;
   A: Start and end of shift inventory
   B: Administration of medication
   C: Replacement of expired medication

Procedure:

1. At the beginning of each shift, each paramedic shall visually inspect the controlled substances and enter the required information into the controlled substances log book.

2. If the information is consistent with the previous log entries, the paramedic will print and sign their name in the log book. This shall be witnessed by another paramedic, or the EMT partner for that shift if there is no other paramedic available to witness the drug count.

3. Any discrepancies should be reported immediately to the Operations Manager and a written report filed with Chief Operating Officer.

4. When a controlled substance is used in the field, the Paramedic must complete the "medication administration" area of the narcotics log, as well as an Administration Card. Any waste must have a witness signature other than the in-charge paramedic. EMT's are not allowed to witness the wasting of a controlled medication. In addition to the original signatures of the paramedic and witness, their printed name must be placed next to their signatures. The Administration Card must be turned in with the run report for that drug.

5. At the end of each shift, the paramedic will visually count and inspect the controlled medications, considering any changes due to use, expiration or breakage. The paramedic will then enter this information into the "end of shift" section, check the log to verify accuracy, and lock the controlled substances back into the locked container in the locked cabinet. After locking the ambulance, the keys are returned to the appropriate storage location from which they were obtained at the beginning of the shift.

6. Replacement supplies of controlled substances are kept in a locked safe which is kept in a secure, sanitary, temperature and ventilation-controlled area. Only the Operations Director (and/or his designate) has access to the substances in this safe. Also, in the safe, is kept an inventory log book which records the "on hand" quantity, all receipts and issues of items kept in the safe and a monthly inventory of these items. All expired controlled substances are to be clearly marked as such and are to be segregated to preclude the possibility of any confusion of expired supplies with those authorized for current use.

7. Replacements are issued from this safe as follows:
   A: Completion of the "Medication Administration Record" in the log book indicating usage of the substance.
   B: Return to the safe of expired medications will result in a one for one replacement.
   C: Broken or damaged packages must be returned to the safe accompanied by an incident report indicating the circumstances surrounding the damage.

8. Discrepancies, breakage, replacement problems or incomplete log entries will necessitate written reports to be submitted to the Operations Manager and Chief Operating Officer, who will investigate all incidents thoroughly and forward all pertinent findings to the Medical Director.

9. If, at any time it appears that a theft of controlled substances has occurred or been attempted, immediately notify the Operations Director and/or the Chief Operating Officer, who will contact the appropriate local law enforcement agency and the Medical Director for investigation.

SUPPLY

Section 1.20

All non-narcotic medications will be supplied by Ambitrans Logistic Division located in Port Charlotte Corporate Base. All units will ensure that they have a correct amount of medications. Ensure that all medication on the units and in the station, supply are in date and at the appropriate par levels as referenced in F.A.C 64J-1.003 and Medication Inventory.

Ambitrans has taken time to consider the appropriate levels to be maintained based on (1) call volume and (2) supply use per station.

Operations, Training, Logistics, and QA/QI Divisions have set up the current medication supply standards. This includes specific levels to be held in all medical boxes, in ambulance supply cabinets, and in station supply closets. These levels will be assessed annually or as use dictates to ensure that the medication par levels remain appropriate.

This process will be followed and adjusted as the need arises. Please make every attempt to rotate the medications as described. This process will help ensure medications that are nearing expiration date are used first.

The following process of medication use and documentation will be observed:

- Use medications out of the ALS Med box to treat patients
- Use appropriate supply bag (B 1-13 or ALS-1-5)
- Don't resupply medications or bags from other units
- Fill your units supply from your station supply closet
- Document the use of medications in your PCR treatment/intervention section
- Place used and/or open bags in the marked bin at station

Expiration Dates

All Medications will be checked on the first (1st) of every month. Medications that expire within the next 30, or 60 days should be denoted on the "Monthly Checklist" found on Ninth Brain. Please forward a completed form to Logistics.

- Use of expired medications is strictly prohibited by law Florida Statute 499

- Expirations with the date format of **month/year (01/2015)** are good until the last day of the month
  - (e.g. **Narcan exp. 01/2025 is good until midnight 01/31/2025**)

- Expirations with the date format of **month/day/year (01/01/2025)** are good until midnight of that specific day
  - (e.g. **Atropine exp. 04/01/2025 is good until midnight on the 1st**)

- Personnel are strictly prohibited from keeping expired medication for "training". Expired medications will be removed from unit or supply and returned immediately to Logistics supply for proper disposal.

MEDICATIONS, FLUIDS, CONTROLLED SUBSTANCE INVENTORY, STORAGE AND SECURITY PROCEDURES

Section 1.21

1. All Intravenous fluids and medications (other than controlled substances) which are kept in an ambulance shall be placed in a medication storage box or a compartment of the vehicle.
2. A checklist shall be kept in each ALS ambulance in order to document all intravenous fluids and medications on a daily basis.
3. All replacement intravenous fluids and medications (other than controlled substances) shall be stored in a locked cabinet located in a secure, sanitary, temperature and ventilation-controlled area. Access shall be limited to the Supply Officer, Operations Director, Chief Operating Officer, and Training Supervisor.
4. An inventory log shall be kept in the supply cabinet to document current inventory, quantities of any additions or deletions and the legible name of the person completing the inventory.

Procedure:

1. On the first day of each month a "MONTHLY MEDICATION/FLUID EXPIRATION LIST" shall be completed for each ALS vehicle and the supply cabinet.

2. All expired/damaged intravenous fluids and medications shall be removed and given to the operations manager or his designate who will issue replacements from current stock. All expired supplies are to be logged, clearly marked as such and segregated as to preclude confusion of expired supplies with medical supplies authorized for current use.

3. The supply officer shall insure that sufficient quantities are kept on hand to accommodate replacement for normal usage/breakage and projected expiration dates.

4. If at any time it appears that a theft of IV fluids or medications has occurred or been attempted, immediately notify the Operations Director and/or the Chief Operating Officer who will then contact the presiding law enforcement agency and the Medical Director for investigation.

LIGHTS AND SIRENS USE

Section 1.22

Use of lights and other warning devices (EMS 64J-2): An ambulance may not use emergency lights and audible warning devices, unless they do so in accordance with the standards imposed by Florida Department of Health Rule 64J-2 and are transporting or responding to a call involving a patient who presents or is in good faith perceived to present a combination of circumstances resulting in a need for immediate medical intervention. When transporting the patient, the need for immediate medical intervention must be beyond the capabilities of the ambulance crew using the available supplies and equipment.

- Response to an incident:
  - The EMS vehicle driver is responsible for the mode of response to the scene based upon the information available at dispatch. If the dispatcher provides a response category based on dispatch protocol, Ambitrans crew, shall respond in a mode (L&S or non-emergent) consistent with the category of the call at dispatch as directed by the dispatch center. Response mode may be altered based upon additional information that is received by the dispatcher while the crew is en-route to the scene.
  - Special circumstances may justify L&S use to a scene when the emergency vehicle is not transporting a crew for the purposes of caring for a patient:
    - Transportation of personnel or material resources considered critical or essential to the management of an EMERGENCY incident scene.
    - Transportation of human or materials resources considered critical or essential to the prevention or treatment of acute illness/injury at a medical facility or other location at which such a circumstance may occur - (transportation of an amputated limb, organ retrieval, etc…).

- Patient Transport
  - The crew member primarily responsible for patient care during transport will advise the driver of the appropriate mode of transportation based upon the medical condition of the patient.
  - Mode of transport for interfacility will be based upon the medical protocol and the direction of the referring physician or medical command physician who provides the orders for the patient care during the transport. Generally, interfacility transport patients have been stabilized to a point where the minimal time saved by L & S transport is not of importance to patient outcome.

L&S should not be used during patient transport unless the patient meets one of the following criteria:

- An **UNSTABLE** patient has significant abnormality of one or more vital signs, significant abnormality of one or more cardiovascular, neurological, respiratory or trauma parameters. (Section 2.4)

- Exceptions to these policies can be made under extraordinary circumstances (e.g.) disaster conditions, back log of high priority calls where the demand for emergency ambulances exceeds available resources, etc…). These exceptions should be documented.

L&S use is generally **not** appropriate in the following situations:

- Hospital discharges
- Baker acts
- Wound care transports and dialysis transports
- "Standbys" for the county fire departments
- This list is not all encompassing. These are just examples.

Other operational safety considerations:

- The following procedures will be followed for safety:
  - Daytime running lights or low beams will be on at all times while operating during L&S and non-L&S driving.
  - L&S should **BOTH** be used when exercising any moving privilege granted to emergency vehicles that are responding or transporting in an emergency mode.
  - When traveling in an opposing traffic lane, the driver should always proceed with due regard.
  - The use of L&S **must be** documented on the patient care report. The justification for using L&S during transportation should also be documented.

Seat belts or restraints will be securely fastened to the following individuals when the vehicle is in motion:

- All EMS vehicle operators
- All patients
- All non-EMS passengers
- All EMS practitioners (when patient care allows)
- All infant and toddlers (these children should be transported in an age-appropriate child seat or size appropriate Pedi-mate unless approved by management). Children should not be placed in a cab passenger seat with airbag.

TRANSITIONAL CARE

Section 1.23

This is to be used when **ALL 3 criteria are met**:

1. You are in the Hospital awaiting a bed assignment

- AND -

2. Your unit is delayed off load

- AND -

3. Your patient in need of additional or continued care

4. Once all of the above have been satisfied the Paramedic will strictly adhere to the following:

    a. Seek permission directly from the attending physician to provide required care. This includes but is not limited to:
        i. Procedures other than vital sign monitoring
        ii. Administration of medications
        iii. Any patient that goes into cardiac or respiratory arrest, care **WILL NOT** be delayed to obtain permission from physician

    b. The patients vital signs are required to be monitored including but not limited to:
        i. Pulse
        ii. Respirations
        iii. Lung sounds
        iv. Blood pressure
        v. Blood glucose determination
        vi. Skin condition – color, temperature, moisture
        vii. Pulse oximetry and/or plethysmograph (SaO2 waveform)
        viii. EtCO2
        ix. Cardiac monitor
        x. Continued 12 LEAD's if needed

    c. Carefully document this situation in great detail to include conversations with ER staff and physician and care ordered and/or given.

SCENE SAFETY

Section 1.24

Applies to every response, particularly if dispatch information or initial scene size-up suggests:

- MVA
- Violent patients

1. General Considerations MVA:
   a. Obtain as much information as possible prior to entering the scene.
   b. Look for hazardous materials, placards, labels, spills, and/or containers.
   c. Consider entering the scene from uphill/ upwind
   d. Look for downed wires
   e. Call for assistance as needed
   f. Park in a manner that allows for rapid departure.
   g. Allow for access of other support vehicles (i.e. fire trucks)
   h. Avoid entering a damaged vehicle or building.
   i. Use all available lights to light the scene.
   j. Always use PPE **(Infection Control Protocol)**
   k. Always wear High Visibility Safety Vest while on scene of MVA

2. Residence Scenes with Suspected Violent or Baker Acted Individuals
   a. Attempt to ascertain the scene is under control.
   b. Do not enter environments that have not been determined to be secure.
   c. Shut down any warning lights/sirens one block or more before reaching the scene.
   d. Park in a manner that allows rapid departure.
   e. Park 100' prior to or past residence.
   f. Approach residence on an angle.
   g. Listen for screaming, yelling, or gun shots.
   h. If you decide to leave, walk backwards.
   i. Stand on the knob side of the door.
   j. Knock and announce yourself.
   k. Open the door all the way and look in first.
   l. Observe as you enter for alternative exits.
   m. Do NOT let anyone between you and the door, or back you into a corner.
   n. Do not take sides or accuse anyone.

SECTION 2

General Orders

GENERAL ORDER APPROVAL

Section 2.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

EMS GENERAL ORDERS

Section 2.1

1. All patients will be treated with respect.

2. The EMT/Paramedic will at all times conduct his activities according to the standards established by Chapter 401 of the Florida Statutes and Chapter 64J-1 F.A.C., periodically amended.

3. The EMT/Paramedic is responsible for equipment as per Chapter 64J-1 and will at all times ensure that his vehicle is equipped in compliance with standards outlined in Chapter 64J-1.

4. The EMT/Paramedic will initiate prompt treatment of sick and/or injured persons, within the scope of their training and certification, at the scene of a medical emergency in accordance with Chapter 64J-1. F.A.C.

5. It is the responsibility of each EMT/Paramedic to review, understand, and follow all current Ambitrans Ambulance medical policies, procedures, and protocols, and any updates or changes to them. It is also the responsibility of each EMT/Paramedic to study and understand all treatment protocols including; Transport Protocols and policy and procedure of Ambitrans Ambulance and to adhere explicitly to the material therein.

6. The Medical Director hereby designates the Emergency Department staff physicians and referring subspecialists (i.e. cardiologist, critical care specialists, neurologists, etc....) of hospitals in Charlotte, Desoto, Lee, Sarasota, Collier, Hendry and Manatee Counties, (hereinafter referred to as Resource Hospitals) as supervising physicians. On-line control of Ambitrans Ambulance, Inc. in Charlotte, Desoto, Lee, Sarasota, Collier, Hendry and Manatee Counties shall be the responsibility of the Supervising Physician (transferring physician or receiving physician or the ER physician at the transferring or receiving hospitals).

7. The EMT/Paramedic is directed to follow orders as described in the Protocols. If orders conflict, those received from the Supervising Physician take precedence. Orders issued by the Supervising Physician shall have priority over orders issued by an On-Scene Physician. Should the On-Scene Physician wish to assume control of a particular case, permission shall be obtained from the Supervising Physician of the destination hospital. In this circumstance, refer to the policy entitled Responsibilities of the On-Scene Physician (Section 1.15).

8. The Supervising Physician shall have the prerogative to modify the treatment of a patient from that described in the protocols if the best interest of the patient is thereby served. Such modifications must be based upon sound medical judgment and in accordance

with the standard of practice in pre-hospital care. Any orders given by the Supervising Physician shall be documented in the ePCR in the treatments section.

9. It is our goal to follow the foundation established by American Heart Association Conference on Standards and Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care.

10. A valid consent shall be obtained from each patient prior to the initiation of evaluation and treatment as time and condition allow. Consent may be verbal, written, or implied (as in incapacitated and minor patients). Refusal of Care is covered in (Section 1.6).

11. Emergency medical care to minors may be rendered in the pre-hospital setting by EMT/Paramedic in accordance with Chapter 401 Florida Statutes. The minor may be released only to a parent, legal guardian, law enforcement officer, or designated school board representative, if applicable. If the minor is transported to a hospital, the Supervising Physician may assume custody of the minor pending notification of parent or legal guardian (Section 1.6).

12. Radio communications between rescue personnel and the Hospital Emergency Department shall be in accordance with the policy entitled Patient Information Transmission Format (Section 1.5). If technical problems prevent communication, the EMT/Paramedic is authorized to proceed with the Physician's Orders section of the protocol in lieu of on-line medical direction. The Paramedic may contact a Supervising Physician at the closest hospital for medical direction if they are unable to communicate with the desired destination.

13. The Physician's Orders are reserved for use in cases where communications with the Supervising Physician are delayed or impossible. A good faith attempt to contact the Receiving Hospital must be made and documented. Telephone communication is acceptable in the event radio communications are difficult or of poor quality. If the Paramedic uses Physician's Orders due to communication problems or is directed to use them by a Supervising Physician, they should proceed until the patient's condition is stabilized.

14. Upon arrival at the scene of a sick or injured person, a primary and secondary survey shall be performed, and care shall be initiated based upon the appropriate protocol. (Section 2.5 and Section 2.6) The Paramedic shall follow the protocol until:
    a. The patient is stabilized, and no further care is required other than to continue what has been initiated,

b. Medical direction is needed to guide patient care. It may be appropriate to switch protocols during the course of patient care.

15. Upon arrival at the hospital, the EMT/Paramedic shall insure that all pertinent clinical information, including preliminary incident report, is provided to the hospital staff to facilitate an orderly transfer of patient care responsibility. The EMT/Paramedic shall complete the permanent patient report in accordance with policies of the Emergency Medical Provider and Chapter 64J-1 F.A.C.

16. All personnel are responsible for knowing and adhering to the policies contained in the Exposure Control Plan for Bloodborne Pathogens for Ambitrans Ambulance.

GENERAL MEDICAL SUPPORTIVE CARE

Section 2.2

All medical patients **will** receive General Medical Supportive Care.

It is the understanding that if a BLS first responder arrives on scene first, then the Basic Life Support portions of the protocols will be carried out. If the first arriving unit is ALS, then it is up to that crew to make sure that both the Basic Life Support and Advanced Life Support portions are followed.

If at any time you are unable to determine which protocol the patient falls into, contact on-line medical control at the receiving facility for further guidance.

Basic

- Secure airway and provide basic airway and/or ventilation management as needed. i.e., OPA, NPA, jaw thrust, head tilt/chin lift, assisted ventilations, I-Gel Airway (Section 12.10)
- Apply O_2 to maintain a SPO_2 of $\geq$94% as needed (Section 12.15)
- Suction airway as indicated
- Monitor and record vital signs
- Determine blood glucose as needed
- Spinal immobilization, as indicated (Section 12.19)
- Bleeding control and/or Tourniquet (Section 12.21), splinting and/or bandaging as indicated

Advanced

- Provide advanced airway and/or ventilation management as needed. i.e., ETT Intubation (Section 12.6), Cricothyrotomy (Section 12.5) or Needle Cricothyrotomy (Section 12.13)
- Initiate cardiac monitoring and determine rhythm as needed
- Initiate 12 lead ECG (Section 12.1) when appropriate or specified
- Monitor and record CO_2 capnography and/or SaO_2 (pleth wave) when appropriate (Section 12.15)
- Establish vascular access i.e., IV (Section 12.23) or IO (Section 12.7) when appropriate

Notes:

-

GENERAL TRAUMA SUPPORTIVE CARE

Section 2.3

All trauma patients **will** receive General Trauma Supportive Care.

It is the understanding that if a BLS first responder arrives on scene first, then the Basic Life Support portions of the protocols will be carried out. If the first arriving unit is ALS, then it is up to that crew to make sure that both the Basic Life Support and Advanced Life Support portions are followed.

If at any time you are unable to determine which protocol the patient falls into, contact on-line medical control at the receiving facility for further guidance.

Basic

- Issue Trauma Alert, as indicated (Section 10.V and 10.VIII)
- Spinal immobilization, as indicated (Section 12.19)
- Secure airway and provide basic airway and/or ventilation management as needed. i.e., OPA, NPA, jaw thrust, head tilt/chin lift, assisted ventilations, I-Gel Airway (Section 12.10)
- Sucking chest wound, seal injury utilizing appropriate adjuncts
- Apply O_2 to maintain a SPO_2 of $\geq$94% as needed (Section 12.15)
- Suction airway as indicated
- Bleeding control and/or Tourniquet (Section 12.21), splinting and/or bandaging as indicated
- Monitor and record vital signs
- Determine blood glucose as needed

Advanced

- Provide advanced airway and/or ventilation management as needed. i.e., ETT Intubation (Section 12.6), Cricothyrotomy (Section 12.5) or Needle Cricothyrotomy (Section 12.13)
- Tension pneumothorax, proceed to Needle Thoracostomy (Section 12.14)
- Initiate cardiac monitoring and determine rhythm as needed
- Initiate 12 lead ECG (Section 12.1) when appropriate or specified
- Monitor and record CO_2 capnography and or SaO_2 (pleth wave) when appropriate (Section 12.15)
- Establish vascular access i.e., IV (Section 12.23) or IO (Section 12.7) when appropriate

Physicians Orders

- On-line medical control for Normal Saline bolus over 2 Liters

Notes:

-

DEFINITION OF STABILITY/ INSTABILITY

Section 2.4

A **STABLE** patient has reasonably normal vital signs, no significant cardiovascular, neurological, respiratory or trauma parameters. A minimum of 2 sets of vital signs will be obtained at least every 30 minutes (Section 1.8).

An **UNSTABLE** patient has significant abnormality of one or more vital signs, significant abnormality of one or more cardiovascular, neurological, respiratory or trauma parameters. A minimum of 2 sets of vital signs will be obtained every 15 minutes (Section 1.8).

The following definition shall be used throughout all Ambitrans Ambulance medical and trauma protocols. Determination of Stability/Instability depends upon both subjective and objective findings. Parameters to be considered but are not limited to:

ADULT	PEDIATRIC

Vital Signs:
• Pulse
  ○ <50 or >150 per minute for medical reasons
  ○ >120 sustained in trauma
• Respirations
  ○ <12 or >30 per minute
• Hypotension, defined as:
  ○ Medical – Systolic <100mmHg
  ○ Trauma – Systolic <90mmHg
• Blood glucose
  ○ <60 ml/dL with no change with treatments or >400 ml/dL
• SAO_2
  ○ <94%
• Temperature
  ○ <94° F or >104° F
	Vital Signs:
	• Pulse
	  ○ <60 or ≥180 per minute for children; ≥220 per minute for infants for medical reasons
	• Respirations
	  ○ <12 or >30 per minute
	• Hypotension, defined as:
	  ○ systolic BP <70 + (age x2)
	• Blood glucose
	  ○ Children – <60 ml/dL with no change with treatments.
	  ○ Neonates – <40 ml/dL with no change with treatments
	• SAO_2
	  ○ <94%
	• Temperature
	  ○ <94° F or >104° F

Cardiovascular Parameters: • Cardiac /STEMI Alert • Significant, severe chest pain, accompanied by ECG evidence of ischemia, and/or signs of ischemic chest pain • Signs/Symptoms of shock • Lethal or significant cardiac rhythms	**Cardiovascular Parameters:** • Signs/Symptoms of shock • Lethal or significant cardiac rhythms ○ V-TACH with or without pulse, V-FIB, A-FIB or A-Flutter with RVR, WPW or PSVT
	Neurological Parameters: • Acute focal deficits

○ V-TACH with or without pulse, V-FIB, A-FIB or A-Flutter with RVR or PSVT ○ 2nd Degree Type II HB ○ 3rd Degree HB **Neurological Parameters:** • Stroke Alert criteria • Active seizures • Acute altered level of consciousness (unresponsive, agitated) **Respiratory Parameters:** • Active airway control/assistance • Increased work of breathing • Use of accessory muscles • Pulmonary edema • Pneumothorax/Hemothorax • Surgical airway **Trauma Parameters:** • Trauma Alert Criteria **Other Factors:** • Suspected abuse/neglect • Complicated childbirth • Paramedic judgment	• Active seizures • Acute altered level of consciousness (unresponsive, agitated) **Respiratory Parameters:** • Active airway control/assistance • Increased work of breathing • Use of accessory muscles • Signs/symptoms of Epiglottitis • Pneumothorax/Hemothorax • Surgical airway **Trauma Parameters:** • Trauma Alert Criteria **Other Factors:** • Suspected abuse/neglect • Paramedic judgment

ADULT ASSESSMENT

Section 2.5

BLS ALS

Defined as: Patient over the age of 15 years unless specified in protocol

1. **Scene Size-up**
   a. Review of dispatch information
   b. Assess need for body substance isolation
   c. Assessment of scene safety
   d. Determine mechanism of injury/nature of illness
   e. Determine number and location of patients
   f. Determine need for additional resources
   g. Determine need of spinal immobilization
   h. Note anything suspicious at the scene – Medications, household chemicals, other ill/injured family members

2. **Initial Assessment**
   a. General impression of patient
   b. Assess mental status (AVPU) – maintain spinal immobilization as indicated
   c. Chief complaint
   d. Assess airway
   e. Assess breathing
   f. Assess circulation – pulse, major bleeding, skin color, and temperature (as indicated)
   g. Assess disability – ability to move extremities, stroke assessment, defibrillation – VF / VT without pulse
   h. Expose and examine head, neck, chest, abdomen, pelvis, and back (when patient is rolled on side)

3. **Identify stability of Patients (Section 2.4) based on following criteria**
   a. Vital signs
      i. Pulse
      ii. Respirations
      iii. Lung sounds
      iv. Blood pressure
      v. Blood glucose determination
      vi. Skin condition – color, temperature, moisture
      vii. Pulse oximetry and/or plethysmograph (SaO_2 waveform)
   b. Cardiovascular parameters
   c. Neurological parameters
   d. Respiratory parameters
   e. Trauma parameters
   f. Other factors

4. **Initial Management (Section 2.2 Medical or Section 2.3 Trauma)**

5. **Obtain a Medical History**
    a. S – Symptoms – assessment of chief complaint
        i. O – Onset and location
        ii. P – Provocation
        iii. Q – Quality
        iv. R – Radiation, Referred, Relief
        v. S – Severity
        vi. T – Time
    b. A – Allergies
    c. M – Medications
    d. P – Past medical history
    e. L – Last oral intake (food and/or drink)
    f. E – Events leading to illness or injury

6. **Other Assessment Techniques**
    a. Cardiac monitoring
    b. 12 Lead interpretations
    c. Capnography
    d. Monitor body temperature

7. **Secondary Assessment**
    a. Reassess neurological status
    b. Pupillary response
    c. Glasgow coma score
    d. Reassess vital signs
        i. Pulse
        ii. Respirations
        iii. Lung sounds
        iv. Blood pressure
        v. Blood glucose determination
        vi. Skin condition – color, temperature, moisture
        vii. Pulse oximetry and/or plethysmograph (SaO2 waveform)
    e. Conduct a head-to-toe survey

PEDIATRIC ASSESSMENT

Section 2.6

BLS ALS

Defined as:

- **Neonate – birth to 30 days**
- **Infant – 30 days to 1 year**
- **Child (includes: Toddler, Preschooler, School-aged, and Adolescent) – 1 year to 15 years**

1. **Scene Size-up**
   a. Review of dispatch information
   b. Assess need for body substance isolation
   c. Assessment of scene safety
   d. Determine mechanism of injury / nature of illness
   e. Determine number and location of patients
   f. Determine need for additional resources
   g. Need for spinal immobilization
   h. Note anything suspicious at the scene – Medications, household chemicals, other ill/injured family members
   i. Assess any discrepancies between history of illness/injury given and patient presentation

2. **Initial Assessment**
   a. General impression of patient (Pediatric Assessment Triangle – P.A.T)
      i. Appearance
      ii. Work of breathing
      iii. Circulation to skin

   b. Assess mental status (AVPU) – maintain spinal immobilization as indicated
   c. Chief complain
   d. Assess airway
   e. Assess breathing
   f. Assess circulation – pulse, major bleeding, skin color and temperature (as indicated)
   g. Assess disability – ability movement of extremities, defibrillation – VF / VT without pulse
   h. Expose and examine patient as appropriate based on age and severity of illness or injury: head, neck, chest, abdomen, pelvis, back (When patient is rolled on side)

i. Initiate measures to prevent heat loss

3. **Identify stability of Patients. (Section 2.4) based on following criteria**
   a. Vital signs
      i. Pulse
      ii. Respirations
      iii. Lung sounds
      iv. Blood pressure
      v. Capillary refill
      vi. Blood glucose determination
      vii. Skin condition – color, temperature, moisture
      viii. Pulse oximetry and/or plethysmograph (SaO_2 waveform)

Heart rate, BP & respiratory rate are expected to increase during times of fever or stress			
AGE	**PULSE**	**RESPIRATIONS**	**BLOOD PRESSURE**
Neonate (birth – 30 days)	**100 – 180**	**30 – 60**	**> 70 systolic**
Infant (30 days – 1 year)	**100 – 180**	**20 – 60**	**> 70 systolic**
Toddler (1 – 3 years)	**90 – 160**	**20 – 30**	**> 70 systolic**
Preschooler (3 – 5 years)	**80 – 140**	**20 – 30**	**> 75 systolic**
School-aged Child (5 – 10 years)	**70 – 120**	**20 – 30**	**> 80 systolic**
Adolescent (10 – 15 years)	**60 – 110**	**12 – 30**	**> 90 systolic**

   b. Cardiovascular parameters
   c. Neurological parameters
   d. Respiratory parameters
   e. Trauma injury parameters
   f. Other factors

4. **Initial Management (Section 2.2 Medical or Section 2.3 Trauma)**

5. **Obtain a Medical History**
   a. S – Symptoms - assessment of chief complaint
      i. O – Onset and location
      ii. P – Provocation
      iii. Q – Quality
      iv. R – Radiation, Referred, Relief
      v. S – Severity
      vi. T – Time
   b. A – Allergies

c. M – Medications
d. P – Past medical history
e. L – Last oral intake (food and/or drink)
f. E – Events leading to illness or injury

6. **Other Assessment Techniques**
   a. Cardiac monitoring
   b. 12 Lead interpretations
   c. Capnography
   d. Monitor body temperature

7. **Secondary Assessment**
   a. Reassess neurological status
   b. Pupillary response
   c. Glasgow coma score
   d. Reassess vital signs
      i. Pulse
      ii. Respirations
      iii. Lung sounds
      iv. Blood pressure
      v. Capillary refill
      vi. Blood glucose determination
      vii. Skin condition – color, temperature, moisture
      viii. Pulse oximetry and/or plethysmograph (SaO_2 waveform)

Heart rate, BP & respiratory rate are expected to increase during times of fever or stress			
AGE	**PULSE**	**RESPIRATIONS**	**BLOOD PRESSURE**
Neonate (birth – 30 days)	**100 – 180**	**30 – 60**	**> 70 systolic**
Infant (30 days – 1 year)	**100 – 180**	**20 – 60**	**> 70 systolic**
Toddler (1 – 3 years)	**90 – 160**	**20 – 30**	**> 70 systolic**
Preschooler (3 – 5 years)	**80 – 140**	**20 – 30**	**> 75 systolic**
School-aged Child (5 – 10 years)	**70 – 120**	**20 – 30**	**> 80 systolic**
Adolescent (10 – 15 years)	**60 – 110**	**12 – 30**	**> 90 systolic**

   e. Conduct a head-to-toe survey

SECTION 3

Cardiac Protocols

CARDIAC PROTOCOLS APPROVAL

Section 3.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

GENERAL ADULT BLS CARDIAC ARREST

Section 3.1

Adult arrest patients will receive General Cardiac Arrest Protocol care. This protocol follows the AHA Guidelines. If BLS units arrives on-scene first, this protocol will be followed until an ALS unit arrives on scene to provided advanced care. Along with this, General Basic Supportive Care will be initiated. When ALS care arrives on-scene, the ALS unit will proceed to the appropriate Cardiac Arrest Protocol.

Constant monitoring of effectiveness of resuscitation is required, especially in patients not responding promptly to standard measures. Proper positioning of airway adjuncts should be confirmed by auscultation of breath sounds at least every (2) minutes. Assess patient cardiac rhythm and pulse every (2) minutes. Vital signs should be obtained every (5) minutes or when there is a change in patient condition.

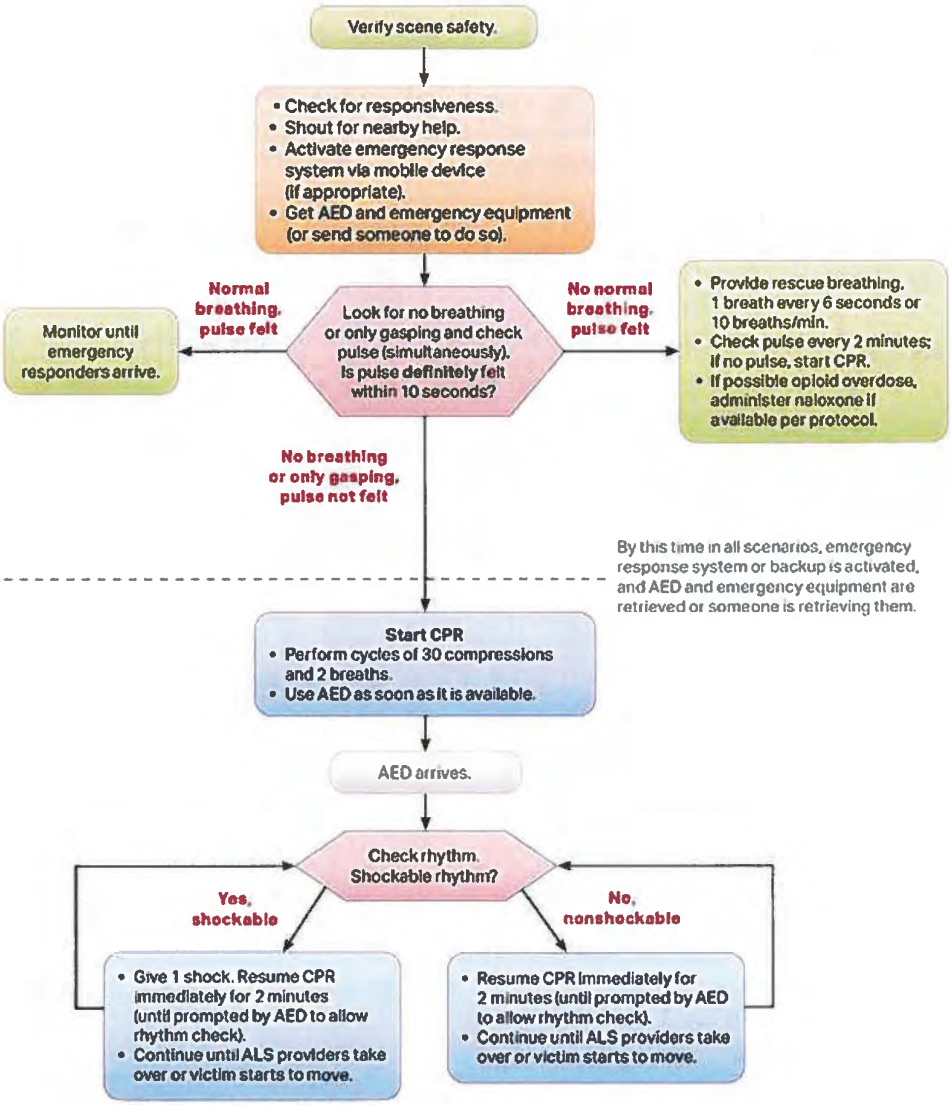
All patients who are intubated or have a SGA shall have cervical immobilization performed after placement is confirmed in order to minimize the possibility of movement. NG/OG is Required with an established airway.

BLS

GENERAL ADULT BLS CARDIAC ARREST

Section 3.1

Adult Basic Life Support Algorithm for Healthcare Providers



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GENERAL ADULT ALS CARDIAC ARREST

Section 3.2

Adult arrest patients will receive General Cardiac Arrest Protocol care. This protocol follows the AHA Guidelines. If BLS units arrives on-scene first, this protocol will be followed until an ALS unit arrives on scene to provided advanced care. Along with this, General Basic Supportive Care will be initiated. When ALS care arrives on-scene, the ALS unit will proceed to the appropriate Cardiac Arrest Protocol.

Constant monitoring of effectiveness of resuscitation is required, especially in patients not responding promptly to standard measures. Proper positioning of airway adjuncts should be confirmed by auscultation of breath sounds at least every (2) minutes. All unresponsive patients who are intubated shall have cervical immobilization performed after tube placement is confirmed in order to minimize the possibility of movement within the trachea.

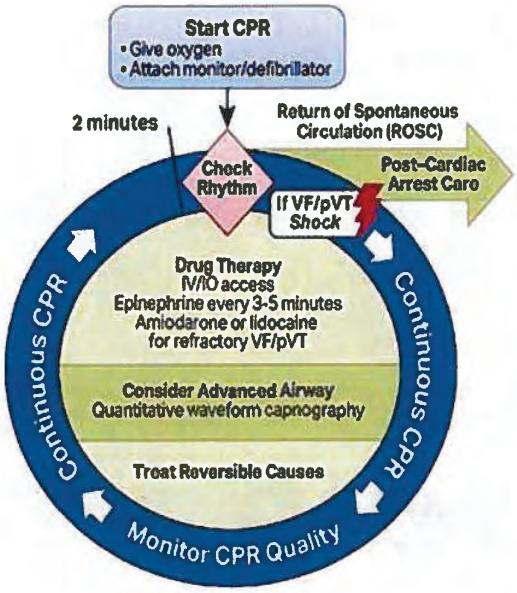
All patients who are intubated or have a SGA shall have cervical immobilization performed after placement is confirmed in order to minimize the possibility of movement. NG/OG is Required with an established airway.

REMEMBER: Rapid defibrillation and high quality CPR is the major determinant of survival.

ALS

GENERAL ADULT ALS CARDIAC ARREST

Adult Cardiac Arrest Circular Algorithm



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CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If P_{ETCO_2} is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- **Biphasic:** Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic:** 360 J

Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus. Second dose: 150 mg.
  or
- **Lidocaine IV/IO dose:** First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in P_{ETCO_2} (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

ASYSTOLE/ PEA

Section 3.3

Signs & Symptoms	Differential Diagnosis
Unresponsive Apneic Pulseless	Irreversible Death V-TACH or V-FIB

BLS

- General Adult BLS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- AED (if available)
- I-Gel Airway with required nasogastric/orogastic tube

ALS

- General Adult ALS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- I-Gel Airway with required nasogastric/orogastic tube placement
- Establish IV/IO
- Normal Saline 250cc bolus IV/IO, repeat to max 2 Liters
- EPINEPHRINE (1:10,000) 1 mg IV/IO, repeat every 4 minutes
- Consider possible causes of asystole/PEA such as hypoxia, hypovolemia, hyperkalemia, hypokalemia, hydrogen ions acidosis, toxins, hypothermia, tension pneumothorax, cardiac tamponade, thrombosis, trauma
- SODIUM BICARBONATE 1 mEq/kg IV/IO at 10 minutes, repeat 0.5 mEq/kg IV/IO at 20 minutes
- Traumatic cardiac arrest, bilateral needle chest decompression (Section 12.14)

Physician Orders

- On-line medical control if needed
- Termination of resuscitation efforts (Section 1.12)

Notes:

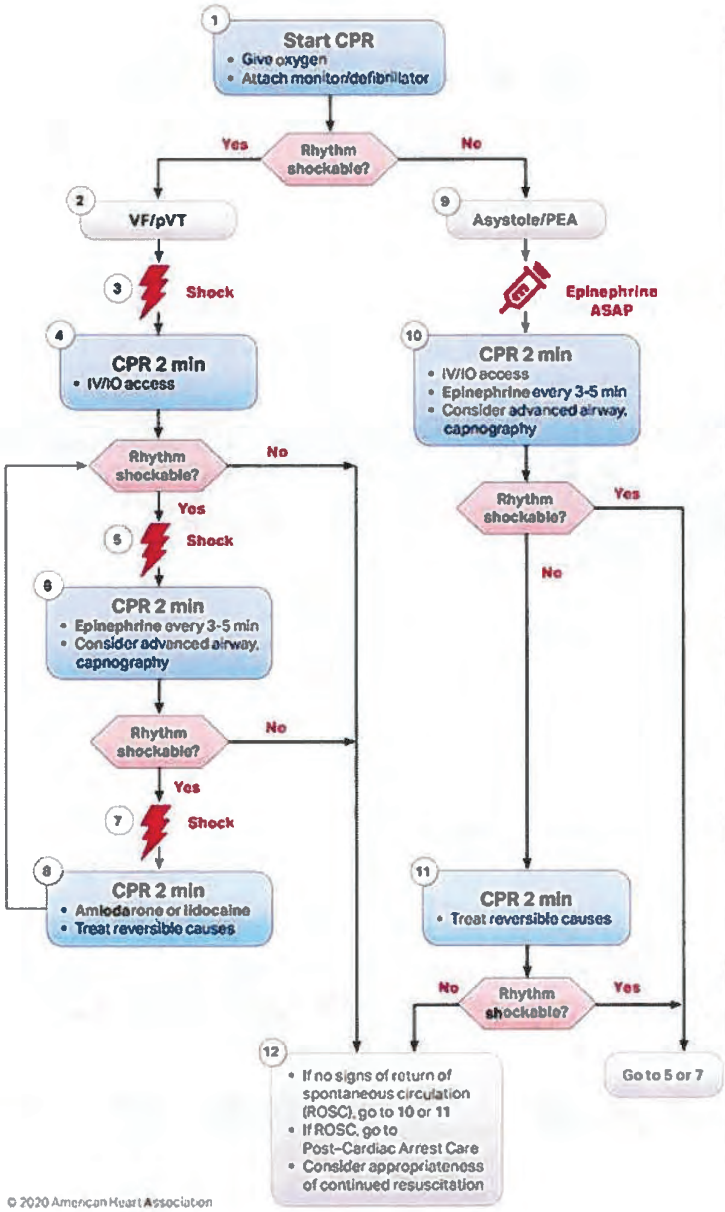
If arrest is unwitnessed and asystole is confirmed in 3 leads, refer to (Section 1.11) WITHHOLDING LIFE SUPPORT Protocol

- **In hypothermic patients active rewarming is required prior to termination of resuscitation efforts.**
- Effective CPR is defined as 100 to 120 compressions/min. at a minimum of 2" depth
- Maintain a capnography of at least 10 mmHg during effective CPR
- CPR should not be delayed or interrupted for more than 10 seconds
- Considering placement of an advanced airway should be accomplished only after effective CPR and ventilation has been performed for several minutes
- Administration of medications should occur while CPR is in progress and should be circulated by CPR.
- Sharp increase in capnography is a sign of ROSC

ASYSTOLE/ PEA *Reference Flowchart*

Section 3.3.1

Adult Cardiac Arrest Algorithm (VF/pVT/Asystole/PEA)



CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil
- Minimize interruptions in compressions
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If $PETCO_2$ is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- Biphasic: Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered
- Monophasic: 360 J

Drug Therapy

- Epinephrine IV/IO dose: 1 mg every 3-5 minutes
- Amiodarone IV/IO dose: First dose: 300 mg bolus. Second dose: 150 mg.
  or
  Lidocaine IV/IO dose: First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in $PETCO_2$ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

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V-FIB/ PULSELESS V-TACH

Section 3.4

Signs & Symptoms	Differential Diagnosis
Unresponsive Apneic Pulseless	Irreversible Death Asystole/PEA

BLS

- General Adult BLS Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- AED (If available)
- I-Gel Airway with nasogastric/orogastic tube

ALS

- General Adult ALS Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- I-Gel Airway with required nasogastric/orogastric tube placement

Energy Selection:

ZOLL X SERIES	PHYSIO LIFEPAK
120 Joules	200 Joules
150 Joules	300 Joules
200 Joules	360 Joules

- Defibrillate at recommended energy selection for monitor.
- Establish IV/IO
- Defibrillate at recommended energy selection for monitor.
- EPINEPHRINE (1:10,000) 1.0 mg IV/IO, repeat every 4 minutes
- Defibrillate at recommended energy selection for monitor.
- AMIODARONE 300 mg IV/IO
- Defibrillate at recommended energy selection for monitor, If V-FIB/Pulseless V-TACH returns
- AMIODARONE 150 mg IV/IO
- SODIUM BICARBONATE 1 mEq/kg IV/IO at 10 minutes, repeat 0.5 mEq/kg IV/IO in 20 minutes
- If refractory V-FIB/ Pulseless V-TACH or Torsades de Pointes,
  - MAGNESIUM SULFATE 1-2 GM IV/IO
- If ROSC is noted proceed to ROSC Protocol (Section 3.5)

Physician Orders

- On-line medical control as needed
- Termination of resuscitation efforts (Section 1.12)

Notes:

- **In hypothermic patients active rewarming is required prior to termination of resuscitation efforts**
- Effective CPR is defined as 100 to 120 compressions/min. at a minimum of 2" depth
- Maintain a capnography of at least 10 mmHg during effective CPR
- CPR should not be delayed or interrupted for more than 10 seconds

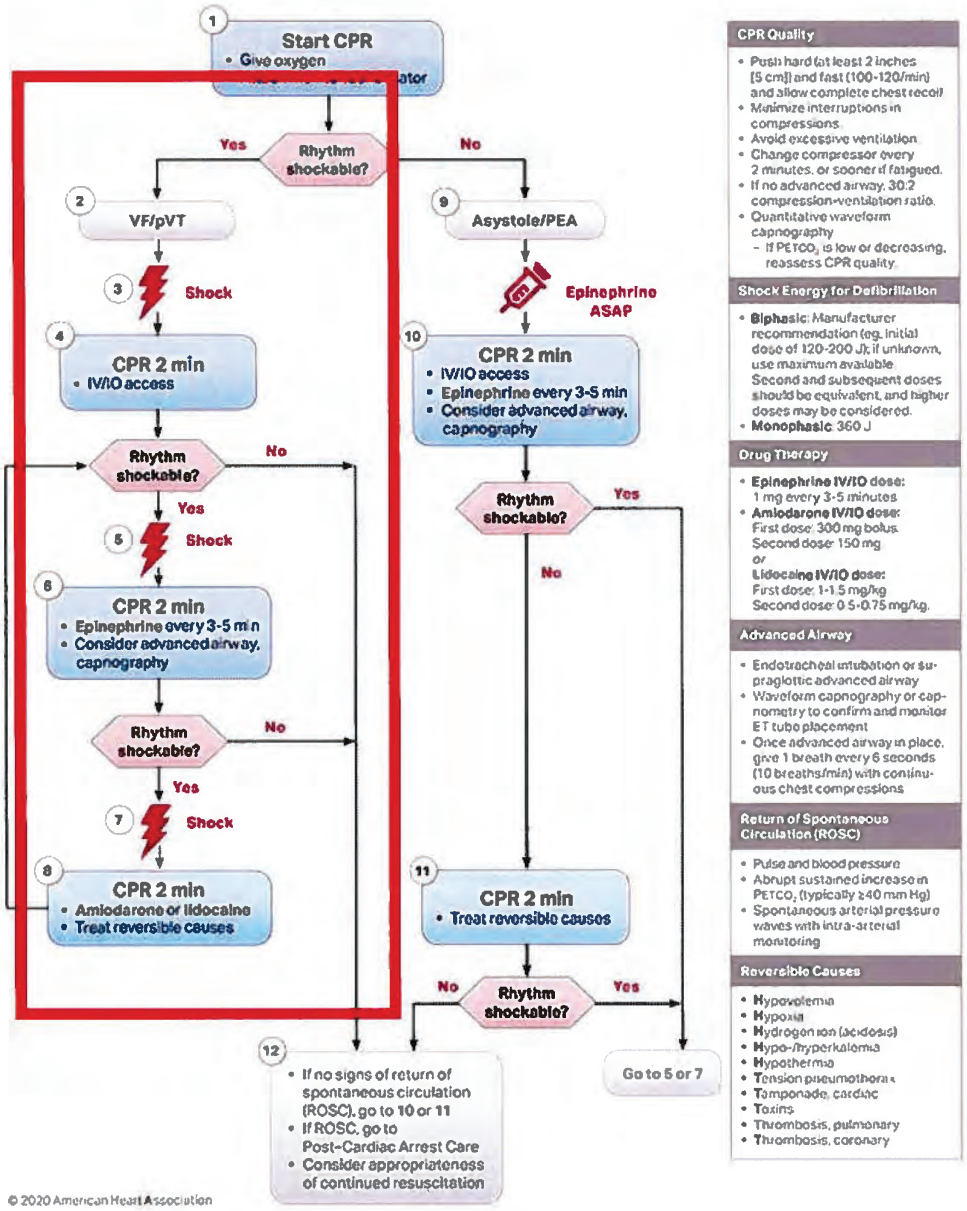
V-FIB/ PULSELESS V-TACH

- Considering placement of an advanced airway should be accomplished only after effective CPR and ventilation has been performed for several minutes
- Administration of medications should occur while CPR is in progress and should be circulated by CPR for one (1) minute before defibrillation.
- Sharp increase in capnography is a sign of ROSC

V-FIB/ PULSELESS V-TACH *Reference Flowchart*

Section 3.4.1

Adult Cardiac Arrest Algorithm (VF/pVT/Asystole/PEA)



CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If $PETCO_2$ is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- **Biphasic**: Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic**: 360 J

Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus. Second dose: 150 mg
  or
  Lidocaine IV/IO dose: First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in $PETCO_2$ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

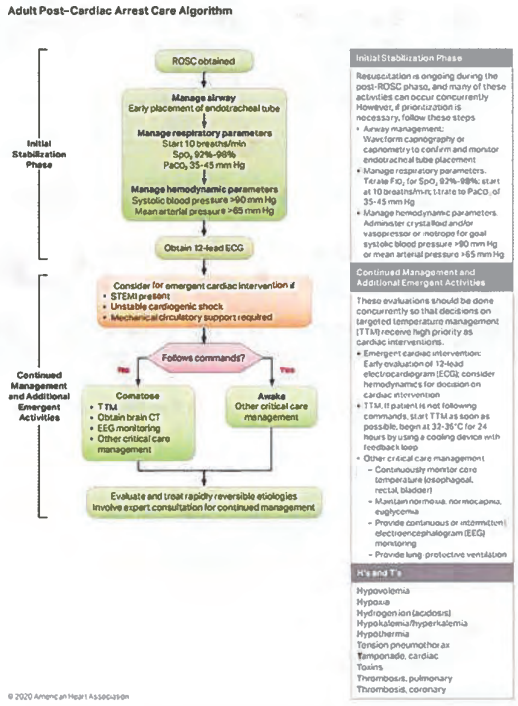
ROSC – Return of Spontaneous Circulation

Section 3.5

Patients with return of spontaneous circulation (ROSC)

- Continue ventilator support to maintain SpO^2 ≥94% if possible.
- Establish and/or maintain IV/IO access.
- Obtain and record vital signs.
- Record 12-lead if possible.

- Treat hypotension (SBP ≤100 mm Hg) with one of the following.
  - ADULT
    - Normal Saline 1-2 L bolus
    - Dopamine Drip at 5 to 10 mcg/kg/min titrated to effect.
    - Epinephrine IV infusion: 0.1-0.5mcg/kg per minute, titrate to desired hemodynamic effect



ACUTE MI/STEMI

Section 3.6

Signs & Symptoms	Differential Diagnosis
Chest pain/discomfort Shortness of breath Nausea/vomiting/upset stomach Arm/back/shoulder/jaw pain Syncope	**STEMI Mimics:** LV Hypertrophy Ventricular pacemaker A-V Sequential pacemaker Pericarditis

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- Call Cardiac Alert to closest appropriate interventional facility
- 12 Lead ECG
- Apply defibrillation pads and continue to monitor closely for sudden cardiac arrest
- ASPIRIN 324 mg PO
- If systolic BP is >100 mmHg
  - NITRO 0.4 mg SL, repeat every 5 minutes until pain free or if BP is <100 mmHg
- If chest pain/ discomfort persist despite treatment and BP is >100 mmHg,
  - MORPHINE 5 mg IV/IO/IM, repeat every 5 minutes, max of 20 mg

ST segment elevation in inferior leads (II, III, aVF) is noted

- Perform V4R 12 Lead and if elevation is noted, withhold NITRO and MORPHINE
  - If hypotension and/or bradycardia is noted
    - Normal Saline 250cc bolus IV/IO, titrate to systolic BP of ≥100 mmHg, repeat as needed, monitor closely for signs of pulmonary edema
  - If BP is >100 mmHg,
    - FENTANYL 1 mcg/kg IV/IO/IM/IN titrated to pain relief, max total dose of 3 mcg/kg

Physician Orders

- On-line medical control if needed

Notes:

Acute MI/STEMI is defined as:

- ST segment elevation of 2mm or more in 2 or more related leads. (Section 3.6.1)

Confirm **Acute MI/STEMI** with **at least 2** of the following criteria:

- 12 lead ECG interpretation printing ****Acute Myocardial Infarction****
- Paramedic interpretation of ECG as AMI
- Chest pain with signs and symptoms consistent with AMI

In the setting of an **Acute MI/STEMI**, the benefit of a one-time dose of aspirin far exceeds the risk of the recurrence of gastric bleeding. Additionally, patients who take Coumadin (Warfarin) should also be administered aspirin.

ACUTE MI/ STEMI *Reference Chart*

Section 3.6.1

I Lateral	aVR	V1 Septal	V4 Anterior
II Inferior	aVL Lateral	V2 Septal	V5 Lateral
III Inferior	aVF Inferior	V3 Anterior	V6 Lateral

SITE	FACING	RECIPROCAL
SEPTAL	V1, V2	NONE
ANTERIOR	V3, V4	NONE
ANTEROSEPTAL	V1, V2, V3, V4	NONE
LATERAL	I, aVL, V5, V6	II, III, aVF
ANTEROLATERAL	I, aVL, V3, V4, V5, V6	II, III, aVF
INFERIOR	II, III, aVF	I, aVL
POSTERIOR	NONE	V1, V2, V3, V4

ISCHEMIC CHEST PAIN

Section 3.7

Signs & Symptoms	Differential Diagnosis
Chest pain/discomfort Shortness of breath Nausea/vomiting Diaphoresis Arm/back/shoulder/jaw pain Syncope	Angina Acute Myocardial Infarction (STEMI) Pleuritic chest pain Trauma Pulmonary Embolism

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- ASPIRIN 324mg PO
- If systolic BP is >100 mmHg
  - NITRO 0.4 mg SL, repeat every 5 minutes until pain free or if BP is <100 mmHg
- If chest pain/ discomfort persist despite treatment and BP is >100 mmHg,
  - MORPHINE 5 mg IV/IO/IM, repeat every 5 minutes to max of 20 mg
- Continue to monitor closely for development of Acute MI
  - Call Cardiac Alert to closest appropriate interventional facility if STEMI
  - Leave a copy of the 12 lead ECG at the destination facility

Physician Orders

- On-line medical control if needed

Notes:

Document reason not given Aspirin, i.e. taken this morning, severe allergy causing difficulty breathing

Should a patient claim an allergy to aspirin, ensure that the patient suffers from true allergic reaction symptoms. Many patients with previous ulcers or gastric bleeding state they are allergic to aspirin

In the setting of an ischemic chest pain, the benefit of a one-time dose of aspirin far exceeds the risk of the recurrence of gastric bleeding. Additionally, patients who take Coumadin (Warfarin) should also be administered aspirin

NARROW COMPLEX TACHYCARDIA (STABLE)

Section 3.8

Signs & Symptoms	Differential Diagnosis
ALL are ABSENT: Decreased level of consciousness Respiratory distress Pulmonary edema Hypotension (systolic BP <100 mmHg) Severe chest pain	Confirmed A-FIB or A-Flutter: Initially **- or -** During treatment with Adenosine **- or -** If patient has a history of Atrial Fibrillation or Atrial Flutter **AND** is on home medication therapy

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

Confirmed Narrow Complex Tachycardia or PSVT: Sustained >150 HR:

- Attempt vagal maneuvers
- ADENOSINE 6 mg rapid IV, followed by Normal Saline 20 – 30cc rapid bolus IV
- If no change 2 minutes after initial dose,
  - ADENOSINE 12 mg rapid IV, followed by Normal Saline 20 – 30cc rapid bolus IV

Physician Orders

- If rhythm **DOESN'T** convert, contact on-line medical control for further orders
- On-line medical control if needed

Notes:

This protocol is not for patients in sinus tachycardia

Site of IV **SHOULD** be at least antecubital fossa or more central placement

NARROW COMPLEX TACHYCARDIA (UNSTABLE)

Section 3.9

Signs & Symptoms	Differential Diagnosis
ONE (1) or MORE are PRESENT: Decreased level of consciousness Respiratory distress Pulmonary edema Hypotension (systolic BP <100 mmHg) Severe chest pain	Confirmed A-FIB or A-Flutter: Initially **- or -** During treatment with Adenosine **- or -** If patient has a history of Atrial Fibrillation or Atrial Flutter **AND** is on home medication therapy

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

Narrow Complex Tachycardia or PSVT Atrial Fibrillation or Atrial Flutter: Sustained >150 HR and Symptomatic

- Consider sedation for cardioversion
  - VERSED 0.05 mg/kg IM/IN/IV/IO, max of 10 mg

Energy Selection:

ZOLL X SERIES	PHYSIO LIFEPAK
120 Joules	200 Joules
150 Joules	300 Joules
200 Joules	360 Joules

- *Synchronized cardioversion*
- *Synchronized cardioversion*
- *Synchronized cardioversion*
- *Synchronized cardioversion*

Physician Orders

- **If unstable A-Fib has been occurring for greater than 48 hours do not cardiovert, contact Medical Control.**
- If rhythm **DOESN'T** convert, contact on-line medical control for further orders
- On-line medical control if needed

Notes:

If shock not delivered then proceed to unsynchronized cardioversion

This protocol is not for patients in sinus tachycardia

Site of IV **SHOULD** be at least antecubital fossa or more central placement

Young, elderly and patients with depressed VS should receive the lowest possible dose of VERSED to achieve sedation for cardioversion (0.05 mg/kg)

VENTRICULAR TACHYCARDIA WITH PULSE (STABLE)

Section 3.10

Signs & Symptoms	Differential Diagnosis
ALL are ABSENT: Decreased level of consciousness Respiratory distress Pulmonary edema Hypotension (systolic BP <100 mmHg) Severe chest pain	Pulseless V-TACH or V-FIB

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

Sustained >150 HR and has no other symptoms

- AMIODARONE INFUSION 150 mg in 100 cc D5W over 10 minutes

If no change or patient becomes symptomatic proceed to Synchronized Cardioversion

- Consider sedation for cardioversion
  - VERSED 0.05 mg/kg IM/IN/IV/IO, max of 10 mg

Energy Selection:

ZOLL X SERIES	PHYSIO LIFEPAK
120 Joules	200 Joules
150 Joules	300 Joules
200 Joules	360 Joules

- *Synchronized cardioversion*
- *Synchronized cardioversion*
- *Synchronized cardioversion*
- *Synchronized cardioversion*

Physician Orders

- If rhythm **DOESN'T** convert, contact on-line medical control for further orders
- On-line medical control if needed

Notes:

if shock not delivered then proceed to unsynchronized cardioversion

Monitor patient and vital signs closely, prepare for patient to develop sudden cardiac arrest.

Young, elderly and patients with depressed VS should receive the lowest possible dose of VERSED to achieve sedation for cardioversion (0.05 mg/kg)

VENTRICULAR TACHYCARDIA WITH PULSE (UNSTABLE)

Section 3.11

Signs & Symptoms	Differential Diagnosis
ONE (1) or MORE are PRESENT: Decreased level of consciousness Respiratory distress Pulmonary edema Hypotension (systolic BP <100 mmHg) Severe chest pain	Pulseless V-TACH or V-FIB

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

Sustained >150 HR with TWO or MORE signs and symptoms

- Consider sedation for cardioversion
  - VERSED 0.05 mg/kg IM/IN/IV/IO, max of 10 mg

Energy Selection:

ZOLL X SERIES	PHYSIO LIFEPAK
120 Joules	200 Joules
150 Joules	300 Joules
200 Joules	360 Joules

- *Synchronized cardioversion*
- *Synchronized cardioversion*
- *Synchronized cardioversion*
- *Synchronized cardioversion*

If the rhythm converts

- AMIODARONE INFUSION 150 mg in 100 cc D5W over 10 minutes

Physician Orders

- If rhythm **DOESN'T** convert, contact on-line medical control for further orders
- On-line medical control if needed

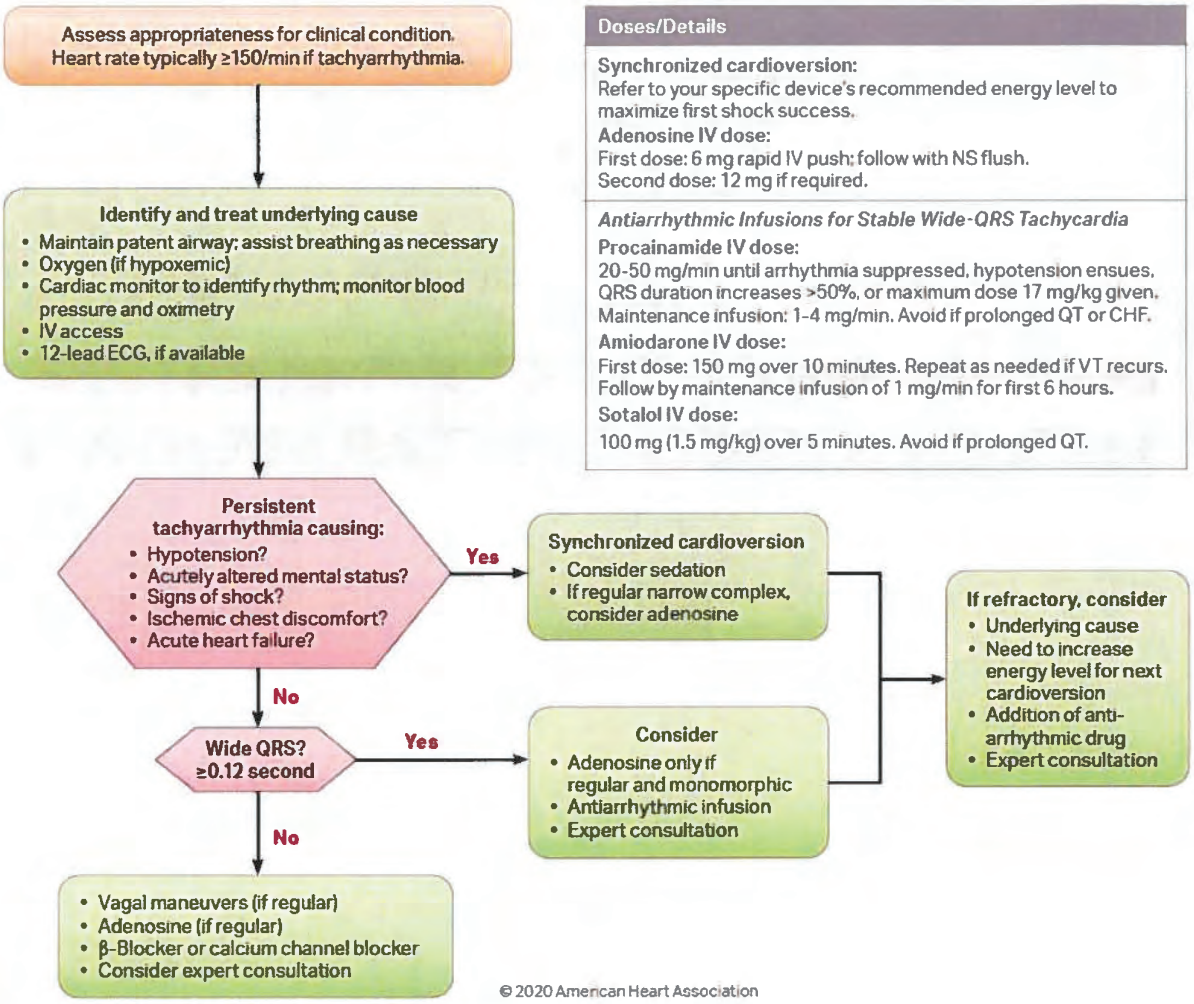
Notes:

if shock not delivered then proceed to unsynchronized cardioversion

Monitor patient and vital signs closely, prepare for patient to develop sudden cardiac arrest.

Young, elderly and patients with depressed VS should receive the lowest possible dose of VERSED to achieve sedation for cardioversion (0.05 mg/kg)

Adult Tachycardia With a Pulse Algorithm



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SUPPRESIVE THERAPY FOR VENTRICULAR ECTOPY

Section 3.12

Signs & Symptoms	Differential Diagnosis
Chest pain/discomfort Shortness of breath Nausea/vomiting Diaphoresis Arm/back/shoulder/jaw pain Syncope Trauma to thorax	Couplets (2 unifocal PVC's) Geminies (Bi, Tri, Quadri, etc.) Pacemaker Implant

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

Suppress PVCs ONLY in short RUNS of V-TACH (3 or more consecutive PVC's) that are symptomatic

- AMIODARONE INFUSION 150 mg in 100 cc D5W over 10 minutes

Physician Orders

- On-line medical control if needed

Notes:

SYMPTOMATIC BRADYCARDIA

Section 3.13

Signs & Symptoms	Differential Diagnosis
Defined as: Pulse <50 **AND** Hypotension (systolic <100 mmHg)	Vaso-vagal response Drug use or abuse Beta-blocker Overdose

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Supportive Care
- Normal Saline 250cc bolus IV/IO, titrate to systolic BP of ≥100 mmHg, repeat as needed
- ATROPINE 0.5 mg IV/IO, max of 3 mg, repeat every 3 – 5 minutes as needed

If no response to Atropine and Normal Saline bolus

-or-

Second Degree Type II Heart Block or Third Degree Heart Block

- Consider sedation for transcutaneous pacing
  - VERSED 0.05 mg/kg IM/IN/IV/IO, max of 10 mg
- Initiate transcutaneous pacing at 70 beats per minute (Section 12.22)

-or-

- DOPAMINE INFUSION 2-10 mcg/kg/min IV/IO, titrated to a systolic BP of ≥100mmHg

-or-

- EPINEPHRINE INFUSION 2-10 mcg/minute IV/IO, titrated to a systolic BP of ≥100mmHg

Physician Orders

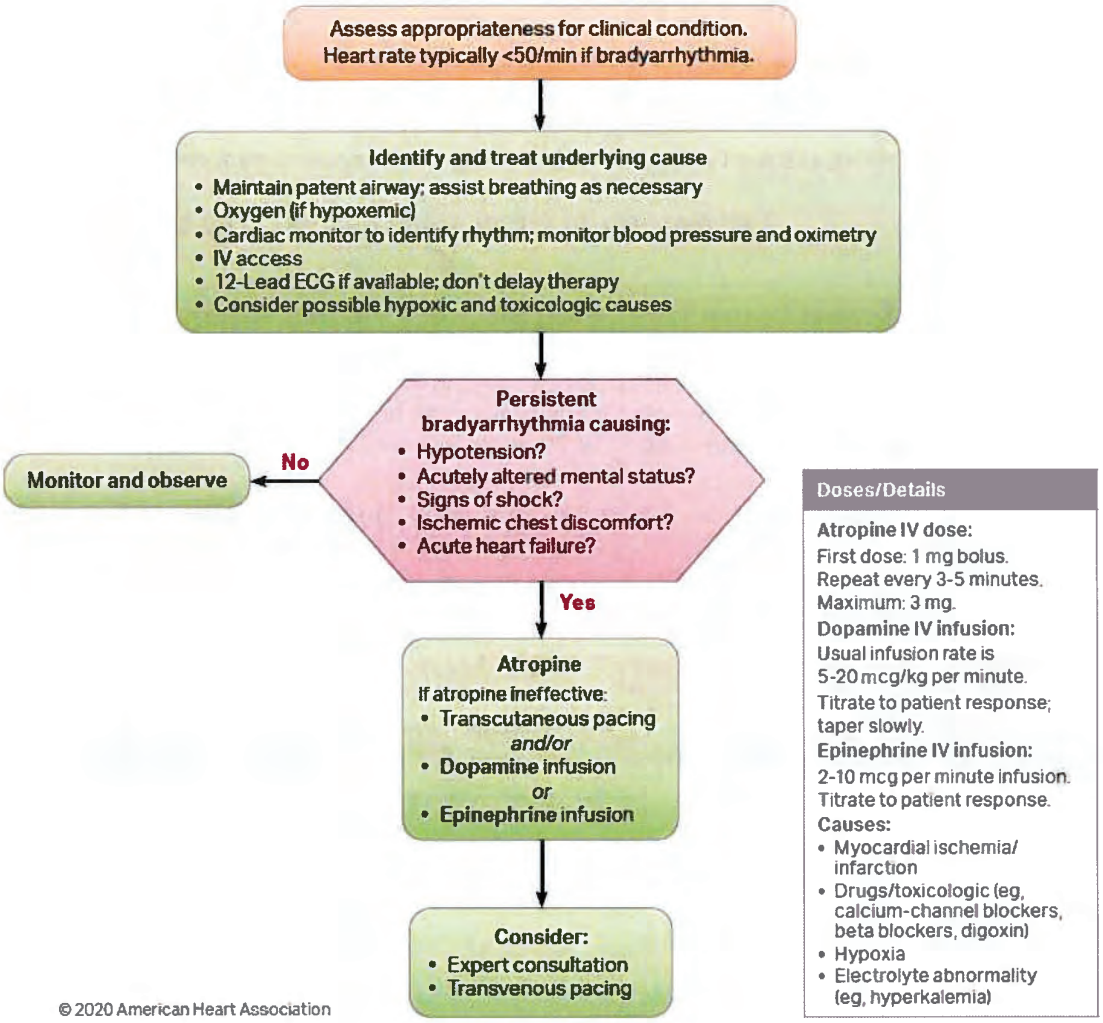
- On-line medical control if needed

Notes:

SYMPTOMATIC BRADYCARDIA *Reference Flowchart*

Section 3.13.1

Adult Bradycardia Algorithm



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CARDIOGENIC SHOCK MANAGEMENT

Section 3.14

Definition	Differential Diagnosis
Persistent inadequate perfusion after correction of existing dysrhythmias, fluid challenge, or loss of vascular tone this includes neurogenic shock	Hypovolemic Shock Septic Shock Anaphylactic

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- Normal Saline 250cc bolus IV/IO, titrate to systolic BP of ≥100 mmHg, repeat as needed max 2 Liters, monitor closely for pulmonary edema

If no response to Normal Saline or if pulmonary edema is noted

- DOPAMINE INFUSION 2-10 mcg/kg/min IV/IO, titrated to a systolic BP of ≥100mmHg
  -or-
- EPINEPHRINE INFUSION 2-10 mcg/minute IV/IO, titrated to a systolic BP of ≥100mmHg

Physician Orders

- On-line medical control if needed

Notes:

VAD PATIENT MANAGEMENT

Section 3.15

Description	Helpful Links
A ventricular assist device (VAD) is a mechanical pump that's used to support heart function and blood flow in people who have weakened hearts.	Tampa General Hospital VAD Center VAD Reference Charts (3.15.1)

BLS

- Initiate Basic General Medical Supportive Care
- Auscultate Heart Sounds to determine if the device is functioning, If it is continuous flow device, you should hear a "whirling sound"
- Assess the device for any alarms
- Look on controller found around the waist of the patient or in the VAD and to see what color tag and device it is refer to (Section 3.15.1) for EMS information or use links provided

ALS

- Initiate Advanced General Medical Supportive Care
- If not already done, Call the number on the device to get advice or further treatment options
- Use the Mean Number (smaller number located to left of the blood pressure reading) on the monitor to assess perfusion
- The trained caregiver and all equipment should accompany the patient to the hospital
- Bring ALL backup equipment: Hand pumps, extra batteries, primary and backup drivers, if available

Physician Orders

- On-line medical control if needed
- If transporting to TGH (Tampa General Hospital): If unable to find number on device or if patient/ trained caregiver is unable to give it to you, contact the VAD coordinator pager at (866) 844-8237 (TGH-VADS). If you do not hear back from the coordinator after a second page, call the hospital operator at (813) 844-7000 and ask for the VAD coordinator.

Notes:

There are many types of VAD units; some have pulses (usually pulse will not be in sync with the patient's rhythm) and some are continuous flow units resulting in no pulse.

Complications:

VAD Pump Failure: Need to initiate hand pumping at a rate of 60 – 90 strokes/min; may be a Bi-VAD with two pumps

VAD Working-Blood Flow Low-EKG Abnormal: Usually with a single VAD device; patient's function is influenced by arrhythmia-may need to treat the rhythm if patient is symptomatic LVAD (Left-sided VAD) patient may require large amounts of IV fluids RVAD (right-sided VAD) patient should not get IV fluids

VAD Working-Blood Flow Low-EKG Normal: Hypovolemia; could be internal bleeding. If symptomatic initiate appropriate therapy to treat the cause of hypovolemia

VAD Reference Charts

VAD Tag Color	Name of Unit	CPR by EMS?	Palpable Pulse?	Blood Pressure	Defibrillate	Pacing
Orange	HEARTMATE II	YES	MAYBE	70 – 90 mmHg (MAP)	YES	YES
Dark Blue	HEARTWARE	YES	MAYBE	< 85 mmHg (MAP)	YES	YES
Yellow	HEARTMATE XVE	NO	YES	110/80 – 140/80 mmHg	NO	YES (> 40 MA)
Light Blue	THORATEC PVAD – IVAD	NO	YES	Normal BP	YES	NO
Pink	FREEDOM DRIVER	NO	YES	Normal BP	NO	NO
Purple	DURAHEART	NO	MAYBE	80 – 90 mmHg (MAP)	YES	YES

CPR is not routinely recommended but may be approved in special circumstances by VAD Coordinator.

Quick Reference Guide for Durable VADs

VAD	Diagram	Indications	Mechanism of Action	Anatomic Location	Comments
HeartMate II®		BTT DT	Continuous	LVAD	• Quiet operation, auscultate over chest for low-pitched sound, or VAD 'hum.' • Must be attached to power at all times. • May not have a palpable pulse; • Important to assess for adequate blood flow. • Best to use doppler/BP cuff for mean arterial blood pressure. • Goal is MAP 60-90mmHG. • Gray updated controller available for display of VAD parameter and for alarm troubleshooting.
HeartMate 3		Investigational	Continuous	LVAD	• Quiet operation, auscultate over the chest for low-pitched varying tones. • Centrifugal pump; must be attached to power at all times, batteries or AC. • May not have a palpable pulse; important to assess for adequate blood flow. • Best to use doppler/BP cuff for mean arterial blood pressure. • Goal is MAP 60-90mmHG. • Black controller displays VAD parameter and alarm conditions.
HeartWare®		BTT DT (investigational)	Continuous	LVAD	• Quiet operation, auscultate over chest for low-pitched sound, or VAD 'hum.' • Must be attached to power at all times. • May not have a palpable pulse. • Important to assess for adequate blood flow. • Best to use doppler/BP cuff for mean arterial blood pressure. • Goal is MAP 60-90mmHG. • Controller displays VAD parameter and alarm conditions. • Assure red silencer adapter is not on a contoller in patient use.
Syncardia		BTT	Pulsatile	Total Artificial Heart (TAH)	• Surgically placed in chest after diseased heart removed. • Blood path same as normal path. • Palpable pulse, monitor BP with automatic BP cuff. Goal is normotensive SBP < 140 mmHG per cuff. • Assess patient with BP and pulse OX. • No EKG, no defibrillation or cardioversion. • No central lines, no vasopressors or epinephrine.

MECHANICAL CIRCULATORY SUPPORT PROGRAM

Ventricular Assist Device (VAD)

Non-emergency calls: **(813) 844-7137** (select option 2)

Emergency/after hours/weekends/holidays,
call the VAD 24-hour pager:
1-866-844-8237 (TGH-VADS)

Fax: **(813) 844-4234** Email: **VADteam@tgh.org**

P.O. Box 1289 • Tampa, FL 33606

1. Assess airway. Implement BLS/ACLS protocols as clinically indicated.
2. Auscultate chest wall for VAD sounds (low-pitched whirling sound, or VAD 'hum'). If present, VAD is functioning. Assess for medical condition and treat per standard protocols. If not present, assure the controller is attached correctly and is powered.
3. **Chest compressions are not recommended** and should not be performed on any patient because of the risk of dislodgement of the cannulae (tubing). Most VAD patients have ICDs; allow to discharge as programmed. If necessary, external shocks can be applied. Move the external equipment off the chest and abdomen. It is not necessary to disconnect.
4. Patients and caregivers have been extensively trained in handling emergent situations. Allow them to assist with VAD-related issues.
5. Reference mylvad.com for Field Service Guides. These color-coded reference guides assist with VAD troubleshooting. Look for color-coded tags and medic alert bracelet.
6. Patients have been instructed to always have a bag to carry extra VAD supplies, med lists and contact information. If possible, bring all of the patient's equipment when transporting.
7. **Contact the TGH VAD Coordinator on the 24-hour emergency pager at 1-866-844-8237.**

Affiliated with the USF Health Morsani College of Medicine **6/18**

SECTION 4

Respiratory Protocols

RESPIRATORY PROTOCOLS APPROVAL

Section 4.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

CONGESTIVE HEART FAILURE

Section 4.1

Signs & Symptoms	Differential Diagnosis
Tachycardia Dyspnea, diminished breath sounds Tachypnea, hypoxia Hypertension Diaphoresis/cool/clammy skin/cyanosis Rales/wheezes (cardiac asthma) JVD (bulging neck veins) Anxiety and/or agitation Inability to lay flat	COPD Acute MI Angina Pneumonia Near drowning

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- 12 Lead must be obtained
- If systolic BP is >100 mmHg
  - NITRO 0.4 mg SL, repeat every 5 minutes
- Assist ventilations with BVM if the patient is having poor perfusion or if pulse oximetry reading is < 90%, and patient can tolerate the assistance.
- MORPHINE 5 mg IV/IO/IM, every 5 minutes, titrated to relief of dyspnea/agitation, max dose 20 mg
- If systolic BP is <100 mmHg
  - DOPAMINE INFUSION 2-10 mcg/kg/min IV/IO, titrated to a systolic BP of >100 mmHg
- Proceed to ETT intubation (Section 12.6) if indicated

Physician Orders

- On-line medical control if needed

Notes:

Repeat 12 LEADs need to be monitored closely during transport for development of AMI

CHRONIC OBSTRUCTIVE PULMONARY DISEASE/ ASTHMA

Section 4.2

Signs & Symptoms	Differential Diagnosis
Wheezes Diminished lung sounds Increased work of breathing Shortness of breath/tachypnea Cyanosis Productive/non-productive cough Anxiety Altered mental status (late sign) Hypoxia Hypercarbia/ hypercapnia	Pneumonia Sepsis CHF/cardiac asthma Pulmonary edema Allergic reaction

BLS

- Initiate Basic General Medical Supportive Care
- May assist patients with his/her prescribed inhalers
- Assist ventilations with BVM if needed

ALS

- Initiate Advanced General Medical Supportive Care
- Albuterol 0.083% - 2.5 mg/3 mL, by nebulizer, if respiratory symptoms continue may be repeated two time for moderate to severe distress.
- Assist ventilations with BVM if the patient is having poor perfusion or if pulse oximetry reading is < 90%, and patient can tolerate the assistance

Patients in extremis from severe asthma attack

- EPINEPHIRINE (1:1000) 0.01 mg/kg IM, max of 0.5 mg
- Magnesium Sulfate: 2 gm in 100cc D5W IV infusion over 10 minutes for patient's refractory to above treatment.
- Epinephrine infusion: 2 mcg/min titrate to effect.
- Proceed to ETT intubation (Section 12.6), if indicated

Physician Orders

- On-line medical control for repeat doses Epinephrine if needed

Notes:

FOREIGN BODY AIRWAY OBSTRUCTION

Section 4.3

Signs & Symptoms	Differential Diagnosis
Universal choking sign Unable to speak or cough Apneic, possibly unresponsive	Partial obstruction, still air exchange Severe allergic reaction/anaphylaxis Respiratory arrest Cardiac arrest

BLS

- Establish responsiveness

Responsive patient

- Abdominal Thrusts repeat until relief or until unresponsive

Patient is unresponsive or goes unresponsive

- Begin CPR with one exception
  - Check airway for obstruction prior to giving breaths
  - ONLY remove items that are seen
  - NO BLIND FINGER SWEEPS
- Continue until ALS help arrives or object is removed and patient becomes responsive
- Initiate Basic Medical General Supportive Care

ALS

- Direct laryngoscopy and attempt to visualize and remove the object
- Continue ventilation with BVM
- Initiate Advanced Medical General Supportive Care
- If ventilation becomes difficult, attempt ETT intubation (Section 12.6)
- If you can't ventilate or intubate, initiate Cricothyrotomy (Section 12.5)

Physician Orders

- On-line medical control if needed

Notes:

SECTION 5

Medical Protocols

MEDICAL PROTOCOLS APPROVAL

Section 5.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

ABDOMINAL PAIN

Section 5.1

Signs & Symptoms	Differential Diagnosis
Nausea/ vomiting Diarrhea/ Bloody/ tarry stool Pulsating masses Rebound tenderness Epigastric/ chest pain Distension or rigidity Abdominal guarding	Acute Myocardial Infarction Diabetic Ketoacidosis Ruptured appendix Dissecting Abdominal Aortic Aneurism Ectopic Pregnancy GI Bleeding

BLS

- Initiate Basic General Medical Supportive Care

ALS

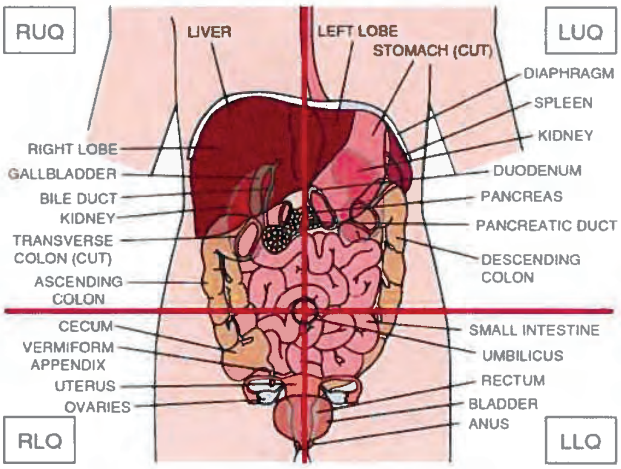
- Initiate Advanced General Medical Supportive Care
- Assess for orthostatic changes
- If nausea or vomiting,
  - ONDANSETRON 4 mg IV/IM/PO, may repeat once in 5 minutes

Physician Orders

- On-line medical control consult for pain management

Notes:

Try to establish a large bore IV for patient



0	2	4	6	8	10
No Hurt	Hurts Little Bit	Hurts Little More	Hurts Even More	Hurts Whole Lot	Hurts Worst

DIABETIC EMERGENCIES

Section 5.2

Signs & Symptoms		Differential Diagnosis
Hypoglycemia:	**Hyperglycemia:**	**(A)** Alcohol or acidosis
Altered LOC	Altered LOC	**(E)** Epilepsy or seizures
Coma	Coma	**(I)** Insulin diabetes
Pale/ moist skin	Warm/ dry skin	**(O)** Overdose
Irritability	Hypotension	**(U)** Uremia (kidney failure)
Confusion	Tachycardia	**(T)** Trauma
Seizures	Sweet fruity breath	**(I)** Infection or sepsis
	Kussmaul breathing	**(P)** Psychosis or behavioral
		(S) Stroke or TIA

BLS

- Initiate Basic General Medical Supportive Care
- Check blood sugar
- If blood sugar <60 mg/dL or "LO" with an intact gag reflex and able to follow commands
  - ORAL GLUCOSE or non-diet soda or juice
- Recheck blood sugar
- If blood sugar remains below <60 mg/dL or "LO"
  - Repeat ORAL GLUCOSE

ALS

- Initiate Advanced General Medical Supportive Care

Hypoglycemia:
(<60 mg/dL or "LO")

With IV:

- DEXTROSE 10% 250cc bolus IV
- Repeat glucose check in 10 – 15 minutes. If glucose still < 60 contact medical control for orders
- Recheck blood sugar as needed

Hyperglycemia:
(>400 mg/dL or "HI")

- Normal Saline 250cc bolus IV over 10 minutes
- Monitor for fluid overload (pulmonary edema)
- Recheck blood sugar as needed

Physician Orders

- On-line medical control if needed

Notes:

"LO" = less than 10 mg/dL, "HI" = greater than 600 mg/dL

IMPAIRED CONSCIOUSNESS

Section 5.3

Signs & Symptoms	Differential Diagnosis
Lethargy or stupors Constricted, dilated or fixed pupils Facial droop Incontinence Narcotic drug use or abuse Needle marks (IV drug use) Fever Irrational behavior	**(A)** Alcohol or acidosis **(E)** Epilepsy or seizures **(I)** Insulin diabetes **(O)** Overdose **(U)** Uremia (kidney failure) **(T)** Trauma **(I)** Infection or sepsis **(P)** Psychosis or behavioral **(S)** Stroke or TIA

BLS

- Initiate Basic General Medical Supportive Care
- Check blood sugar

ALS

- Initiate Advanced General Medical Supportive Care

Narcotic OD = Unresponsive with Respiratory Depression

- Assist ventilations (1 breath every 5 – 6 seconds)
- NARCAN 0.5 - 2mg IV/IO/IM/IN, repeat for patients that respond then deteriorate
- Proceed to ETT Intubation (Section 12.6) if indicated

Physician Orders

- On-line medical control if needed

Notes:

Search for medic alert ID, note medications, and potential toxic substances and bring list with the patient to the hospital.

Titrate Narcan to adequate respirations.

Poison Control: 1-800-222-1222

NAUSEA AND VOMITING

Section 5.4

Signs & Symptoms	Differential Diagnosis
Nausea and/or vomiting Retching Gagging	Acute MI GI Bleeding Poisoning or overdose Vertigo Infection GERD Stroke
BLS	
• Initiate Basic General Medical Supportive Care	
ALS	
• Initiate Advanced General Medical Supportive Care • ONDANSETRON 4 mg PO/IV/IM, may be repeated as often as needed	
Physician Orders	
• On-line medical control if needed	
Notes:	
Patient should have nothing to eat or drink **Poison Control: 1-800-222-1222**	

PAIN MANAGEMENT

Section 5.5

Indications	Contraindications
Acute comfort care Suspected fractures of hip, pelvis, long bone Suspected dislocation of major joint Extremity amputations Massive soft tissue injuries Major burns Acute Sickle Cell Crisis Abdominal pain DNR palliative care	Sensitivity or allergy to Toradol, Aspirin or other NSAIDs Sensitivity or allergy to Morphine or derivatives Hypotensive Systolic BP <100 mmHg Respirations are <12 Chronic pain Head injury Multi-system trauma (relative) Transport time is brief, or transport is refused

BLS

- Initiate Basic General Medical Supportive Care
- Assess pain scale 0 – 10

ALS

- Initiate Advanced General Medical Supportive Care

Pain Scale 2 to 10 (Comfort care, minor burns, moderate to moderately severe pain)

- Toradol 60 mg IM or 30 mg IV over 1 minute for patients ages 14 – 65 Patients over 65 y/o IV dose 15 mg
- MORPHINE 5 mg IV/IO/IM, titrated to pain relief, max of 20 mg

Pain Scale 4 to 10 (Orthopedic injuries, massive soft tissue injuries, severe pain)

- MORPHINE 5 mg IV/IO/IM, titrated to pain relief, max of 20 mg
- FENTANYL 1 mcg/kg IV/IO/IM/IN, titrated to pain relief, max total dose of 3 mcg/kg
-

Physician Orders

- Contact Medical Control or receive orders prior to interfacility transport for pain management of multi-system trauma (relative), abdominal pain, no relief of pain with treatment provided, need to exceed max dose, or severe allergy to opiates
- If the patient is currently taking NSAIDS or ASA, contact Medical Control prior to administration of Toradol.

Notes:

Be sure to document ordering physician name and time spoken to or include a written physician order stating that the max of the medication can be exceeded during transport.

- Ondansetron may be administered prophylactically with pain management.
- Lower doses should be used in elderly patients, patient's first time receiving narcotic medications and/or when other CNS depressants have been used.
- Have Narcan readily available when using Morphine/Fentanyl for pain management.

SEIZURE

Section 5.6

Signs & Symptoms		Differential Diagnosis
Absent (Petite Mal) Blank stare Change in expression ALOC Twitching	**Tonic/Clonic** ALOC Extension of arms and/or legs Jaw/Teeth clenched Rhythmic jerking Urination Vomiting Increased salivation	Impending cardiac arrest **(A)** Alcohol or acidosis **(E)** Epilepsy or seizures **(I)** Insulin diabetes **(O)** Overdose **(U)** Uremia (kidney failure) **(T)** Trauma **(I)** Infection or sepsis **(P)** Psychosis or behavioral **(S)** Stroke or TIA

BLS

- Initiate Basic General Medical Supportive Care

Active seizure (Tonic/Clonic)

- Place patient in a lateral position, protect patient from objects
- Do not attempt forceful insertion of bite block or oral airway during active seizure
- Insert NPA, ventilate and oxygenate with BVM
- Check blood sugar

ALS

- Initiate Advanced General Medical Supportive Care

Active seizure (Tonic/Clonic)

- VERSED 0.05 mg/kg IV/IO/IM/IN, titrated to cessation of seizure, max of 10 mg repeat once if needed

Physician Orders

- On-line medical control if needed
- Repeat doses of Versed for status epilepticus not responded to treatment

Notes:

IM route is preferred if the patient is found in active seizure (Tonic/Clonic) when no IV/IO access is established

Be prepared to aggressively manage airway concentrate on oxygenation of patient post seizures

Be prepared for combative patient post seizures

SEVERELY AGITATED/COMBATIVE PATIENT

Section 5.7

Signs & Symptoms	Differential Diagnosis
Bizarre and/ or violent behaviors Aggression or agitated delirium Combativeness Extreme paranoia or hallucinations Superhuman strength Incoherent shouting Elevated temperature Nakedness Respiratory arrest and/or sudden death	Psychotropic drug withdrawal Seizures (Avoid Ketamine use) Hypoglycemia Heat stroke

BLS

- Attempt to calm (verbal communication and verbal de-escalation)
- Prepare Safety Restraint Buckle and/ or restraints and respiratory equipment before attempting restraining
- If the patient is in clear and present danger to himself or others,
  - Attempt restraining patient using **ONLY** the force necessary to protect yourself and others.
- Ensure sufficient manpower for the restraining team: Minimum of 5 personnel
  Position patient in the supine position and secure extremities with soft restraints as soon as possible (one arm above the head, one at the patient's side, both feet tied to the sides of the stretcher closest to the body and on the bottom rail of the stretcher)
- Consider calling for ALS, if the patient has an altered LOC or is severely agitated and may need to be medicated
- Initiate Basic General Medical Supportive Care **ONLY** when safe to do so
- If the patient is spitting, you may cover his/her face with a surgical mask or NRB mask with high flow oxygen set at 10 lpm or above.
- Request law enforcement officers (LEO) if needed

ALS

- Prepare restraints, respiratory equipment, and medication before attempting restraining

Agitated patients (aggressive behavior, inability to calm by talking down.)

- Benadryl 50mg IV/IM

Severely Agitated patients

- VERSED 0.05 mg/kg IM/IV/IO, max 10 mg

Life-threatening (self or others) agitated patients or Known/suspected excited delirium

- VERSED 0.05 mg/kg IM/IV/IO, max 10 mg
- Normal Saline 500cc bolus IV/IO
- Initiate Advanced General Medical Supportive Care **ONLY** when safe to do so
- SODIUM BICARBONATE 50 mEq IV/IO

Physician Orders

- On-line medical control for further fluid boluses

Notes:

Monitor patient for sudden cessation of struggling or fighting. Monitor very closely for sudden cardiac arrest.
Use Safety Restraint Buckle and/ or restraints:

(1) Law enforcement personnel order restraints for transport
(2) Medical command physician orders restraint for transport
(3) The patient is a direct threat to EMS personnel and must be restrained to avoid injury.
(4) The patient exhibits suicidal thoughts and actions.
(5) The patient is a flight risk.

Reinforcement restraints with folded sheets tied around the stretcher at the level of chest (not to impede respirations) and knees may be needed, LEO needs to accompany handcuffed patients.

STROKE

Section 5.8

Signs & Symptoms	Differential Diagnosis
Sudden numbness, weakness, or paralysis of face, arm, or leg Sudden decreased vision Total loss of vision, or double vision Difficulty speaking, or understanding speech Sudden ALOC Headache and/or neck stiffness Sudden loss of balance or coordination	Hypoglycemia or hyperglycemia Meningitis, encephalitis, or systemic infection Multiple sclerosis exacerbation Seizures Complex or atypical migraine Reference Chart

BLS

- Initiate Basic General Medical Supportive Care
- Check Blood Sugar

If blood sugar >60 mg/dL	If blood sugar <60 mg/dL or "LO" with an intact gag reflex and able to follow commands
Perform MANGO assessment (Section 12.)	• ORAL GLUCOSE or non-diet soda or juice, recheck blood sugar • If blood sugar >60 mg/dL, perform MANGO assessment (Section 12.)

MANGO POSITIVE (+)	**MANGO NEGITIVE (-)**
TRANSPORT TO CLOSEST COMPREHENSIVE STROKE CENTER **(MANGO ALERT)**	TRANSPORT TO CLOSEST PRIMARY STROKE CENTER **(STROKE ALERT)**

CALL ALERT ONLY IF ALL ARE PRESENT:

1) Any abnormal finding on examination
2) Deficit not likely due to head trauma
3) Blood sugar must be greater than 60 mg/dL
4) 24 hours or less from time of onset (confirmed by witness)

ALS

- Initiate Advanced General Medical Supportive Care
- Check Blood Sugar
- IV must be 20g or larger preferred in AC

Suspected Stroke in the presence of Hypoglycemia <60 mg/dL or "LO"

- DEXTROSE 10% 250cc bolus IV
- Recheck blood sugar
- If blood sugar >60 mg/dL, perform MANGO assessment

Physician Orders

- On-line medical control if needed

Notes:

Transport unidentified suspected strokes (Paramedic discretion) to closest Comprehensive Stroke Center
Patients not meeting MANGO or Stroke Alert criteria, transport to any facility
Do Not give aspirin or other anticoagulant agents
Do not delay transport while treating hypoglycemia

STROKE PATIENTS RECEIVING ALTEPLASE (IFT)

Section 5.8.1

Signs & Symptoms	Criteria
Sudden numbness, weakness, or paralysis of face, arm, or leg Sudden decreased vision Total loss of vision, or double vision Difficulty speaking, or understanding speech Sudden ALOC Headache and/or neck stiffness Sudden loss of balance or coordination	Patients with a confirmed Ischemic Stroke that have been started on ALTEPLASE (thrombolytic therapy) prior to being transferred to an acute stroke center.

BLS

- Initiate Basic General Medical Supportive Care

ALS

Prior to Departure:

- Initiate Advanced General Medical Supportive Care
- Verify that systolic blood pressure is < 180; diastolic < 105. If BP above these limits, sending hospital should stabilize prior to transport.
- Document initial GCS to establish a baseline.
- If Alteplase is to continue during transport, review/verify Alteplase dosage and IV pump settings with transferring RN.
- Obtain Ambitrans Alteplase Transport if provided from facility
- Communication Form from ED nurse.

Note: if in Lee County take Lee Health Alteplase Transport Communication Form from ED nurse

During Transport:

- When the Alteplase is empty, and before the pump alarms "air in line", replace the Alteplase with a bag of 0.9% Sodium Chloride. Continue the infusion at the current settings on the pump until the preset volume is completed or 50ml of 0.9% Sodium Chloride is infused. This will ensure that the patient safely receives the full amount of Alteplase in the tubing.
- Maintain NPO – including medications.
- Record GCS every 15 minutes.
- Monitor and document vital signs every **15** minutes on Alteplase Transport Communication Form if provided by sending facility and in ePCR. ***THIS IS EXTREMLY IMPORTANT FOR THESE PATIENTS.***
- Maintain head of bed as flat as tolerated

If SBP exceeds 180 or DBP exceeds 105:

- Administer Labetalol 10mg bolus over 1-2 min.
- After 10 min, if SBP remains >180 or DBP remains >105 and HR ≥ 60, repeat 10mg bolus over 1-2 min.
- Stop infusion if unable to keep SBP < 180 or DBP < 105 after two doses of Labetalol and **Notify Receiving Physician**
- Increase frequency of vital signs to every **5** min

Physician Orders

- On-line medical control if needed

Notes:

Complication Management:

STROKE PATIENTS RECEIVING ALTEPLASE (IFT)

Section 5.8.1

1. Monitor for signs of intracranial hemorrhage (ICH): acute worsening of neurological status as compared to baseline GCS, sudden onset of headache, nausea, and/or vomiting, sudden elevation in blood pressure and/or bradycardia. If signs of ICH present:
   - Stop Alteplase if still infusing
   - Call Medical Control for further instructions
   - Monitor and document VS and GCS every 5 min
   - Contact the receiving ECC with update and ETA

2. Monitor for signs of angioedema (mouth or throat edema, difficulty breathing) If signs present:
   - Stop Alteplase
   - Treat according to allergic reaction protocol
   - Notify Receiving Physician and ECC with update of ETA

3. Monitor for other bleeding or hematomas (infusion/puncture sites, urine, emesis).

If bleeding present, apply direct pressure to any sites and notify Receiving Physician.

STROKE PATIENTS RECEIVING ALTEPLASE (IFT)

Section 5.8.1

TO BE COMPLETED BY TRANSFERRING FACILITY

Ambitrans Alteplase Transport Communication Form

Pt Sticker Placed Here

Date: _____/_____/_____ Time: _____

- **This page to be completed by transferring facility**
- **If Medical Direction is needed contact one of the following**

Transferring Physician _____ Direct Phone # _____

Receiving Physician _____ Direct Phone # _____

Family Contact _____ Phone _____

Patient wt: _____ kg Last Seen Normal: _____

Bolus Dose _____ mg Time Given _____

CONTINUOUS INFUSION

Vitals	B/P	Pulse	RESP	SaO2	GCS
Initial Time					
Catch up*					

- Catch up time = initial time rounded to 4 hr
  - Ex: initial time 1257 – Catch up time would be 1300 and next set must be at 1315 and so on

Infusion Dose _____mg Time Given _____

Rate _____ mg/ hr Estimated Time of Completion _____

50ml 0.9% NS bag flush provided to transport crew _____

Additional Instructions:

_____

_____

_____

_____

Prior To Departure:

1. Verify that systolic blood pressure is less than 180, diastolic less than 105. If BP is above these limits sending hospital should stabilize prior to transport.
2. Document initial GCS to establish baseline
3. If Alteplase is to continue during transport, review/ verify dosage and IV pump settings with transferring RN and transport crew

X_____ X_____

Transferring RN Signature Printed Name of RN

AMBITRANS TRANSPORT CREW MUST LEAVE A COPY OF THIS COMPLETED COMMUNICATION FORM WITH RN AT RECEIVING FACILITY

1

Updated 05-2018

TO BE COMPLETED BY AMBITRANS TRANSPORT CREW

Ambitrans Alteplase Transport Communication Form

VITALS	Time	B/P	PULSE/RHY	RESP	SaO2	GCS	ANGIOEDEMA
Every 15 min			REG/IRR				YES / NO
+ 15 min			REG/IRR				YES / NO
+ 15 min			REG/IRR				YES / NO
+ 15 min			REG/IRR				YES / NO
+ 15 min			REG/IRR				YES / NO
+ 15 min			REG/IRR				YES / NO

- Infusion actual stopped/ completed time: _____
- 50ml 0.9% NS bag flush Start Time _____
- Discontinued early due to. _____

During Transport:

1. When Alteplase is empty, and before the pump alarms "air in line", replace Alteplase with a 50ml bag of 0.9% Sodium Chloride and keep same IV tubing. Continue the infusion at the current settings on the pump until the preset volume is completed. This will ensure that the patient safely receives the full amount of Alteplase in tubing
2. Continuous cardiac monitoring and pulse oximetry
3. O2 prn to maintain SaO2 ≥ 94%
4. NPO – including medications
5. Record GCS every 15 minutes
6. Maintain head of bed as flat as tolerated

Complication Management:

1. If SBP exceeds 180 or DBP exceeds 105
   - Treat according to hypertension protocol
   - Stop infusion if unable to keep SBP ≤ 180 or DBP ≤ 105 after two doses of Labetalol
   - Notify receiving Physician
   - Increase vital signs to every 5 minutes
2. Monitor for signs of ICH: acute worsening of neurological status as compared to baseline GCS, sudden onset of headache, nausea, and/or vomiting, sudden elevation in blood pressure and/or bradycardia. If signs of ICH present
   - Stop Alteplase if still infusing
   - Contact Medical Control for further instructions
   - Monitor and document VS and neuro exam every 5 minutes
   - Contact receiving facility with update and ETA
3. Monitor for signs of angioedema (mouth or throat edema, difficulty breathing) If signs present
   - Stop Alteplase
   - Treat according to allergic reaction protocol
   - Notify Receiving Physician and facility with update and ETA
4. Monitor for other bleeding or hematomas (infusion/ puncture site, urine, emesis)
   - If bleeding present, apply direct pressure to site and notify Receiving Physician

X_____ X_____

Paramedic Signature Paramedic Printed

AMBITRANS TRANSPORT CREW MUST LEAVE A COPY OF THIS COMPLETED COMMUNICATION FORM WITH RN AT RECEIVING FACILITY

2

Updated 05/2018

SUSPECTED ABUSE/NEGLECT

Section 5.9

Signs & Symptoms	Differential Diagnosis
Inconsistent explanation of injury Bruises (old and new in same area) Patterned burns (cigarette or stove) Hot water submersion burns (hands, feet, buttocks) Imprint injuries (shaped like fingers, thumbs, hands, belts, or sticks) Spotty balding (from pulled hair) Unexplained broken bones, dislocations sprains, abrasions, or scrapes Abnormal bleeding, or bruising in the genital/anal area Inability to care for self	Religious practices (coining/cupping) Congenital disease processes Sports injuries

BLS

- Initiate Basic General Medical Supportive Care
- **DO NOT** engage, antagonize, or confront suspected abuser(s)
- ***Supervisor and then notify Department of Children and Family Services 1-800-962-2873***
- Take note of the environment, patient's interaction with caregivers, discrepancies in the history obtained from the caregivers, and any signs of obvious injury

ALS

- Initiate Advanced General Medical Supportive Care
- Treat any underlying conditions as needed
- ***Supervisor and then notify Department of Children and Family Services ***
- Carefully document history and physical exam findings as well as environmental/ circumstantial data

Physician Orders

- On-line medical control if needed

Notes:

All employees are legally mandated to contact Department of Children and Family Services in all situations that are suspected to be due to child and elder abuse and neglect as required by FSS Chapter 415.504. Please confirm with RN or MD if DCFS has been notified when transporting patient from a facility if abuse or neglect is suspected.

If parents/guardians of minors refuse to let you transport the patient in cases of suspected abuse or neglect, retreat to a safe location and request assistance from law enforcement

*** This contact may not be feasible from the scene or possible due to patient care, scene, or situation, make contact with Supervisor and Department of Children and Family Services as soon as possible ***

In cases of confirmed rape, suspected rape or other sexual assault where the patient is stable, it may be necessary to request same gender provider to care for or help care for patient. This request should be made through Supervisor

SYNCOPE

Section 5.10

Signs & Symptoms	Differential Diagnosis
Sudden loss of consciousness Inability to maintain upright position	Unstable dysrhythmias Acute MI Vasovagal response Dehydration/ hypovolemia Seizure

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- Place in supine position
- 12 Lead ECG is required for all syncope or near-syncope patients
- Assess for orthostatic changes
- If systolic blood pressure <100 mmHg,
  - Normal Saline 250cc bolus IV/IO, titrate to BP of ≥100 mmHg, repeat as needed
- Patients who are experiencing syncope from cardiac dysrhythmias should be treated for the specific dysrhythmia

Physician Orders

- On-line medical control if needed
- DOPAMINE 2-10 mcg/kg/min IV/IO for systolic BP <100 mmHg that is not responsive to fluid therapy, titrate to BP of ≥100 mmHg

Notes:

HYPOVOLEMIC SHOCK MANAGEMENT

Section 5.11

Definition	Differential Diagnosis
Persistent inadequate perfusion after correction of existing decreased volume of circulating blood in the body or loss of vascular tone this includes septic and anaphylactic shock	Cardiogenic shock Neurogenic shock

BLS

- Initiate Basic General Trauma/Medical Supportive Care

ALS

- Initiate Advanced General Trauma/Medical Supportive Care
- Normal Saline 250cc bolus IV/IO
  - (Medical) titrate to systolic BP of ≥100 mmHg (septic and anaphylactic shock)
  - (Trauma) titrate to systolic BP of ≥ 90 mmHg (severe blood loss)
- repeat as needed, max of 2 Liters, monitor closely for pulmonary edema

Physician Orders

- Contact on-line medical control for bolus more than 2 liters

Notes:

Establish 2 or more large bore IV's if needed

ANXIETY CONTROL

Section 5.12

Criteria	Signs & Symptoms
Any patient experiencing severe anxiety (this includes patients who become anxious about having a CT Scan or MRI)	• Feeling restless, wound-up, or on-edge • Heart palpitations, a pounding heartbeat, or an accelerated heartrate • Sweating • Trembling or shaking • Having muscle tension • Sensations of shortness of breath, smothering, or choking

BLS

- Initiate Basic General Supportive Care

ALS

- Initiate Advanced General Supportive Care
- Give Versed 0.05 mg/kg IV/IO, max 10 mg until anxiety is relieved.
- B/P is $\geq$ 90, preferably $\geq$ 100
- LPN or higher must be present to monitor the patient at the facility.

Physician Orders

- Call Medical control as needed

Notes

Monitor for respiratory depression and keep the pulse ox on to monitor SaO^2. If respiratory depression occurs, discontinue administration, and continue airway monitoring.

SECTION 6

Environmental Protocols

ENVIRONMENTAL PROTOCOLS APPROVAL

Section 6.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

ALLERGIC REACTION

Section 6.1

Signs & Symptoms	Differential Diagnosis
Mild/Moderate Reaction Includes: Hives/Rash (especially over the neck & face) Itching Chest discomfort or tightness, palpitations Coughing **Severe Reaction Includes**: Difficulty breathing/ swallowing Swelling of the face, eyes, or tongue Wheezing, stridor Anaphylaxis Respiratory arrest	Asthma COPD Status asthmaticus

BLS

- Initiate Basic General Medical Supportive Care
- May assist patient with use of an EPI PEN
- Assist ventilations as needed

ALS

- Initiate Advanced General Medical Supportive Care

Mild or Moderate Reaction

- DIPHENHYDRAMINE 50mg IV/IO/IM

Severe

- EPINEPHINE (1:1,000) 0.01mg/kg IM, max of 0.5mg, every 5 minutes as needed
- DIPHENHYDRAMINE 50mg IV/IO/IM
- ALBUTEROL 0.083% - 2.5 mg/3 mL by nebulizer for bronchospasms
- Normal Saline 250cc bolus IV/IO, titrate to systolic BP of $\geq$100 mmHg, repeat as needed

In Extremis with Hypotension and Severe Distress

- EPINEPHRINE (1:10,000) 0.1mg IV/IO, repeat every minute titrated to effect, max 0.5mg
- Prepare for aggressive airway management, ETT intubation (Section 12.6) as indicated
- If you can't ventilate or intubate, consider Cricothyrotomy (Section 12.5)

Physician Orders

- On-line medical control if needed

Notes:

EPI PEN's are now available in some locations for public access. (i.e. Schools and government buildings)

Establish 2 or more large bore IV's if needed

BITES AND STINGS

Section 6.2

Signs & Symptoms		Differential Diagnosis
Insect Bites/ Stings	**Snakebites**	Human bite
Localized pain/ itching	Pain in area of bite	Non-venomous insects' bites or stings
Anxiety	Anxiety	Non-poisonous snakebite
Difficulty breathing or swallowing	Difficulty breathing or swallowing	Marine animal bite or sting
Swelling of the face, eyes, or tongue	Swelling in area of bite	Infections
Wheezing/ stridor	Nausea/ vomiting	
Anaphylaxis	Anaphylaxis	
Respiratory arrest	Respiratory arrest	

BLS

- Initiate Basic General Medical Supportive Care
- Remove constricting items from effected limb (rings, bracelets, clothing)

Insect Bites and Stings (bees, wasps, hornets, stinging caterpillars)

- If stinger is still in place use edge of plastic card or dull side of scissors to "scrape" stinger out of the skin

Venomous Snakebites (Pit Vipers and Coral Snakes)

- Determining if venomous snakebite, if venom status is unknown treat as venomous snakebite until proven otherwise
- If tourniquet or constricting band is already in place, **DO NOT** remove it
- Splint the affected area and position below the heart
- **DO NOT** use ice or heat

ALS

Insect Bites and Stings or Venomous Snakebites

- Initiate Advanced General Medical Supportive Care
- Monitor closely for allergic reaction and prepare treatment for sudden development of moderate or severe allergic reaction and/or anaphylaxis
- Pain management (Section 5.5) as needed

Physician Orders

- On-line medical control if needed

Notes:

Florida venomous snake identification
If snake has already been killed, transport the snake with the patient secured in a pillowcase. Be wary of reflex bites, even in dead snakes

Prior to transport contact receiving hospital for availability of antivenom
Human bites are highly infectious and should be treated by a physician

Poison Control: 1-800-222-1222

Cold Exposure

Section 6.3

Signs & Symptoms	Differential Diagnosis
Shivering Shivering that stops (worsening hypothermia) Altered level of consciousness Slow or shallow breathing Slow or weak pulse Severe hypothermia patient may appear dead Osborn wave noted in EKG (relative)	Death Burns (cryogenic) Malnutrition Decompensated shock Peripheral vasodilation Compensated shock

BLS

- Relocate to warm environment, remove wet clothing (if applicable), and provide warming blanket
- Initiate Basic General Medical Supportive Care
- Obtain patient's baseline temperature
- Initiate active external rewarming with warm compresses to groin and axilla

ALS

- Initiate Advanced General Medical Supportive Care
- Monitor and treat dysthymias associated with rewarming

Physician Orders

- On-line medical control if needed

Notes:

Avoid CPR unless clearly no pulse or perfusion

The patient may need internal rewarming with heated IV's, heated oxygen, and more invasive procedures as rapidly as possible if core temperature <89°F,(or suspected low body temp)

HEAT EXPOSURE

Section 6.4

Signs & Symptoms		Differential Diagnosis
Heat Exhaustion	**Heat Stroke**	Medication related hyperthermia (Malignant)
Warm, moist skin	Hot, dry skin	Poisoning
Heavy sweating	Little to no sweating	Infection
Cramps	Unconscious	
Weakness	Dilated pupils	
Dizziness/ Syncope	Rapid, shallow breathing and/or pulse	
Rapid, weak pulse		

BLS

- Relocate to cool environment and remove clothing (if applicable)
- Initiate Basic General Medical Supportive Care
- Obtain patient's baseline temperature

Heat Exhaustion

- Cold beverages may be used judiciously in the alert patient
- Cool patient and increase evaporation (using a fan or air conditioning)

Heat Stroke or Temperature ≥105°F with ALOC

- Remove all the patient's clothing
- Initiate active aggressive external cooling with cool compresses to axilla and groin, fans, air conditioning

ALS

- Initiate Advanced General Medical Supportive Care

Heat Stroke or temperature ≥105°F with ALOC

- Do not delay transport
- Remove all the patient's clothing
- Initiate active aggressive external cooling with cool compresses to axilla and groin, fans, air conditioning
- Normal Saline 250cc bolus IV/IO, repeat as needed, maximum of 2 Liters, monitor closely for pulmonary edema

Physician Orders

- On-line medical control if needed

Notes:

Cool environments include an air conditioned building or rescue vehicle

Cooling the patient's skin may include spray bottle, misting fans, sponge bath (wet towels) and increase evaporation by blowing a fan over patient

MARINE LIFE INJURY

Section 6.5

Signs & Symptoms		Differential Diagnosis
Venom spines/fins Localized pain burning swelling redness bleeding Impaled spines	**Stinging cells (nematocysts)** Burning, prickling, stinging, throbbing pain Red, brown or purplish tracks on skin Itching Swelling Tingling/ numbness	Non-marine life bites and stings

BLS

- Initiate Basic General Medical Supportive Care

Predatory marine life (sharks or barracuda)

- Apply gauze pads, direct pressure and elevate wound site as needed
- Severe bleeding, apply tourniquet immediately, note time

Venomous spines/fins (catfish, scorpion fish, sea urchin, starfish, stonefish, stingray)

- Soak affected area in hot water (110° – 115° F) if available or apply heat pack

Venomous nematocysts (fire coral, jellyfish, Portuguese man-of-war, sea anemone)

- Rinse with sea water and isopropyl alcohol or vinegar if available as copious irrigation
- Remove large fragments with forceps or pliers
- Patients are highly encouraged to be transported to the hospital due to the high incidence of retained foreign bodies and infection

ALS

Predatory marine life (sharks or barracuda)

- Normal Saline 250cc bolus IV/IO, titrate to systolic BP of >90 mmHg, repeat as needed

Venomous spines/fins and Venomous nematocysts

- Initiate Advanced General Medical Supportive Care
- Monitor Closely for allergic reaction and prepare treatment for sudden development of moderate/severe allergic reaction and/or anaphylaxis
- Pain management (Section 5.5) as needed

Physician Orders

- On-line medical control if needed

Notes:

RADIATION EXPOSURE

Section 6.6

Signs & Symptoms		Differential Diagnosis
Early or low dose (1 – 6 Gy)	**Late or high dose** (6 – 10 Gy)	GI problems
Nausea/vomiting	Weakness, fatigue	Cardiac issues
Headaches	Hair loss,	Infection or sepsis
Fatigue	Bloody vomit and stools,	Allergic reaction
Fever	Infections or poor wound healing	Poisoning
Skin reddening		

BLS

- Request Hazmat unit response
- Remove patient from radiological environment if safe to do so
- Establish a gross field decontamination area and process patient(s) in this area as appropriate
- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- Treat any underlying reactions to radiation
- Contact Poison Control Center for consultation: **1-800-222-1222** or Medical Control

Physician Orders

- On-line medical control if needed

Notes:

Obtain information regarding, name and amount of material if contacted or ingested, time of contact or ingestion and level/ type of radiation (alpha, beta, gamma, x-ray)

Contact receiving hospital prior to transport to ensure the hospital is able to handle this patient

SUSPECTED CYANIDE POISONING/SMOKE INHALATION

Section 6.7

Signs & Symptoms		Differential Diagnosis
Low dose	**High dose**	Hypoxia
General weakness	ALOC	Hydrogen Sulfate (H_2S) poisoning
Giddiness	Seizure	CO_2 Poisoning
Headache	Apnea	
Vertigo	Coma	
Confusion	Cardiac arrest	
SOB		

BLS

- Request Hazmat response (if applicable)
- Remove patient from toxic environment if safe to do so
- Establish a gross field decontamination area and process patient(s) in this area as appropriate
- High flow oxygen
- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- Normal Saline 250cc bolus IV/IO, titrate to systolic BP of >90 mmHg, repeat as needed, max of 2 Liters
- Contact Poison Control Center for consultation: **1-800-222-1222** or Medical Control

Physician Orders

- On-line medical control if needed

Notes:

SaO_2 reading may be falsely normal or high

Hydroxocobalamin must administered in a dedicated IV line

TOXIC EXPOSURE

Section 6.8

Signs & Symptoms	Differential Diagnosis
(S) Salivation/ Sweating / Seizures **(L)** Lacrimation (Tearing) **(U)** Urination **(D)** Defecation/diarrhea **(G)** GI Upset (Cramps and nausea) **(E)** Emesis **(M)** Muscle twitching/miosis(constricted pupils)	Nerve agent exposure (Intentional) Seizure

BLS

- Request Hazmat response
- Remove patient from toxic environment if safe to do so
- Establish a gross field decontamination area and process patient(s) in this area as appropriate
- Initiate Basic General Medical Supportive Care

Dermal Exposure:

- Remove contaminated clothing, brush powders off of skin, and irrigate area copiously with water or saline for at least 15 minutes

Eye or Mucosal Exposure:

- Irrigate with water or saline continuously for at least 30 minutes

ALS

- Initiate Advanced General Medical Supportive Care
- Do not delay transport for irrigation
- Treat any reactions to toxins
- Contact Poison Control Center for consultation: **1-800-222-1222** or Medical Control

Physician Orders

- On-line medical control if needed

Notes:

If safe to do so, secure area; if unable or unsafe to do so, contact Hazmat Team

Obtain information regarding name and amount of material if contacted or ingested, time of contact or ingestion

Rescue personnel shall take protective measures such as wearing gloves, masks, gowns, exposure garments

NERVE AGENT EXPOSURE

Section 6.9

Signs & Symptoms	List of Common Nerve Agents
Patients over age of 10 or 40kg: **Nerve agent/ organophosphate poisoning** **(S)** Salivation/Sweating/Seizures **(L)** Lacrimation (Tearing) **(U)** Urination **(D)** Defecation/Diarrhea **(G)** GI Upset (Cramps and nausea) **(E)** Emesis **(M)** Muscle twitching/miosis (pinpoint pupils)	Sarin (GB) Soman (GD) Tabun (GA) VX

BLS

- Request Hazmat response
- Remove patient from toxic environment if safe to do so
- Establish a gross field decontamination area and process patient(s) in this area as appropriate
- Initiate Basic General Medical Supportive Care

Exposure with NO symptoms

- Observation only

ALS

- Initiate Advanced General Medical Supportive Care
- Contact Poison Control Center for consultation: **1-800-222-1222** or Medical Control

Mild symptoms (muscle twitching and diaphoresis), Moderate symptoms (S.L.U.D.G.E.M) and Severe symptoms (unconscious, seizures, flaccid, apnea)

- ATROPINE 2 mg IV/IO/IM, repeat every 5 – 10 minutes until secretions disappear

Seizure activity related to nerve agent exposure

- VERSED 0.05 mg/kg IV/IO/IM/IN, titrated to cessation of seizure, max of 10 mg, repeat once if needed (IM route is preferred if no IV/IO access is established)

Physician Orders

- On-line medical control if needed or Poison Control: **1-800-222-1222**

Notes:

Rescue personnel shall take protective measures such as wearing gloves, masks, gowns, exposure garments

SECTION 7

OB/GYN Protocols

AMBITRANS AMBULANCE

OB/GYN PROTOCOLS APPROVAL

Section 7.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

EMERGENCY CHILDBIRTH

Section 7.1

Childbirth History		Delivery Site	
		On-Scene	**Hospital Delivery**
Number of pregnancies (gravida)? Number of deliveries (para)? Duration of present pregnancy? Have membranes ruptured? Time? Complications of pregnancy? Coincidental medical problems?	Frequency/duration of contractions? Vaginal bleeding? Presenting fetal parts? Prolapsed umbilical cord? Patients Physician?	Term pregnancy Multiparous mother Long transport Head crowning Vertex position (baby facing down) Mother with stable vitals No cord prolapse	Premature labor 1st pregnancy Short transport Breech presentation No crowning Mother with unstable vitals Cord prolapse

BLS

- Initiate Basic General Medical Supportive Care
- Prepare the equipment in the provided OB Kit
- Position the mother on a firm surface and elevate hips on a blanket roll, drape patient as time allows
- Inspect vaginal area for impending delivery (crowning), any other signs of abnormal presentation, prolapsed amniotic sac, limb presentation, cord presentation, or breech presentation
- Upon delivery of the fetal head, suction the mouth, nose, and pharynx. Unwind the cord if it is wrapped around the fetal neck
- Place the fetus on a secure surface on the same level as the birth canal of the mother, wrap the baby with sterile towels
- Double clamp the umbilical cord
  - Apply first clamp on cord at ten inches (10") from the babies navel
  - Apply second clamp three inches (3") below first clamp towards the mother, cut the cord in middle of the two clamps
- The infant should now be stimulated (gently dry the skin) to produce respiratory efforts until a cry is obtained
- Allow the mother to hold the baby, if mother wants encourage mother breast feed baby
- Document time of delivery and APGAR Scores at 1 and 5 minutes
- For care of newborn refer to (Section 7.2)
- For heavy bleeding post-partum, apply sterile dressings to vagina, DO NOT PACK

ALS

- Initiate Advanced General Medical Supportive Care
- Normal Saline 250cc bolus IV/IO, titrate to systolic BP of $\geq$100 mmHg, repeat as needed

If meconium is present without fetal distress (Heart rate greater than 100/min)

- Suction airway as normal monitor for signs of distress

If meconium is present with fetal distress (Heart rate less than 100/min)

- Aggressive suction of airway via ETT with meconium aspirator suction device
- Place ETT through vocal cords, suction while withdrawing ETT, repeat until airway is clear

Physician Orders

- On-line medical control if needed for abnormal presentation or birth

Prolapsed or unruptured amniotic sac is noted:

- Gently break the membrane with a sterile hemostat, note any abnormal color or smell associated with amniotic fluid

Limb presentation is noted:

- DO NOT DELAY TRANSPORT
- Place the patient with head down with pelvis elevated position and discourage the mother's need to push, DO NOT PULL ON EXPOSED LIMB

Umbilical cord prolapse is noted:

- DO NOT DELAY TRANSPORT
- Place the patient in deep Trendelenburg position, upward manual pressure should be exerted through the vagina (two gloved fingers) lifting the presenting part away from the cord use other hand to palpate pulse in prolapsed section of cord
- Hold this position during transport to the hospital

If breech presentation is noted:

- DO NOT DELAY TRANSPORT
- Place the patient with head down with pelvis elevated position and discourage the mothers need to push
- Deliver the anterior (upper) shoulder in controlled fashion, and then the posterior (lower) shoulder and the remainder of the fetus. Carefully support the fetus with head slightly lower than feet

Notes:

	Score 0	Score 1	Score 2
Appearance			
Pulse	No pulse	< 100/min.	> 100/min.
Grimace			
Activity			
Respirations	No respirations	Weak, slow	Strong cry

NEONATAL CARE/RESUSCITATION

Section 7.2

Signs & Symptoms		Differential Diagnosis
Within 30 seconds Address respiratory issues	**Within 60 seconds** Address respiratory/ circulation issues or begin CPR	Fetal Overdose Premature Non-viable gestation <20 weeks Spontaneous abortion Medical abortion

BLS

- Warm, clear airway if necessary, dry and stimulate
- Initiate Basic General Medical Supportive Care

If heart rate is above 100 beats per minute

- Monitor SaO2 (placed on newborns right arm) maintain target range, if unable to maintain target range supply supplemental blow by oxygen to maintain target range (Section 7.2.1)

If meconium is present without fetal distress (Heart rate greater than 100/min)

- Suction airway as normal monitor for signs of distress

If heart is 60 - 100 beats per minute with labored breathing, cyanosis, gasping or apnea

- Assist ventilations with neonatal BVM
  - Stop if heart rate increases to ≥100 beats per minute
- Monitor SaO_2 (placed on newborns right arm) maintain target range, if unable to maintain target range supply supplemental oxygen via BVM (Section 7.2.1)

If meconium is present with fetal distress (Heart rate less than 100/min)

- Aggressive suction of airway via ETT with meconium aspirator suction device
- DO NOT DELAY TRANSPORT

If heart rate is below 60 beats per minute

- CPR (3 compression to 1 ventilation ratio, reassess every one (1) minute),
  - Stop if heart rate increases ≥60 beats per minute and assist ventilations with neonatal BVM
- DO NOT DELAY TRANSPORT

ALS

- Initiate Advanced General Medical Supportive Care

If heart rate is below 60 beats per minute and not responding to current treatment

- Consider intubation with appropriate sized ETT (Section 12.6) if available
  - If appropriate size ETT is not available, continue ventilating with BVM
- Normal Saline 10 cc/kg fluid bolus
- EPINEPHRINE (1:10,000) 0.01 mg/kg IV/IO, may be repeated every 4 minutes

Physician Orders

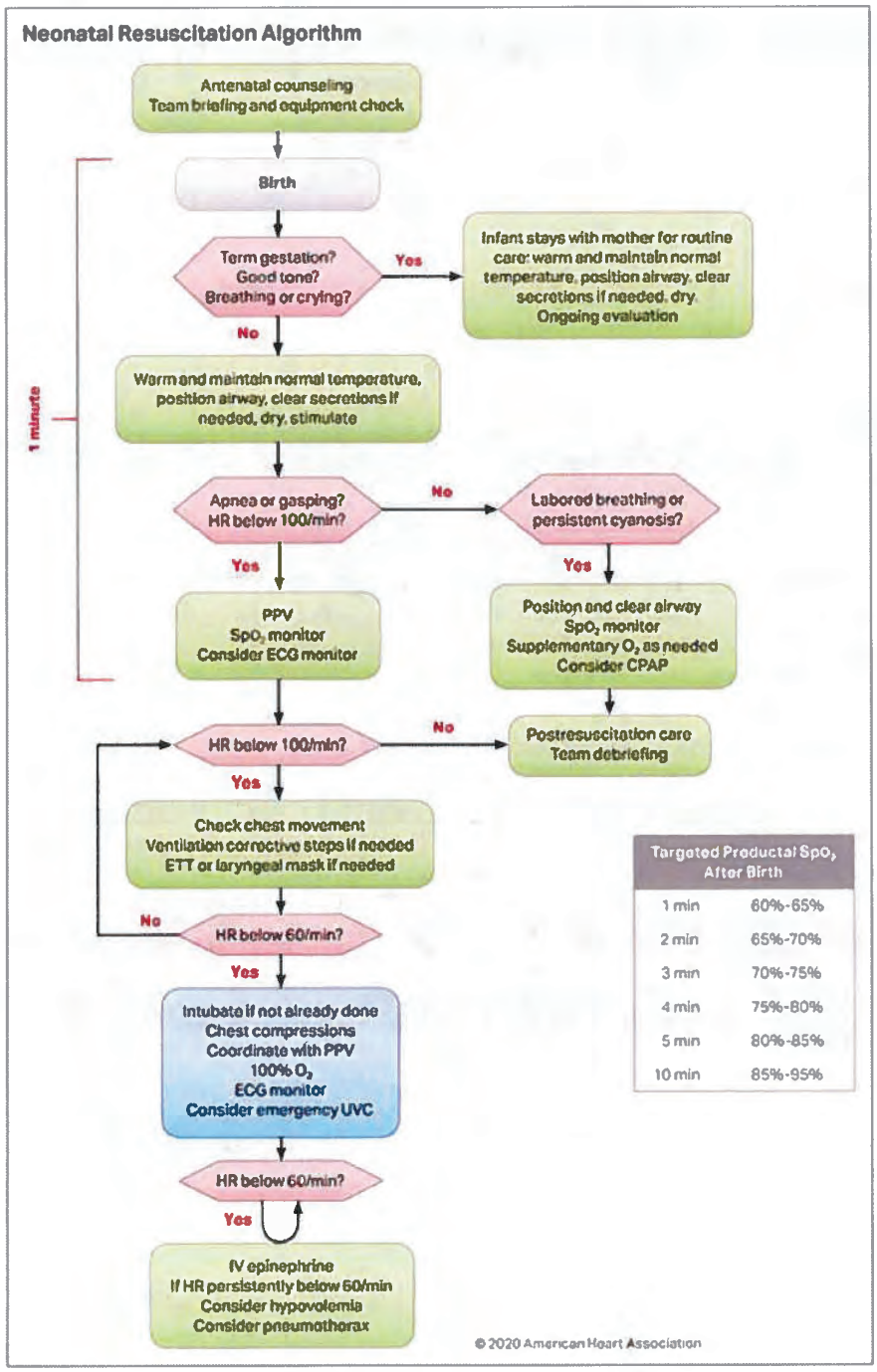
- On-line medical control if needed

Notes:

USE BROSELOW TAPE FOR CALCULATIONS OF MEDICATIONS

NEONATAL RESUSCITATION *Reference Flowchart*

Section 7.2.1



Targeted Preductal SpO_2 After Birth	
1 min	60%-65%
2 min	65%-70%
3 min	70%-75%
4 min	75%-80%
5 min	80%-85%
10 min	85%-95%

PRE-ECLAMPSIA AND ECLAMPSIA

Section 7.3

Signs & Symptoms		Differential Diagnosis
Pre-Eclampsia Present in the last trimester Up to 28 days post-partum Hypertension (140/90) Proteinuria Generalized peripheral edema Headache (Late) ALOC (Late)	**Eclampsia** Pre-eclampsia accompanied by seizure activity	Overdose Poisoning Seizures Diabetes Trauma

BLS

- Initiate Basic General Medical Supportive Care

Active seizure (Tonic/Clonic)

- Place patient in a lateral position, protect patient from objects
- Do not attempt forceful insertion of bite block or oral airway during active seizure
- Insert NPA and ventilate with BVM
- Check blood sugar

ALS

- Initiate Advanced General Medical Supportive Care

Active seizure (Tonic/Clonic) associated with eclampsia

- MAGNESIUM SULFATE 4 GM IVPB in Normal Saline 250cc over 15 minutes
- MAGNESIUM SULFATE Maintenance Infusion 1-2 GM/hr
- If IV is unavailable, MAGNESIUM SULFATE 4 GM IM (2 GM in each gluteus)

Physician Orders

- On-line medical control if needed

Notes:

IM route is preferred if the patient is found in active seizure (Tonic/Clonic) when no IV/IO access is established

Be prepared to aggressively manage airway concentrate on oxygenation of patient post seizures

Be prepared for combative patient post seizures

For symptomatic toxicity: 10 mL or 10% Calcium Chloride IV and contact medical control

SUSPECTED SEXUAL ASSAULT

Section 7.4

Signs & Symptoms	Differential Diagnosis
Pain, bleeding or discharge in genitals, anus, or mouth Cuts or tears around the vaginal area and/or anus Other physical trauma to genital and/or anal area	

BLS

- Advise appropriate law enforcement authority
- Calm patient and protect privacy of patient and crime scene
- Do not remove clothing unless medically necessary for treatment. If clothing is removed, place in a evidence bag provided by law enforcement, and turnover to law enforcement on-scene
- Initiate Basic General Medical Supportive Care
- Treat any underlying conditions as needed
- Carefully document history and physical exam findings as well as environmental/ circumstantial data

ALS

- Initiate Advanced General Medical Supportive Care
- Treat any underlying conditions as needed

Physician Orders

- On-line medical control if needed

Notes:

At the conclusion of the transport, wrap and leave stretcher sheets in the patient's room

In cases of confirmed rape, suspected rape or other sexual assault where the patient is stable, it may be necessary to request same gender provider to care for or help care for patient. This request must be approved by a Supervisor

TRAUMA DURING PREGNANCY

Section 7.5

Signs & Symptoms	Differential Diagnosis
Associated with pregnancy Bruising of chest and abdomen (seat belt sign) Abrasions and hematomas Abdominal distension, rigidity or guarding Chest/rib pain or injury Pelvis pain or injury Back pain or injury	Suspected abuse

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- If possible, transport patient in left lateral recumbent position
  - If spinal precautions prevent this, the unstable pregnant patient should be transported with manual displacement of the uterus to the left

Physician Orders

- On-line medical control if needed

Notes:

SECTION 8

Pediatric Protocols

PEDIATRIC PROTOCOLS APPROVAL

Section 8.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

GENERAL PEDIATRIC BLS CARDIAC ARREST

Section 8.1

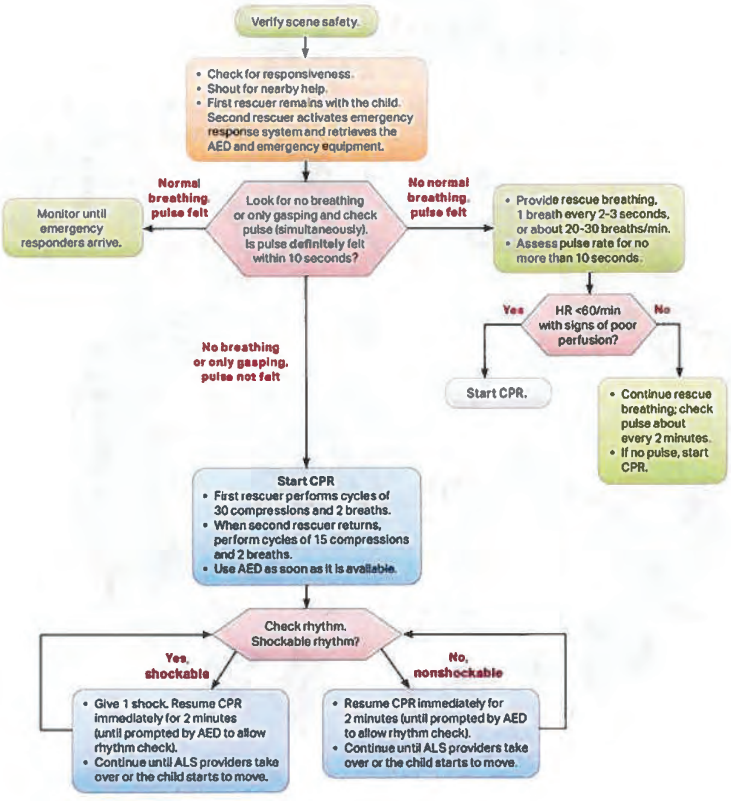
Pediatric arrest patients (30 days to puberty) will receive General Cardiac Arrest Protocol care. This protocol follows the AHA Guidelines. If BLS units arrive on-scene first, this protocol will be followed until an ALS unit arrives on scene to provided advanced care. Along with this, General Basic Supportive Care will be initiated. When ALS care arrives on-scene, the ALS unit will proceed to the appropriate Cardiac Arrest Protocol.

Constant monitoring of effectiveness of resuscitation is required, especially in patients not responding promptly to standard measures. Proper positioning of airway adjuncts should be confirmed by auscultation of breath sounds at least every (2) minutes. Assess patient cardiac rhythm and pulse every (2) minutes. Vital signs should be obtained every (5) minutes or when there is a change in patient condition.

All unresponsive patients who are intubated shall have cervical immobilization performed after tube placement is confirmed in order to minimize the possibility of movement within the trachea.

BLS

Pediatric Basic Life Support Algorithm for Healthcare Providers—2 or More Rescuers



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GENERAL PEDIATRIC ALS CARDIAC ARREST

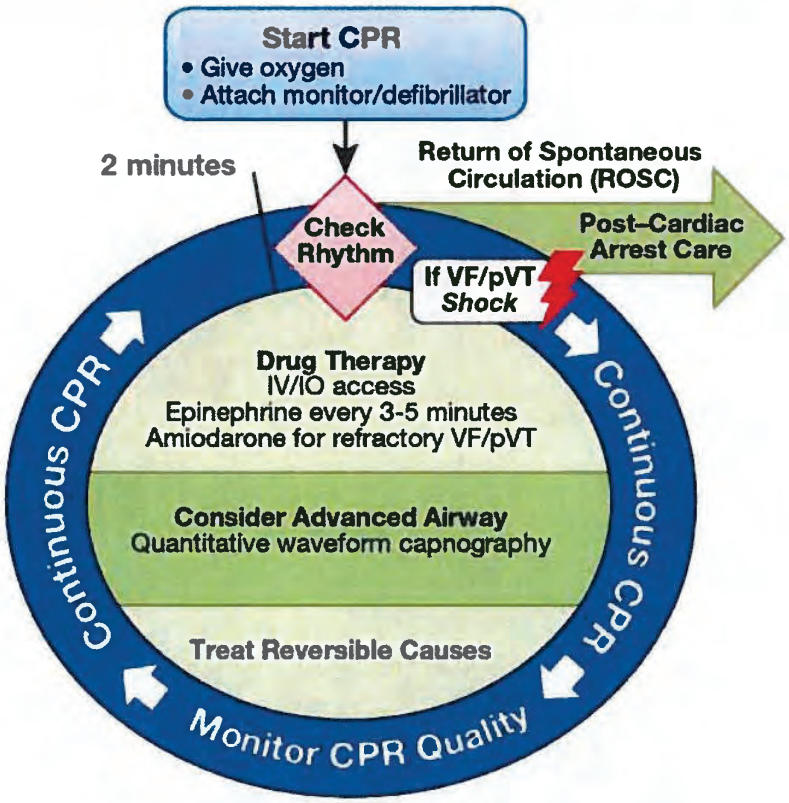
Section 8.2

Pediatric arrest patients (30 days to puberty) will receive General Cardiac Arrest Protocol care. This protocol follows the AHA Guidelines. If BLS units arrive on-scene first, this protocol will be followed until an ALS unit arrives on scene to provided advanced care. Along with this, General Basic Supportive Care will be initiated. When ALS care arrives on-scene, the ALS unit will proceed to the appropriate Cardiac Arrest Protocol.

Constant monitoring of effectiveness of resuscitation is required, especially in patients not responding promptly to standard measures. Proper positioning of airway adjuncts should be confirmed by auscultation of breath sounds at least every (2) minutes. Assess patient cardiac rhythm and pulse every (2) minutes. Vital signs should be obtained every (5) minutes or when there is a change in patient condition.

All unresponsive patients who are intubated shall have cervical immobilization performed after tube placement is confirmed in order to minimize the possibility of movement within the trachea.

ALS



PEDIATRIC ASYSTOLE/PEA

Section 8.3

Signs & Symptoms	Differential Diagnosis
Unresponsive Apneic Pulseless	Irreversible Death V-TACH or V-FIB

BLS

- General Pediatric BLS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- AED (1 year old and greater)
- Consider nasogastric/orogastic tube placement to relieve gastric distension

ALS

- General Pediatric ALS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- Establish IV/IO
- EPINEPHRINE (1:10,000) 0.01 mg/kg IV/IO, repeat every 4 minutes
- Intubate (when possible),
- Normal Saline 20cc/kg bolus IV/IO
- Consider possible causes of asystole or PEA such as hypoxia, hypovolemia, hyperkalemia, hypokalemia, hypoglycemia, hydrogen ions acidosis, toxins, hypothermia, tension pneumothorax, cardiac tamponade, thrombosis, trauma

Physician Orders

- On-line medical control if needed or for SODIUM BICARBONATE administration
- Traumatic cardiac arrest bilateral needle chest decompression

Notes:

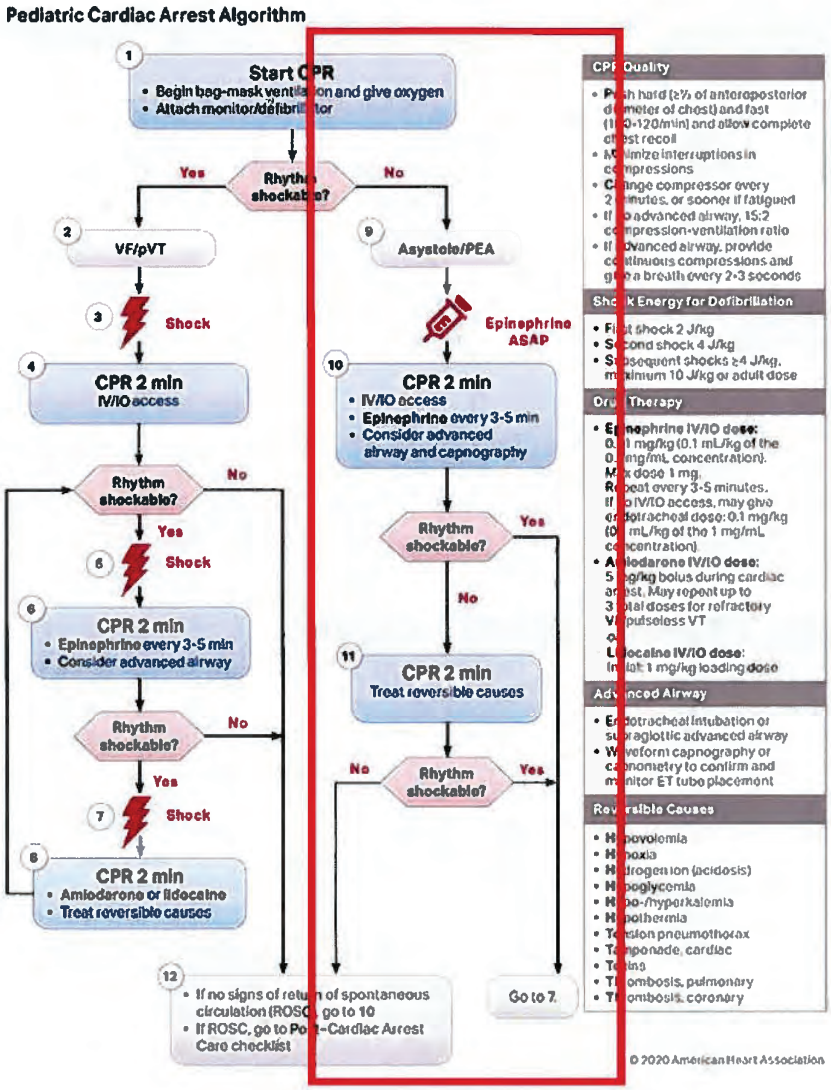
USE BROSELOW TAPE FOR ALL CALCULATIONS OF MEDICATIONS

If patient has under arm hair, breast development or you are unable to determine if patient is a child, proceed to (Section 3.4)

- **In hypothermic patients active rewarming is required prior to termination of resuscitation efforts.**
- Effect CPR is defined as 100 to 120 compressions/min at a minimum of 2" depth for adults or children and a depth of 1 ½" for infants
- Maintain a capnography of at least 10 mmHg during effective CPR
- CPR should not be delayed or interrupted for more than 10 seconds
- Placement of an advanced airway should be accomplished only after effective CPR, ventilation has been performed for several minutes or ventilations are ineffective via BVM and OPA
- Administration of medications should occur while CPR is in progress and should be circulated by CPR for one (1) minute before defibrillation
- Sharp increase in capnography is a sign of ROSC

PEDIATRIC ASYSTOLE/ PEA REFERENCE FLOWCHART

Section 8.3.1



PEDIATRIC V-FIB/ PULSELESS V-TACH

Section 8.4

Signs & Symptoms	Differential Diagnosis
Unresponsive Apneic Pulseless	Irreversible Death Asystole/PEA

BLS

- General Pediatric BLS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- AED (1-year-old and greater) * If available
- Ventilate by BVM and OPA
- Consider nasogastric/orogastic tube placement to relieve gastric distension

ALS

- General Pediatric ALS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- Defibrillate at 2 joules/kg
- Establish IV/IO
- Defibrillate at 4 joules/kg
- EPINEPHRINE (1:10,000) 0.01 mg/kg IV/IO, repeat every 4 minutes
- Defibrillate at 4 joules/kg, If V-FIB/ Pulseless V-TACH returns (closest available setting)
- AMIODARONE 5 mg/kg IV/IO, may be repeated twice
- Intubate (when possible),

Physician Orders

- On-line medical control as needed or for SODIUM BICARBONATE administration

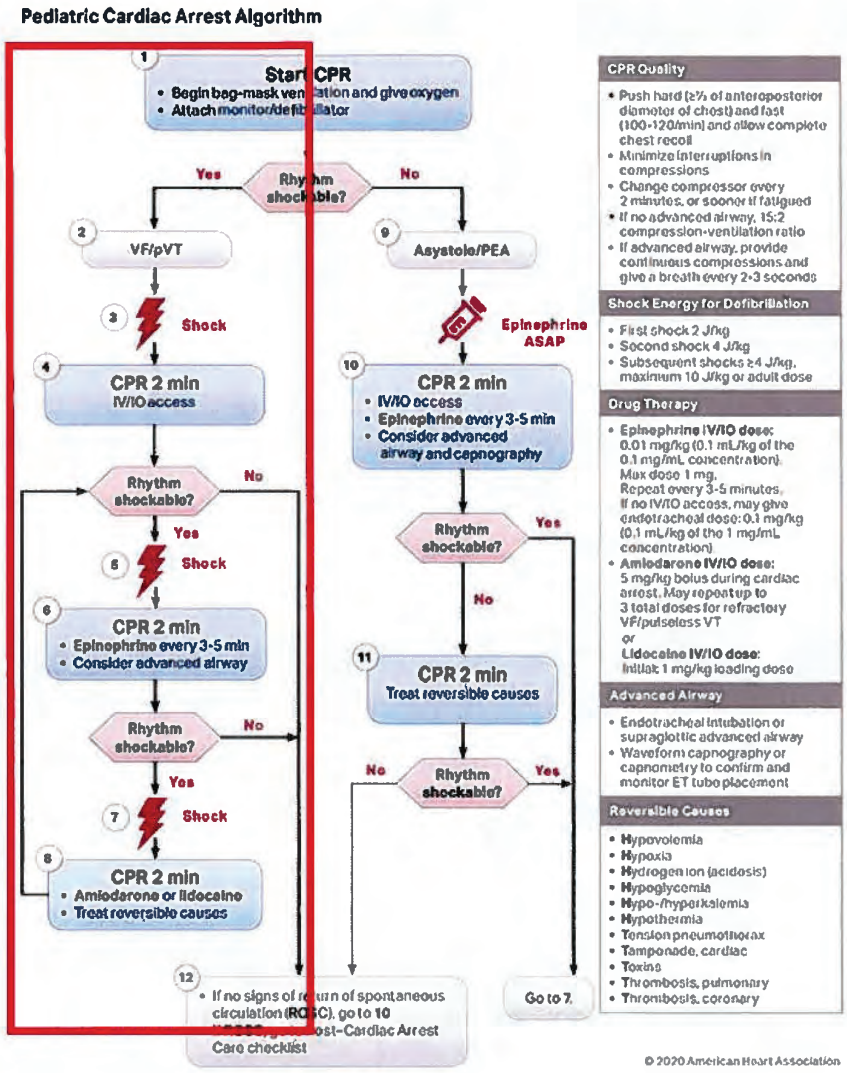
Notes:

USE BROSELOW TAPE TO CALCULATE DOSE OF MEDICATIONS

- **In hypothermic patients active rewarming is required prior to termination of resuscitation efforts**
- Effect CPR is defined as 100 to 120 compressions/min at a minimum of 2" depth for child and minimum of 1 ½" depth of infants
- Maintain a capnography of at least 10 mmHg during effective CPR
- CPR should not be delayed or interrupted for more than 10 seconds
- Placement of an advanced airway should be accomplished only after effective CPR and ventilation has been performed for several minutes
- Administration of medications should occur while CPR is in progress and should be circulated by CPR for one (1) minute before defibrillation
- Sharp increase in capnography is a sign of ROSC

PEDIATRIC V-FIB/ PULESLESS V-TACH *Reference Flowchart*

Section 8.4.1



PEDIATRIC SYMPTOMATIC TACHYCARDIA

Section 8.5

Signs & Symptoms		Differential Diagnosis
Infant	**Child**	Cardiac Arrest
HR ≥220	HR ≥180	A-Fib/A-Flutter
QRS Interval ≤0.09	QRS Interval ≤0.09	Infection
with following signs:	with following signs:	Pain
ALOC	ALOC	Fear or anxiety
capillary refill	Hemodynamically unstable	
pale, ashen skin		
peripheral cyanosis		

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

Sinus Tachycardia: ≤220 HR for infant or ≤180 HR for child

- Normal Saline 20cc/kg bolus IV/IO

Narrow Complex: Sustained ≥220 HR for infant or ≥180 HR for child and Symptomatic

- ADENOSINE 0.1 mg/kg rapid IV/IO, max of 6 mg, followed by Normal Saline 10 – 20cc rapid IV bolus
- If no change 1-2 minutes after initial dose,
  - ADENOSINE 0.2 mg/kg rapid IV/IO, max of 12 mg, followed by Normal Saline 10 – 20cc rapid IV bolus

Physician Orders

- If rhythm **DOESN'T** convert, contact on-line medical control for further orders
- On-line medical control if needed

Wide Complex with Pulses: Sustained ≥ 150 HR, QRS Interval ≥ 0.09 sec

- Consider sedation
  - VERSED 0.05 mg/kg IV/IO, max of 10 mg
- Synchronized cardioversion at 2 joules/kg (closest available setting)

Notes:

USE BROSELOW TAPE FOR ALL CALCULATIONS OF MEDICATIONS

Heart rate, BP & respiratory rate are expected to increase during times of fever or stress

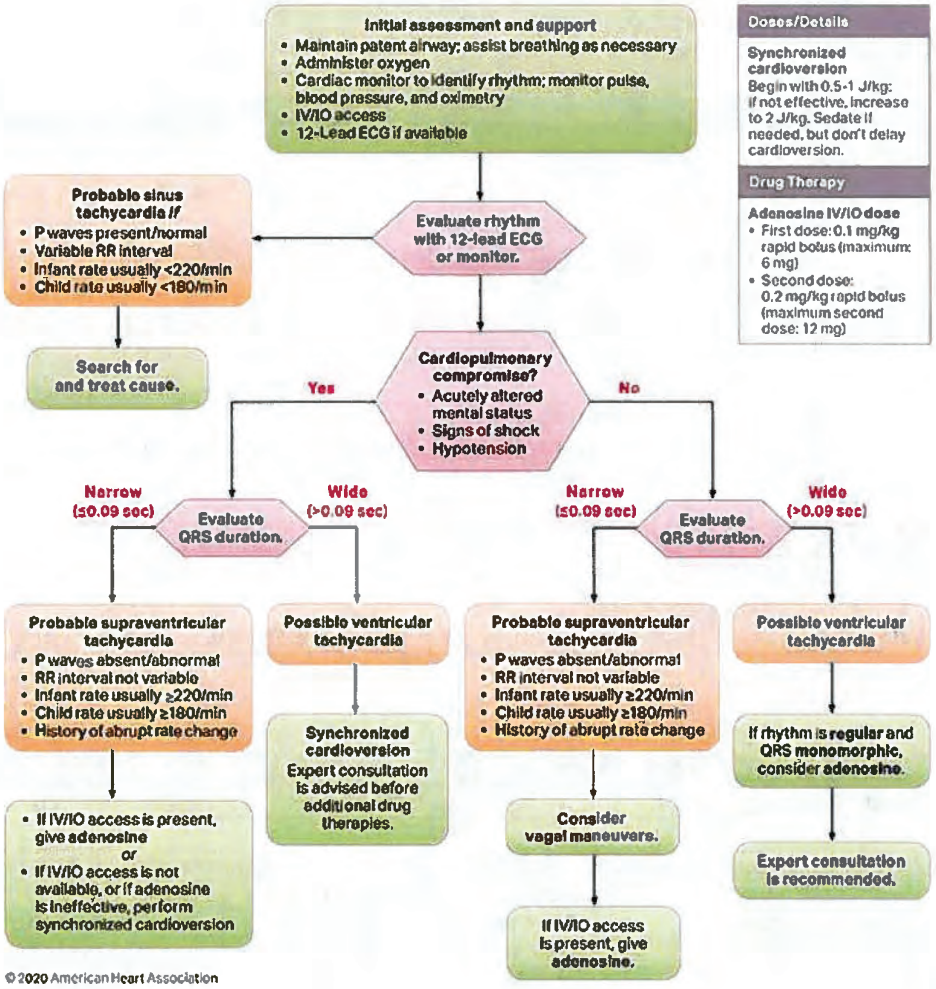
AGE	PULSE	RESPIRATIONS	BLOOD PRESSURE
Neonate (birth – 30 days)	100 – 180	30 – 60	> 70 systolic
Infant (30 days – 1 year)	100 – 180	20 – 60	> 70 systolic
Toddler (1 – 3 years)	90 – 160	20 – 30	> 70 systolic
Preschooler (3 – 5 years)	80 – 140	20 – 30	> 75 systolic
School-aged Child (5 – 10 years)	70 – 120	20 – 30	> 80 systolic
Adolescent (10 – 15 years)	60 – 110	12 – 30	> 90 systolic

Young, elderly and patients with depressed VS should receive the lowest possible dose of VERSED to achieve sedation for cardioversion (0.05 mg/kg)

PEDIATRIC SYMPTOMATIC TACHYCARDIA

Section 8.5

Pediatric Tachycardia With a Pulse Algorithm



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PEDIATRIC SYMPTOMATIC BRADYCARDIA

Section 8.6

Signs & Symptoms	Differential Diagnosis
Defined as: Pulse <60 **AND** Symptomatic = Altered level of consciousness Delayed capillary refill Diminished distal pulses Cool extremities	Vaso-vagal response Drug use or abuse Beta-blocker Overdose

BLS

- Initiate Basic General Medical Supportive Care
- Consider CPR for infants (<1 year)

ALS

- Initiate Advanced General Medical Supportive Care
- EPINEPHRINE (1:10,000) 0.01 mg/kg IV/IO, repeat every 3 – 5 minutes
- ATROPINE 0.02 mg/kg IV/IO (min single dose 0.1 mg), max single dose 0.5 mg, may be repeated once

Physician Orders

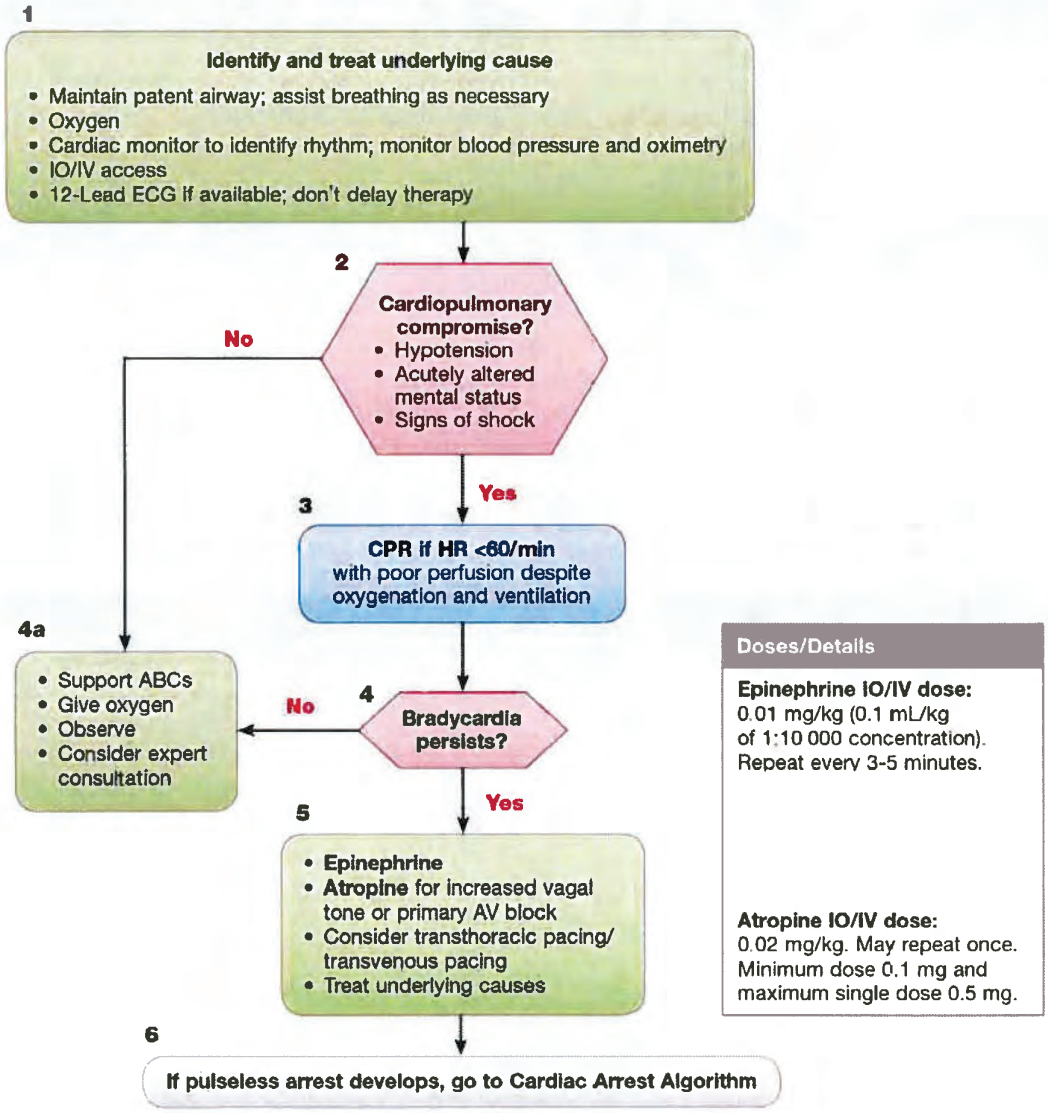
- If rhythm **DOESN'T** convert, contact on-line medical control for further orders
- On-line medical control if needed

Notes:

USE BROSELOW TAPE FOR ALL CALCULATIONS OF MEDICATIONS

PEDIATRIC BRADYCARDIA *Reference Flowchart*

Section 8.6.1



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PEDIATRIC RESPIRATORY DISTRESS

Section 8.7

Signs & Symptoms	Differential Diagnosis
Wheezes Stridor Increased work of breathing Nasal flaring Intercostal retractions Cyanosis	Pneumonia Sepsis Allergic reaction

BLS

- Initiate Basic General Medical Supportive Care
- May assist patient with patient's prescribed inhalers
- Sit in position of comfort
- Assist ventilations with BVM if needed

ALS

- Initiate Advanced General Medical Supportive Care
- Albuterol 0.083% - 2.5 mg/3 mL, by nebulizer, if respiratory symptoms continue may be repeated two more times
- Assist ventilations with BVM as needed

Croup / Epiglottis / Bronchiolitis

- Administer Oxygen humidified if possible.
- Give nothing by mouth.
- Contact medical control for medication orders.

If respiratory distress doesn't improve or worsens

- EPINEPHIRINE (1:1000) 0.01 mg/kg IM, max of 0.5 mg
- Proceed to ETT intubation (Section 12.6), if indicated

Physician Orders

- On-line medical control if needed

Notes:

USE BROSELOW TAPE FOR ALL CALCULATIONS OF MEDICATIONS

If the patient is sitting in a tripod position with excessive drooling this may be epiglottitis, **transport immediately**. Do not lay the patient flat, do not attempt to visualize the throat.

PEDIATRIC FOREIGN BODY AIRWAY OBSTRUCTION

Section 8.8

Signs & Symptoms	Differential Diagnosis
Universal choking sign Unable to speak or cough Apneic, possibly unresponsive For infants and young children, inability to cry, cyanotic, eventually becoming limp when unresponsive	Partial obstruction, still air exchange Severe allergic reaction/ Anaphylaxis Respiratory arrest Cardiac arrest

BLS

- Establish responsiveness

Responsive Infant or Child

Infant

- 5 Back Blows and 5 Chest Thrusts
- repeat until relief or until unresponsive

Child

- Abdominal Trusts
- repeat until relief or until unresponsive

Infant or Child is unresponsive or goes unresponsive

- Begin CPR, with one exception
  - Check airway for obstruction prior to giving breaths
  - ONLY remove items that are seen
  - NO BLIND FINGER SWEEPS
- Continue until ALS help arrives or object is removed and patient becomes responsive
- Initiate Basic Medical General Supportive Care

ALS

- Direct laryngoscopy and attempt to visualize and remove the object
- Continue ventilation with BVM
- Initiate Advanced Medical General Supportive Care
- If ventilation becomes difficult, attempt ETT intubation (Section 12.6)
- If you can't ventilate or intubate, initiate Cricothyrotomy (Section 12.5) for patients over 10 years or Needle Cricothyrotomy for patients 10 years and younger (Section 12.13)

Physician Orders

- On-line medical control if needed

Notes:

PEDIATRIC DROWNING/NEAR DROWNING

Section 8.9

Signs & Symptoms	Differential Diagnosis
Cold or bluish skin Abdominal swelling Chest pain Cough Shortness or lack of breath Vomiting Unconsciousness	Head trauma Cervical spine trauma Seizure Suicide/homicide Child abuse

BLS

- Initiate Basic General Medical Supportive Care
- Maintain SaO_2 $\geq$94%
- Be prepared to give CPR
- Maintain the child's body temperature throughout the examination and expose the child only as necessary to perform further assessments

ALS

- Initiate Advanced General Medical Supportive Care
- If the child's condition is critical, initiate transport
- Assist ventilations with BVM
- Reassess the patient frequently

Physician Orders

- On-line medical control if needed

Notes:

USE BROSELOW TAPE FOR CALCULATIONS OF MEDICATIONS

All near drowning patients are highly encouraged to be transported to the hospital

PEDIATRIC IMPAIRED CONSCIOUSNESS

Section 8.10

Signs & Symptoms	Differential Diagnosis
Altered level of conciseness	**(A)** Alcohol or acidosis
Lethargy	**(E)** Epilepsy or seizures
Constricted, dilated, or fixed pupils	**(I)** Insulin diabetes
Facial droop	**(O)** Overdose
Incontinence	**(U)** Uremia (kidney failure)
Narcotic overdose	**(T)** Trauma
Needle marks (IV drug use)	**(I)** Infection or sepsis
Fever	**(P)** Psychosis or behavioral
Irrational behavior	**(S)** Stroke or TIA

BLS

- Initiate Basic General Medical Supportive Care
- Check blood sugar

ALS

- Initiate Advanced General Medical Supportive Care

Hypoglycemia

Neonatal:	<40 kg:	>40 kg:
(<40 mg/dL or "LO")	(<60 mg/dL or "LO")	(<60 mg/dL or "LO")
With IV:	**With IV:**	**With IV:**
• DEXTROSE 10% 5cc/kg IV	• DEXTROSE 10% 5cc/kg IV	• DEXTROSE 10% • 250cc IV

- Recheck blood sugar as needed

No response to Dextrose or Narcotic OD = Unresponsive with Respiratory Depression

- Assist ventilations (1 breath every 3 – 5 seconds)
- NARCAN 0.5 - 2mg IV/IO/IM/IN, repeat for patients that respond then deteriorate
- Proceed to ETT intubation (Section 12.6) if indicated

Physician Orders

- On-line medical control if needed or hyperglycemia

Notes:

USE BROSELOW TAPE FOR CALCULATIONS OF MEDICATIONS

Poison Control: 1-800-222-1222

"LO" = less than 10 mg/dL, "HI" = greater than 600 mg/dL

PEDIATRIC NAUSEA AND VOMITING

Section 8.11

Signs & Symptoms	Differential Diagnosis
Nausea and/or vomiting Retching Gagging	GI Bleeding Poisoning or overdose Vertigo Infection

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- ONDANSETRON 0.1 mg/kg IV/IO/IM, max dose of 4 mg, repeat once in 5 minutes
- If child is ≥40kg
  - ONDANSETRON 4mg IV/IO/IM/PO, repeat once in 5 minutes

Physician Orders

- On-line medical control if needed

Notes:

USE BROSELOW TAPE FOR ALL CALCULATIONS OF MEDICATIONS

Patient should have nothing to eat or drink

Poison Control: 1-800-222-1222

PEDIATRIC PAIN MANAGEMENT

Section 8.12

Indications	Contraindications
Suspected fractures of hip, pelvis, long bone Suspected dislocation of major joint Extremity amputations Massive soft tissue injuries Major burns Acute Sickle Cell Crisis Abdominal pain with orders DNR palliative care with orders	Sensitivity or allergy to Morphine or derivatives Hypotension (relative), Systolic BP <70 + (age x 2) Respirations are <12 or Pulse <60 Head injury Multi-system trauma (relative) Transport time is brief or transport is refused by parent/guardian

BLS

- Initiate Basic General Medical Supportive Care
- Assess pain scale 0 – 10

ALS

- Initiate Advanced General Medical Supportive Care

Pain Scale 4 to 10 (Burns, orthopedic injuries, amputations, crush injuries)

- MORPHINE 0.1 mg/kg IV/IO/IM, titrated to pain relief, max dose of 5 mg, may be repeated once
- FENTANYL 1 mcg/kg IV/IO/IM/IN, titrated to pain relief, max total dose of 3 mcg/kg

Physician Orders

- Contact Medical Control or receive orders prior to interfacility transport for pain management of multi-system trauma (relative), abdominal pain, no relief of pain with treatment provided, need to exceed max dose, or severe allergy to opiates

Notes:

USE BROSELOW TAPE FOR ALL CALCULATIONS OF MEDICATIONS

Ondansetron may be administered prophylactically with pain management

Lower doses should be used if it's patient's first time receiving narcotic medications

Have Narcan readily available when using Morphine for pain management

0	2	4	6	8	10
No Hurt	Hurts Little Bit	Hurts Little More	Hurts Even More	Hurts Whole Lot	Hurts Worst

PEDIATRIC SEIZURE

Section 8.13

Signs & Symptoms		Differential Diagnosis
Absent (Petite Mal) Blank stare Change in expression ALOC Twitching	**Tonic/Clonic** ALOC Extension of arms and/or legs Jaw/Teeth clenched Rhythmic jerking Urination Vomiting Increased salivation	Impending cardiac arrest **(A)** Alcohol or acidosis **(E)** Epilepsy or seizures **(I)** Insulin diabetes **(O)** Overdose **(U)** Uremia (kidney failure) **(T)** Trauma **(I)** Infection or sepsis **(P)** Psychosis or behavioral **(S)** Stroke or TIA

BLS

- Initiate Basic General Medical Supportive Care

Febrile Seizures

- Remove clothing and begin cooling

Active seizure (Tonic/Clonic)

- Place patient in a lateral position, protect patient from objects
- Do not attempt forceful insertion of bite block or oral airway during active seizure
- Insert NPA, ventilate and oxygenate with BVM
- Check blood sugar

ALS

- Initiate Advanced General Medical Supportive Care

Active seizure (Tonic/Clonic)

- VERSED 0.05 mg/kg IV/IO/IM/IN, titrated to cessation of seizure, max of 10 mg, repeat once if needed

Physician Orders

- On-line medical control if needed
- Repeated doses of Versed for status epilepticus not responding to treatment

Notes:

USE BROSELOW TAPE TO CALCULATE DOSE OF MEDICATIONS

IM route is preferred if the patient is found in active seizure (Tonic/Clonic) when no IV/IO access is established

Be prepared to aggressively manage airway concentrate on oxygenation of patient post seizures

Be prepared for combative patient post seizures

PEDICATRIC ALLERGIC REACTION

Section 8.14

Signs & Symptoms	Differential Diagnosis
Mild/Moderate Reaction Includes: Hives/Rash (especially over the neck & face) Itching Chest discomfort or tightness, palpitations Coughing **Severe Reaction Includes**: Difficulty breathing/ swallowing Swelling of the face, eyes, or tongue Wheezing, stridor Anaphylaxis Respiratory arrest	Asthma COPD Status asthmaticus

BLS

- Initiate Basic General Medical Supportive Care
- May assist patient with use of an EPI PEN
- Assist ventilations as needed

ALS

- Initiate Advanced General Medical Supportive Care

Mild or Moderate Reaction

- DIPHENHYDRAMINE 1 mg/kg IV/IM, max of 50 mg

Severe

- EPINEPHINE (1:1,000) 0.01mg/kg IM, max of 0.5mg every 5 minutes as needed
- DIPHENHYDRAMINE 1 mg/kg IV/IO/IM, max 50 mg
- ALBUTEROL 0.083% - 2.5 mg/3 mL by nebulizer for bronchospasms
- Normal Saline 20cc/kg bolus IV/IO

In Extremis with Hypotension and Severe Distress

- EPINEPHRINE (1:10,000) 0.1mg IV/IO, repeat every minute titrated to effect, max 0.5mg
- Prepare for aggressive airway management, ETT intubation (Section 12.6) as indicated
- If you can't ventilate or intubate, initiate Cricothyrotomy (Section 12.5) for patients over 10 years or Needle Cricothyrotomy for patients 10 years and younger (Section 12.13)

Physician Orders

- On-line medical control if needed

Notes:

USE BROSELOW TAPE TO CALCULATE DOSE OF MEDICATIONS

Establish 2 or more large bore IV's if needed

PEDIATRIC SUSPECTED CYANIDE POISONING/SMOKE INHALATION
Section 8.15

Signs & Symptoms		Differential Diagnosis
Low levels	**High levels**	Hypoxia
General weakness	ALOC	Hydrogen Sulfate (H_2S) poisoning
Giddiness	Seizure	CO_2 poisoning
Headache	Apnea	
Vertigo	Coma	
Confusion	Cardiac arrest	
SOB		

BLS

- Request Hazmat response (if applicable)
- Remove patient from toxic environment if safe to do so
- Establish a gross field decontamination area and process patient(s) in this area as appropriate
- High flow oxygen
- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care
- Normal Saline 20cc/kg bolus IV/IO
- Contact Poison Control Center for consultation: **1-800-222-1222** or Medical Control

Physician Orders

- On-line medical control if needed

Notes:

SaO_2 reading may be falsely normal or high

PEDIATRIC NERVE AGENT EXPOSURE

Section 8.16

Signs & Symptoms	List of Common Nerve Agents
Patients under age of 10 or 40kg: **Nerve agent/ organophosphate poisoning** **(S)** Salivation/Seizures **(L)** Lacrimation (tearing) **(U)** Urination **(D)** Diarrhea/Diaphoresis **(G)** GI Upset (cramps and nausea) **(E)** Emesis **(M)** Muscle twitching/Miosis (pinpoint pupils)	Sarin (GB) Soman (GD) Tabun (GA) VX

BLS

- Request Hazmat response
- Remove patient from toxic environment if safe to do so
- Establish a gross field decontamination area and process patient(s) in this area as appropriate
- Initiate Basic General Medical Supportive Care

Exposure with NO symptoms

- Observation only

Mild symptoms (muscle twitching and diaphoresis)

- Observation only

ALS

- Initiate Advanced General Medical Supportive Care
- Contact Poison Control Center for consultation: **1-800-222-1222** or Medical Control

Moderate or Severe symptoms (S.L.U.D.G.E.M), unconscious, flaccid, apnea

- ATROPINE 0.05 mg/kg IV/IO/IM, repeat every 5 – 10 minutes, max dose 4 mg or until secretions disappear

Seizure activity related to nerve agent exposure

- VERSED 0.1 mg/kg IV/IO/IM/IN, titrated to cessation of seizure, max of 10 mg repeat once if needed (IM route is preferred if no IV/IO access is established)

Physician Orders

- On-line medical control if needed or Poison Control: **1-800-222-1222**

Notes:

USE BROSELOW TAPE FOR ALL CALCULATIONS OF MEDICATIONS

Rescue personnel shall take protective measures such as wearing gloves, masks, gowns, and respiratory protection (N95) as indicated

SECTION 9

Trauma Protocols

TRAUMA PROTOCOLS APPROVAL

Section 9.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

MANAGEMENT OF TRAUMATIC CARDIAC ARREST

Section 9.1

Signs & Symptoms	Differential Diagnosis
Unresponsive Apneic Pulseless	Trauma incompatible with life (Section 1.12)

BLS

- General Adult BLS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- AED (if available)
- Consider I-Gel Airway with nasogastric/orogastic tube placement to relieve gastric distension

ALS

- General Adult ALS Cardiac Arrest Protocol
- Effective CPR for 2 minutes repeat CPR for 2 minutes if no pulse during entire event
- I-Gel Airway with required nasogastric/orogastic tube placement
- Establish IV/IO
- EPINEPHRINE (1:10,000) 1 mg IV/IO, repeat every 3 – 5 minutes
- Normal Saline 250cc bolus IV/IO, repeat to max 2 Liters
- Consider possible causes of asystole/PEA such as hypoxia, hypovolemia, hyperkalemia, hypokalemia, hydrogen ions acidosis, toxins, hypothermia, tension pneumothorax, cardiac tamponade, thrombosis, trauma
- SODIUM BICARBONATE 1 mEq/kg IV/IO when arrest unwitnessed or ALS support delayed, may repeat 0.5 mEq/kg IV/IO in 10 minutes
- Bilateral needle chest decompression (Section 12.14)

Physician Orders

- On-line medical control if needed
- Termination of resuscitation efforts (Section 1.13)

Notes:

If arrest is unwitnessed and asystole is confirmed in 3 leads, treatment may be withheld under paramedic discretion after considering circumstances surrounding the arrest such as age, down time, significant/serious medical history with no DNR in place and treatment of all possible causes.

- **In hypothermic patients active rewarming is required prior to termination of resuscitation efforts.**
- Effect CPR is defined as at least 100 compressions/min. at a minimum of 2" depth
- Maintain a capnography of at least 10 mmHg during effective CPR
- CPR should not be delayed or interrupted for more than 10 seconds
- Placement of an advanced airway should be accomplished only after effective CPR and ventilation has been performed for several minutes
- Administration of medications should occur while CPR is in progress and should be circulated by CPR for one (1) minute before defibrillation.
- Sharp increase in capnography is a sign of ROSC

AMPUTATION

Section 9.2

Signs & Symptoms	Differential Diagnosis
Major Tissue Loss (cutaneous, muscle, bone) Hypotension Blood loss Tachycardia Diaphoresis ALOC (late sign)	Abrasion Contusion Laceration Dislocation/fracture Crush injury

BLS

- Initiate Basic General Trauma Supportive Care
- Apply gauze pads, direct pressure and elevate wound site as needed
- Severe bleeding, apply tourniquet immediately
  - Note time applied
- Rinse amputated part and/or limb in sterile saline, place in moist gauze, place in plastic bag on ice
  - Note time of injury and time cooling began

Partial Amputation

- Splint in anatomical position with moist gauze over wound site and apply ice packs over gauze

ALS

- Initiate Advanced General Trauma Supportive Care
- Normal Saline 250cc bolus IV/IO, titrate to systolic BP of ≥90 mmHg, repeat as needed, max of 2 Liters
- Pain management (Section 5.5) as indicated

Physician Orders

- On-line medical control for Normal Saline bolus over 2 Liters

Notes:

When confronted with a patient with an amputated digit or extremity, ear lobe, nose, and/or penis, the rule should be to assume that reattachment is possible and all measures should be taken to ensure this

BAROTRAUMA

Section 9.3

Signs & Symptoms		Differential Diagnosis
Air embolism Paralysis or weakness Convulsions Aphasia Deafness Unconsciousness Dizziness or vertigo Visual blurring/ blindness Disorientation or confusion	**Decompression sickness** Dull deep ache in shoulders/elbows Paralysis Chest pain Paresthesia Dyspnea Bladder dysfunction Pulmonary edema Blotchy skin rash Staggering gait Dizziness Unconsciousness	Facture/ Dislocation Soft tissue injury Hypothermia Methemoglobinemia Pneumonia Spontaneous pneumothorax

BLS

- Initiate Basic General Trauma Supportive Care
- High flow oxygen
- Place patient in left lateral recumbent position with legs elevated

ALS

- Initiate Advanced General Trauma Supportive Care

Physician Orders

- On-line medical control if needed

Notes:

The definitive treatment of these entities necessitates transport to a decompression chamber

FRACTURE AND DISLOCATION

Section 9.4

Signs & Symptoms	Differential Diagnosis
Significant trauma to area Deformity Swelling Significant pain to area Loss of distal vascular perfusion Open or closed fracture	Chronic pain Old injury

BLS

- Initiate Basic General Trauma Supportive Care

If distal vascular status is intact

- Splint the extremity in position found, assess distal pulses often

If distal vascular status impaired

- Apply gentle traction until distal vascular status improves. Splint extremity in that position, assess distal pulses often

If open fracture

- Cover the wound in saline-moistened gauze and splint in place
- DO NOT attempt to realign fracture, assess distal pulses often

If closed isolated mid-shaft femur facture

- Apply manual traction until a HARE Traction splint can be applied, assess distal pulses often

ALS

- Initiate Advanced General Trauma Supportive Care
- Pain management (Section 5.5) as indicated

Physician Orders

- On-line medical control if needed

Notes:

Have Narcan readily available when using Morphine/ Fentanyl for pain management

MAJOR BURNS

Section 9.5

Signs & Symptoms	Differential Diagnosis
2nd or 3rd degree burns covering >15% BSA Facial burns Circumferential burns Electrical burns Chemical burns Lightning related	1st degree burns Minor burns

BLS

- Remove burned and or contaminated clothing
- Initiate General Basic Trauma Supportive Care

Chemical burns

- On skin – Brush powders off of skin, and irrigate area copiously with water or saline for at least 15 minutes
- In eyes – Irrigate eyes with water or saline continuously for at least 30 minutes
- Do not delay transport while irrigating

Thermal burns or Electrical burns

- Apply dry sterile burn sheets or sterile gauze
- Calculate burn by Rule of Nines
- Immobilize (if applicable)
- Use thermal blanket

ALS

- Initiate Advanced General Trauma Supportive Care
- Pain management (Section 5.5) as indicated

Physician Orders

- On-line medical control if needed

Notes:

Have Narcan readily available when using Morphine/ Fentanyl for pain management

TASER

Section 9.6

Signs & Symptoms	Differential Diagnosis
Combative Diaphoresis Agitated	Excited delirium Intoxication from drugs/ETOH Diabetic emergency Seizures/postictal Head trauma

BLS

- Ensure Air Cartridge is disconnected from Taser or wires are cut before instituting care
- Initiate Basic General Trauma Supportive Care

If not already removed by law enforcement

- Barbs may be removed by gently pulling back in the same plane as they entered the body, discard barbs immediately in sharps container
- Apply band-aid or dressing (if applicable)

If embedded in eyelid/globe, genitalia, face/neck

- Stabilize in place, transport is required

ALS

- Initiate Advanced General Trauma Supportive Care
- Document barb penetration site and that barb is intact (no part of barb remains in body)

Physician Orders

- On-line Medical Control if needed

Notes:

Taser barb removal is primarily the responsibility of the law enforcement agency involved in subduing the patient. EMS should not be utilized solely for barb removal

SECTION 10

Trauma Transport Protocols

TRAUMA TRANSPORT PROTOCOLS APPROVAL

Section 10.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

TRAUMA TRANSPORT PROTOCOLS APPROVAL

Section 10.0.1

The following transport protocol meets the requirement set forth in Florida Statute 401, Section 64J-2 entitled Pre-Hospital Requirements for Trauma Care.

Ambitrans Ambulance functions as a non-emergency transport agency and responds to trauma related calls and other emergencies only at the request of Charlotte County Fire and Emergency Medical Services, Sarasota County Fire Department, and/or Manatee County Emergency Medical Services.

Ambitrans Ambulance shall function under the Charlotte County Fire and Emergency Medical Services **Trauma Transport Protocols** under the following circumstances:

- Ambitrans is responding to a request for assistance from Charlotte County Fire and Emergency Medical Services, Sarasota County Fire Department or Manatee County Medical Services.
- Ambitrans is providing assistance during an officially declared evacuation or disaster.
- Ambitrans encounters any patient which meets trauma alert criteria.

In all other circumstances, Ambitrans personnel shall follow the Ambitrans protocols.

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DISPATCH PROTOCOL

Section 10. II

A. The Emergency Medical Service System is accessed by the public through 911. The calls are received and dispatched by the Charlotte County Sheriff's Office, referred to hereafter as "dispatcher". Upon the receipt of a request for an EMS response, the dispatcher shall obtain the following information:

1. Address of the response.
2. Telephone of the response.
3. Nature of the emergency.
4. State of consciousness, respirations, and pulse if caller able to describe.

B. In addition, if the call involves a motor vehicle accident, industrial accident, or multiple patient problem:

1. Number of injured.
2. How serious do the injuries appear (if the caller is able to describe extent or severity of injury).
3. Hazards at the site that are observed.
4. The best way to enter the area (if industrial site).

REQUESTING ASSISTANCE FROM OTHER AGENCIES
Section 10.III

A. In the case of the need for another agency to respond to an incident, the unit will advise dispatch of the agency needed and the problem observed. This can include police, fire, Power Company, Water Company, etc.

B. The dispatcher will acknowledge that the agency has been notified. If the agency being requested cannot be contacted, the dispatcher will advise the on-scene crew making the request to see if another agency can be substituted.

NOTE: In the situation of **COMMAND** Procedure (Multiple-Casualty Incident), the **COMMAND** Officer is the only authorized person that may request outside agencies or equipment to the scene. All requests for that scene must be initiated and/or cleared by the **COMMAND** Officer in charge of the incident

GROUND TRANSPORT ASSIST PROTOCOL

Section 10. IV

A. Additional Ground Transport Assistance may be requested by our CCFEMS system when the patient volume suddenly exceeds the CCFEMS vehicle availability.

   This could be due to a multiple casualty incident or other situations that require more transport capability than is available.

   Presently, mutual aid ground transport is called in an incident that involves 10 or more patients or where the on-scene commander requests mutual aid.

B. Once requested, the dispatcher contacts the assigned agency by phone and asks for a response.

   Agencies on the Mutual Aid call list are:

   Lee County EMS

   North Port Fire Department

   Sarasota Fire Department

   Desoto County Fire/Rescue

C. Units should respond to a specific location to receive further instructions and portable communications.

PROTOCOL FOR THE MANAGEMENT OF MAJOR TRAUMA
Section 10. V

A. Perform primary survey emphasizing airway control with stabilization of C-Spine, adequate ventilation and hemodynamic status. The primary survey should include the assessment of the patient utilizing the trauma scorecard methodology covered in 64J-2 FAC. The information gathered on assessment should be documented on the Charlotte County Fire & EMS Patient Care Report and utilized to determine the transport destination. The completed form will be left with the initial receiving hospital. (See page 10 for pediatric assessment.)

B. If the adult patient has any of the following criteria, a "Trauma Alert" must be called to dispatch by on-scene medical personnel. All adult trauma alert patients will be transported via helicopter to the nearest appropriate trauma center. If helicopter is unavailable or ground transport is more expedient, the paramedic will initiate ground transport. Trauma alert patients may be transported by ground to the nearest initial receiving facility if the following conditions exist:
   1. Helicopter transport unavailable or transport greater than 45 minutes **and** ground transport greater than 45 minutes to closest appropriate Trauma Center.
   2. Airway compromise without advanced airway intervention.
   3. Cardiac arrest or impending cardiac arrest.
   4. MCI Situations

AIRWAY	RESPIRATORY RATE OF 30 OR GREATER (B)	ACTIVE AIRWAY ASSISTANCE (1) (R)
CIRCULATION	SUSTAINED HEART RATE OF 120 BEATS PER MINUTE OR MORE (B)	LACK OF RADIAL PULSE WITH SUSTAINED HEART RATE (>120) OR BP , 90 mmHg (R)
BEST MOTOR RESPONSE	BMR=5 (B)	BMR=4 OR LESS OR PRESENCE OF PARALYSIS, OR SUSPICION OF SPINAL CORD INJURY OR LOSS OF SENSATION (R)
CUTANEOUS	SOFT TISSUE LOSS (2) OR GSW TO EXTREMITIES (B)	2ND OR 3RD DEGREE BURNS TO 15% OR MORE TBSA OR AMPUTATION PROXIMAL TO THE WRIST OR ANKLE OR ANY PENETRATING INJURY TO THE HEAD, NECK OR TORSO (3) (R)
LONGBONE FRACTURE (4)	SINGLE FRACTURE SITE DUE TO MVA OR FALL 10' OR MORE (B)	FRACTURE OF TWO OR MORE LONGBONES (4) (R)
AGE	55 YEARS OR OLDER (B)	
MECHANISM OF INJURY	EJECTION FROM VEHICLE (5) OR DEFORMED STEERING WHEEL (6) (B)	

RED = any one criteria – transport as trauma alert

BLUE = any two criteria – transport as trauma alert

1) Airway assistance beyond administration of oxygen.
2) Major degloving injury or flap avulsion (> 5 in).
3) Excluding superficial wounds in which depth can be determined.
4) Long bone including Humerus (radius, ulna), femur (tibia, fibula).
5) Excluding motorcycle, moped, all-terrain vehicle, bicycle, or open body of a pickup truck.
6) Only applies to driver of vehicle.

Exceptions: If the only criteria met is the Glasgow Coma Score less than or equal to 12, and a reliable person who is knowledgeable of the pre-existing neurologic status establishes to personnel on scene that this is the normal status, the patient will not be considered a Trauma Alert.

C. Immobilization of the cervical spine by appropriate methods* should immediately be done in all cases where injury to the spine is suspected, either due to the mechanism of injury, trauma above the level of the clavicles, or existence of altered sensorium.

D. The patient should be placed on a long spine backboard as indicated.

E. Administer supplemental oxygen.**
   1. In the inadequately ventilating or unconscious patient, endotracheal intubation should be performed assuring stability of the cervical spine at all times. Ventilation with 100% oxygen should follow endotracheal intubation along with Capnography.
   2. In the conscious, breathing patient, administer via cannula or face mask

F. Control of hemorrhage:
   1. Use direct pressure to Tamponade external bleeding.
   2. Splint and elevate extremities when possible
   3. Apply tourniquet(s) as needed.

G. Initiate transport.

H. Establish IV infusion with normal saline through large bore cannula (14 or 16 gauge) and macrodrip tubing.***
   1. In the patient in shock, establish one IV or IO NS with macrodrip tubing. Infuse up to 2 liters NS in 250 cc bolus (20 cc/kg in the pediatric patient) with observed response dictating further therapy
   2. In the patient not in shock, NS should be infused at KVO rate continuously, maintaining a systolic pressure of at least 90 mm Hg.

I. Provide constant cardiac monitoring

J. Keep the patient warm.

K. Wounds associated with penetrating chest wounds shall be treated utilizing chest wound kit.

L. Evisceration injuries should be covered with saline soaked gauze.

M. Establish communications with supervising physician.
   1. Early contact with the physician is essential, especially in Trauma Alert patients.
   2. Constant monitoring and reassessment of the trauma patient is paramount. Proceed to needle thoracotomy in patient with tension pneumothorax. The paramedic should always be suspicious of tension pneumothorax in the trauma patient particularly when he is not responding appropriately to standard treatment.
   3. Proceed to management of fractures as needed.
      - Manually supported head and neck immobilization
        - KED
        - Cervical Immobilization Device (X-Collar)
        - Stiff-Neck Collar
        - Long Backboard/ Scoop Stretcher
        - Tape/ Head Immobilization Device (HID)

DETERMINING HOSPITAL OF DESTINATION

Section 10. VI

When a trauma patient falls within the parameters of the trauma alert criteria scorecard methodology, the patient will be transported to the nearest appropriate trauma center.

Guidelines for transportation are as follows:

A. AIR SUPPORT to a State Approved Trauma Center (SATC). Air support response time is **less than** 45 minutes.

B. GROUND TRANSPORT to a State Approved Trauma Center (SATC). The ground transport time is **less than** 45 minutes.

C. GROUND TRANSPORT to an Initial Receiving Facility (IRF) nearest the scene of the incident when:

1. Air transport not available or response time is **greater than** 45 minutes

   and:

   Ground transport to SATC is **greater than** 45 minutes.

2. Cardiac arrest secondary to trauma.
3. Lack of patient airway.
4. MCI situation.

REQUEST FOR ADDITIONAL TRANSPORTATION ASSISTANCE

The paramedic will request additional assistance through dispatch notifying them of the trauma alert as well as mechanism and anatomical location of the injury(ies). This notification must be simultaneous with the Battalion Officer to coordinate the request smoothly.

Additional ground units may be requested as dictated by any given situation. Units on scene will channel all ground transport assistance requests through dispatch.

NON-TRAUMA ALERT PATIENT

The stable patient, (non-trauma alert) within the constraints imposed by good judgment, shall be transported to the facility of his choice within the service area of the CCFEMS system. This decision shall be made in conjunction with the patient, his family, and the supervising physician where appropriate. In cases where the preferred hospital is outside the service area of the CCFEMS system, permission of a supervising physician and the CCFEMS Battalion Officer is required prior to initiating transport.

DETERMINING HOSPITAL OF DESTINATION

Section 10. VI

Charlotte County Fire and Emergency Medical Services personnel shall refrain from recommending or soliciting patients for a given hospital.

If the clinical condition of the patient dictates one facility over another, the patient shall be so informed. If the patient has no preference and is stable, the hospital destination will be the closest appropriate receiving facility.

The stable pediatric patient (non-trauma alert), defined as a patient with the physical and anatomical characteristics of a person 15 years old or younger, should be taken to the hospital of parental or legal guardian preference. If there is no preference, and the patient will obviously require admission, the stable patient should be transported to Bayfront Port Charlotte.

The stable obstetrical patient (non-trauma alert), 20 weeks gestational age who complains of abdominal pain, who states she is in active labor, or who has trauma to the trunk, should be taken to Bayfront Port Charlotte since it has the only locally approved in-patient obstetrical unit in the County.

The socioeconomic or insurance status of a patient shall have no bearing on determination of the receiving facility, nor shall reference to such matters be made in communication with the facility via telephone or radio.

Any deviation from these protocols will be documented and justified on the run report.

INTERFACILITY TRANSFERS

Section 10. VII

Emergency Interfacility transfers will be dispatched with the closest available ALS unit and handled as any other emergency call. Communications will attempt to secure the name of the accepting physician at the receiving facility to relay to the transporting unit. Refer to the Administrative Policy for further information concerning Interfacility transports.

CCFEMS personnel shall insure that all pertinent clinical material, such as the medical records, x-rays and laboratory test results, accompany the patient to the receiving facility.

CCFEMS personnel should carefully document the name of the physicians and facilities involved in the transfer on the patient care report, as well as any personnel accompanying the patient. In general, CCFEMS will not transport the following types of patients without appropriate personnel from the transferring facility accompanying the patient:

- Balloon pumps
- Critical cardiac patients with hemodynamic monitoring IV medications outside the scope of CCFEMS practice
- Critical trauma patients
- Critical infants and children
- Complicated obstetrical patients.

Reference: Rules of the Department of Health, Section 64J-2.

PEDIATRIC TRAUMA PROTOCOL

Section 10. VIII

Although the number or frequency of pediatric trauma patient encounters are considerably less than adult trauma patients, there still needs to be a system in place to provide rapid assessment and proper triage of pediatric trauma patients. For this protocol, a pediatric patient is defined as a trauma alert patient with the physical and anatomical characteristics of a person 15 years old or younger.

SEVERITY OF INJURY

The term "Trauma Alert" shall be used in the notification to the receiving medical facility. A Pediatric Trauma Score should be determined.

The Pediatric Trauma Score is a rapid assessment protocol designed to consider all of the factors characteristically seen in childhood injury. The pediatric patient is assessed based on each of the six (6) physiologic components listed on the following page. The single, most appropriate criterion for each component is selected (along the row to the right). Refer to the color coding of each criteria and legend below to determine the transport destination.

SIZE	> 20 KG (44+ LBS) (G)	11-20 KG (22-43 LBS) (G)	WEIGHT ≤ 11 KG OR LENGTH ≤ 33 INCHES ON A PEDIATRIC LENGTH AND WEIGHT EMERGENCY TAPE (B)
AIRWAY	NORMAL (G)	SUPPLEMENTAL 02 (G)	ASSISTED OR INTUBATED (1) ®
CONSCIOUSNESS	AWAKE (G)	AMNESIA OR LOSS OF CONSCIOUSNESS (B)	ALTERED MENTAL STATUS (2) OR COMA OR PRESENCE OF PARALYSIS OR SUSPICION OF SPINAL CORD INJURY OR LOSS OF SENSATION ®
CIRCULATION	GOOD PERIPHERAL PULSES; SBP > 90 mmHg (G)	CAROTID OR FEMORAL PULSES PALPABLE, BUT RADIAL OR PEDAL PULSE NOT PALPABLE OR SBP < 90 mmHg (B)	FAINT OR NON-PALPABLE CAROTID OR FEMORAL PULSE OR SBP < 50 mmHg ®
FRACTURE	NONE SEEN OR SUSPECTED (G)	SINGLE LONG BONE (3) FRACTURE (4) (B)	OPEN LONG BONE (3) FRACTURE (5) OR MULTIPLE FRACTURE SITES OR MULTIPLE DISLOCATIONS (5) ®
CUTANEOUS	NO VISIBLE INJURY (G)	CONTUSION OR ABRASION (G)	MAJOR SOFT TISSUE DISRUPTION (6) OR MAJOR FLAP AVULSION OR 2ND OR 3RD DEGREE BURNS TO > 10% TBSA OR AMPUTATION (7) OR ANY PENETRATING INJURY TO THE HEAD, NECK OR TORSO (8) ®

RED = any one (1) – transport as trauma alert BLUE = any two (2) – transport as a trauma alert
GREEN = follow local protocols

1) Airway assistance includes manual jaw thrust, continuous suctioning, or use of other adjuncts to assist ventilatory efforts.
2) Altered mental status includes drowsiness, lethargy, and inability to follow commands, unresponsiveness to voice, totally unresponsive.
3) Long bones include the humerus (radius, ulna), femur (tibia, fibula).
4) Long bone fractures do not include isolated wrist or ankle fractures.
5) Long bone fractures do not include isolated wrist or ankle fractures or dislocations.
6) Includes major degloving injury.
7) Amputation proximal to wrist or ankle.
8) Excluding superficial wounds where the depth of the wound can be determined.

HELICOPTER LANDING ZONE (L-Z) PROTOCOL

Section 10. IX

A. All on-scene landing of helicopter should have the following personnel on the scene:
   1. Law Enforcement Agency Two personnel minimum for traffic and crowd control.
   2. Fire Department To provide L-Z security and on-scene safety as well as fire suppression.

B. All L-Z sites should be cleared of all debris, including all loose wood, metal or potentially dangerous projectiles.

C. L-Z measurements should be measure 100' by 100'.

D. Wires should be highlighted with marking tape or light at night. The L-Z should not have wires within 50 feet on any side.

E. Daytime L-Z can be marked with traffic cones: one cone on each corner of the L-Z with one offset to show wind direction. The cone showing wind direction should be placed on its side, pointing towards the headwind thus indicating the direction the helicopter will land.

F. Nighttime L-Z can be marked with flashlights in the same manner. Note: No light should be pointed directly at the helicopter at any time.

G. After landing, no one should approach the aircraft unless indicated by the flight crew.

H. One person should stand to the rear of the aircraft within 50 feet to insure no one goes near the tail rotor. At night a flashlight can be shown on the tail rotor.

HELICOPTER ACTIVATION PROTOCOL

Section 10. X

A. In the case of on-scene air evacuation of a trauma patient, the following should be considered:
   1. Extent of injury(ies).
   2. Estimated travel time by ground ALS unit to an initial receiving hospital.
   3. Estimated air travel time to a trauma center.

B. Helicopter EMS systems providing on-scene response and their transport destinations are:
   1. **Aeromed** (24 hour availability) will transport to the closest appropriate facility.
   2. **Bayflite** (24 hour availability) will transport to the closest appropriate facility.
   3. **Lee County EMS** (24 hour availability) will transport patients to the closest appropriate facility.

C. On-scene personnel will notify Central Dispatch of the need for air transport. CCFEMS personnel will not request a specific air transport service.

LIST OF HOSPITALS

Section 10. XI

Trauma Transport Protocols

The following is a list of trauma centers and initial receiving hospitals to where Ambitrans may transport trauma alert patients.

TRAUMA CENTER (2)

Gulf Coast Hospital
13681 Doctors Way, Fort Myers, FL
33912

Sarasota Memorial Hospital
1700 S Tamiami Trail
Sarasota, FL 34239

INITIAL RECEIVING HOSPITALS (7)

Fawcett Memorial Hospital
21298 Olean Boulevard
Port Charlotte, FL 33952

Advent Port Charlotte 2500
Harbor Boulevard
Port Charlotte, FL 33952

Englewood Community Hospital
700 Medical Boulevard
Englewood, FL 34223

Cape Coral Hospital
636 Del Prado Boulevard
Cape Coral, FL 33990

Desoto Memorial Hospital
900 Roberts Avenue
Arcadia, FL 34266

Sarasota Memorial Venice
2600 Laurel Rd E, North Venice, FL
34275

Sarasota Memorial Hospital North Port 2345 Bobcat Village Center Road
North Port, FL 34288

SECTION 11

ALS Medications

MEDICATION APPROVAL

Section 11.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

ADENOSINE (Adenocard)

Section 11.1

Section Reference	3.8 8.5

Class:
- Antiarrhythmic

Action:
- It is a naturally occurring agent that "chemically cardioverts" SVT to a normal sinus rhythm. It has a half-life of 5 seconds and does not cause hypotension like Verapamil

Indications:
- Narrow complex supraventricular tachycardia refractory to vagal maneuvers

Contra-Indication:
- 2nd and 3rd degree heart block
- Sick sinus syndrome
- Hypersensitivity

Precautions:
- It may cause transient arrhythmias.
- It may cause bronchospasm in asthma patients.
- Heart transplant patients may require a smaller dosage and patients on Theophylline based medications may require larger doses, contact On-line Medical Control for consult

Dose:

Adult	**Initial dose: 6 mg IV rapid** **2nd dose: 12 mg RAPID IV Push, if no conversion for a total maximum dose of 18 mg**

Pediatric	**Given only if hemodynamically unstable** **Initial dose: 0.1 mg/kg rapid IV/IO max dose 6mg** **2nd dose: 0.2 mg/kg rapid IV/IO maximum single dose 12 mg**
USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS	

Route:
- IV, IO

AMIODARONE (Cordarone)

Section 11.2

Section Reference	3.4 3.10 3.11 8.4

Class:
- Antiarrhythmic

Action:
- Class III antiarrhythmic, blocks sodium, calcium and potassium channels. Slows conduction. Prolongs refractory A/V node conduction. It also vasodilates.

Indications:
- V-Fib or Pulseless V-Tach
- Stable V-Tach
- Ventricular Ectopy (Runs of V-Tach)

Contra-Indication:
- Hypersensitivity
- 2nd and 3rd degree heart block
- Symptomatic bradycardia
- Cardiogenic shock

Precautions:
- May cause hypotension

Dose:

Adult	**V-FIB/ Pulseless V-TACH: Initial dose of 300 mg IV/IO, 2nd dose of 150 mg IV/IO** **Stable V-TACH with pulses and Ventricular Ectopy: 150 mg in 100cc D5W IVPB over 10 minutes**
Pediatric	**V-FIB/ Pulseless V-TACH: 5 mg/kg IV/IO, may repeat twice**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IVPB

AMIODARONE INFUSION

AMIODARONE INFUSION

Amiodarone 150 mg mixed into 100 cc of D5W. A macrodrip (10 gtts/min) over 10 minutes. The resulting drip rate is 100 gtts/min (approximately 2 gtts/second) when macrodrip (10 gtts/min) administration set is used

ASPIRIN (ASA)

Section 11.3

Section Reference	3.6 3.7

Class:
- NSAID, platelet aggregation inhibitors, analgesics, antipyretic

Action:
- Commonly used over the counter analgesic with anticlotting properties

Indications:
- New chest pain suggestive of acute MI

Contra-Indication:
- Hypersensitivity to the drug

Precautions:
- GI bleeding and upset stomach
- Heartburn,
- Nausea and vomiting
- Not recommended for pediatric patients

Dose:

Adult	Four (4) 81mg tablets (324 mg) PO chewed

Pediatric	None

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- PO

ATROPINE SULFATE

Section Reference	3.13 6.9 8.6 8.16

Class:
- Parasympathetic Nerve Blocking Agent

Action:
- It blocks the parasympathetic nervous system and it's inhibiting effects on heart rate. It does not increase the strength of cardiac contraction. Atropine is not an actual antidote for organophosphate poisoning. However, by blocking the action of acetylcholine at muscarinic receptors, Atropine also serves as a treatment for poisoning by organophosphate insecticides and nerve gases, such as tabun (GA), sarin (GB), soman (GD) and VX.

Indications:
- Symptomatic bradycardia
- Suspected nerve agent exposure
- Organophosphate poisoning

Contra-Indication:
- None in the emergency setting

Precautions:
- Paradoxical bradycardia when pushed too slowly or when used at doses less than 0.5mg.

Dose:

Adult	**Cardiac: 0.5 IV/IO, with maximum dose 3.0 mg** **Nerve Agents: 2 mg IV/IO/IM every 5 – 10 minutes or until secretions discontinue**
Pediatric	**Cardiac: 0.02 mg/kg IV/IO, (minimum dose 0.1 mg), maximum total dose 1.0 mg** **Nerve Agent (age > 10 or > 40kg): 0.05 mg/kg IV/IO/IM, maximum total dose 4.0 mg**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IM

ALBUTEROL SULFATE (Ventolin)

Section 11.5

Section Reference	4.2 6.1 8.7 12.12

Class:
- Bronchodilator

Action:
- Beta-adrenergic bronchodilator

Indications:
- Bronchospasms from COPD
- Asthma
- Allergic reactions

Contra-Indication:
- Hypersensitivity

Precautions:
- Closely monitor vital signs in hypertension and cardiac history
- May cause tachycardia
- Palpitations
- Anxiety, tremor

Dose:

Adult	2.5 mg/3 ml (0.083%) by nebulizer; repeat twice prn.

Pediatric	2.5 mg/3 ml (0.083%); repeat twice prn.

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- Nebulized

DEXTROSE 10%

Section 11.6

Section Reference	5.2 5.8 8.10

Class:
- Caloric

Action:
- Dextrose is a simple sugar that the body can rapidly metabolize when in hypoglycemic states

Indications:
- Hypoglycemia
- Hypoglycemia in association with other conditions i.e. stroke, impaired consciousness and seizures

Contra-Indication:
- None

Precautions:
- Must have a patent IV site

Dose:

Adult	D10% in 250cc Normal Saline bolus over 10 minutes

Pediatric	Less than 40 kg: D10% in 250cc Normal Saline – 5 cc/kg
USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS	

Route:
- IV/IO

DEXTROSE 10% INFUSION

Section 11.6.1

DEXTROSE D10% Infusion

Dextrose 10% in 250 cc (5 gm/ 50 cc). A macrodrip (10 gtts/min) administration set is used over 10 minutes. The resulting drip rate is 250 gtt/min (approximately 4 gtts/second) when macrodrip
(10 gtts/min) administration set is used

DIPHENHYDRAMINE (Benadryl)

Section 11.7

Section Reference	6.1 5.7 8.14

Class:
- Antihistamine

Action:
- It inhibits the release of histamines, thereby reducing bronchoconstriction and vasodilation.

Indications:
- Mild, moderate and severe allergic reaction
- Agitated patients (aggressive behavior, Inability to calm by talking down)

Contra-Indication:
- None

Precautions:
- Hypotension
- Headache
- Palpitations
- Tachycardia
- Sedation drowsiness, and/or impaired coordination
- Use with caution in patients with asthma and other lower respiratory diseases due to the potential for dyspnea

Dose:

Adult	50 mg IV/IM

Pediatric	1 mg/kg IV/IM maximum 50 mg

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IM

DOPAMINE (Intropin)

Section 11.8

Section Reference	3.13 3.14 4.1 5.10

Class:
- Sympathomimetic

Action:
- A beta agonist, it maintains renal and mesenteric blood flow while inducing vasoconstriction and increasing blood pressure at doses < 10 mcg/kg/minute

Indications:
- Cardiogenic shock (Persistent inadequate perfusion after correction of existing dysrhythmias, fluid challenge or loss of vascular tone)

Contra-Indication:
- Hypotension due to hypovolemia

Precautions:
- Tachyarrhythmias
- Ventricular fibrillation or irritability
- Blood pressure must be constantly monitored

Dose:

Adult	**2 – 20 mcg/kg/min IVPB, titrated to systolic BP >100 mmHg.**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV Piggy Back

DOPAMINE INFUSION

Section 11.8.1

DOPAMINE Infusion

Pre-mix Dopamine (400 mg/ 250 cc) IV with a concentration of 1600 mcg/cc.
A microdrip (60 gtts/min) administration set is used.

Mg/kg/min	50 KG	75 KG	100 KG	125 KG
2	4 gtt/min	6 gtt/min	8 gtt/min	9 gtt/min
4	8 gtt/min	11 gtt/min	15 gtt/min	19 gtt/min
6	11 gtt/min	17 gtt/min	23 gtt/min	28 gtt/min
8	15 gtt/min	23 gtt/min	30 gtt/min	38 gtt/min
10	19 gtt/min	28 gtt/min	38 gtt/min	47 gtt/min
15	28 gtt/min	42 gtt/min	56 gtt/min	70 gtt/min
20	38 gtt/min	56 gtt/min	74 gtt/min	94 gtt/min

EPINEPHRINE (Adrenalin)

Section 11.9

Section Reference	3.3	3.4	3.13	3.14	6.1	7.2	8.3	8.4	8.6	8.7	8.14	9.1

Class:
- Sympathomimetic

Action:
- A potent alpha and beta agonist, it increases the electrical activity of the heart through its beta properties. It produces vasoconstriction to counteract the vasodilation and resulting hypotension associated with anaphylaxis.

Indications:
- Cardiac Arrest including V-Fib/ Pulseless V-Tach, asystole, PEA, Symptomatic bradycardia, Acute asthma, severe allergic reaction, anaphylactic shock

Contra-Indication:
- None in the emergency setting

Precautions:
- It should be protected from light and should not be infused with alkaline solutions such as sodium bicarbonate, since they will deactivate epinephrine.

Dose:

Adult	**Cardiac Arrest (1:10,000): 1 mg IV/IO every 4 minutes** **Severe Allergic Reaction (1:1,000) 0.01 mg/kg IM, maximum of 0.5 mg IM every 5 minutes as needed** **In extremis with hypotension and severe distress (1:10,000) 0.1 mg IV/IO. Repeat every minute titrated to effect, maximum of 0.5 mg** **Symptomatic Bradycardia: 2 – 10 mcg/min IVPB**

Pediatric	**Cardiac Arrest/ Symptomatic Bradycardia (1:10,000): 0.01 mg/kg IV/IO, maximum of 1 mg, every 4 minutes** **Severe Allergic Reaction (1:1,000) 0.01 mg/kg IM, maximum of 0.5 mg IM every 5 minutes as needed** **In extremis with hypotension and severe distress (1:10,000) 0.1mg IV/IO. Repeat every minute titrated to effect, maximum of 0.5 mg**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IM

EPINEPHRINE INFUSION

Section 11.9.1

EPINEPHRINE Infusion	
1 mg of epinephrine (1:1000) is mixed with 250 cc Normal Saline **or** 250cc of D10% which results in a concentration of 4 mcg/cc. A microdrip (60 gtts/min) administration set is used	
(mcg/min)	(gtt/min)
2	30
4	60
6	90
8	120
10	150

ETOMIDATE (Amidate)

Section 11.10

Section Reference	12.6

Class:
- Hypnotic/ Analgesic

Action:
- Ultra short-acting, non-barbiturate hypnotic agent. Onset is less than a minute and duration is about 3 to 8 minutes.

Indications:
- Induced Hypothermia post ROSC
- **MUST BE** used in conjunction with Succinylcholine (Quelicin)

Contra-Indication:
- Non-intubated patients
- Hypersensitivity

Precautions:
- Hyperventilation
- Hypoventilation and brief periods of apnea
- Hypertension or hypotension
- Tachycardia, bradycardia, and other dysrhythmias

Dose:

Adult	**0.3 mg/kg IV/IO, maximum dose 20 mg**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO

FENTANYL (Sublimaze)

Section 11.11

Section Reference	3.6 5.5 12.6 12.7 12.9

Class:
- Analgesic

Action:
- A Schedule II controlled substance, synthetic opioid which has a very rapid onset and short duration. It is 100 times stronger than Morphine

Indications:
- Acute Inferior wall myocardial infarction
- Severe pain management

Contra-Indication:
- Hypersensitivity
- Intoxication
- Head trauma
- Stroke
- Pregnancy without orders from medical control
- Respirations are <12
- Hypotension

Precautions:
- May cause profound sedation
- Vomiting
- Allergic reaction
- Seizure
- Closely monitor respiratory rate, oxygen saturation, capnography levels and level of consciousness
- Naloxone should be readily available to counteract the effects of Fentanyl

Dose:

Adult	1 mcg/kg IV/IO/IM/IN to a maximum total dose of 3 mcg/kg

Pediatric	None

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IM, IN

GLUCAGON (GlucaGen)

Section 11.12

Section Reference	

Class:
- Hormone

Action:
- A naturally occurring hormone, it breaks down glycogen stores in the liver to glucose, thereby elevating blood glucose levels. Onset of action is 8-10 minutes.

Indications:
- Hypoglycemia in the absence of IV access

Contra-Indication:
- Hypersensitivity

Precautions:
- Only effective if there are sufficient glycogen stores in the liver
- Use with caution in patients with cardiovascular or renal disease as it has positive inotropic and chronotropic effects on the heart.

Dose:

Adult	**1 mg IM**
Pediatric	**Over 20 kg: 1 mg IM** **Under 20 kg: 0.5 mg IM**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IM

HYDROXYCOBALAMIN (Cyanokit)

Section 11.13

Section Reference	

Class:
- Vitamin

Action:
- Hydroxycobalamin is a form of vitamin B-12. It is used as an antidote to cyanide poisoning. Hydroxycobalamin works by helping cells in the body convert cyanide to a form that can be removed from the body through urination.

Indications:
- Smoke inhalation or cyanide poisoning associated with cardiac arrest or hypotension

Contra-Indication:
- None in the emergency setting

Precautions:
- Acne-like rash
- Headache
- Nausea and vomiting
- Red-colored urine
- Skin redness

Dose:

Adult	**5 grams/ 200cc Normal Saline over 15 minutes may be repeated maximum total dose of 10 grams**

Pediatric	**Administer 70 mg/kg over 15 minutes**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- DEDICATED IV , IO

KETAMINE

Section 11.14

Section Reference	

Class:
- Anesthetic induction

Action:
- A Schedule III controlled substance, rapidly acting anesthetic producing profound analgesia while maintaining pharyngeal and laryngeal reflexes

Indications:
- Excited delirium
- Severe pain management
- Status asthmaticus

Contra-Indication:
- Hypersensitivity

Precautions:
- Increases heart rate and blood pressure
- Tonic/clonic movements resembling seizures
- Excessive salivation

Dose:

Adult	**Excited Delirium: 5 mg/kg IM or 2 mg/kg IV/IO** **Severe Pain: 0.5 mg/kg IV/IO/IM titrated to pain relief** **Status Asthmaticus: 0.5 mg/kg IV/IO/IM** **Respiratory Failure/ Impending Respiratory/Cardiac Arrest/ Trismus: 2 mg/kg IV/IO to facilitate airway management**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IM

LIDOCAINE (Xylocaine)

Section 11.15

Section Reference	

Class:
- Antiarrhythmic, Anesthetic

Action:
- Numbs the area during insertion of IO

Indications:
- Anesthetic for IO patients responsive to pain

Contra-Indication:
- Hypersensitivity to "caines",
- 2nd degree and 3rd degree heart blocks
- Bradycardias.

Precautions:
- Lowering LOC
- Confusion
- Irritability
- Muscle spasms
- Seizures
- Coma
- Possibly death

Dose:

Adult	**Anesthetic for IO: 40 mg over 2 minutes, wait 1 minute give addition 20 mg**

Pediatric	**Anesthetic for IO: 0.5 mg/kg over 2 minutes maximum of 40 mg, wait 1 minute give administer half of initial dose**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IO

LABETALOL (Normodyne, Trandate)

Section 11.16

Section Reference	5.8.1

Class:
- Beta Blocker

Action:
- Labetalol HCl combines both selective, competitive, alpha-1-adrenergic blocking and nonselective, competitive, beta-adrenergic blocking activity in a single substance. The principal physiologic action of labetalol is to competitively block adrenergic stimulation of β-receptors within the myocardium (β1-receptors) and within bronchial and vascular smooth muscle (β2-receptors), and α1-receptors within vascular smooth muscle. This causes a decrease in systemic arterial blood pressure and systemic vascular resistance without a substantial reduction in resting heart rate, cardiac output, or stroke volume, apparently because of its combined α- and β-adrenergic blocking activity.

Indications:
- Hypertension of Ischemic Stroke patients receiving Alteplase

Contra-Indication:
- Heart Rate < 60

Precautions:
- May cause Bradycardia
- If no change I BP after second dose, Stop Alteplase and notify Medical Control
- Should only be administered with patient in supine position

Dose:

Adult	**10mg bolus over 1-2 minutes * If SBP > 180 or DBP >105 and HR ≥ 60, may repeat dose 1 time**

Pediatric
USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO

Metoprolol (Lopressor)

Section 11.17

Section Reference	

Class:
- Beta Blocker, Beta-1 Selective
-

Action:
- Blocks binding of catecholamines to beta-1 receptors; Beta-1 selective

Indications:
- Direct replacement for Labetalol in stroke patients receiving Alteplase during interfacility transports.

Contra-Indication:
- Decompensated HF;
- Pulmonary edema;
- Cardiogenic shock;
- Bradycardia, heart block, or sick sinus syndrome

Precautions:
- BRADYCARDIA
- HF (Heart Failure)
- PULMONARY EDEMA
- Hypotension
- Peripheral vasoconstriction

Dose:

Adult	**5mg IV slow push over 5 minutes** **May repeat dose up to 2 times, for a total dose of 15 mg**

Pediatric
USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO

MAGNESIUM SULFATE

Section 11.18

Section Reference	3.4 7.3

Class:
- Electrolyte, Calcium Channel Blocker

Action:
- It is an anti-convulsant and an antiarrhythmic that depresses the central nervous system, it has been shown to inhibit smooth muscle contraction

Indications:
- Refractory V-FIB/ pulseless V-TACH
- Torsades de Pointes
- Eclampsia

Contra-Indication:
- Shock
- Heart blocks

Precautions:
- Caution should be used in patients on digitalis
- May cause hypotension
- Respiratory depression

Dose:

Adult	**Refractory V-FIB/ Pulseless V TACH/ Torsades de Pointes: 1 – 2 GM IV/IO** **Eclampsia (actively seizing): 4 GM in 250cc IVPB over 15 minutes or 2 GM IM each gluteus if IV unavailable**

Pediatric	**Medical Control On-line Consult**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IM, IV Piggyback

MAGNESIUM INFUSION

MAGNESIUM INFUSION

In patients with Eclampsia

Magnesium Sulfate 4g / 250 cc Normal Saline with macrodrip (10 gtts/min) over 15 minutes. The resulting drip rate is 166 gtts/min (approximately 3 gtts/second) when macrodrip (10 gtts/min) administration set is used

MORPHINE SULFATE

Section 11.19

Section Reference	3.6 3.7 4.1 5.5 8.12

Class:
- Analgesic

Action:
- A Schedule II controlled substance, potent analgesic which also causes some vasodilation. It reduces myocardial oxygen demand.

Indications:
- Acute myocardial infarction
- Ischemic chest pain
- Congestive heart failure
- Pain management
- Pediatric pain management

Contra-Indication:
- Head trauma
- Abdominal pain without medical consult
- Hypotension
- Volume depleted, or hypovolemia
- Respirations are <12

Precautions:
- May cause profound sedation
- Nausea and vomiting
- Allergic reaction
- Seizure
- Closely monitor respiratory rate, oxygen saturation, capnography levels and level of consciousness
- Naloxone should be readily available to counteract the effects of Morphine

Dose:

Adult	**Cardiac, CHF, Pain Management : 5 mg IV/IO/IM titrated to pain relief maximum 20 mg**
Pediatric	**Pain Management: 0.1 mg/kg IV/IO/IM (slow 1 – 2 mg/min) maximum 5 mg**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IM

NARCAN

Section 11.20

Section Reference	5.3 8.10 12.9

Class:
- Antagonist

Action:
- An effective agent that blocks both natural and synthetic opioids

Indications:
- Reverses the effects of opioid overdose including respiratory depression, sedation and hypotension

Contra-Indication:
- Hypersensitivity

Precautions:
- Should be administered with caution in patients dependent on opioid narcotics, as it may cause withdrawal effects.

Dose:

Adult	**0.5 – 2 mg IV/IO/IM/IN *if available MAD device (half in each nostril)**

Pediatric	**0.5 – 2 mg IV/IO/IM/IN *if available MAD device (half in each nostril)**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IN, IM

NITROGLYCERIN (NitroStat)

Section 11.21

Section Reference	3.6 3.7 4.1

Class:
- Vasodilator

Action:
- The principal action of nitroglycerin is vasodilation (widening of the blood vessels). Nitroglycerin will dilate veins thereby reducing preload; this is thought to be its primary mechanism of action. It also dilates arteries, thereby reducing afterload.

Indications:
- Acute Myocardial Infarction
- Ischemic chest pain
- Congestive heart Failure
- Systolic BP **MUST BE** >100 mmHg

Contra-Indication:
- Hypotension
- Hypovolemia with hypotension
- Acute inferior wall myocardial infarction with confirmed V4R ST Elevation
- Use in patients taking sexual enhancement drugs in past 24 hours

Precautions:
- Chronic repeated doses may cause methemoglobinemia

Dose:

Adult	**If BP is >100 systolic 0.4 mg SL, Repeat every 5 minutes until pain free or if BP is <100 mmHg**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- SL

ONDANSETRON (Zofran)

Section 11.22

Section Reference	5.1 5.4 8.11

Class:
- Antiemetic

Action:
- Ondansetron is used to prevent nausea and vomiting. It works by blocking the action of serotonin, a natural substance that may cause nausea and vomiting.

Indications:
- Nausea and vomiting in all patient including children and pregnant women

Contra-Indication:
- Hypersensitivity

Precautions:
- Adverse effects are extremely rare but include hypotension, tachycardia, extrapyramidal effects, seizure and QT prolongation

Dose:

Adult	**4 mg tablet or 4 mg slow IV/IO/IM, repeat once in 5 min**
Pediatric	**Under 40 kg: 0.1 mg/kg slow IV/IO/IM, maximum single dose 4 mg, repeat once in 5 min**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- PO, IV, IO, IM

ORAL GLUCOSE

Section 11.23

Section Reference	5.2 5.8

Class:
- Caloric

Action:
- Dextrose is a simple sugar that the body can rapidly metabolize when in hypoglycemic states

Indications:
- Hypoglycemia with an intact gag reflex and able to follow simple commands

Contra-Indication:
- Unresponsive patient
- Patients unable to swallow

Precautions:
- May become a choking hazard monitor patient closely

Dose:

Adult	**One Tube placed between cheek and gum**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- PO

OXYGEN

Section 11.24

Class:
- Gas

Action:
- Increased concentrations of oxygen increase the saturation level in the hemoglobin in the red blood cell. This results in an increased oxygenation level at the tissue. Oxygen is required for the efficient breakdown of glucose into a usable energy form

Indications:
- Hypoxia
- Any type of patient that has or may have a condition in which increased oxygen levels are needed

Contra-Indication:
- None

Precautions:
- Possible oxygen toxicity in COPD patients and newborns
- Never deprive the hypoxic patient of oxygen for fear of respiratory depression

Dose:

Adult	**All patients, enough to maintain SAO2 readings ≥ 94%**

Pediatric	**All patients, enough maintain SAO2 readings ≥ 94%**
USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS	

Route:
- Blow by, nasal cannulas, face masks, ventilator, BVM, advanced airways

RACEMIC EPINEPHRINE

Section Reference	

Class:
- Sympathomimetic

Action:
- A bronchodilator that has beta properties causing relaxation of bronchial smooth muscle tissue. Racemic Epinephrine is a sympathomimetic bronchodilator that is delivered by aerosol

Indications:
- Asthma/COPD
- Croup
- Pediatric Respiratory Distress

Contra-Indication:
- Epiglottitis
- Hypertension, underlying cardiovascular disease

Precautions:
- May cause tachycardia and dysrhythmias
- Monitor vital signs closely. Rebound exacerbation of severe croup may occur

Dose:

Adult	**One (1) packaged dose mixed with 3cc of normal saline**

Pediatric	**One (1) packaged dose mixed with 3cc of normal saline**
USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS	

Route:
- Nebulized

SODIUM BICARBONATE

Section 11.26

Section Reference	3.3 3.4 5.7 8.3 8.4 9.1

Class:
- Electrolyte

Action:
- Alkalinizing agent used in the treatment of metabolic acidosis

Indications:
- Severe acidosis refractory to adequate ventilations
- Life-threatening agitated patients or excited delirium
- Cardiac arrest that is unwitnessed or has a long down time

Contra-Indication:
- Alkalosis

Precautions:
- Correct dose is essential to avoid overcompensation
- Should not be use in same IV line with EPINEPHRINE

Dose:

Adult	**Acidosis: 1 mEq/kg IV/IO, may be repeated 0.5 mEq/kg IV/IO bolus in 10 minutes** **Life-threatening agitated patients or excited delirium: 50 mEq IV/IO**

Pediatric	**Medical Control On-line Consult**
USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS	

Route:
- IV, IO

SUCCINYLCHOLINE (Quelicin)

Section 11.27

Section Reference	

Class:
- Depolarizing neuromuscular blocking agents

Action:
- A short acting, non-competitive, depolarizing neuromuscular blocking (NMB) agent than binds with the motor end plate receptor site causing a "continuous" depolarization to take place. It is this depolarization that causes initial fasciculation. As Acetylcholinesterase breaks the NMB down, there is a return of fasciculation. Onset is 30-60 seconds and duration is 3 to 8 minutes.

Indications:
- **RSI-MUST BE** given in conjunction with Etomidate (Amidate)

Contra-Indication:
- Non-intubated patients
- Recent or Known History of Hyperkalemia
- Known/Suspected History of Malignant Hyperthermia (a life-threatening state that includes high body temperatures)
- Increases in ICP or Recent Acute Stroke
- Known Increased Intraocular Pressure, Penetrating Eye Injury, or Recent Eye Surgery
- Recent Major Trauma Including Severe Burn(s) or Crush Injury

Precautions:
- Administration of a neuromuscular blocker does not alter mentation or the ability to feel pain
- **MUST BE GIVEN WITH ETOMIDATE, IT IS NEVER TO BE GIVEN ON ITS OWN**

Dose:

Adult	**1.5 mg/kg IV/IO maximum dose 120mg**

Pediatric	**2mg/kg IV/IO maximum dose 72mg**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO

VECURONIUM BROMIDE (Norcuron)

Section 11.28

Section Reference	12.6

Class:
- Neuromuscular blocking agent

Action:
- Vecuronium is a non-depolarizing, long lasting, neuromuscular blocking agent. It works by blocking nerve transmissions in muscle nerves, which results in muscle relaxation and paralysis. It paralyzes both skeletal muscles and respiratory muscles. Paralysis occurs within 2-4 min and generally lasts 25-40 min.

Indications:
- Induced Hypothermia post ROSC, Pre-sedation (Midazolam) must be provided
- Long-acting non-depolarizing paralytic medication for use with pharmaceutically assisted intubation and compliance during mechanical ventilation
- Maintenance of chemical paralysis for patients who have a secured ET tube in place and on a ventilator during inter-facility transport.
-

Contra-Indication:
- Non-intubated patients
- Hypersensitivity

Precautions:
- Bradycardia (rare)
- Prolonged paralysis
- Additive/ synergistic effects if administered with or following an opioid, sedative or anesthetic agent

Dose:

Adult	**0.1 mg/kg IV/IO, maximum dose 10 mg** **May repeat 0.1 mg/kg IV/IO push, maximum dose 10 mg 20-40 minutes after initial dose**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO

Special Considerations:
Produces COMPLETE APNEA; therefore, an intact airway (e.g. endotracheal intubation), and adequate ventilation oxygenation MUST BE ESTABLISHED PRIOR TO ADMINISTRATION. Likewise, personnel and equipment with the ability to restore an airway, ventilation and oxygenation must be available during transport.
Causes paralysis only; therefore, concomitant use of a sedative hypnotic is indicated. Vecuronium has no effect on consciousness or pain threshold. Adequate anesthesia/analgesia should always be used when vecuronium is used. Benzodiazepines and/or analgesics should be administered concurrently when prolonged vecuronium therapy is used for ventilator patients, because patient is awake and able to feel all sensations.
Note: Paralysis may alter the clinical exam. For example, motor seizure activity will not be seen, but the brain will continue to undergo seizure activity, and this must be treated! Also, conditions such as shock, hypoxia, pain, intracranial injury, hypoglycemia, etc. may be the cause of this unwanted, spontaneous patient movement in the first place. These conditions must be addressed but may be masked by the paralytic agent!

VERSED (Midazolam)

Section 11.29

Section Reference	3.5	3.7	3.10	3.11	3.13	5.6	5.7	6.9	8.5	8.13	8.16	12.6	12.12	12.22

Class:
- Benzodiazepine

Action:
- A schedule IV controlled substance with strong hypnotic, anti-convulsing, and amnesic properties

Indications:
- Premedication or sedation for cardioversion and pacing
- Sedation of spontaneously breathing patients to facilitate Intubation
- Induced hypothermia post ROSC
- Seizures
- Severely agitated patients

Contra-Indication:
- Shock
- Depressed vital signs
- Alcoholic coma
- Narrow angle glaucoma

Precautions:
- May cause respiratory depression, monitor vital signs closely

Dose:

Adult	**Seizures, premedication/sedation for cardioversion, pacing, or facilitate intubation, Induced hypothermia or severely agitated patient:** **0.05 mg/kg to maximum dose 10 mg, may repeat once (IM preferred if no IV/IO access is established)**

Pediatric	**Seizures, premedication/sedation:** **0.05 mg/kg, maximum single dose 10 mg (IM preferred if no IV/IO access is established)**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO, IM (preferred for seizures), IN

ROCURONIUM BROMIDE (Zemuron)

Section 11.30

Section Reference	

Class:
- Neuromuscular blocking agent

Action:
- Vecuronium is a non-depolarizing, short duration, neuromuscular blocking agent. It works by blocking nerve transmissions in muscle nerves, which results in muscle relaxation and paralysis. It paralyzes both skeletal muscles and respiratory muscles. Paralysis occurs within 30-90 sec. and generally lasts 25-60 min.
- REQUIRES REFRIGERATION

Indications:
- Induced Hypothermia post ROSC, Pre-sedation (Midazolam) must be provided

Contra-Indication:
- Non-intubated patients
- Hypersensitivity

Precautions:
- Bradycardia (rare)
- Prolonged paralysis

Dose:

Adult	**1 mg/kg IV/IO, maximum dose 100 mg**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO

CARDIZEM (Diltiazem)

Section 11.31

Section Reference	

Class:
- Calcium Channel Blocker

Action:
- Slow calcium channel blocker, calcium antagonist

Indications:
- Temporary control of A-Fib or A-Flutter

Contra-Indication:
- Hypersensitivity
- 2nd and 3rd degree AV block
- Hypotension
- Cardiogenic shock
- WPW syndrome

Precautions:
- Must be given slowly in patients with impaired liver, renal functions or on digitalis

Dose:

Adult	**CARDIZEM 5 mg bolus IV slow push repeated every minute titrated to HR < 100; maximum dose 25 mg as long as blood pressure >100 mmHg May be repeated once**

Pediatric	**None**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV

TORADOL (Ketorolac)

Section 11.32

Section Reference	5.5

Class:
- Nonsteroidal anti-inflammatory drug (NSAID)

Action:
- Analgesic

Indications:
- Pain management

Contra-Indication:
- Hypersensitivity to ASA or other NSAID

Precautions:
- Must be given slowly in patients with impaired liver, renal functions or on digitalis

Dose:

Adult	**Age 14-65:** **60mg IM or 30mg IV over 1 minute** **Age >65:** **15mg IV over 1 minute**

Pediatric	**Not intended for use on children under 14 years of age**

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IM

LACTATED RINGERS

Section 11.33

Section Reference	

Class:
- Isotonic Crystalloid

Action:
- Lactated Ringer is a sterile solution for fluid and electrolyte replenishment. It restores fluid and electrolyte balances, produces diuresis, and acts as alkalizing agent.

Indications:
- Direct replacement for Normal Saline due to shortages

Contra-Indication:
- Hypersensitivity to to sodium lactate

Precautions:
- May not be suitable for mixing with certain medications.

Dose:

Adult	Direct replacement for Normal Saline due to shortages

Pediatric	Direct replacement for Normal Saline due to shortages

USE APPROVED LENGTH BASED TAPE FOR CALCULATIONS OF ALL MEDICATIONS

Route:
- IV, IO

SECTION 12

Procedural Protocols

PROCEDRUAL PROTOCOLS APPROVAL

Section 12.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD

Medical Director

ECG MONITORING & 12 LEAD ECG

Section 12.1

BLS | ALS

Indications:

- ALL ALS patients shall have their EKG rhythm monitored.
- All related protocols and whenever deemed appropriate by the paramedic in charge of patient care including but not limited to:
  - Complaints of chest pain or discomfort
  - Drug overdoses
  - Epigastric or abdominal pain
  - Unexplained diaphoresis
  - Dyspnea
  - Syncope, near syncope, unexplained weakness or general malaise
  - CHF or Pulmonary Edema
  - Thoracic back pain in the absence of trauma
  - Dysrhythmia

Procedure:

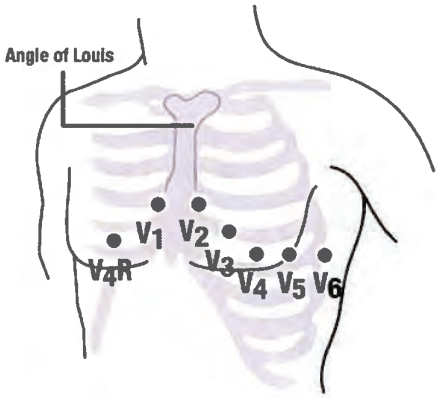
1. Expose patient's chest and prep area as needed (i.e. cleaning, shaving, drying or removing brassieres), be aware to provide privacy for female patients

2. Apply limb leads as follows:
   a. LA – BLACK Left upper chest
   b. RA – WHITE Right upper chest
   c. LL – RED Left lower leg (medial calf)
   d. RL – GREEN Right lower leg (medial calf)

3. Adjust monitor to the proper lead (generally lead II). Adjust gain if necessary.

4. Obtain baseline EKG tracing. (six second strip).

5. Interpret EKG:
   A: Analyze the rate (six second strip method).
   B: Analyze the rhythm (regular, irregular, pattern).
   C: Analyze the P-waves (present, regular, upright or inverted).
   D: Analyze the P-R interval (normal duration: 120-200 ms).
   E: Analyze the QRS complex (normal duration 40-120 ms).



6. Locate the jugular notch and move downward until the sternal angle is found (Angle of Louis)

7. Follow the articulation to the right sternal border to locate the second rib. Just below the second rib is the second intercostal space

8. Move down two intercostal spaces and position the V1 RED electrode in the fourth intercostal space, just to the right of the patient's sternum

9. Move across the sternum to the corresponding intercostal space and place the V2 YELLOW lead to the left of the patient's sternum
    a. In women, V4 BLUE should be placed on top of breast

10. From V2 YELLOW electrode position, palpate down one intercostal space to the mid-clavicular line to place the V4 BLUE electrode
    a. In women, V4 BLUE should be placed under breast
    b. In suspected acute right wall inferior wall MI, **V4R** BLUE will be placed in same position on the right side of patients chest

11. Place V3 GREEN electrode midway between V2 YELLOW position and V4 BLUE position
    a. In women, V3 GREEN should be placed on top of breast

12. Place V5 ORANGE electrode anterior axillary area, level with V4 BLUE position
    a. In women, V5 ORANGE should be placed under breast

13. Place V6 PURPLE electrode mid-axillary line, level with V4 BLUE and V5 ORANGE position

a. In women, V6 PURPLE should be placed under breast

14. Interpretation should be contained in the patient care report.

15. Transmit data to ePCR.

CHEST TUBE MONITORING

Section 12.2

ALS | SCT

Often needed when an object infiltrates the pleural space and compromises the negative pressure of the chest wall that maintains lung expansion (i.e. air emboli, infection).

Indications:

- To monitor stable patients with an already established chest tube as a result of an infiltrate in the pleural space or those presenting with other conditions that require a chest tube.

Contraindications/Precautions:

- Closely monitor patients with coagulopathy or platelet dysfunction due to increased risk of bleeding.
- Clamping of the chest tube for prolonged periods of time can lead to tension pneumothorax if a residual leak is present.
- Obstructed chest tubes can cause tension pneumothorax if not noted quickly and the drainage system is not monitored closely.

Procedure:

1. Body substance isolation.
2. The chest tube should have already been established and confirmed for proper placement prior to transport.
3. Assess ABC's and vital signs, including breath sounds.
4. Assess oxygen saturation levels.
5. Check dressing for occlusiveness and any drainage at the insertion site as well as chest wall at the insertion site for subcutaneous air.
6. Assess drainage collection system for any fluctuations in the air leak indicator and air bubbles in the air leak indicator, assess for tube kinks, dependent loops or clots. If dependent loops have trapped fluid, drain tubing content into drainage system.
7. Assure that the drainage collection system is not full to prevent having to drain or change it en route.
8. Position the drainage system upright, below the level of the heart at all times.

9. Apply suction if ordered and as indicated

10. Frequently assess the patient's comfort level and cardiac rhythm and monitor vital signs every 15-30 minutes.

11. If possible, position the patient in Semi Fowler's for air leak and high Fowler's for fluid leak.

12. If a chest tube is pulled out, treat the opening as a sucking chest wound and cover with an occlusive dressing taped at 3 sides to prevent air leaking from the patient's chest.

13. If a tension pneumothorax develops with sudden onset of respiratory distress, chest pain, mediastinal tracheal shift to the unaffected side and absent or diminished breath sounds on the affected side, hypotension and tachycardia, make sure the chest tube is not clamped, kinked or occluded. Notify Medical Control immediately and prepare for immediate needle chest decompression.

14. If the patient is on a water seal (no suction applied), air and/or fluid drainage is considered resolved but you need to observe for signs or re-accumulation of air/fluid in the chest.

Notes:

1. A three-chamber drainage system is the most frequently used. Note the chamber readings and mark the volume, date and time of the last reading of the drainage compartment as well as color and consistency of the fluid. The first chamber is the collection of drainage material. The second chamber is filled with water and acts as a water seal to prevent entry of air into the pleural space if suction was not used or interrupted. The third chamber regulates the amount of suction applied by changing the height of the water in it. Typical vacuum, settings start at 20 cm H20
2. Do NOT strip or "milk" the system unless you have a direct order from the sending physician.
3. Make sure you have 2 padded hemostats and a Heimlich valve in case you need to clamp the tube which is done only in specific circumstances during transports: to assess for air leaks and if the pleur-evac equipment tubing becomes disconnected from the chest tube or if the equipment fails. Clamp just long enough to replace system or attach Heimlich valve.

4. If a leak is suspected, check all connections between the patient, chest tube and drainage system air leak: continuous bubbling seen in the water seal chamber indicating a leak between the patient and water seal. Attempt to locate the leak by tightening
loose connections and watch for bubbling to stop. If unsuccessful, cross clamp chest tube close to the patient's chest and if bubbling stops, the air leak is inside the patient's chest or at the chest tube insertion site. Unclamp the tube and notify physician immediately. Leaving the tube clamped will cause a tension pneumothorax. If bubbling is still present, it indicates that it is not in the patient's chest or at the insertion site. Gradually move the clamps down the drainage tubing away from the patient and toward the suction control chamber, moving one clamp at a time. If bubbling stops, the leak is in that section of the tubing or connection. Replace tubing or secure connection distal to the clamp. If bubbling continues, the leak is in the drainage system. Change the system.

5. When transporting the patient, make sure the drainage system is properly secured below the level of the patient's heart, to avoid tipping it over and risk breaking the system or dislodging the chest tube from the patient's chest.

Complications:

- Hemorrhage from intercostal vessel injury
- Subcutaneous emphysema
- Injury due to improper tube placement
- Local infection and/or pain

Pediatric Transport Devices

Section 12.3

BLS

These guidelines provide the procedures for enhancing the safety of a pediatric patient during transport. Due to the infinite number of possible scenarios that may be encountered, these guidelines shall be used to assist with strategic and tactical decision making throughout the operation.

Indications:

- For a Child whose condition may require continuous and/or intensive medical monitoring and/or interventions.

Procedure:

Car Seat:

1. Elevate stretcher backrest to an upright position
2. Attach provided seatbelt straps to stretcher. Use **only** approved provided seatbelt straps. **(DO NOT USE DISPOSABLE BACKBAORD STRAPS)**
3. Position car seat facing rear of ambulance
4. Install with **both** rear-facing & forward-facing belt paths and tighten so there is no more than one inch (1") of lateral movement from the belt path of car seat on stretcher
5. Adjust car seat recline mechanism to fit snugly against stretcher backrest
6. Secure child into car seat assuring all buckles and clips are properly fastened
7. Adjust shoulder strap so that they are above the shoulders of the child, belts should rest snuggly against the child's chest, and chest clip is at the child's nipple level
8. Adjust the leg strap to ensure they are resting on the upper thighs of the child

THE PEDI-MATE® & PEDI-MATE® PLUS:

- To secure Pedi-Mate to stretcher refer to (12.3.1)
- To secure Pedi-Mate Plus to stretcher refer to (12.3.2)

***** Never transport a child unrestrained or held in an adult's arms. *****

PEDI-MATE

BLS

4.3 Positioning the Pedi-Mate®

1. Remove any restraints attached to the cot.
2. Raise the cot backrest and lock in place at an angle between 15 and 45 degrees. This will keep the patient's shoulders higher than the pelvis and maintain the proper center of gravity.
3. Unroll the Pedi-Mate® and spread it flat on the cot mattress with all straps extended.
4. Center the blanket left to right on the mattress.
5. Position the blanket with the black backrest strap at the point where you expect the patient's shoulders to rest (Figure 1).

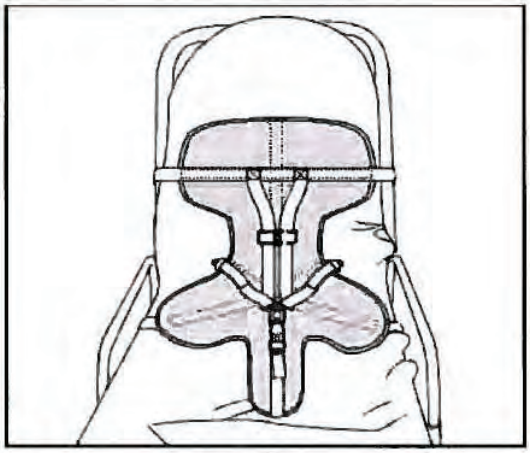


Figure 1 - Pedi-Mate® Positioned on a Cot

6. Run the ends of the backrest strap around the cot backrest until they meet in the back, then fasten the buckle (Figure 2). Leave some slack in the strap for final adjustment.

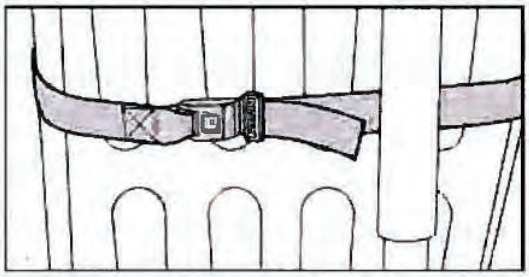


Figure 2 - Attach the Pedi-Mate® Backrest Strap

4.4 Securing the Pedi-Mate®

1. Place the patient on the Pedi-Mate®. If the black backrest strap is not at the patient's shoulder level, adjust the blanket position.
2. With the blanket properly positioned, tighten the backrest strap by pulling very firmly on the free end of the strap until the mattress is compressed.
3. Fasten a main frame strap by threading the free end downward between the cot main frame and the mattress next to the head-end sidearm casting.
4. Wrap the strap up around the cot main frame and fasten the buckle (Figure 3). Leave a little slack in the strap for final adjustment.
5. Repeat with the other main-frame strap.
6. Tighten each main frame strap by holding onto the buckle with one hand and pulling firmly on the free end of the strap.

Note: *To loosen a main-frame strap, unfasten it, then grasp the buckle tang, and pull outward. Refasten the buckle.*

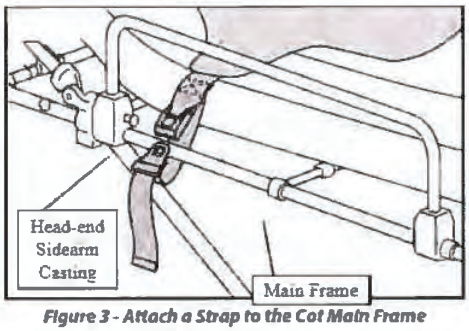


Figure 3 - Attach a Strap to the Cot Main Frame

4.5 Securing the Patient

⚠ WARNING

Secure and snug all straps. Unsecured or loose straps may allow movement and result in injury or death of the patient.

1. Pull the crotch strap buckle up between the patient's legs and lay the strap on the patient's abdomen.
2. Lift a shoulder strap over one shoulder of the patient. Place patient's arm through the strap, then lock the buckle half into the central buckle (Figure 4).
3. Repeat with the other shoulder strap.

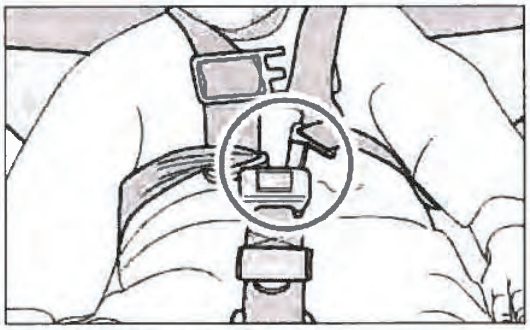


Figure 4 - Fastening a Shoulder Strap

4. Thread the shoulder strap on the patient's left side through the chest clip (Figure 5) and slide the chest clip to armpit level.

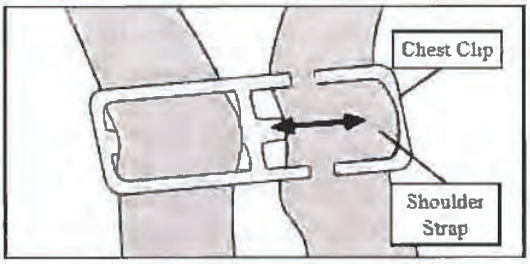


Figure 5 - Fastening a Shoulder Strap

LOOSENING THE HARNESS STRAPS

To loosen the straps, refer to Figures 7 and 8 and use the following procedures:

1. Grasp the adjustment tab (Figure 7) with one hand and pull the torso strap (B) back through the tab with your other hand.
2. Steady the central buckle with one hand and loosen the shoulder strap (A) by pulling it upward with the other hand.
3. Repeat with the other shoulder/torso strap.
4. Loosen the crotch strap by grasping the adjustment tab with one hand and pulling downward on the portion of the strap that rests against the body (Figure 8).

4.6 Releasing the Patient from the Pedi-Mate® Harness

1. Loosen the crotch strap.
2. Slide the chest clip down toward the central buckle and unthread the shoulder strap on the patient's left side from the clip.
3. Press the red release button in the central buckle and pull the buckle slightly downward to release the shoulder straps from the buckle.
4. Loosen the shoulder straps and slide them away from the patient's body.
5. Lift the patient from the Pedi-Mate® according to local protocols.

4.7 Storing the Pedi-Mate®

1. Detach the Pedi-Mate® from the cot and spread it flat on the cot mattress.
2. Attach the shoulder straps to the central buckle and adjust all straps to lay smoothly against the blanket.
3. Fold the backrest straps across the blanket.
4. Fold the crotch panel up toward the center of the blanket.
5. Fold the cot main-frame straps and the lower blanket panels across the center of the Pedi-Mate®.
6. Beginning at the crotch panel, roll the Pedi-Mate® upward. Secure the roll with the hook-and-loop straps.

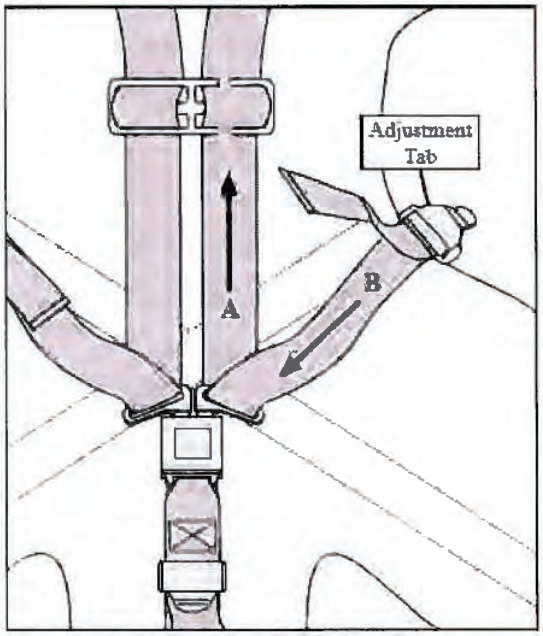


Figure 7 - Loosening the Strap

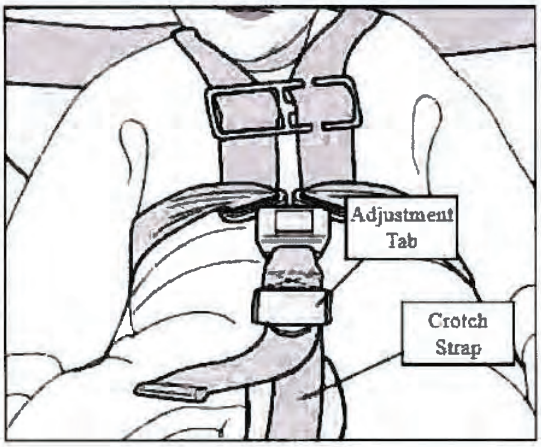
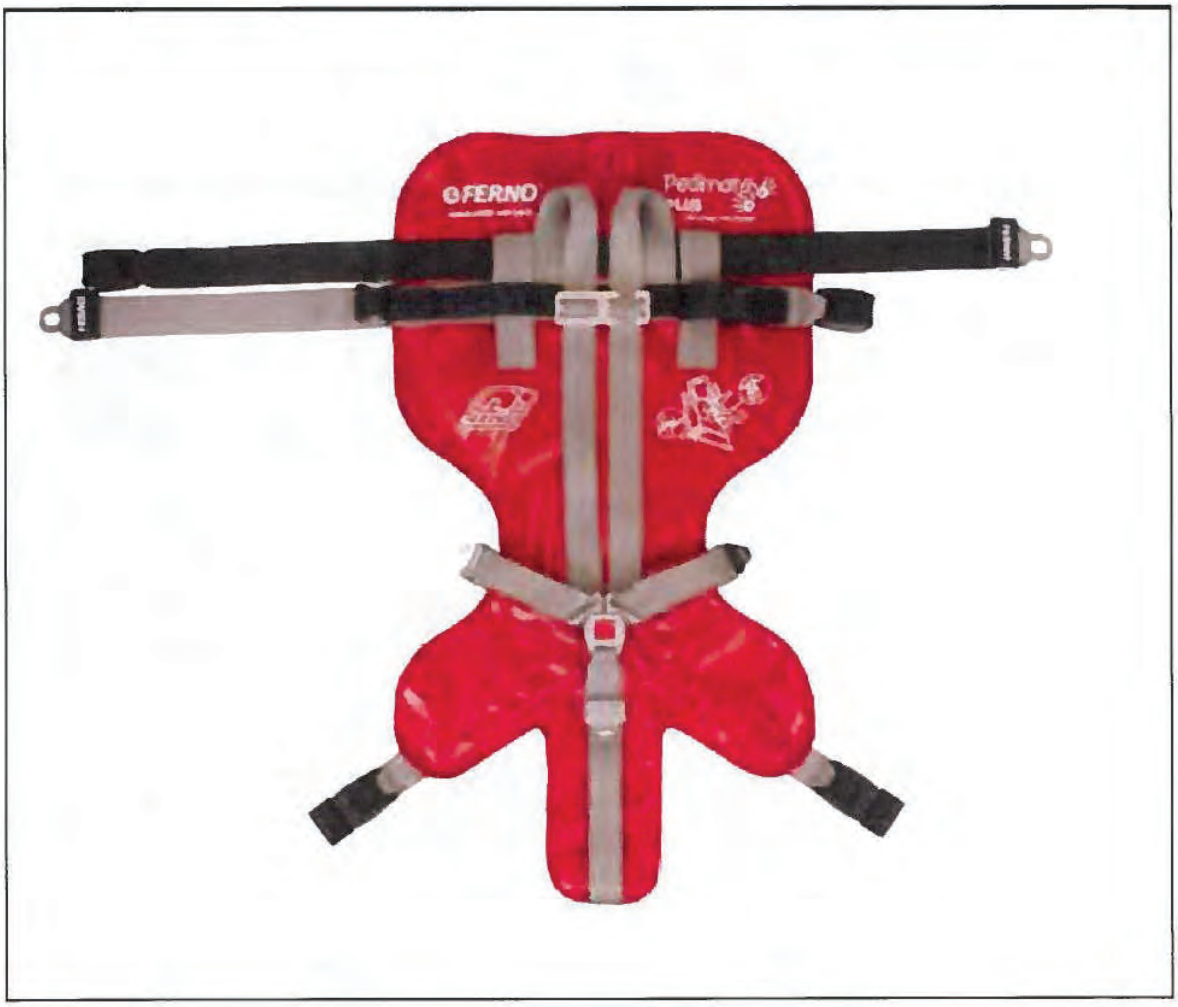


Figure 8 - Loosening the Crotch Strap

PEDI-MATE PLUS

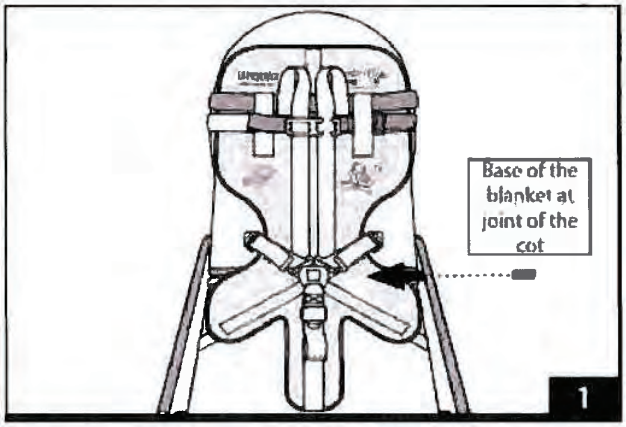
Section 12.3.2

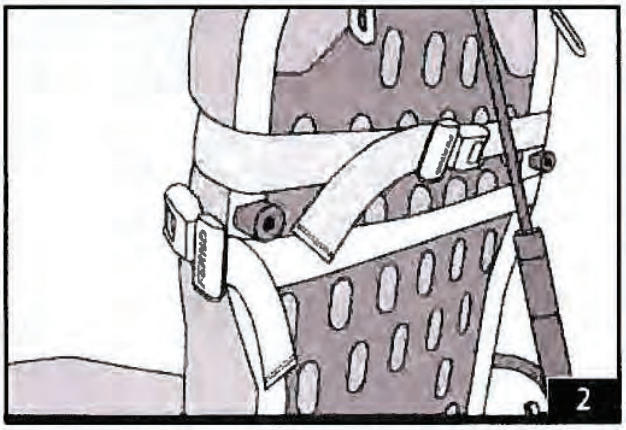
BLS



4.3 Positioning the Pedi-Mate® PLUS

1. Remove any restraints attached to the cot.
2. Raise the cot backrest and lock in place at an angle between 15 and 45 degrees. This will keep the patient's shoulders higher than the pelvis and maintain the proper center of gravity.
3. Unroll the Pedi-Mate® PLUS and spread it flat on the cot mattress with all straps extended.
4. Center the blanket left to right on the mattress
5. Position the blanket so that the base of the blanket, where patient will be seated, is at the joint of the cot (Figure 1). The black backrest strap will be in the area where you expect the patient's shoulders to rest.
6. Run the ends of the backrest strap around the cot backrest until they meet in the back, then fasten the buckle. Leave some slack in the strap for final adjustment.
7. Position the grey and black floating strap system a the point where the patient's chest is expected to rest.
8. Run the ends of the grey and black floating strap system around the cot backrest until they meet on the side, then fasten the buckle (Figure 2). Leave some slack in the strap for final adjustment

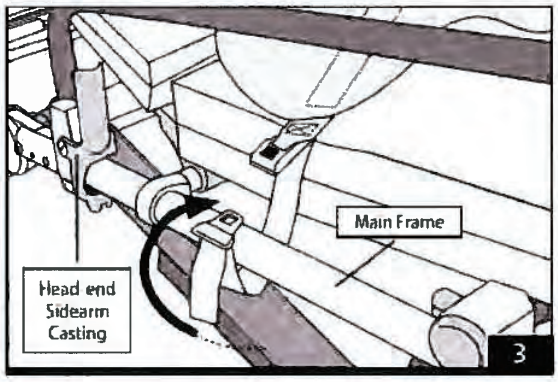




4.4 Securing the Pedi-Mate® PLUS

1. Place the patient on the Pedi-Mate® PLUS. If the black backrest strap is not at the patient's shoulder level, adjust the blanket position.
2. With the blanket properly positioned, tighten the backrest strap by pulling very firmly on the free end of the strap until the mattress is compressed.
3. Fasten a main frame strap by threading the tang end downward between the cot main frame and the mattress next to the head end sidearm casting.
4. Wrap the strap around the cot main frame and fasten the buckle (Figure 3). Leave a little slack in the strap for final adjustment.
5. Repeat with the other main frame strap.
6. Tighten each main frame strap by holding onto the buckle with one hand and pulling firmly on the free end of the strap

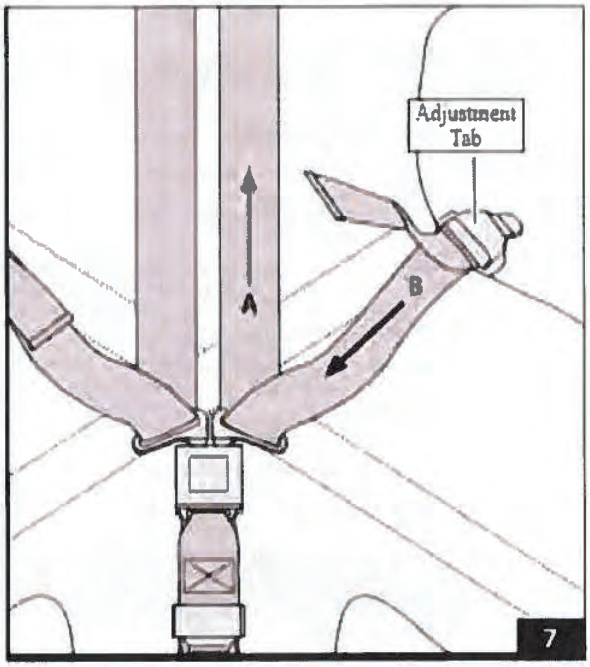
Note: *To loosen a main frame strap, unfasten it, then grasp the tang, and pull outward. Refasten the buckle*



LOOSENING THE HARNESS STRAPS

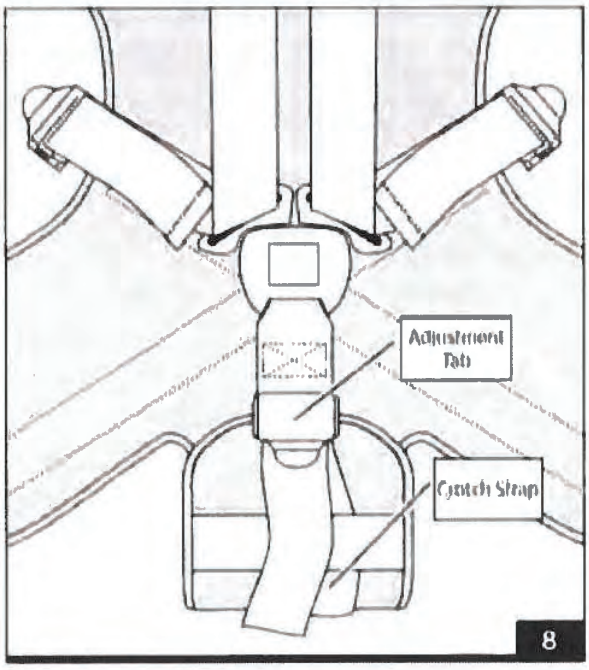
To loosen the straps, refer to Figures 7 and 8 and use the following procedure:

1. Grasp the adjustment tab (Figure 7) with one hand and pull the torso strap (B) back through the tab with your other hand.
2. Steady the central buckle with one hand and loosen the shoulder strap (A) by pulling it upward with the other hand.
3. Repeat with the other shoulder/torso strap.
4. Loosen the crotch strap by grasping the adjustment tab with one hand and pulling downward on the portion of the strap that rests against the body (Figure 8).



4.6 Releasing the Patient from the Pedi-Mate® PLUS Harness

1. Loosen the crotch straps.
2. Slide the chest clip down toward the central buckle and unthread the shoulder strap on the patient's left side from the clip.
3. Press the red release button in the central buckle and pull the buckle slightly downward to release the shoulder straps from the buckle.
4. Loosen the shoulder straps and slide them away from the patient's body.
5. Loosen and unclip the black floating chest strap.
6. Lift the patient from the Pedi-Mate® PLUS according to local protocols.



4.7 Storing the Pedi-Mate® PLUS

1. Detach the Pedi-Mate® PLUS from the cot and spread it flat on the cot mattress.
2. Attach the shoulder straps to the central buckle and adjust all straps to lay smoothly against the blanket.
3. Fold the backrest straps across the blanket.
4. Fold the crotch panel up toward the center of the blanket.
5. Fold the cot main-frame straps and the lower blanket panels across the center of the Pedi-Mate® PLUS.
6. Beginning at the crotch panel, roll the Pedi-Mate® PLUS upward. Secure the roll with the hook and loop straps.

4.5 Securing the Patient

⚠ WARNING

Secure and snug all straps. Unsecured or loose straps may allow movement and result in injury or death of the patient.

1. Pull the crotch strap buckle up between the patient's legs and lay the strap on the patient's abdomen.
2. Wrap the black chest strap of the grey and black floating strap system around the patient's chest and fasten under the shoulder straps. Snug the chest strap by pulling the free end, leaving enough slack to permit normal breathing.
3. Lift a shoulder strap over one shoulder of the patient. Place patient's arm through the strap, then lock the buckle half into the central buckle (Figure 4).
4. Repeat with the other shoulder strap.
5. Thread the shoulder strap on the patient's left side through the chest clip (Figure 5) and slide the chest clip up to rest on top of the black chest strap.

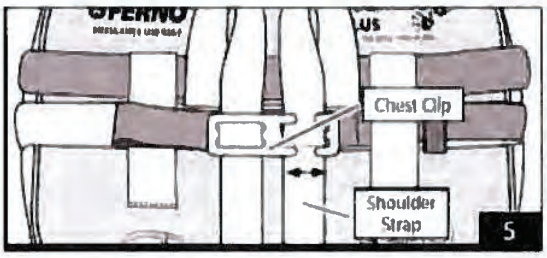
⚠ WARNING

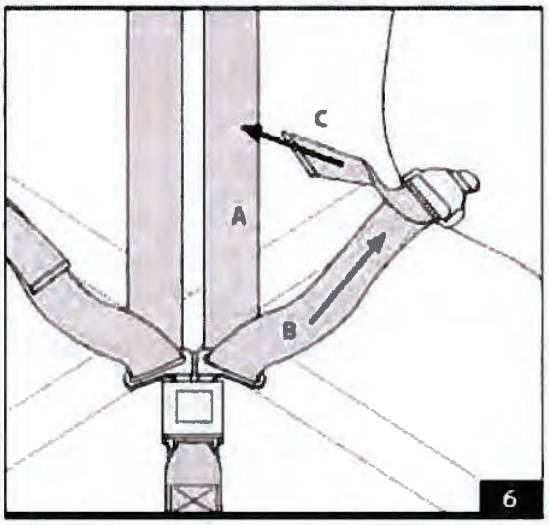
Do not fasten black strap too tightly over the chest. Must permit normal breathing.

TIGHTENING THE HARNESS STRAPS

To tighten the shoulder/torso straps, refer to Figure 6 and use the following procedure:

1. Snug the shoulder strap (A) against the shoulder and chest by pulling section B of the strap with one hand while steadying the central buckle with the other hand.
2. Repeat with the other shoulder strap.
3. Snug the torso strap (B) by pulling on section C with one hand while steadying the central buckle with the other hand.
4. Repeat with the other torso strap.
5. Snug the crotch strap by pulling on the free end.





CPAP

Section 12.4

BLS | ALS

Continuous positive airway pressure (CPAP) is a form of positive airway pressure ventilator which applies mild air pressure on a continuous basis to keep the airways continuously open in a patient who is able to breathe spontaneously on their own

Indications:

- Congestive Heart Failure or Pulmonary Edema
- Pulmonary Edema secondary to near-drowning
- Respiratory Distress

Contraindications:

- Patient less than 8 years of age
- Unable to maintain a patent airway
- Decreased level of consciousness
- Pneumothorax
- Facial Trauma or Burns
- Systolic BP <100 mmHg
- Recent surgery to face or mouth
- Epistaxis
- Patient unable to tolerate mask or pressure after coaching patient

Procedure:

1. Assemble all equipment needed prior to departing on call.
2. Patient should be in Upright position.
3. Assure monitoring devices are attached.
4. Set ventilator settings per guidelines given per RT/RN at hospital/transferring facility
5. Attach to oxygen (on portable oxygen, ventilator should be attached directly to the tank, in ambulance, oxygen should be hooked directly to the wall NOT through regulator or flowmeter).
6. Reassure patient and explain the procedure.

Attach ventilator/CPAP to patient. When the patient tolerates the ventilator/CPAP, transport can begin, otherwise, ask RN/RT for assistance

1. Monitor patient's vital signs at a minimum of every 30 minutes for a stable patient, and every 15 minutes for an unstable patient on CPAP.
2. Reassess patient's breathing effort.

CPAP should be transported via ALS unless no other means are available, and the patient has their own machine. If the patient has their own CPAP machine, management can be contacted for approval for BLS transport.

CRICOTHYROTOMY

Section 12.5

ALS	SCT

Cricothyrotomy is a surgical procedure that allows rapid entrance to the airway for ventilation and oxygenation for patients in whom airway control is not possible by other means. It should not be performed on patients who can be ventilated by other means (can't ventilate, can't intubate). Potential complications include: high pressure during ventilation and air entrapment may produce pneumothorax, hemorrhage at the insertion site, and subcutaneous emphysema.

Indications:

- Facial or nasal injuries that preclude oral intubations such as:
  - Massive mid-facial trauma
  - Possible spinal trauma
  - Anaphylaxis
  - Chemical inhalation injuries
- Complete airway obstruction (Rule of Thumb: Can't Intubate and Can't Ventilate)

Contraindications:

- Ability to control airway and/or ventilations by other means
- Inability to identify land marks
- Children under 10 years of age, needle Cricothyrotomy is preferred (Section 12.12)

Procedure:

In patients with suspected spinal injury, in-line stabilization should be maintained throughout the procedure

1. Prepare the Cric equipment:
   - Scalpel blade
   - 6.0 E.T. cuffed tube or smaller
   - 10cc syringe for inflation of ETT cuff
   - Antiseptic solution
   - BVM with oxygen source
   - Suction device
   - Bulky dressing

2. Locate the anatomical landmarks of the neck, and identify the cricothyroid membrane (almond shape depression just below the thyroid cartilage)

3. Make a 3cm incision with the scalpel at the level of the cricothyroid membrane

4. With the cricothyroid membrane exposed, puncture it horizontally with the scalpel or forceps rotate several times to spread tissue on each side.

5. Insert ETT about 1 inch (1") to 1 ½ inches (1.5"); inflate cuff with 10cc of air

6. Provide ventilation by a bag-valve device with 100% oxygen

7. Determine adequacy of ventilation through bilateral auscultation and observation of rise and fall of the chest (don't over ventilate)

8. Secure tube in place with tape or twill tape provided, **DO NOT** wrap tape tightly around neck

9. Attach $ETCO_2$ to end of ETT and monitor capnography waveform

DRUG FACILITATED ENDOTRACHEAL INTUBATION

Section 12.6

ALS	SCT

Endotracheal intubation (ET) is the definitive method of securing the airway. In this manner, we can ventilate the patient as well as prevent the aspiration of material into the lungs. It is a procedure which should be performed in patients who have lost their stimulus to breathe, in patients who are not ventilating adequately despite other standard procedures, in patients with significantly decreased levels of consciousness, and in patients who need their airway protected.

Indications:

- Endotracheal tube (ETT) intubation with ventilation and 100% oxygen should be used in patients who are unconscious, unresponsive, near death having:
  - Apnea
  - GCS <8
  - Risk of aspiration
  - Inadequate ventilation despite other standard methods
  - Inability to control their airway and are in danger of aspiration (i.e. unconscious)
- Conscious or semi-conscious patients that need aggressive airway control via ETT intubation administer:
  - First Line Therapy:
    - Adult ETOMIDATE 0.3 mg/kg rapid IV/IO bolus (maximum dose 30 mg)
    - Pediatric patient ETOMIDATE 0.3 mg/kg IV/IO (maximum dose 10.8 mg)
  - Second Line Therapy If 1st is **Unavailable**:
    - VERSED 0.05 mg/kg IM/IN/IV/IO, max of 10 mg, prior to attempting intubation.
- Follow Pain Management Protocol for Analgesia

Contraindications:

- Severe airway trauma or obstruction that does not permit safe passage of an endotracheal tube,
  - Cricothyrotomy or Needle Cricothyrotomy would be indicated
- Cervical spine injury in which the need for complete immobilization of the cervical spine makes endotracheal intubation difficult or impossible
  - In patients with suspected spinal injury, manual in-line stabilization should be maintained throughout the procedure

Procedure:

DRUG FACILITATED ENDOTRACHEAL INTUBATION

Section 12.6

There is to be no more than one (1) attempt at endotracheal intubation. If the patient cannot be intubated after one (1) attempt, continue with BVM ventilation and initiate transport to the hospital; insert a Supraglottic airway; or perform a Cricothyrotomy or Needle Cricothyrotomy if needed. ***(Attempt is defined as a laryngoscope passing the patients lips)***

1. Prepare
    - Pre-oxygenate
    - Assign an assistant to assist with procedure
    - Secure vascular access
    - Draw up all medications

2. Sedate

3. Utilize positioning that best accommodates visualization of the vocal cords

4. Insert laryngoscope blade into the oropharynx (sweeping tongue to the left) to visualize the vocal cords, avoid creating a fulcrum on patient's lips and teeth

5. While visualizing the vocal cords insert the proper size ETT through the vocal cords. As the ETT cuff reaches the level of the vocal cords, advance the cuff a half inch (½") to one inch (1") further
    - Visualization of tube passing the cords is primary confirmation of successful intubation

6. While holding the ETT in place, inflate the cuff with enough air to create a seal in the trachea (5 – 10 cc of air) or until resistance is felt, note depth of tube at patient teeth or gums
    - Condensation in the tube is secondary confirmation of successful intubation

7. Attach $ETCO_2$ and monitor capnography waveform for appropriate levels
    - $ETCO_2$ and waveform at appropriate levels are a primary confirmation of successful intubation
        - Cardiac arrest patients, >10 mmHg (during CPR)
        - Non-cardiac arrest patients, 35 – 45 mmHg

8. Observe equal chest rise and fall with each ventilation
    - Observing equal chest rise and fall is a secondary confirmation of successful intubation
    - If only right-side rise noted, consider right main-stem bronchus tube placement
        - deflate cuff, pull tube back ½ to 1 inch, reinflate cuff, and reassess chest rise

- or tension pneumothorax
  - Decompress effected side

9. Auscultate over the epigastrium
   - absence of sounds is secondary confirmation of successful intubation
   - if sounds in stomach or poor/no $ETCO_2$ is noted, pull the tube

10. Auscultate breath sounds, confirm air exchange both right and left lung fields

11. If no signs of mal-intubation are noted and lung sounds are clear/equal, secure tube with approved commercial tube holder

12. All unresponsive intubated patients will have cervical spinal immobilization performed once tube placement is confirmed

13. If at any time placement of the ETT is in doubt, insert the laryngoscope into the oropharynx and note if the ETT passed through the vocal cords. If still in doubt, remove the ETT and ventilate the patient with BVM
    - Signs of mal-intubation may include but are not limited to:
      - Absence of chest rise with ventilatory support
      - Absence of breath sounds with ventilatory support
      - Abdominal distention (increase with every ventilation)
      - Cyanosis and progressive worsening of patient's condition
      - Absence of condensation in the ETT
      - A persistent air leak, despite inflation of the tube's distal cuff
      - Phonation (any noise made by the vocal cords)
      - Lack of waveform on capnography

14. ETT placement shall be checked:
    - Each time the patient is moved
    - Significant change in patient's condition
    - Significant change in $ETCO_2$ and/or SaO_2 reading
    - Apnea alarm on monitor

15. For post-intubation care, you may administer **midazolam** (sedative) +/- **vecuronium** *(paralytic) as necessary to control combativeness, posturing or shivering. You may use **midazolam** alone at your discretion, but whenever **vecuronium*** is administered, you **MUST ALSO** administer **midazolam**.

    Adults:
    - **Midazolam** 0.05 mg/kg IV/IO bolus, (maximum dose 10 mg).
    - **Vecuronium** * 0.1 mg/kg IV/IO bolus (maximum dose 10 mg)

Documentation:

All ETT placements shall be verified by the following procedures and documented in report:

- Visualization of tube passing through the cords
- Presence of condensation in tube at exhalation
- Use of bulb aspiration device (if used)
- Observe equal chest rise and fall with each ventilation
- ETCO2 and waveform at appropriate levels
  - Cardiac arrest patients >10 mmHg
  - Non-cardiac arrest patients 35 – 45 mmHg
- Absence of sounds over the epigastrium
- Auscultation of breath sounds, confirm air exchange both right and left lung field
- ETT placement shall be confirmed and documented each time the patient is moved
- In cardiac arrest, OG tube should be placed after intubation

INTRAOSSEOUS CANNULATION

Section 12.7

ALS

Intraosseous Vascular Access provides an option for emergent vascular access. It's also ideal for patients in whom peripheral vascular access is difficult or impossible. This procedure is not intended for use in isolated hypoglycemic patients.

Indications:

- Adult and pediatric patients in cardiac and or respiratory arrest
- Patients whose vital signs are unstable with limited or no IV access such as
  - Shock
  - Near drowning
  - Status epilepticus
  - Respiratory failure
  - Severe trauma
  - Impending cardiac arrest

Contraindications:

- Fracture of the bone selected for IO infusion
- Excessive tissue at insertion site with the absence of anatomical landmarks
- Previous orthopedic procedures near insertion site (i.e. joint replacement)
- Infection at insertion site

Procedure:

1. Prepare equipment: Examine IO needle to ensure trochar is lined up with bevel. Draw up 10 mL saline in syringe.

2. Locate the appropriate site. (1 – 3 cm below and just medial to the tibial tuberosity).

3. Cleanse the area with alcohol or betadine, using antiseptic technique.

4. Support the leg by placing a towel under the knee and leg.

5. Grasp the thigh and knee above and lateral to the insertion site. Wrap the fingers and thumb around the knee to stabilize the proximal tibia. Do not allow any portion of your hand to rest behind the insertion site.

6. Insert the needle at the determined site of the anteromedial aspect of the proximal tibia.

7. Penetrate the skin, and use a boring type motion to penetrate the bony cortex at a 90-degree angle, or slightly caudal.
8. Stop advancing the needle when there is a sudden decrease of resistance, or you feel a "pop".

9. Unscrew the cap, remove trochar and attach 10 mL syringe.

10. Flush IO needle with 10 mL saline. If resistance or tissue edema is noted, terminate procedure.

11. Remove syringe.

12. Connect I.V. tubing.

13. Secure IO needle with kling, gauze, and secure similar to an impaled object.

14. Continue to monitor ease of fluid infusion, as well as any changes in the soft tissue.

15. Dispose of trochar in the sharps container.

16. Document time, date, location, needle, person who did the procedure, and site assessment.

Recommended needle placement:

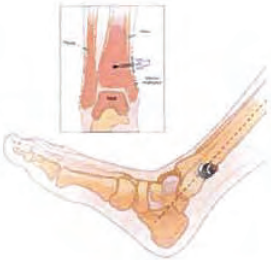
- The proximal tibia may be used for children up to age 6
- The distal tibia is the preferred site for older children
- The distal femur

Adult Locations of IO Insertion:

Proximal Tibia:

1. Extend the leg
2. Measure approximately 2 – 3 cm (two finger widths) below the patella
3. Move finger position approximately 2 cm medial, along the flat aspect of the tibia
   a. Note: the insertion site is on same side as big toe.

Distal Tibia:



1. Locate medial malleolus (medial ankle bone)
2. Measure approximately 2 – 3 cm (two finger widths) proximal to medial malleolus and positioned midline on medial shaft of the tibia.

Pediatric Locations of IO Insertion:

Distal Femur:

1. Secure the leg out-stretched to ensure the knee does not bend
2. Identify the patella by palpation
3. Measure just proximal to the patella (maximum 1 cm) and approximately 1 – 2 cm medial to midline

Proximal Tibia:

1. Place a rolled towel under knee of the leg to be used
2. Measure approximately 1 cm (one finger width) below the patella

3. Move finger position approximately slightly medial, along the flat aspect of the tibia
    a. Note: the insertion site is on same side as big toe

4. Pinch the tibia between your fingers to identify the center of the medial and lateral borders

Distal Tibia

1. Locate medial malleolus (medial ankle bone)

2. Measure approximately 1 cm (one finger width) proximal to medial malleolus and positioned midline on medial shaft of the tibia

Anesthetic for Patients Responsive to Pain if LIDOCAINE is Available:

Anesthetic for Adult Patients Responsive to Pain:

1. Observe recommended cautions/contraindications to using Lidocaine
2. Prime extension set with LIDOCAINE
   a. Note that the priming volume of the *EZ-Connect* is approximately 1.0mL
3. Slowly infuse LIDOCAINE 40 mg IO over 2 minutes
4. Allow LIDOCAINE to dwell in IO space for 1 minute
5. Flush with 5 – 10mL of Normal Saline
6. Slowly administer an additional LIDOCAINE 20 mg IO over 1 minute for a max of 60 mg
7. Repeat as needed
8. Consider FENTANYL for patients not responding to LIDOCAINE IO, allergic to LIDOCAINE, or if no LIDOCANINE available

Anesthetic for Infant/Child Responsive to Pain:

1. Observe recommended cautions/contraindications to using LIDOCAINE
2. Initial dose is LIDOCAINE 0.5 mg/kg, not to exceed 40 mg
3. Prime extension set with lidocaine
   a. Note that the priming volume is approximately 1.0mL
4. For small doses of Lidocaine, consider administering by carefully attaching syringe directly to *Needle Set Hub*
5. Slowly infuse LIDOCAINE IO dose over 2 minutes
6. Allow LIDOCAINE to dwell in IO space for 1 minute
7. Flush with 2 – 5 mL of Normal Saline
8. Slowly administer subsequent LIDOCAINE (half the initial dose) IO over 1 minute
9. Repeat as needed

Consider pain management (Section 8.12) for pediatric patients not responding to LIDOCANE IO or allergic to LIDOCAINE

INDWELLING INTRAVENOUS CATHETER / DEVICES

Section 12.8

BLS	ALS

Specialty vascular access in patient with problematic access or requiring frequent infusion of medication or parenteral nutrition.

Indications:

- Only when the patient is unstable and requires immediate treatment

Different Types:

Triple Lumen Central Venous Catheter:
Can be in femoral, internal jugular or subclavian location. Usually red hub is for blood draws – it is typically the most certain line of the three ports in emergency situations

Indwelling Catheter External Access (Broviac, Hickman, Groshong) catheters:
Usually placed in subclavian region
Usually contains heparin; draw 10 mL waste before infusions

Implanted Ports (Port-a-Cath, Bard Port):
Require Huber needle to access

Shiley:
Usually used for dialysis. Usually contains heparin; draw 10 mL waste before infusions, then flush with saline if needed in emergency situations

Peripherally Inserted Central Catheter (PICC) Line:
Location usually in the antecubital regions. Usually contains Heparin; draw 10mL waste before infusions

Procedure:

1. Prepare all equipment.
2. Don appropriate PPE
3. Cleanse the area around the port, using the standard invasive procedures preparation technique.
4. Insert the needle at 90 degrees to the port.
5. Advance the needle until it contacts the bottom of the port reservoir.
6. Using 5 mL of normal saline attempt flush. If there is no resistance, no evidence of infiltration, and no pain experienced by the patient, or any concern that the catheter

may be clotted or dislodged, then proceed. If any of these things exist, then discontinue immediately.

7. Insert connecting device and begin infusion or injection slowly.

8. Secure the device using a Veniguard.

9. Administer medication / fluids slowly, observing for any signs or infiltration.

10. Record procedure, any complications, fluid or medication administered on the patient care report.

In the setting of cardiac arrest any preexisting dialysis shunt or external central venous catheter maybe used.

Patients must be hemodynamically unstable or in extremis to require use of a dialysis catheter or external central venous catheter.

Blue ends on the catheter are for venous access. Red is arterial access. Use only blue ends.

Potential Complications:

Bleeding at insertion point:
Apply direct, manual pressure using body fluid precautions and request assistance from ALS, if not controlled.

Leaking of fluids/ medications:
Clamp fluid line if possible and contact medical control.

Dislodged catheter:
If no bleeding is present, tape securely in place and continue transport.
(Please note: it is normal for some mid-line and PICC catheters to extend several centimeters outside the skin.)

Pump malfunction:
Patients and/or family members, who have received proper education and training, should be allowed to trouble shoot alarms. Otherwise request assistance from ALS. Contact medical control for direction on disabling the pump until intervention is provided.

Infiltration or extravasation (leaking of fluid or blood into tissues characterized by pain and swelling at injection site);

If possible, stop the infusion. Request ALS assistance. Apply cold packs to the infusion
site. Contact medical control if needed for further directions prior to ALS arrival.

Inadvertent puncture or transection of line:
Immediately clamp off the line and cover with sterile dressing to prevent air embolus and reduce risk of infection. Request assistance from ALS for replacement of the line.

INTRANASAL ADMINISTRATION OF MEDICATIONS

Section 12.9

ALS

Administration of medications through the use of the Mucosal Atomizing Device (MAD) has been shown to be as effective as intramuscular administration. Systemic absorption across the nasal mucosa occurs rapidly. Therefore, administration of medications through the use of MAD device if it is available should be considered when other routes are unavailable or inaccessible.

Indications:

- Patients with impaired consciousness from narcotic overdose, seizures and pain management when IV access is unsuccessful, unavailable or difficult to obtain
- To be used ONLY with the following medications:
  - FENTANYL (Section 11.13)
  - NARCAN (Section 11.20)
  - VERSED (Section 11.29)

Contraindications:

- Epistaxis
- Nasal trauma
- Septal abnormality
- Nasal congestion
- Mucous discharge
- Destruction of nasal mucosa from surgery or past cocaine abuse

Procedure:

1. Load syringe with dosage (volume) as determined by specific protocol
2. Expel all air from syringe
3. Connect the MAD tip to the end of the syringe

4. Hold and stabilize the patients head
5. Place atomizer in 1st the nostril
6. Briskly compress syringe atomizing ½ of the volume of medication

7. Place atomizer in 2nd nostril
8. Briskly compress syringe atomizing the remaining volume of medication
9. Keep towel nearby to catch any secretions

SUPRAGLOTTIC AIRWAYS

Section 12.10

BLS

The i-gel® is the innovative second generation supraglottic airway device from Intersurgical. Made from a medical grade thermoplastic elastomer, i-gel has been designed to create a non-inflatable, anatomical seal of the pharyngeal, laryngeal and perilaryngeal structures whilst avoiding compression trauma.

Indications:

- All Adult cardiac arrest patients
- Apneic patient when endotracheal intubation is not possible or not available.
- Patient must be **unconscious, without a gag reflex**
- No history of esophageal foreign body, disease or caustic ingestion
- Adult patients in need of an advance airway after endotracheal intubation attempt is unsuccessful

Contraindications:

- Obstructive lesions below the glottis.
- Trismus, limited mouth opening, pharyngo-peri laryngeal abscess, trauma or mass.
- Conscious or semi-conscious patients with an intact gag reflex
- Do not use excessive force to insert the device.
- As with all supraglottic airway devices, care should be taken with patients who have fragile and vulnerable dental work, in accordance with recognized airway management.
- Use care to avoid the introduction of lubricant in or near the ventilatory openings
- Do not allow peek airway pressure of ventilation to exceed 40cm H2O

Prepare for Procedure:

1. Support the patient's ventilations with BVM as you prepare the patient and equipment.
2. Choose the appropriately sized i-gel airway size for the patient.

i-gel size	Color	Description	KG	NG / OG
1	Pink	Neonate	2-5	N/A
1.5	Light Blue	Infant	5-12	10 FR
2	Gray	Small pediatric	10-25	12 FR
2.5	White	Large pediatric	25-35	12 FR
3	Yellow	Small Adult	30-60	12 FR
4	Green	Medium Adult	50-90	12 FR
5	Orange	Large Adult	90+	12–14 FR

3. Premeasure NG/ OG tube for proper placement in patient taking note of depth of insertion.

4. Open the i-gel O2 package, do not discard packaging.

5. Place small dab of lubricant on the NG / OG opening located on the top of tube

6. Insert premeasured NG / OG tube into I-Gel gastric channel. Do not allow the distal tip of the NG / OG tube to exit the distal end of the I-Gel.

7. Apply lubricant to the interior of package, Grasp the I-Gel firmly along the tube portion of the device and apply lubricant generously to the sides and posterior aspect of the distal end of the I-Gel taking care to avoid lubricant in or near ventilatory openings.

8. Pre-oxygenate (30 seconds to 1 minute) and position the head

   - The ideal head position for insertion of the I-Gel is the "sniffing position"

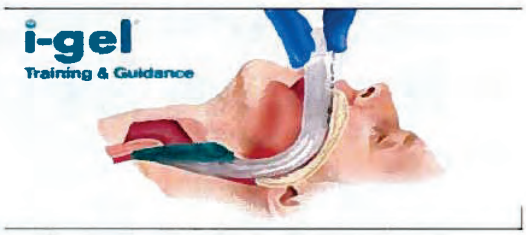
Procedure:

9. Grasp the lubricated i-gel firmly along the integral bite block (tube portion of the device). Position the device so that the i-gel cuff outlet is facing toward the chin of the patient.

10. The chin should be gently pressed down/inferior before proceeding to insert the i-gel.

11. Introduce the leading soft tip into the mouth of the patient in a direction toward the hard palate in a continuous but gentle push until definitive resistance is felt.

    - Do not apply excessive force on the device during insertion. It is not necessary to insert your fingers or thumbs into the oral cavity of the patient during insertion of this device.
    - If there is resistance during insertion, a 'jaw thrust' and slight rotation of the device is recommended.



12. At this point, the tip of the device should be located into the upper esophageal opening and the cuff should be located against the laryngeal framework. The incisors should be resting on the integral bite block.

Post Placement:

13. Auscultate breath sounds, check for chest rise and confirm placement with SpO2 monitoring and ETCO2 monitoring if available.
    - ETCO2 Cardiac arrest patients, > 10mmHg (during CPR)
    - ETCO2 Non-cardiac arrest patients, 35 – 45 mmHg

14. Secure the tube
    - Taping: The i-gel O2 should be taped down from 'maxilla to maxilla' or secured with the support strap provided.
    - Airway support strap: The strap should be slid under the patient's neck until the wide central band of the strap is located directly under the neck of the patient. One end of the strap should then be lifted over the patient's face and secured to the i-gel O2 by placing an appropriate hole on the strap over the lug of the hook ring located at the top of the integral bite block. The other end of the strap should then be lifted over the other side of the patient's face and secured in the same manner, ensuring there is sufficient tension to hold the i-gel O2 securely in place, but not an excessive tension that may cause trauma to the patients neck or face or that may cause unwanted downward pressure of the i-gel O2.

15. Continue to monitor / check I-Gel
    - Each time the patient is moved
    - Significant change in patient condition
    - Significant change in ETCO2 and / or SaO2 reading
    - Apnea alarm

SUPRAGLOTTIC AIRWAYS

Section 12.10

The King LTS-D™ (KLTSD), aOraNGE versatile and effective airway management tool, is an alternative to tracheal intubation or mask ventilation. It is easy to insert and is strategically designed to minimize airway trauma.

Indications:

- Patients 4 ft. in height and over
- Patients in cardiac arrest
- Patients in need of an advanced airway after endotracheal intubation attempt is unsuccessful

Contraindications:

- Patients with intact gag reflex
- Patients with known esophageal disease
- Patients who have ingested caustic substances
- Patients under 4 feet tall

Procedure:

1. Choose the correct KLTSD airway size

Size	Color	Height	Test	Use
3	YELLOW	4 – 5 feet tall	60 ml air	50 ml air
4	RED	5 – 6 feet tall	70 ml air	60 ml air
5	PURPLE	Over 6 feet tall	80 ml air	70 ml air

2. Test cuff and inflation system for leaks by injecting the **maximum** recommended volume of air into the cuffs Remove all air from both cuffs prior to insertion.
   a. Size 3 – (Yellow) 60 ml
   b. Size 4 – (Red) 70 ml
   c. Size 5 – (Purple) 80 ml

3. Apply lubricant to the beveled distal tip and posterior aspect of the tube, taking care to avoid introduction of lubricant in or near the ventilatory openings

4. Have a spare KLTSD available

5. Pre-oxygenate (30 seconds to 1 minute) and position the head
   a. The ideal head position for insertion of the KLTSD is the "sniffing position" but can be inserted with the head in a neutral position
6. Hold the airway at the connector with dominant hand. With non-dominant hand, hold mouth open and apply chin lift.

7. With the KLTSD rotated laterally 45-90 degrees (blue orientation line is touching the corner of the mouth) introduce tip into mouth and advance behind base of tongue

8. As tube tip passes under tongue, rotate tube back to midline (blue orientation line faces chin)

9. Without exerting excessive force, advance tube until base of connector is aligned with teeth or gums

10. Using the syringe provided, inflate the cuffs of the KLTSD with the appropriate volume:
    a. Size 3 – (Yellow) 50 ml
    b. Size 4 – (Red) 60 ml
    c. Size 5 – (Purple) 70 ml
        i. If the initial inflation volume does not provide an adequate seal, further inflation of up to 10 ml is available to achieve adequate seal

11. Attach BVM to the 15 mm connector of the KLTSD. While gently bagging the patient to assess ventilation, simultaneously withdraw the KLTSD until ventilation is easy and free flowing

12. Depth markings are provided at the proximal end of the KLTSD which refer to the distance from the distal ventilatory opening, document this depth

13. Confirm proper position by auscultation and chest rise

14. Attach ETCO2 and monitor capnography waveform for appropriate level
    a. Cardiac arrest patients, >10 mmHg (during CPR)
    b. Non-cardiac arrest patients, 35 – 45 mmHg

15. Readjust cuff inflation to just seal volume
    a. Inflate with the minimum volume necessary to seal the airway

16. Insert lubricated nasogastric tube (16F) into designated lumen for NG/OG tube (Section 12.11)

17. Secure KLTSD to patient using tape or secure tube with department approved commercial tube holder

18. All unresponsive intubated patients will have cervical immobilization performed once tube placement is confirmed

19. KLTSD placement shall be checked:
    a. Each time the patient is moved
    b. Significant change in patient's condition
    c. Significant change in $ETCO_2$ and/or SaO_2 reading
    d. Apnea alarm on monitor

NASAL/ORAL GASTRIC TUBE INSERTION

Section 12.11

Indications:

- Nasal/ oral gastric tube use in the respiratory/ cardiac arrest patient for decompression of a distended stomach as a result of artificial respirations
- It should always be preceded by intubation of the trachea with a endotracheal tube or insertion of King LTS-D
- OG Tube shall be placed in all traumatic cardiac arrest

Contraindications:

- Nasal gastric (NG) tube in patients with significant nasal or facial trauma in which the possibility of a skull fracture exists, oral gastric (OG) tube can be used in this type of patient
- Nasal/ oral gastric (NG/OG) tube in patients with known pre-existing medical conditions which could result in excessive bleeding and/or perforation of the gastric mucosa (i.e. esophageal varices)

Procedure:

1. Measure the distance based on nasal or oral insertion
    a. NG tube – place the distal end of the tube at the bottom of the sternum. Bring the tube up and around the earlobe continue to the tip of the patient's nose. This will give you the approximate insertion length
    b. OG tube – place distal end of the tube at the bottom of the sternum. Bring the tube up and around the earlobe, continue to the corner of the patient's mouth. This will give you the approximate insertion length

2. Lubricate the tube with a water soluble lubricant

3. Insert the tube. DO NOT FORCE, bleeding from the nose or mouth may occur from the trauma of insertion
    a. NG tube – into the nostril and gently pass it into the posterior nasopharynx
    b. OG tube – into the mouth to the posterior oropharynx

4. Place the patients head in a neutral position and gently advance the tube until you have reached the pre-determined insertion point. For NG tube placement, you may want to visualize the tube in the posterior oropharynx.
    a. The tube may coil in the posterior pharynx. This can be corrected by pulling back on the tube until the tip is visualized and then gently reinserting.

5. With proper tube placement in the distended abdomen, air should begin to escape immediately. Confirm proper tube placement by infusing approximately 20 ml of air with

large irrigating (60cc) smooth catheter tip syringe while auscultating over the epigastrium. The tube may inadvertently pass into the trachea. Confirmation of proper tube placement immediately following insertion is essential. This step may be repeated as needed to confirm placement

6. After you have confirmed tube placement and are confident the tube will not have to be removed, you should secure it with tape to prevent tube movement

7. DO NOT attach the tube to a continuous suction device. This can cause the creation of a gastric ulcer and/or gastric bleeding.

8. At times the tube may become blocked by stomach contents and it may be necessary to flush the tube with water or saline. Use a large irrigating smooth catheter tip syringe and approximately 40 – 50 ml of fluid

9. Anytime proper tube placement is in doubt or insertion is difficult, remove the tube and discontinue the procedure

Documentation:

All NG or OG placements shall be verified and documented in report:

- Proper documentation of this procedure should include:
- Indication for insertion or contraindication for non-insertion
- Tube size
- Nostril used (if applicable)
- Short statement about insertion (i.e. tube inserted without difficulty)
- Any complications and/or re-insertion attempts
- Confirmation of tube placement
- Any other pertinent information regarding this procedure

NEBULIZER

Section 12.12

BLS

Indications:

- For use with the following medications as per specific protocols
  - Albuterol

Procedure:

1. Build delivery assembly
   a. Handheld
      i. Attach mouth piece and exhaust reservoir to tee valve, place assembly on top of nebulizer container
   b. Face mask
      i. Attach supplied face mask on top of nebulizer container
      ii. If supplied face mask is unavailable:
         1. Remove the face mask from a NRB mask
         2. Remove the flaps from the exhaust ports on side of face mask
         3. Attach face mask on top of nebulizer medicine container
   c. In-line
      i. Attach supplied valved tee adapter in between circuit and mask, place nebulizer container on the valved tee adapter

2. Place medication into the nebulizer container

3. Attach the oxygen tank using supplied oxygen tubing

4. Turn oxygen system to 6 LPM and instruct patient to draw the mist from the mouth piece or mask on the nebulizer until the medication is gone. Coaching the patient to take deep breathes followed by period of normal breath. Treatment should last approximately 6 minutes

NEEDLE CRICOTHYROTOMY

Section 12.13

ALS | SCT

Needle Cricothyrotomy is a procedure that allows rapid entrance to the airway for ventilation and oxygenation for patients in whom airway control is not possible by other means. It should not be performed on patients who can be ventilated by other means. Potential complications include, high pressure during ventilation and air entrapment may increase inner-thoracic pressure may result in produce pneumothorax, hemorrhage at the insertion site and/or inappropriate ventilation without allowing 3 second exhalation may cause subcutaneous emphysema.

Indications:

- Preferred method for children under 10 years old
- Facial or nasal injuries that preclude oral intubations including but not limited to
  - Massive mid-facial trauma
  - Possible spinal trauma
  - Anaphylaxis
  - Chemical inhalation injuries
- Complete airway obstruction (Rule of Thumb: Can't Intubate and Can't Ventilate)

Contraindications:

- Ability to control airway/ ventilations by other means
- Inability to identify land marks

Equipment Needed:

- 14g IV catheter
- 3.0 ET tube 15 mm adapter

Procedure:

In patients with suspected spinal injury, in-line stabilization should be maintained throughout the procedure.

10. If time permits, the neck should be cleaned with aseptic technique (Povidone and ChloraPrep if available)

11. Locate the anatomical landmarks of the neck, and identify the cricothyroid membrane (almond shape depression just below the thyroid cartilage)

12. Insert the14g IV catheter through the cricothyroid membrane in the midline
    a. The rush of air will signify correct placement of the IV catheter

13. While stabilizing the catheter remove the needle by withdrawing, leaving the plastic catheter in place

14. Place 3.0 mm ET tube 15 mm adapter on catheter hub

15. Provide ventilation by a BVM device with the highest available oxygen concentration
    a. The patient should be ventilated for 1 second and allowed to exhale for 3 seconds

16. Determine adequacy of ventilation through bilateral auscultation and observation of rise and fall of the chest

17. Secure catheter in place with tape, **DO NOT** wrap tape around neck

18. Attach $ETCO_2$ to end of ET tube and monitor capnography waveform

NEEDLE THORACOSTOMY

Section 12.14

ALS | SCT

Indications:

- Tension Pneumothorax
  - Dyspnea, diminished lung sounds, or absent on one side, tachycardia, hypotension, jugular vein distention (JVD), altered level of conciseness (ALOC), and tracheal deviation (late sign)

Contraindications:

- Inability to identify land marks

Procedure:

1. Determine the side of the tension pneumothorax

2. Prepare a 14g or 16g needle (minimum 2" length)

3. Determine decompression site
   a. Primary Site
      i. 2nd intercostal space (above 3rd rib) mid-clavicular line
      ii. If massive swelling and/or trauma prevents adequate determination, use secondary site
   b. Secondary Site
      i. 4th intercostal space (above 5th rib) in the mid-axillary

4. If time permits, the neck should be cleaned with antiseptic solution (Povidone and ChloraPrep) if available

5. Insert the supplied 14g or 16g needle into the decompression site chosen. A rush of air will signify correct placement of the needle (may not hear). A syringe can be attached to the IV catheter for aspiration, during insertion, to confirm placement

6. Remove needle, inserting catheter, and secure catheter to chest wall by appropriate taping measures

7. As the patient now has an open Pneumothorax, cut a hole in the closed end of a rubber glove and tape this cut area over the opening of the needle hub. This will keep air from entering the chest but will allow air to exit, preventing a sucking chest wound (flutter valve). Or attach a 3-way stopcock; note you must "burp" the 3-way valve. Alternatively, the catheter can be left open
8. Auscultate both lungs fields and recheck vital signs to assure resolution of the tension pneumothorax

OXYGEN THERAPY

Section 12.15

BLS

Indications:

- Any medical or trauma patient that is showing signs or symptoms of hypoxia
  - When oxygen administration is indicated per protocol, administer sufficient doses to maintain an oxygen saturation of at least 94%. Unless treatment requires high flow oxygen regardless of documented O_2 saturation (Example: CO Poisoning, Active seizure)

Method of Administration:

1. Nasal cannula or non-rebreathing face mask can be used in the spontaneously breathing patient.
   a. Nasal Cannula (NC) or Nasal Capno/O2 Cannula
      i. Can supply up to 44% oxygen at 6 Liters/minute (Lpm) and is appropriate for routine use at 4 – 6 liters/minute
         1. 1 Lpm = 24%
         2. 2 Lpm = 28%
         3. 3 Lpm = 32%
         4. 4 Lpm = 36%
         5. 5 Lpm = 40%
         6. 6 Lpm = 44%
   b. Non-rebreathing face mask (NRM)
      i. Can supply 90% - 100% oxygen at 10 - 15 Lpm and is appropriate when dyspnea is present.
   c. Bag-Valve-Mask (BVM) with a supplemental oxygen reservoir
      i. Can supply almost 100% oxygen and is appropriate for patients that are apneic or have inadequate respirations

Special Considerations:

1. COPD (Emphysema/Chronic Bronchitis) when known or suspected CO_2 retainer:
   a. In the spontaneously breathing patient, the dose administered should be enough to maintain SaO_2 of 94% unless specifically stated by On-line Medical Control.
   b. In the patient who is not ventilating adequately and/or spontaneously, serious consideration should be given to aggressively gaining control of the airway

2. Known or suspected CO poisoning
   a. Due to the CO ability to provide false SaO_2 readings, these patients will be placed on 100% oxygen despite SaO_2 readings or lack of symptoms

OXYGEN THERAPY

Section 12.15

Measurement of Oxygen Therapy:

Pulse Oximetry

- Pulse oximetry (SaO_2) shall be used in the development of a clinical impression of patient condition. This device shall never be used as an indicator that would cause oxygen administration to be withheld.

Capnography

- End Tidal CO_2 ($ETCO_2$) Detector is an assessment tool that measures the concentration of exhaled carbon dioxide. $ETCO_2$ waveform tracings further support confirmation of correct ET tube placement.
  - All patients who are intubated, on the ventilator, have a King airway, or an I-Gel in place shall have $ETCO_2$ waveform tracings recorded on ECG strip
  - All patients who are in respiratory distress and/or potential perfusion insufficiency shall have $ETCO_2$ waveform recorded on ECG strip
  - Patients who are administered narcotics during transport

When CO^2 is NOT detected, the following must be quickly evaluated for possible causes:

1. Loss of airway function and/or equipment malfunction
   A: Improper placement of endotracheal tube (esophageal placement?) or obstruction
   B: Apnea
   C: Supraglottic Airway misplacement or obstruction
2. Loss of circulatory function
   A: Massive pulmonary embolism
   B: Cardiac arrest
   C: Exsanguination (extensive loss of blood)

- Since the $ETCO_2$ provides an estimate of arterial carbon dioxide level, when used in conjunction with oximetry and oxygenation, a better assessment of the patient's respiratory status can be achieved. Capnography has also been shown to be an effective tool in the assessment of adequate perfusion

Note: Capnography MUST be plugged into the monitor before it is placed on the patient. $ETCO_2$ monitoring must be turned on via the CO2 button on the Zoll X Series to view the waveform.

PHYSIO CONTROL CHECKS

Section 12.16

Procedure:

LifePak (LP-12) Monitor/ Defibrillator

1. Daily
    a. Inspection
        i. LP-12 case for damage
    b. Batteries
        i. Both batteries should be fully charged
    c. Manual User Test
        i. Press **ON** button to power on unit
        ii. Press **OPTIONS** button, the options menu will appear
        iii. Using speed knob, select **USER TEST** by depressing knob, the LP-12 will perform the following test
            1. Self-test to check internal components
            2. Charges to 10 joules and discharges internally
            3. Prints **PASS/ FAIL** report
    d. Therapy Cable Test
        i. While monitor is still powered on attach TEST LOAD box
        ii. Press **CHARGE** button (energy level is defaulted to 200 J)
        iii. Press **SHOCK** button, the LP 12 will perform the following test
            1. Ensure electrical energy is being discharged from monitor
            2. "**ENEGRY DELIVERED**" message on screen
            3. Print out confirming energy was delivered
        iv. DO NOT FORGET TO DISCONNECT TEST LOAD BOX
    e. Equipment
        i. Ensure 4 LEAD cable are attached
        ii. Ensure 12 LEAD cable in monitor
        iii. Ensure SaO_2 extension and reusable SaO_2 probe are attached
        iv. Ensure BP hose and cuff (Adult Regular) are attached
        v. Ensure printer has paper
        vi. Ensure following equipment is available
            1. BP Cuffs
                a. Infant
                b. Child
                c. Adult Small
                d. Adult Large
            2. 1 roll of printer paper
            3. 2 Adult Defibrillation Pads
            4. 1 Child Defibrillation Pads
            5. Extra 4 and 12 LEAD electrodes

2. Monthly
    a. All of the above plus the following
        i. Ensure Adult/ Child Defibrillation Pad are not expired

ZOLL X SERIES CHECKS

Daily/Shift Check Procedure:

Equipment and Accessories

- Ensure that the X Series unit is clean (with no fluid spills) and free of visible damage.
- Inspect all cables, cords, and connectors for signs of damage or excessive wear (cuts in insulation, fraying, broken wires, dirty or bent connector pins). Replace if damaged.
- Inspect the battery, ECG patient cable, multifunction cable (MFC), One-step cable, pulse oximetry sensor, blood pressure cuff, and hose and temperature and IBP sensors for signs of damage or excessive wear. Replace if damaged.
- Inspect the external AC adapter and its power cords for signs of damage. Contact Supervisor to replace if damaged.

Supplies

- Verify the presence, proper condition, and appropriate quantities of all disposable supplies (hands-free therapy electrodes, ECG monitoring electrodes, recorder paper, etc.).
- Verify that two sets of hands-free therapy pads are available.
- Ensure that the therapy and monitoring electrodes are sealed within the packages and within the expiration dates printed on the packages.
- Open the recorder door on the left side of the X Series unit and verify that an adequate supply of paper is available in the unit.

Batteries

- Verify that a charged battery is fully inserted into the battery compartment of the X Series unit.
- Ensure that a fully charged spare battery pack is available.
- Batteries should be switched at the beginning of each shift.

Ready For Use Indicator

- Check the Ready For Use (RFU) indicator on the X Series front panel. Verify that the RFU symbol is displayed.
    - If the RFU indicator is flashing or displaying the Do Not Use symbol, then either an equipment fault has been detected or the unit's battery is low or not properly installed. Install a fully charged battery in the unit and check the RFU indicator again. If the RFU indicator continues to flash or display the Do Not Use symbol, contact Supervisor.

Defibrillator/Pacing Test with Hands-Free Therapy Electrodes

Note: If a low battery message appears during any of this testing, the battery is close to depletion and should be replaced or recharged.

Warning! **Keep hands, fingers, and other conductive materials away from paddle electrode plates when discharging the defibrillator, or pacing.**

	Function	Response
1	Connect the external AC adapter to a working AC outlet and to the X Series rear panel.	Verify that the green Auxiliary Power LED illuminates on the X Series front panel.
2	Insert a battery into the unit (if a battery is not already in the slot).	Verify that the Battery Charge LED on the X Series front panel illuminates yellow. When the battery pack has been fully charged, the battery status indicator light is green.
3	Press the unit's power on switch.	Verify the unit issues two audio beeps and that the red, yellow, and green Visual Alarm indicators illuminate for 2 to 3 seconds. **Note**: The yellow LED may remain lit after the unit powers on. The X Series unit performs a number of power on self tests. Verify that the unit displays *SELF TEST PASSED*. If the message *SELF TEST FAILED* appears on the display, contact the appropriate technical personnel or the ZOLL Technical Service Department.
4	Disconnect the external AC adapter from the X Series rear panel.	Verify that the unit continues to operate without interruption on battery power and that the displayed battery icon indicates that a fully charged battery is installed. Verify that no error messages are displayed.
5	With no ECG cables attached to the unit, select Lead I, II, or III as the waveform display source.	Verify that a *LEAD FAULT* message displays in the waveform window.
6	Select **Pads** as the waveform display source and connect the multifunction cable to the unit. (Do not connect the test connector to the MFC.)	Verify that a *CHECK THERAPY ELECTRODES* message displays in the waveform window.
7	Connect the multi-function cable (MFC) to the test connector. Alternatively, connect a OneStep MFC and a shorted OneStep pad.	Verify that the *CHECK THERAPY ELECTRODES* message is replaced by a *SHORT DETECTED* message.

ZOLL X SERIES CHECKS

	Function	Response
8	Press the Select Energy arrow (up or down)	Verify that the defibrillation window displays and the following message appears *PADS SHORT DETECTED* *SELECT 30J TO TEST*
9	Press the Select Energy arrow (up or down) to select 30 Joules on the X Series unit.	Verify that the defibrillator window shows 30 J as the selected energy.
10	Press the CHARGE button on the front panel	Verify that a periodic tone sounds while the defibrillator is charging. At the completion of the charge cycle, the tone is continuous. The charge time should be less than 7 seconds. Verify that the SHOCK button ( ) on the front panel illuminates when the defibrillator is charged.
11	Press and hold on the front panel until the unit discharges.	Verify that the defibrillator discharges and that a *DEFIB SHORT TEST PASSED* message displays. If the message *DEFIB SHORT TEST FAILED* displays, contact the appropriate technical personnel or the ZOLL Technical Service Department.
12	After the defibrillator display panel closes, press the PACER button on the front panel to display the Pacer Settings dialog box.	Verify that the Pacer Settings dialog displays with the pacer status bar behind it.
13	Perform the following steps • Set the Pacer mode to Fixed • Set the Pacer Rate to 60 ppm • Set the Output to 100 mA • Select the Start Pacer button	Verify that the green pace indicator on the pacer status bar flashes once each second. Verify that pace markers are printed every 25 mm on the chart recorder printout. Note: If a printout does not automatically begin after starting the pacer, select the Print quick access key to start a continuous printout. Press the Print quick access key again to stop the printout.
14	Press the PACER button on the front panel button again to close the Pacer Settings dialog box.	Verify that the pacer status bar indicates *PACING: SHORT DETECTED*. Verify that the green pace indicator continues to flash once each second. Verify that no pacer-related error messages display.
15	Disconnect the test connector from the MFC or disconnect the OneStep pad from the OneStep MFC as appropriate.	Verify that the pacer status bar displays *PACING: CHECK THERAPY ELECTRODES*
16	Press the PACER button on the front panel to display the Pacer Settings dialog. Select Turn Pacer Off to turn off the pacer.	Verify that the Pacer Settings dialog is closed and that the pacer status bar is removed from the display.
17	Reconnect the external AC Adapter to the X Series rear panel.	Verify that the green Auxiliary Power indicator light on the X Series front panel is illuminated.

GLUCOMETER

Section 12.17

BLS

A variety of medical conditions and patient presentations warrant prehospital blood glucose analysis. Glucometry is a safe, effective and minimally invasive procedure utilized to detect blood glucose anomalies allowing the ability to provide early and condition-specific treatment.

Indication:

Patient signs and / or symptoms consistent with:

- Acute Stroke
  - weakness, facial droop, slurred speech
  - Aphasia (inability to speak), dysarthria (difficulty pronouncing words) and hemiparesis (one-sided weakness), hemiplegia (inability to move one side of body)
- Altered Mental Status
  - confusion, disorientation
- Diabetic Emergencies
- Opiate/Opioid Overdose
- Seizure/Post-Seizure

Procedure:

1. Calibration testing done per device manual.
2. Prepare test strip and glucometer per device manual.
3. Cleanse site with alcohol prep.
4. Pierce desired site (fingertip – adult / heel – infant) with lancet enough to initiate blood flow.
5. Wipe initial blood sample with clean 2 x 2.
6. Compress capillary bed until second blood droplet develops.
7. Hold test strip to blood droplet. Allow test strip capillary action to draw blood sample into test strip.
8. Hold 2 x 2 on puncture site to control bleeding.
9. Properly dispose of lancet in sharps container.
10. Allow glucometer to measure and display glucose reading.
11. Clean and restock glucometer.

SUCTIONING

Section 12.18

BLS

Few situations in medicine are more high-stakes than management of the unstable airway. Failure to protect a patient's airway can result in life-threatening hypoxia, aspiration and hemodynamic compromise in only a matter of minutes. A common threat to a patient's airway in the prehospital setting is rapidly accumulating fluid such as airway secretions, blood, vomit and other foreign material.

Indications:

Remove blood, emesis, secretions, and other fluids and food particles from the airway.

Types of units:

1. Suction Devices
   A: Mounted
   B: Portable

2. Suction Catheters
   A: Hard or rigid ("tonsil sucker", "tonsil tip")
      (1) Used to suction the mouth and Oropharynx of an unresponsive patient.
      (2) Should be inserted only as far as you can see.
      (3) Use the rigid catheter for infants and children but take caution not to touch the back of the airway.
   B: Soft (French)
      (1) Useful for suctioning the Nasopharynx and in other situations where a rigid catheter cannot be used.

Should be measured so that it is inserted only as far as the base of the tongue.

Procedure:

1. Suction device should be inspected on a regular basis before it is needed. A properly functioning unit with a gauge should generate 300mmHg vacuum. A battery-operated unit should have a charged battery.
2. Attach a catheter.
   A: Use a rigid catheter when suctioning the mouth of an infant or child.
   B: Often you will need to suction nasal passages; you should use a bulb suction or French catheter with low to medium suction.
3. Insert the catheter into the oral cavity without suction. Insert only to the base of the tongue.
4. Apply suction. Move the catheter in a circular motion from side to side.
5. Suction for no more than 15 seconds at a time.
   A: In infants and children a shorter suction time should be used approximately 5 seconds.
   B: If the patient has secretions or emesis that cannot be removed quickly and easily by suctioning, the patient should be log rolled and the oropharynx should be cleared.
   C: If the patient produces frothy secretions as rapidly as suctioning can remove, suction for 15 seconds, artificially ventilate for two minutes, then suction for 15 seconds, and continue in that manner. Consult medical direction for this situation. For pediatrics,

suction for 5 seconds, ventilate for 2 minutes, suction for 5 etc…

6. If necessary, rinse the catheter and tubing with water to prevent obstruction of the tubing from dried material.

7. Follow other appropriate protocols and transport.

SPINAL IMMOBILIZATION

Section 12.19

BLS

Indications:

- If mechanism of injury is significant enough to cause spinal injury, evaluate the patient using the Spinal Clearance Flow Chart (Section 12.19.1) to determine the presence of the following clinical criteria
  - Altered mental status (or communication barrier)
  - Possible intoxication
  - Painful distracting injury
  - Neurological deficit
  - Spinal Pain or Tenderness
- Consider additional risk factors such as
  - extremes of age
  - history of musculoskeletal disorders
  - medication use
  - presence of acute stress reaction
- If the mechanism is deemed significant enough to produce spinal injury and there is at least one clinical finding present, immobilize the patient using the cervical collar. If there is any doubt about the patient's condition, immobilize the patient using the cervical collar and long spine board
  - Rule of thumb: If only neck pain use cervical collar, if neck and back pain or only back pain use full immobilization
- Patients of motor vehicle accidents who are not able to "self-extricate" may be removed by placing an appropriate department approved collar using a long spine board and then secured to it
- If the patient does not meet the above criteria for immobilization, transport in the position of comfort to desired appropriate facility

Contraindications:

- Patients with Penetrating trauma to the head, neck, or torso and no evidence of spinal injury should not be immobilized, rapidly transported to an appropriate facility
  - An cervical collar may be placed enroute, if needed

Procedure:

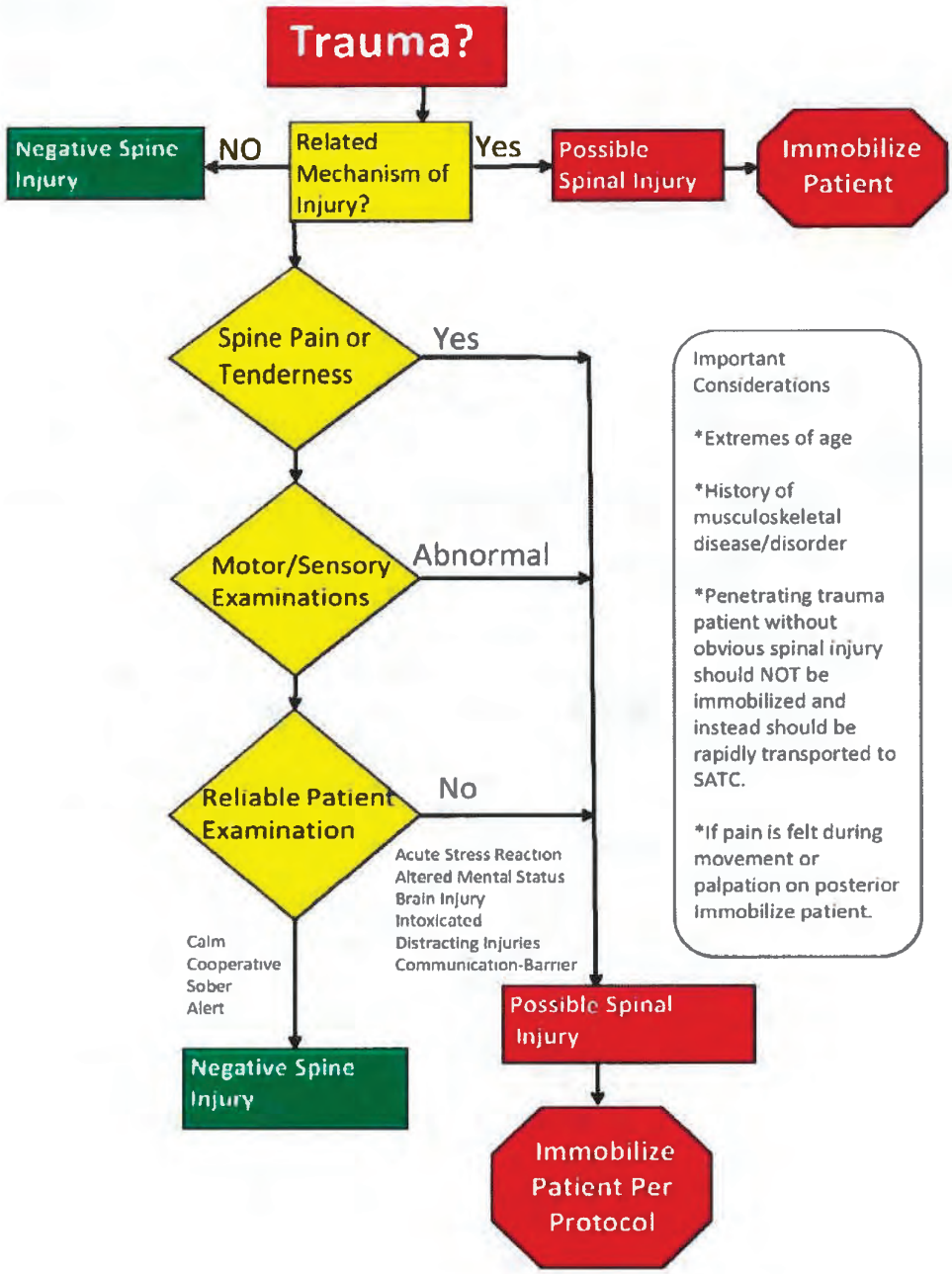
1. Determine mechanism of injury

2. Apply manual stabilization

3. Evaluate for motor, sensory, and circulation in all extremities

4. Apply appropriate department approved collar
5. Place patient on long board or scoop stretcher (if indicate)
6. Secure the patient to long board or scoop stretcher with straps
7. Secure the patient's head with department approved head immobilization device
8. Reevaluate motor, sensory, and circulation in all extremities
9. Rigid cervical collars may be used post intubation or during mass casualty incidents

SPINAL IMMOBILIZATION



TRIAGE

Section 12.20

BLS

The START/Jump START Triage Plan may be used as a protocol for patient care by the first arriving unit on the scene of any multi-patient incident. It will be the judgment of the first unit on scene to initiate this plan in the event there are 5 or more patients due to, but not limited to, a traumatic incident such as a plane crash, vehicle accident, explosion, terrorist act, industrial accident, etc. It will be the responsibility of the Incident Commander to continue its use until the multi-patient incident is under control.

Procedure:

Initial Triage

- Quickly assess the scene for hazards and request back-up. It will also be necessary to request that the Battalion Chief respond in case the EMS Disaster Plan must be implemented
- Utilize the Triage Ribbons (color coded plastic strips). One should be tied to an upper extremity in a VISIBLE location (wrist if possible)
- The first assessment that produces a RED Tag stops further assessment.

1. START Triage (Adults/ Child 8 years old and older or 100 lbs)
    a. Have all persons involved with the incident who can walk are the designated "walking wounded" GREEN remove all of the walking wounded into one location away from the incident if possible. Assign someone to keep them together (police, other fire department personnel, or initially a competent bystander) notify COMMAND of their location - do not forget these victims. Someone should triage them as soon as possible.
    b. Start with the nearest patient and proceed to evaluate and tag each and every patient involved. This should be a continuous process until all patients are evaluated in order to constantly update each patient's condition
    c. The evaluation, ribbon process as described below should not take more than 60 seconds per patient
    d. Remember the pneumonic RPM. (Respiration, Perfusion, Mental Status)
        i. Assess **RESPIRATIONS**:
            1. If respiratory rate is 30/min or less – go to **PERFUSION** assessment.
            2. If respiratory rate is over 30/min – RED
            3. If victim is **NOT** breathing open the airway,
                a. Remove obstructions if seen and assess for (a) or (b) above.
            4. If victim is **STILL NOT** breathing – BLACK

        ii. Assess **PERFUSION**:

1. Performed by palpating a radial pulse or assessing capillary refill (CR) time.
    a. If radial pulse is present or CR is 2 seconds or less – go to **MENTAL STATUS** assessment.
    b. If no radial pulse is present or the CR is greater than 2 seconds – RED
2. In addition, any major external bleeding should also be controlled

iii. Assess **MENTAL STATUS**:
1. Assess the victim's ability to follow simple commands and their orientation to time, place, and person (oriented X3)
    a. If the victim follows commands, oriented X 3 – YELLOW
    b. If the victim does not follow commands, is unconscious, or is disoriented – RED
2. Depending on injuries (burns, fractures, bleeding) it may be necessary to Tag YELLOW

- **NOTE**: At the discretion of the crew implementing the START plan, the designated "walking wounded" GREEN may be utilized to maintain patient's airways, stabilize C-spines, control bleeding with direct pressure, etc.

2. **Jump-START (Child less than 8 years old or less than 100 lbs/ Infants)**
    a. Have all persons involved with the incident who can walk are the designated "walking wounded" GREEN remove all of the walking wounded into one location away from the incident if possible. Assign someone to keep them together (police, other fire department personnel, or initially a competent bystander) notify COMMAND of their location - do not forget these victims. Someone should triage them as soon as possible
    b. If an infant appears to have no apparent trauma, does not fit any delayed criteria; triage the patient GREEN
    c. Start with the nearest patient and proceed to evaluate and tag each and every patient involved. This should be a continuous process until all patients are evaluated in order to constantly update each patient's condition
    d. The evaluation, ribbon process as described below should not take more than 60 seconds per patient
    e. Remember the pneumonic RPM. (Respiration, Perfusion, Mental Status)
        i. Assess **RESPIRATIONS**
            1. If the patient is not breathing, quickly clear the mouth of any foreign matter, properly open the airway and re-evaluate respiration
                a. If no respirations – assess pulse

i. If no pulse is present – "JumpStart" – give 5 breaths
b. If patient remains apneic after "Jump Start" – BLACK
c. If "JumpStart" induces spontaneous respirations- RED
d. If breathing <15 or >45/minute- RED
e. If breathing = 15 to 45/min – go to **PERFUSION** assessment

ii. Assess **PERFUSION** –
1. Palpate a peripheral pulse
a. If no peripheral pulse – RED
b. If peripheral pulse is present – go to **MENTAL STATUS** assessment
2. Assess **MENTAL STATUS**
a. Perform a rapid "AVPU" assessment, remembering the differing developmental stages of the pediatric patient
i. If alert, responds to voice, or localizes pain – YELLOW
ii. If withdraws from pain, postures, or unresponsive – RED

- **NOTE:** At the discretion of the crew implementing the START plan, the designated "walking wounded" GREEN may be utilized to maintain patient's airways, stabilize C-spines, control bleeding with direct pressure, etc.

Secondary Triage

Procedure:

1. Will be performed on all victims during the **Treatment Phase**

2. If a victim is identified in the initial triage phase as a RED and transport is available do not delay transport to perform a secondary assessment

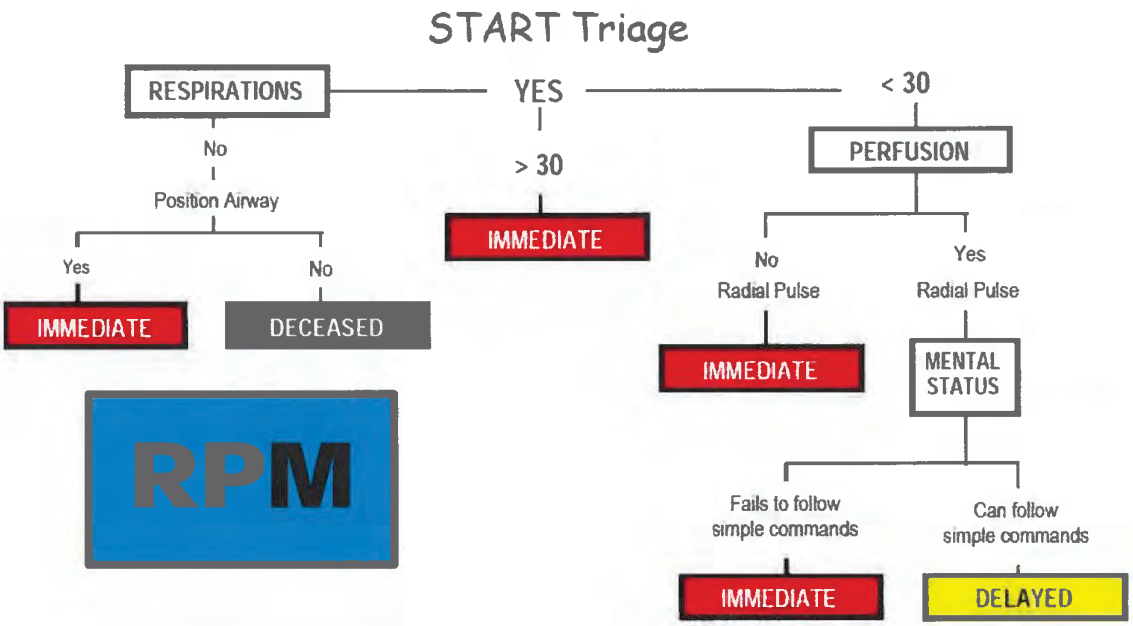
3. Utilize the Triage Tags and attempt to assess for and complete all information required on the tag (time permitting)

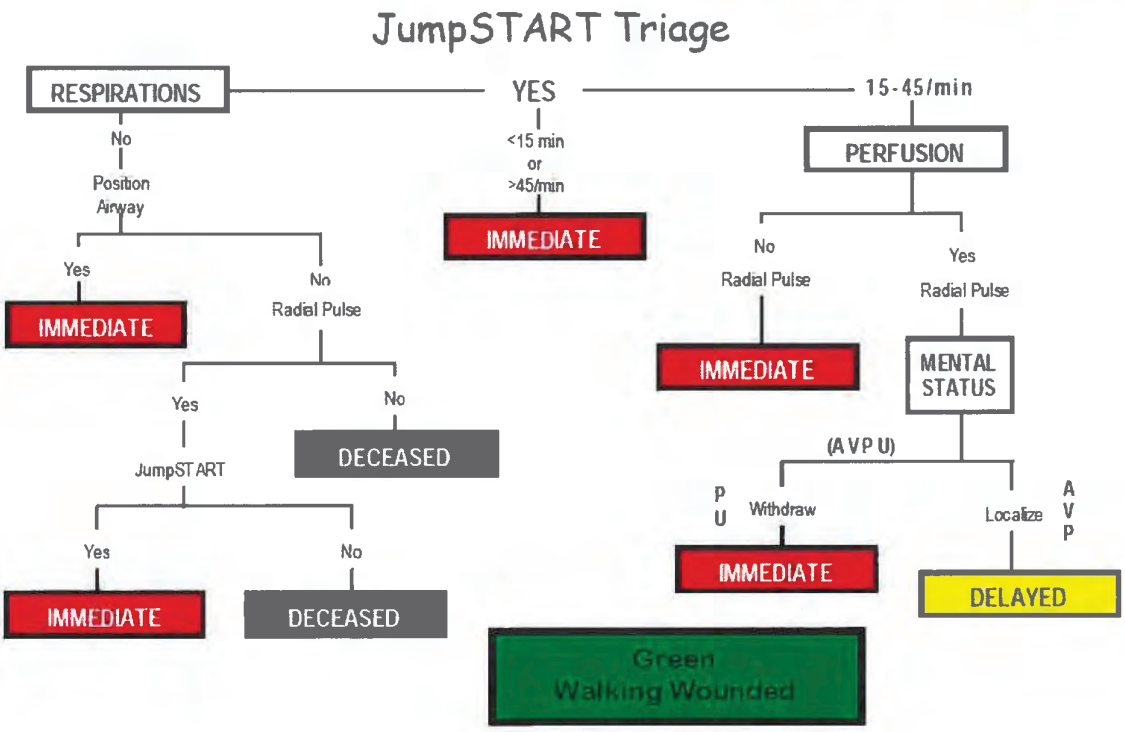
4. Affix the tag to the victim and remove the ribbon

5. The triage priority determined in the **Treatment Phase** should be the priority used for transport

START AND JUMP START TRIAGE *Flowchart*

Section 12.20.1





TOURNIQUET APPLICATION

Section 12.21

BLS

The tourniquet is effectively applied when there is cessation of bleeding from the injured extremity, indicating total cessation of arterial blood flow. Any preexisting distal pulse should be absent at that time as well.

Indication:

- Any bleeding from an extremity that cannot be controlled by other means
- Life-threating bleeding of any kind in an extremity
- Amputation of an extremity proximal to the hand

Procedure:

1. Expose the extremity by removing clothing (if able) in proximity to the injury
2. Place tourniquet directly over exposed skin as high up as possible
3. Prepare the patient for transport and reassess. Record the time of application of strap on the patient and in report
4. Tourniquet placement must be communicated in patient reports for all pre-hospital to hospital and inter-hospital transfers
5. Consider pain management (Section 5.5) tourniquet application is very painful.

TRANSCUTANEOUS PACEMAKER

Section 12.22

ALS

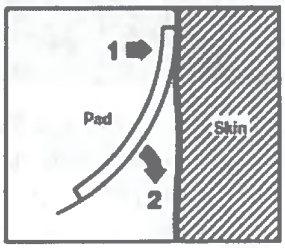
X Series defibrillators contain a pacemaker for the emergency treatment of hemodynamically compromising bradycardia, bradycardia with escape rhythms that are unresponsive to pharmacological therapy, refractory tachycardia (supraventricular or ventricular) and bradyasystolic cardiac arrest. Proper demand pacing requires a reliable, high quality surface ECG signal. For best results apply both standard ECG monitoring electrodes and hands-free pacing therapy electrodes to the patient

Indications:

- Symptomatic bradycardia in patients with a pulse such as
  - Symptomatic bradycardia not responding to treatment
  - Second Degree Type II Heart Block or Third-Degree Heart Block

Procedure:

1. Apply limb leads as follows:
   a. LA – BLACK Left upper chest
   b. RA – WHITE Right upper chest
   c. LL – RED Left lower leg (medial calf)
   d. RL – GREEN Right lower leg (medial calf)
2. Apply one edge of the pad securely to the patient. Roll the pad smoothly from the applied edge to the other, being careful not to trap any air pockets between the gel and skin.



3. Ensure that hands-free therapy electrodes are making good contact with the patient's skin and are not covering any part of any other ECG electrodes
4. Press the Lead quick access key and select I, II, or III to provide the largest amplitude QRS complex.
   a. **Note**: When the Pacer is on, the lead selection is restricted to Leads I, II, or III
5. Verify that R-waves are being properly detected by confirming that a QRS tone occurs with each displayed R wave or by verifying that the X Series unit's heart rate display accurately reflects the patient's pulse rate.

6. Press the PACER button on the front panel of the unit. The Pacer Settings window displays.

7. Use the arrow keys to navigate to Mode, press the Select button, and then use the arrow keys and the Select button to set the Pacer Mode to Demand.
8. Use the arrow keys to navigate to Rate, press the Select button, and then use the arrow keys and the Select button to set the Pacer Rate to a value 10-20 ppm higher than the patient's intrinsic heart rate. If no intrinsic rate exists, use 100 ppm. You can increase or decrease the pacer rate by a value of 5 ppm for rates below 100, and by 10 ppm for rates above 100.
9. Use the arrow keys to navigate to Start Pacer, then press the Select button to select it. The Pacing window displays behind the Pacer Settings window.

10. In the Pacer Settings window, use the arrow keys and the Select button to adjust the pacer output. The pacer output is adjustable in 10 mA increments when increasing the output, and in 5 mA increments when decreasing the output. Observe the ECG for evidence of electrical capture. Select the lowest output current that achieves both electrical and mechanical capture.

Note: If the Pacer Settings window disappears before you have set the output current, press the PACER button again to display the settings window.

It is important to recognize when pacing stimulation has produced a ventricular response (capture). Determination of capture must be assessed both electrically and mechanically in order to ensure appropriate circulatory support of the patient.

Electrical capture is determined by the presence of a widened QRS complex, the loss of any underlying intrinsic rhythm, and the appearance of an extended, and sometimes enlarged, T-wave.

TRANSCUTANEOUS PACEMAKER

Section 12.22

Ventricular response is normally characterized by suppression of the intrinsic QRS complex.

Mechanical capture is assessed by palpation of the peripheral pulse.

To avoid mistaking muscular response to pacing stimuli for arterial pulsations, use ONLY the following locations for palpating pulse during pacing:

- femoral artery
- right brachial or radial artery

Physio TRANSCUTANEOUS PACEMAKER

Section 12.22.1

ALS

The Physio Control LP-12 defibrillator/monitor is designed for DEMAND pacing. DEMAND pacing will "sense" intrinsic QRS activity and inhibit the pacing stimulus. If QRS activity is NOT sensed, the device will pace at the selected rate; this is known as NON-DEMAND pacing.

Indications:

- Symptomatic bradycardia in patients with a pulse such as
  - Symptomatic bradycardia not responding to treatment
  - Second Degree Type II Heart Block or Third-Degree Heart Block

Procedure:

- **Note**: When using DEMAND Pacing, the LP-12 monitoring must be done through both ECG electrodes and the patient cable

1. Apply limb leads as follows:
   a. LA – BLACK Left upper chest
   b. RA – WHITE Right upper chest
   c. LL – RED Left lower leg (medial calf)
   d. RL – GREEN Right lower leg (medial calf)

2. Ensure you are monitoring through the limb lead (II, III, AVF) not paddles

3. Connect Pads electrodes to patient (Anterior – Lateral Placement), then connect to therapy cable
   a. For better adhesion, clean and dry areas over which pacing electrodes will be placed

4. Press "PACER" button. Adjacent indicator will illuminate

5. Observe the ECG rhythm. Confirm that a triangle sense marker ▼ appears near the middle of each QRS complex. If the sense markers do not appear or are displayed in the wrong location (for example, on the T-wave), adjust ECG SIZE, or select another lead. (The sense marker location may vary slightly on each QRS complex.)

6. RATE is default at 70 BPM

7. Press CURRENT ▲ or rotate the SPEED DIAL to increase current until electrical capture occurs

a. Electrical capture is indicated by a wide QRS complex and a T-wave following the pace marker. Each pacing stimulus will be marked with an arrow ⬆ on the lower edge of ECG paper.

8. Mechanical or ventricular capture is evidenced by signs of improving cardiac output. Palpate for a carotid or femoral pulse and check the color and temperature of the skin. Check for improving blood pressure and level of consciousness.
   a. During pacing, the patient should be visually monitored at all times, and should be assessed for both electrical and mechanical (ventricular) capture.
   b. Skeletal muscle twitching should be expected, but it is not an indication of pacing capture. It may be necessary to secure tubing, cables, etc. to prevent their displacement.

9. Conscious patients may complain of discomfort. Discomfort may be minimized by using the lowest current which produces capture and use of VERSED (Section 11.29) for premedication/ sedation

- **Note**: To change rate or current during pacing, press RATE ▲ or CURRENT ▲. The RATE ▲ and CURRENT ▲ buttons allow changes in increments of 10; the SPEED DIAL allows changes in increments of 5.

- **Note**: To interrupt pacing and view the patient's intrinsic rhythm, press and hold PAUSE. This causes the pacer to pace at 25% of the set rate. Release PAUSE to resume pacing at the set rate

VENOUS ACCESS

Section 12.23

ALS

Indication:

- Any patient that is in need of fluids or medications
  - Drugs administered IV or IO should be followed by a minimum of 10 cc IV fluid bolus (flush) to ensure rapid passage to the central circulation.
- Any patient with significant illness or injury
- Unstable patients will have the largest IV for the patient or intraosseous. A second IV can be initiated if time permits but should not delay transport

Procedure:

1. Observe aseptic technique and universal precautions

2. Needles are to be discarded in an appropriate marked container without recapping

3. Secure IV catheters with commercial products (veniguard) sterile dressings (cling), tape or combination of all 3 items. Splints may be used for positional IV's, pediatric patients and in uncooperative patients

4. Peripheral intravenous access including upper extremity and external jugular veins, approved means are:
   a. PRN adapter
      i. A PRN Adapter is the preferred method of venous access
      ii. Patients who do not require fluid replacement therapy shall have a PRN Adapter established and secured
      iii. Should the need arise for IV fluid therapy, access the PRN Adapter by attaching the end of a primed administration set connected to 1 liter (1000 mL) of normal saline
   b. IV infusion tubing – macrodrip (10 gtts/min) and microdrip (60 gtts/min)
      i. Adult patients will have Normal Saline with macrodrip (10 gtts/min) tubing instituted
         1. KVO – 40 cc/hr (approx. 7gtts/min)
         2. Hypovolemic shock – fluid bolus as needed titrated to systolic BP, monitor closely for signs of pulmonary edema
            a. 250 cc fluid bolus to a maximum 2 liters
               i. Medical titrate to Systolic 100mmHg
               ii. Trauma titrate to Systolic 90mmHg

3. Hypotension (i.e. cardiogenic shock, Nitroglycerine use, dehydration, or trauma) – fluid bolus as needed titrated to systolic BP, monitor closely for signs of pulmonary edema
    a. 250 cc fluid bolus to a maximum 2 liters
        i. Medical titrate to Systolic 100mmHg
        ii. Trauma titrate to Systolic 90mmHg
4. Pediatric patients requiring volume expansion will have Normal Saline with macrodrip (60 gtts/min) instituted
    a. Hypovolemic shock or Hypotension – fluid bolus as needed titrated to systolic BP greater than [70 + (age x 2)] mmHg, monitor closely for signs of pulmonary edema
    b. 20 cc/kg NS over 10 minutes

c. Interosseous infusion (Section 12.7)
d. Indwelling central venous catheters (Section 12.8)

IM & SUB-Q MEDICATION ADMINASTRATION

Section 12.24

ALS

Indications:

For the administration of certain medications

Contraindications:

- Intramuscular:
  - To avoid accidental administration into a blood vessel, aspirate prior to injection.
- Subcutaneous:
  -

Procedure:

Intramuscular Medication Administration:

1. Prepare equipment, syringe, needle (21g 1 ½ inch), alcohol wipe, bandaid, and medications to be given.
2. Explain procedure to patient.
3. Select proper injection site (deltoid / dorsogluteal / vastus lateralis).
4. Clean site with alcohol wipe, starting with small circles and working into large ones.
5. Hold skin taut.
6. Puncture the skin and enter the muscle at a 90-degree angle.
7. Aspirate for blood return (if positive remove needle).
8. Inject medication.
9. Cover with bandaid.
10. Dispose of needle / syringe in sharps container.
11. Observe for positive or untoward effects.
12. Document the name of the drug given, time given, route, dose, name of the person administering the drug, and the effects of the administration.

Subcutaneous Medication Administration:

IM & SUB-Q MEDICATION ADMINASTRATION

Section 12.24

- Prepare equipment, syringe, needle (23-25 ga ½ inch – 5/8 inch), alcohol wipes medications to be given.

1. Explain procedure to patient.
2. Select proper injection site (deltoid / anteroproximal aspect of quadricep / back or abdomen).
3. Clean site with alcohol wipe using aseptic technique.
4. Elevate the SQ tissue by pinching the injection site.
5. With bevel, up, insert the needle at a 45-degree angle.
6. Aspirate for blood return (if positive remove needle)
7. Inject medication.
8. Message site with alcohol swab.
9. Dispose of needle / syringe in sharps container.
10. Observe for positive or untoward effects.
11. Document the name of the drug given, time given, route, dose, name of the person administering the drug, and the effects of the administration.

FACE SCALE FOR PAIN

Section 12.25

Activity/Tolerance Scale

FACE	0 – 1	1 – 2	2 – 4	4 – 6	6 – 8	8 – 10
ACTIVITY	Alert, Smiling	No humor, Serious	Furrowed brow, pursed lips, breath holding	Wrinkled nose, raised upper lip, rapid breathing	Slow blinking, opened mouth	Eyes closed, moaning, crying
TOLERANCE	No pain	Pain can be ignored	Interferes with tasks	Interferes with concentration	Interferes with basic needs	Little to no movement tolerated

This tool was originally created with children to help them communicate about their pain. Now it is used around the world with people ages 3 and older, improving assessment so pain management can be addressed

Indications:

- To properly assess patient's pain levels

Procedure:

1. Ask patient what their pain level based on a scale of 0 to 10
2. Use the above scales to confirm patient answer
3. Document both subjective and objective findings in PCR

INHALER ADMINISTRATION

Section 12.26

BLS

Indications:

- Prescribed to patients with diagnosed pulmonary disease
- Signs and symptoms of respiratory difficulty

Contraindication / Precautions:

- Altered mental status
- Inhaler is not prescribed to the patient
- Patient has already reached the maximum dose

Procedure:

1. Shake canister and mouthpiece well.
2. Invert the device and hold close to the patient's mouth.
3. Advise patient to exhale, pushing as much air from lungs as possible.
4. Place mouthpiece in patient's mouth and instruct patient to close his/her lips loosely around the mouthpiece with tongue underneath.
5. Advise patient to inhale deeply, press down canister quickly then release it (over 5 seconds).
6. Instruct patient to hold his/her breath for 5 – 10 seconds before exhaling.
7. Monitor patient for desired or untoward affects.

EPINEPHRINE AUTO-INJECTOR

Section 12.26

BLS

Indications:

- The patient exhibits signs and symptoms of a severe allergic reaction.
- Anaphylaxis, including respiratory distress or shock.
- Patient's prescribed Auto-injector

Contraindication / Precautions:

- Auto-injector is not prescribed to the patient
- None in a life-threatening allergic reaction
- Patient may experience tachycardia, pallor, dizziness, chest pain, headache, nausea/vomiting, or nervousness.

Procedure:

1. Obtain the patient's auto-injector.
2. Verify medication is not expired.
3. Verify that medication belongs to the patient.
4. Remove the safety cap from the injector.
5. Place the tip of the injector against the lateral aspect of the patient's thigh, midway between the waist and the knee.
6. Push the auto-injector firmly against the thigh until the spring-loaded needle is deployed and the medication has been injected, holding for at least 10 seconds.
7. Observe the patient for either positive or untoward side effects.
8. Properly dispose of injector in sharps container.
9. Record drug administration, dose, route, name of person who administered drug, and effects.

Transport Ventilator

Section 12.28

ALS | SCT

CAUTION!!! The transport ventilator is a valuable adjunct to patient care but can sometimes provide a false sense of security. The patient's clinical condition should be closely monitored at all times and the use of the ventilator should be discontinued if the patient develops signs and symptoms of hypoxia, which you feel could be a result of improper operation or ventilator malfunction.

The ventilator should be set by a qualified RT prior to departure. If an RT or RN is unwilling or unable to set the ventilator, they must provide the settings for the patient to be entered into the transport ventilator. The RT or RN must verify the settings once the settings have been entered by the paramedic as given by the RT or RN. If complications develop en route, do not attempt to change ventilator settings (without medical direction). Instead, disconnect and administer manual ventilation.

Procedure:

All paramedics are required to read the "Clinical Instruction Manual" and familiarize themselves with the proper operation of the current transport ventilator. Alternative systems for providing back-up ventilation (i.e., a manual resuscitator) should be available at all times.

1) When a ventilator transport call is received ensure the main and portable oxygen tanks have a sufficient amount of oxygen to complete transport.

2) Make note of the patient's vital signs before any change over occurs. This includes pulse ox and capnography. Assess the ET tube or Trachea tube placement to assure they are properly secured.

3) Depending on the reason for transport and the patient's condition, IV access should be considered.

4) Acquire the patient's current ventilator settings from the nurse or RT caring for the patient. Try to match these setting on the transport ventilator to be used (do this before the patient is switched to the transport ventilator).

5) Connect the oxygen hose to the wall oxygen port before switching the patient to the transport ventilator.

6) Apply cardiac monitor.
7) Switch the patient over to the transport ventilator and observe for any distress. Allow the patient to become accustomed to the new ventilator.

8) If necessary, have the nurse or RT caring for the patient adjust or provide adjusted ventilator settings to best accommodate the patient. If necessary, ventilate with an Ambu bag for several minutes.

9) Document any changes in patient condition, vitals, and vent settings.

10) Once the patient has acclimated to the ventilator set the alarm values.

11) Once the patient has been switched to the transport ventilator and is tolerating this well then move the patient over to the EMS stretcher for transport.

12) Once the patient is on the EMS stretcher and tolerating the transport ventilator, transfer the oxygen hose from the wall oxygen port to the portable oxygen tank regulator

Note: Only use the portable oxygen tank when transporting to and from the Ambulance.

If alarm on the ventilator sounds, immediately check the patient.

Possible alarms:

- High-pressure alarm
  - Causes: kinks in tubing, coughing, secretions, bronchospasm, gagging, HME wet, biting tube, may need suctioned.
- Low-pressure alarm
  - Causes: leak somewhere in system, check all fittings including monitor lines or vent is not meeting patient's inspiratory need if in AC mode.
- Low minute volume alarm
  - Causes: main cause is leak. Could also be change in neuro status, sedation issues, patient fatigue, decrease in lung compliance.
- Apnea – for CPAP or BiPAP patients
  - Activated when no breath is triggered within (20 seconds)
  - Will default to either Volume or Pressure (whichever is selected)
  - CPAP will automatically give 12 bpm
  - BiPAP will default to value selected in Breath rate
- Disc/Sense alarm
  - A sense line has become disconnected or occluded. o Check all connections
- Low O2 Pressure
  - Oxygen source is low. Either from changing high pressure hose from the D tank to M tank or not enough O2 in tank to create sufficient pressure

13) If unable to identify the cause of the ventilator alarm and/or patient's condition deteriorates, disconnect from the ventilator and assist respirations via BVM.

14) Once in the Ambulance transfer the oxygen hose from the portable oxygen tank regulator to the wall oxygen port in the Ambulance during transport.

15) Document ALL ventilator settings used.

16) Monitor and document vital signs, pulse ox, EKG and capnography every 30 minutes for a stable patient and every 15 minutes for an unstable patient.

17) Upon arrival at the destination facility, follow above steps when transferring from EMS stretcher to care facility stretcher. Report any problems to the accepting staff.

***** All patients should have their SaO^2 and End Tidal CO^2 monitored via pulse oximeter and capnography. *****

BLADDER IRRIGATION

Section 12.29

BLS	ALS

Bladder irrigation can be defined as a process of flushing out or washing out the urinary bladder with specified solution. Bladder irrigation can be transported BLS clamped or during continuous irrigation. ALS transport is indicated for patients requiring irrigating solution bag replacement (ex… long transport time needing more irrigating solution than already initiated.)

Procedure:

Continuous irrigation:

- The flow clamp is open on the urinary drainage tubing. This allows the irrigating solution to flow out of the bladder continuously.
- Ensure the regulating clamp on the irrigating tubing is open to the flow rate as prescribed by the transferring physician.

For Irrigating Solution Replacement- ALS

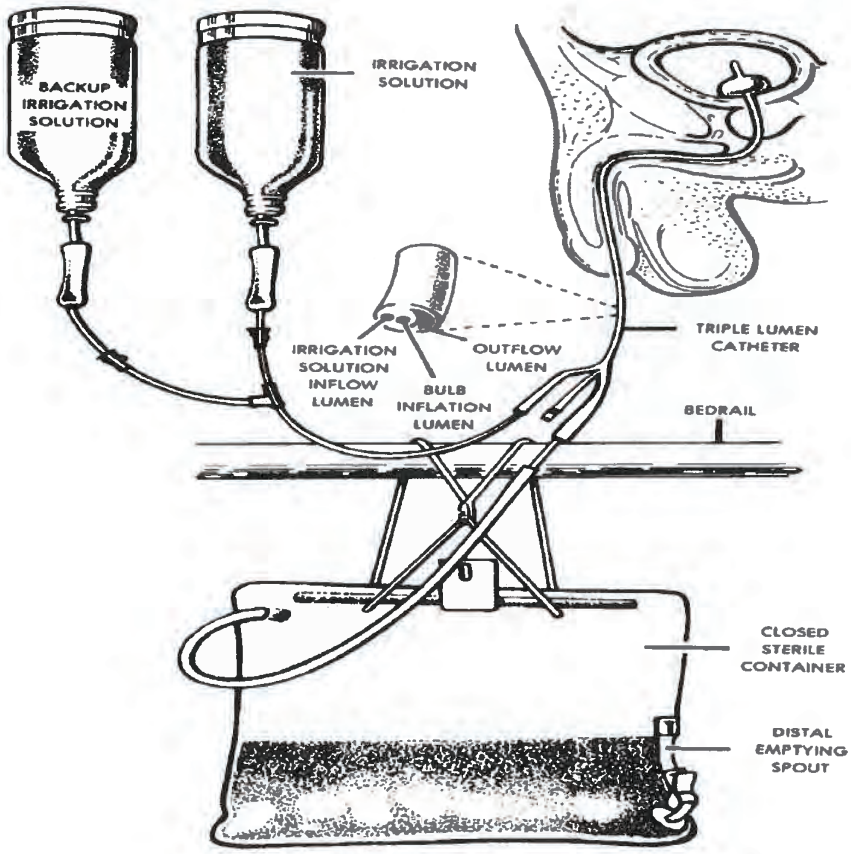
- Close clamp on irrigating tubing above regulating clamp before irrigating solution is empty and open the clamp on backup irrigation solution bag.
- Ensure the regulating clamp on the backup irrigating solution tubing is open to the flow rate as prescribed by the physician and that the irrigating solution is flowing.
- On near empty irrigating solution bag remove and spike new bag.
- Repeat process as prescribed by transferring physician.
- Note any abnormal constituents such as blood clots, pus, or mucous shreds.

Complications:

- Bladder rupture
- Bladder injury
- Patient complains of pain: (Complete pain assessment using the 0-10 or visual analogue scale)
- Palpate bladder to determine presence of distention
- Check drainage tubing for kinks Observe drainage for adequate amount, presence of clots that might be blocking drainage tube. Evaluate input & output.

NOTE: Gravity is important for drainage and the prevention of urine backflow. Ensure that catheter bags are always draining downwards, do not become kinked and are secured below thigh level. Metal or plastic hangers should be attached to the side of the bed.

BLADDER IRRIGATION



MANGO STROKE ASSESSMENT

Section 12.31

BLS	ALS

The MANGO™ Stroke Scale was created by Dr. Nasser Razack, M.D., J.D. for the quick identification of a Large Vessel Occlusion (LVO) stroke. Charlotte County Fire and EMS has adopted this scale to rapidly identify LVO stroke in the field and transport the patient to the proper facility.

A patient that DOES NOT meet ANY of below criteria but are still suspected of have a stroke, rapidly transport patient to nearest Comprehensive Stroke Center. Document your finding very clearly in your ePCR.

Indication:

- Suspected stroke patients after hypoglycemia has been ruled out ☐ Rule in/out LVO cause for stroke symptoms
- Patient MUST HAVE of the following preform the stroke assessment test:
  - Must be conscious
  - Must be able to communicate (follow commands)
  - Must have a blood sugar greater than 60 ml/dL

Procedure:

- The following information **MUST** be obtained as quickly and accurately as possible in conjunction with preforming the stroke assessment.

DO NOT DELAY TRANSPORT OF SUSPECTED STROKE PATIENT TO OBTAIN THIS INFORMATION

- This information **MUST** be documented clearly in the ePCR. If unable to obtain information, document reason why. (i.e. no witness on scene)
  - Last know well time, be as specific as possible (within minutes or within the hour)
  - Name and phone number of person to last see them well
  - Name of any known or suspected medication (if able, bring medications or list of)
  - As accurate as possible medical history (Section 2.5)
- Asses the suspected stroke patient to first rule in/out LVO stroke

MANGO STROKE ASSESSMENT

	MOTOR WEAKNESS
M	Ask patient to hold arms out palm up for 10 seconds • POSITIVE (+) = unable to hold the weight of one or both arms • NEGATIVE (-) = able to hold the weight of both arms

DEPENDING ON THE OUTCOME OF MOTOR WEAKNESS (Positive or Negative), YOU WILL FOLLOW THE APPROPRATE STROKE SCREENING

IF MOTOR WEAKNESS is **POSITIVE (+)** = continue with MANGO™ assessment		IF MOTOR WEAKNESS is **NEGITIVE (-)** = assess for other signs of stroke
A	**APHASIA** Expressive and Receptive Show the patient any two (2) objects (i.e. a pen and radio) ask "what is this?" then ask "what is this used for?" • IF unable to answer either question for one or both objects = Positive (+) LVO. Issue a **MANGO ALERT**, Transport to closest Comprehensive Stroke Center • IF able to answer questions appropriately, continue with MANGO™ assessment	Assess for the following • Facial Droop • Speech issues • New onset balance issues • Changes in vision (blurred or doubled) IF ANY is noted issue **STROKE ALERT** and transport to nearest Primary Stroke Center
N	**NEGLECT** Touch one side of cheek or shoulder asking if they can feel you touching them Then touch the opposite side asking if they can feel you touching them. Then touch both side at same time asking if they can feel you touching them.	

	• IF unable to feel either side or both side at same time question = Positive (+) LVO, Issue a **MANGO ALERT**, Transport to closest Comprehensive Stroke Center • IF able to feel both side at same time continue with MANGO™ assessment
G	**GAZE PREFERENCE** Assess for looking the following: Patient looking to one side only Inability to track an object from right to left with their eyes Complaining of double vision • IF ANY of the above is present = Positive (+) LVO, Issue a **MANGO ALERT**, Transport to closest Comprehensive Stroke Center • IF none are presents continue with MANGO™ assessment
O	**OCULAR FIELD CUT or NEW ONSET BLINDNESS** Assess for new onset blindness Asses the fields of vision (4 quadrants) Ask the patient to look at your nose

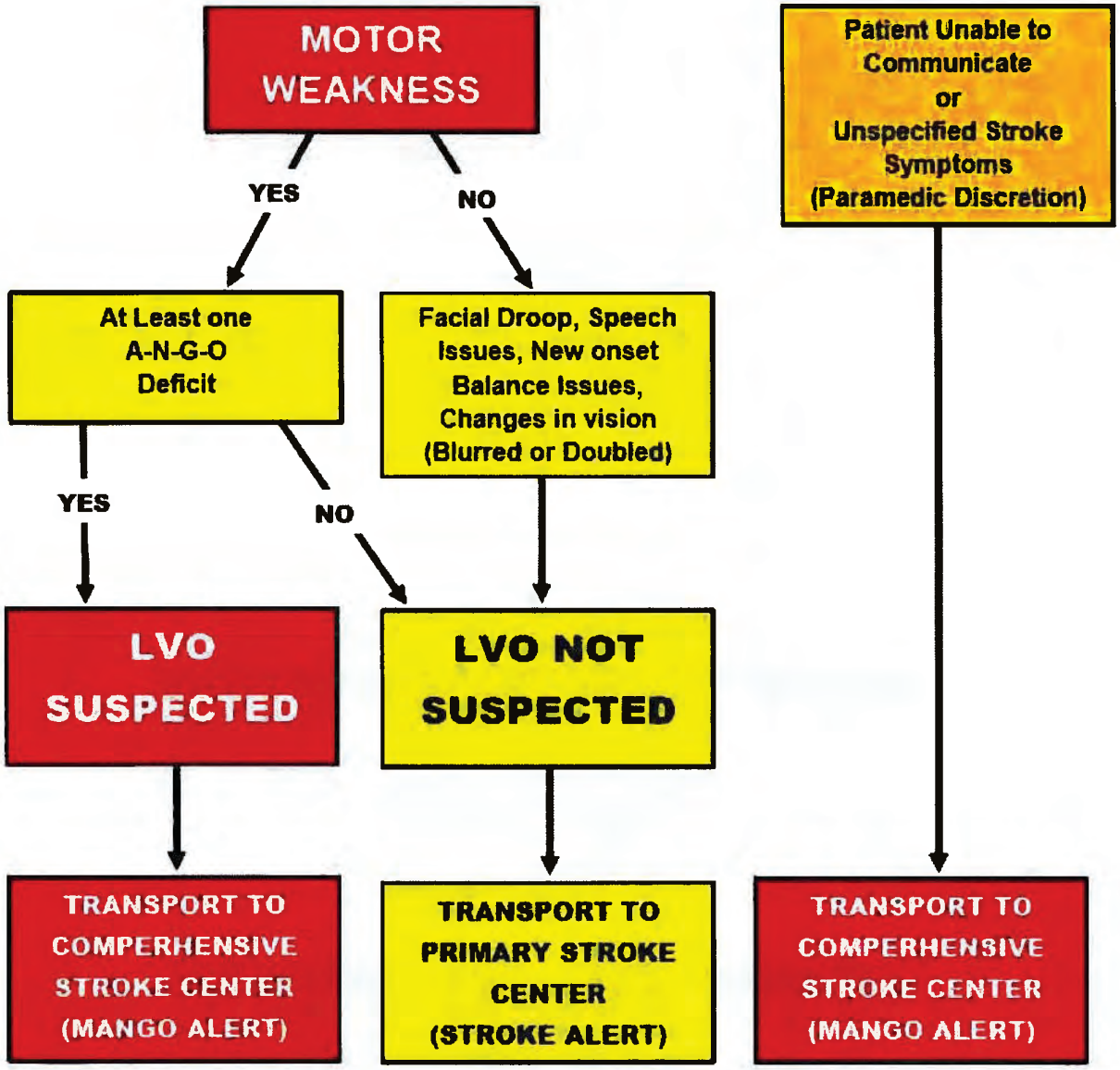
	Then hold an object to upper right of patient head outside of the field of vision Slowly bring to object into down toward the front of their face and ask the patient "tell me when you see the object" Repeat this for all other fields of vision (quadrants) • IF ANY ocular field cut is present or patient is complaining of new onset blindness = Positive (+) LVO, Issue a **MANGO ALERT**, Transport to closest Comprehensive Stroke Center • IF none is noted issue STROKE ALERT and transport to nearest Primary Stroke Center	

STROKE MIMICKERS™	
M	Metabolic – Hypoglycemia or Hyperglycemia
I	Itcal - Seizures
M	Multiple Sclerosis
C	Classic or Specific Migraine Subtypes
K	Keep Balance? (Inner ear issues)
E	Encephalopathy
R	Regular Diastolic Pressure
S	Sepsis

BRAIN LOBE FUNCTION	
FRONTAL	Eye movement, voluntary movement, function of speech
PARIETAL	Sensation
TEMPORAL	Language Comprehension
OCCIPITAL	Vision

MANGO STROKE SCREENING REFERENCE TOOL

Section 12.31.1



SECTION 13

ADVANCED SCOPE CCT/SCT

ADVANCED SCOPE PROTOCOLS APPROVAL

Section 12.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans **Ambulance.**

Daniel O'Leary, MD
Medical Director

STATEMENT AND PURPOSE

Section 13.0

Statement Purpose

The Advanced Scope Paramedic will render care to critically ill or injured patients who are being transported to a facility that provides an equal or higher level of care, for continued treatment. In addition to standard ALS equipment utilized routinely by paramedics, the Advanced Scope Trained Paramedic with guidance and supervision of the transferring, receiving or EMS MD may be required to manage special equipment/medications being used on a patient that are provided by the transferring hospital. The Advanced Scope Paramedic may need to perform advanced procedures, as well as monitor and administer medications not routinely used by ALS Paramedics. When called for, additional personnel such as a respiratory therapist, ICU nurse, physician, or another paramedic may accompany the patient to assist in providing care. The Advanced Scope Paramedic will be the team member in charge but will recognize and respect the expertise of the other care givers on board.

The decision to transfer a patient rests with the transferring physician (or other care provider, such as a physician assistant). This physician bears responsibility for the transfer decisions. It is the transferring physician who must:

1) Determine whether the benefits outweigh the risks.
2) Ensure that the patient is properly stabilized prior to departure.
3) Be responsible for complying with currently accepted community standards of practice regarding interfacility transfer.

The Advanced Scope Paramedics/CCT Teams and Medical Control Physician (MC) assume the responsibility for management of the patient, given the circumstances of the patient's condition, while en route between facilities.

This protocol recognizes there will be situations where potentially unstable patients will require transfer to another facility to obtain a higher level of care.

It should be noted that the Advanced Scope and Critical Care Protocol is a supplemental to Ambitrans Medical Transport, Inc. standard protocols and requires additional training. All paramedics who have completed additional training can provide care based on the following protocols in the areas where the additional training has been completed. In addition, patient care during transport can be defaulted to that delineated by Ambitrans Medical Transportation Standard Protocols.

TRANSFERING DOCUMENTS AND WRITTEN ORDERS

Section 13.1

Transferring Documents/Written Orders

It is the responsibility of the transferring hospital/physician to provide appropriate documentation which includes a transfer form or other documentation indicating compliance with current statutes or laws regarding patient transfer. Included should be patient identifying information (name, address, date of birth, etc.), treatments, test results, preliminary diagnosis, reason for transfer, names of transferring/accepting physician/institutions, pertinent records and orders.

Each patient should have a unique set of written orders provided by the transferring physician, specific to the patient's medical condition. The patient will be treated according to those orders unless a physician's written orders differ from this protocol. If the written orders differ from protocol, review the orders with medical direction prior to the transport for approval to follow.

Any concerns regarding patient's written orders should be voiced to the physician caring for the patient (transferring) or Ambitrans Medical Director prior to transport.

The Advanced Scope Paramedic will receive (or make) two copies of written orders prior to departure. One copy will become part of the patient's transport record by the ambulance service. The second copy will be left at the receiving facility.

The name and phone number of the transferring physician as well as the receiving physician must be readily available in the event the Advanced Scope Paramedic needs to contact them for unexpected problems or for clarification to the orders provided. The EMS physician should also be put on notice that a critical care transport is in progress and will be on standby to intervene if the paramedic is unable to contact the transferring or receiving physician.

All critical care transports will have documentation that supports or identifies the trip as being a critical care (see list***). Documentation, be it electronic or hand written, will detail the patient's chief complaint, reason for the transfer, historical data related to the current problem, past medical history, medication list, allergy list, a timed, chronologic description of patient care, medications, vital signs and changes in patient status with corresponding response of medical crew to the changes. In addition to giving a verbal report to the receiving medical staff, a copy of the patient care report will be left at the receiving facility or faxed shortly thereafter (be sure to obtain a fax number).

MEDICAL CONTROL

Section 13.2

On-Line Medical Control

Medical Control (MC) may be defined as either the Ambitrans Medical Director, the transferring or receiving physician or the ED physician of the transferring or receiving hospital.

In any situation that the Advanced Scope Paramedic needs to contact a physician for medical direction, they will first attempt the transferring physician or the receiving physician. If unable to reach either one, the ED physician at the sending or receiving facility can be contacted. If unable to contact any of the above, Ambitrans Medical Director shall be contacted.

If the Advanced Scope Paramedic is unable to contact the receiving or send facility, the paramedic will follow Ambitrans Medical Transport, Inc. protocols and Advanced Scope protocols until contact can be established. In a situation when medical control is unreachable and intervention is necessary, the transport team will divert to the nearest appropriate medical facility.

Medical Control MUST be contacted in the following circumstances:

a) Changes in symptoms/ signs/ conditions potentially indicating deterioration
b) Unstable vital signs
c) Medications not specifically listed in the protocol.

Patients on medication not specifically listed in the protocol may be transported by **Advanced Scope Paramedics ONLY.** These medications will need to be reviewed by the Ambitrans Medical Director and must fall into a similar category as other drugs already listed in the protocol. A patient receiving a completely new category of drug may not be transported without further personnel trained in the use of that drug.

TRANSFER OF DRUGS AND DEVICES

Section 13.3

Transferring Patients with Drugs and Devices

During inter-hospital transfer, crew members shall follow all regionally approved BLS/ALS protocols. In addition, the patient on the stated drugs and devices may only be transported **if the respective drugs have been initiated at the transferring hospital by the transferring physician/care provider.**

None of these may be initiated enroute. At the discretion of MC, the drug rates/doses may be altered or discontinued depending on the patient's clinical condition. Where indicated, the Advanced Scope Paramedic may titrate a drug up or down once depending on the parameters delineated in the specific protocol.

The following precautions should be kept in mind by transferring providers:

- All medications have potential to cause allergic reactions.
- Some medications cause local irritation around the I.V. site. Several may even cause tissue necrosis if there is infiltration. If there is infiltration of any line, the I.V. should be immediately discontinued.
- Many of the listed medications are incompatible with other medications. Therefore, additional medication should be given through a separate I.V. line, or if one is not established, the infusion should be stopped, and the line flushed before administration of a second medication. This should be done under MC guidance.
- All medicated IV's require infusion pumps and a cardiac monitor (except antibiotics, lipids, and TPN).
- MC should be contacted if there is any change in the patient condition or if any medication needs to be emergently discontinued during transport.
- If the need arises for emergency medications to be given, infusions shall be discontinued.
- The MC physician may determine the number or types of medications/devices that may require the presence of additional personnel (such as a second paramedic, nurse or physician).
- Transfer of patients with ongoing infusion of mediation outside the scope of practice and training of the transport crew (either because of lack of credentialing or medication not listed in protocol) cannot be accomplished without additional personnel who possess a higher level of training.

REQUESTING ADDITIONAL PERSONNEL

Section 13.4

Requesting Additional Personnel

When the EMS provider anticipates that they will require more assistance to appropriately care for the patient during transfer, they shall request the transferring physician/health care provider to provide appropriately trained hospital staff to accompany the patient and assist.

The EMS provider must contact MC for medical direction in all situations where they are not comfortable with the circumstances of the transfer. The transfer will not occur unless the EMS provider and MC are confident the personnel and equipment are appropriate for transfer.

CLINICAL PROCEDURE AND PROTOCOL

Section 13.5

Clinical Procedures/Protocols

All current adult, pediatric and procedural protocols used by Ambitrans medical Transport, Inc. in the field will also apply to advanced scope/critical care transports if applicable to the patient's condition/situation. In addition, advanced protocols, specific for critical care patients, may apply and be used by the advanced scope team members who are qualified and familiar with the procedures listed.

If at any time a critical care team member feels a protocol is beyond their skill level or comfort level, DO NOT PROCEED WITH THE TRANSPORT, instead contact medical control and/or your supervisor to discuss your concern.

NOTE: Some of the procedures listed are to be performed by MD only. The steps in performing the procedures are listed as you may be called upon to assist the physician and will need to know the steps involved.

A protocol has been written for the following topics:

- Arterial Blood Gas Sampling (Restricted to MD, RN or RT)
- Blood Transfusion Protocol
- Blood Transfusion Reaction Protocol
- Emergency Escharotomy
- Hemodynamic Monitoring Protocol
  - CVP Monitoring
  - Arterial Line Monitoring
  - Swan Ganz Monitoring
- ICP (increased intra-cranial pressure) monitoring
- Intra-Aortic Balloon Pump (Requires additional training/certification)
- Ventricular Assist Device
- Venous Access Devices
- Ventilator Protocol

SECTION 14

CCT/SCT MEDICATIONS

CCT/SCT MEDICATIONS

Section 14.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD
Ambitrans Medical Director

CCT/SCT MEDICATIONS

Section 14.0

The following category and list of medications are commonly used on Advanced Scope patients during transport. This list does not in any way represent all of the medication that may be involved in treating a critical patient but are some of the more common drugs used.

CCT/SCT Medication Categoories

- Anti-arrhythmic Medications
- Beta Blockers
- Blood Pressure Lowering Drugs
- Calcium Channel Blockers
- Glycoprotein IIb/IIIa Inhibitors
- Heparin Drip
- Inotropes
- Nitroglycerine Drip
- Thrombolytic Therapy Cardiovascular Drugs
- Benzodiazepines Drips
- Sedative Agents
- Opioid Drugs
- Paralytic Agents
- CNS Drugs
- Hyperalimentation/TPN
- Insulin
- Potassium
- Obstetric Drugs
- Antibiotics and Antiviral
- Antifungal
- Antidotes
- GI Drugs
- Blood

CARDIAC MEDICATIONS ANTI-ARRHYTHMIC

Section 14.1

Anti-arrhythmic:

Uses: Treatment and cardioversion of Atrial Fibrillation or Atrial Flutter

Treatment and prophylaxis of refractory Ventricular Tachycardia

Adverse Effects:

Hypotension, QT prolongation, Torsades, Ventricular Tachycardia, AV Block

Routine Dosing:

Flecainide (Tambocor)

Infusion: 2 mg/kg over 20 minutes

Ibutulide (Corvert)

Infusion: 1 mg IV over 10 minutes

Magnesium Sulfate

Bolus: 1 – 2 grams over 5 minutes

Infusion: 6 – 12 grams over 24 hours

Propafenone (Rhythmol)

Bolus: 2 mg/kg in 15-20 minutes; followed by

Infusion: 0.0067 – 0.0078 mg/kg/minute

Amiodarone (Cordarone)

Bolus: 150 mg over 10 minutes (150 mg in 100 mL NS)

Infusion: 360 mg over next 6 hours (1 mg/min)

Maintenance Infusion: 540 mg over remaining 18 hours (0.5 mg/min)

Special Considerations:

- Use infusion pump for ALL drips
- May not be compatible with heparin, Lidocaine, Amiodarone or bicarb
- Frequent BP Checks for hypotension
- Increased risk for ventricular dysrhythmias if patient is on certain antihistamines or anti-nausea medications

CARDIAC MEDICATIONS BETA-BLOCKERS

Section 14.2

Beta-Blockers:

Uses: Slow ventricular response SVT, Atrial Fibrillation and Atrial Flutter Slow sinus node rate

Adverse Effects: Hypotension, bradycardia, hypoglycemia (diabetics on medications) the usual signs and symptoms are masked; Bronchospasm, Sinus node arrest

Routine Dosing:

Atenolol (Tenormin)

Infuse: 5 mg over 5 minutes; may be repeated in 10 minutes

Esmolol (Brevibloc)

Bolus: 500 mcg/kg (0.5 mg/kg) over 1 minute

Infusion: 50 mcg/kg/minute for 4 minutes

If inadequate response, repeat bolus and increase drip rate by 50 mcg/kg/minute up to 3 times **(total dose of 2000 mcg bolus and infusion at 200 mcg/kg/minute)**

Drug comes in 100 mg (10 mg/mL) vial or 2500 mg ampule into 250 mL (10 mg/mL) or 500 mL (5 mg/mL) NS or D_5W

Labetalol (Normodyne)

Infusion: 2 mg/minute (concentration 1 mg/mL; 2 mL/min) duration from 25 minutes to 2.5 hours

Metoprolol (Lopressor)

Injection: 2.5 mg IV slow push over 2 minutes. May repeat dose up to 5 times every 5 minutes for a **total dose of 15 mg**

Sotalol (Betapace)

Bolus: 1 – 1.5 mg/kg; followed by

Infusion: 0.008 mg/kg/minute = 8 mcg/kg/minute

Special Considerations:

- Use infusion pump for ALL medicated drips
- Check BP frequently: monitor heart rate
- Carefully monitor for hypotension, excessive bradycardia or new AV blocks

- Patients with DIABETES may have symptoms of hypoglycemia masked; watch carefully for mental status change
- Contact MC if development of adverse reaction

CARDIAC MEDICATIONS BP LOWERING AGENTS

Section 14.3

Blood Pressure Lowering Agents:

Uses: Short term parenteral treatment when oral treatment is not feasible. Nitroprusside may be used in CHF to reduce both preload and afterload (reduce work of the heart)

Adverse Effects: Hypotension, bradycardia, dysrhythmias, palpitations, flushing, angina, headache, restlessness, drowsiness, confusion, or slurred speech

Routine Dosing:

Hydralazine

Injection: 5 – 40 mg IV push over 1 – 2 minutes

Usually given as repeat bolus doses every 20 – 30 minutes

Rarely given as a drip: 1 – 10 mg/hour

Nicardipine (Cardene)

Dilute to: 0.1 mg/mL

Infusion: Start at 50 mL/hr (5 mg/hr)

May increase rate by 2.5 mg/hour every 15 minutes until desired BP is reached for a **maximum dose of 15 mg/hr**

Nitroprusside

Infusion: Continuous to maintain BP: See dosage chart below; amount listed is in mL/hr

Nesiritide (Natrecor)

Injection: 2 mcg/kg IV push over 60 seconds

Infusion: 0.01 mcg/kg/minute maintenance infusion

Special Considerations:

- Use infusion pump for all drips
- Dedicated IV line – should not administer in same IV line as other medications

CARDIAC MEDICATIONS BP LOWERING AGENTS

Nicardipine:

- If hypotensive (BP < 60) or tachycardic (HR > 140) discontinue drip
- May resume drip when stable at 3 – 5 mg/hr
- Infusion site must be changed every 12 hours
- Use caution in patients with liver failure since it is metabolized in the liver
- May be contraindicated in severe Aortic Stenosis as may decrease preload

Nitroprusside:

- Small boluses or slight increases in infusion rate may produce profound hypotension
- Solution must be wrapped in foil to protect it from light
- Do not mix other medications in the same line
- Check BP and heart rate every 5 minutes
- Hypotension can be alleviated by decreasing the infusion rate

Nesiritide:

- Caution in pregnant or lactating patients
- Contact MC for worsening signs/symptoms, significant BP change or if BP < 90

CARDIAC MEDICATIONS CALCIUM CHANNEL BLOCKERS

Section 14.4

Calcium Channel Blockers

Uses: Ventricular rate control in A-fib, Atrial Flutter, MAT or SVT

Adverse Effects: May cause Atrial Flutter, AV Block, Bradycardia, Chest Pain, CHF, Ventricular, Arrhythmias, nausea/vomiting, dyspnea or hypotension

Routine Dosing:

Diltiazem (Cardizem)

Bolus: 0.25 mg/kg over 2 minutes (20 mg for average patient) If needed may repeat bolus in 15 minutes at 0.35 mg/kg (25 mg in the average patient) over 2 – 5 minutes

Infusion: Dilute 125 mg (25 mL) in 100 mL NS/D_5W Drip at 5 – 15 mg/hr titrated to heart rate.

Nicardipine (Cardene)

Dilute to: 0.1 mg/mL

Infusion: Start at 50 mL/hr (5 mg/hr) May increase rate by 2.5 mg/hr every 15 minutes until desire BP is reached for a **maximum dose of 15 mg/hr**

Special Considerations:

- Use Infusion pump for ALL drips
- Carefully monitor for hypotension/excessive bradycardia/ new A/V block
- PVC's can occur with conversion to NSR
- Don't use in the presence of WIDE COMPLEX TACHYCARDIA

Nicardipine:

- If hypotensive or tachycardic, discontinue drip
- May resume when stable at 3 – 5 mg/hr
- Infusion site must be changed after 12 hours
- Use caution in patients with liver failure since it is metabolized in the liver
- May be contraindicated in severe Aortic Stenosis as may decrease preload

CARDIAC MEDICATIONS GLYCOPROTEIN IIb/IIIa INHIBITORS

Section 14.5

Glycoprotein IIb/IIIa Inhibitors:

Uses: Unstable angina non q-wave MI Percutaneous Coronary Intervention

Adverse Effects:

Bleeding (usually at cath sites), possible allergic reactions to ReoPro

Routine Dosing:

Abciximab (ReoPro)

Loading bolus: 0.25 mg/kg over 10 – 60 minutes

Maintenance Infusion: 0.125 mcg/kg/min for 12 hours following PCI or 18 – 24 hours for unstable angina

Drip rates will vary depending on concentration that was mixed. Verify drip rates/dosage calculations with the transferring facility staff prior to transport.

Tirofiban (Aggrastat)

Loading infusion: 0.4 mcg/kg/min for 30 minutes

Maintenance infusion: 0.1 mcg/kg/min

Rate will be halved for patient with renal insufficiency

Dosing table for Tirofiban (Aggrastat)

Patient Weight		30-minute loading	Maintenance Infusion	
66 – 82	30 – 37	16 mL/hr	8 mL	4 mL/hr
83 – 100	38 – 45	20 mL/hr	10 mL	5 mL/hr
101 – 119	46 – 54	24 mL/hr	12 mL	6 mL/hr
120 – 137	55 – 62	28 mL/hr	14 mL	7 mL/hr
138 – 155	63 – 70	32 mL/hr	16 mL	8 mL/hr
156 – 174	71 – 79	36 mL/hr	18 mL	9 mL/hr
175 – 192	80 – 87	40 mL/hr	20 mL	10 mL/hr
193 – 210	88 – 95	44 mL/hr	22 mL	11 mL/hr
211 – 229	96 – 104	48 mL/hr	24 mL	12 mL/hr
230 – 247	105 – 112	52 mL/hr	26 mL	13 mL/hr
248 – 265	113 – 120	56 mL/hr	28 mL	14 mL/hr
266 – 283	121 – 128	60 mL/hr	30 mL	15 mL/hr
284 – 302	129 – 137	64 mL/hr	32 mL	16 mL/hr
303 – 319	138 – 145	68 mL/hr	34 mL	17 mL/hr
320 – 337	146 – 153	72 mL/hr	36 mL	18 mL/hr

CARDIAC MEDICATIONS GLYCOPROTEIN IIb/IIIa INHIBITORS

Section 14.5

Eptifibatide (Integrilin)

Loading bolus: 180 mcg/kg over 1 – 2 minutes

Maintenance infusion: 2 mcg/kg/min up to 72 hours

Dosing table for Epitifibatide

Bolus drawn directly from "**bolus – vial**" (2 mg/mL)

Maintenance given directly from "**Infusion vial**" (0.75 mcg/mL)

Patient Weight (kg)	Bolus Volume (mL)	Infusion Rate (mL/hr)
37 – 41	3.4 mL	6 mL/hr
42 – 46	4.0 mL	7 mL/hr
47 – 53	4.5 mL	8 mL/hr
54 – 59	5.0 mL	9 mL/hr
60 – 65	5.6 mL	10 mL/hr
66 – 71	6.2 mL	11 mL/hr
72 – 78	6.8 mL	12 mL/hr
79 – 84	7.3 mL	13 mL/hr
85 – 90	7.9 mL	14 mL/hr
91 – 96	8.5 mL	15 mL/hr
97 – 103	9.0 mL	16 mL/hr
104 – 109	9.5 mL	17 mL/hr
110 – 115	10.2 mL	18 mL/hr
116 – 121	10.7 mL	19 mL/hr
>121	11.3 mL	20 mL/hr

Special Considerations:

- Use infusion pump
- Should always be given with heparin; if bleeding occurs, need to turn heparin off as well as the GPIIb/IIIa drug
- Eptifibatide dose will be decreased in patients with impaired renal function; settings to be determined by the patient's ordering physician

CARDIAC MEDICATIONS HEPARIN

Section 14.6

Heparin Drip:

Uses: Prevents blood clotting, especially in the following situations: Acute MI, Pulmonary Embolus, Deep Vein Thrombosis

Adverse Effects: Hemorrhage from various sites including needle sticks, GI tract, CNS bleeds

Dosing:

Bolus: 15 – 18 mg/kg

Infusion: 800 – 1600 mg/hour

Infusion rates may be outside this range and should not require adjustment during transport.

Special Considerations:

- Use infusion pump
- D/C immediately for onset of major bleeding or acute mental status change
- Contact MC for any bleeding such as IV sites or gums

CARDIAC MEDICATIONS INOTROPES

Section 14.7

Inotropes:

Uses: Short term intravenous treatment of patients with acute decompensated heart failure, severe CHF/Cardiogenic Shock. To increase cardiac output by increasing myocardial contractility and stroke volume. Hemodynamically significant hypotension not resulting from hypovolemia.

Adverse Effects: May develop hypokalemia resulting from increased cardiac output and/or diuresis May have tachycardia, ventricular dysrhythmias or ectopy, hypertension, angina or ischemic chest pain

Dobutamine may also cause hypotension

Dopamine may cause nervousness, headache, palpitations, dyspnea, nausea, or vomiting

Dosing:

Inamrinone (Inocor):

Loading dose over 2 – 3 minutes: 0.75 mcg/kg

Maintenance infusion: 5 – 10 mcg/kg/min

Milrinone (Primacor):

Loading dose over 10 minutes: 50 mcg/kg

Pt. weight (kg)	30	40	50	60	70	80	90	100	110	120 (max)
Loading dose (mg)	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.0	6.0
Maintenance dose (mL/hr) 200 mcg/mL concentration										
mcg/kg/min 0.375	3.4	4.5	5.6	6.8	7.9	9.0	10.0	11.3	12.4	13.5
mcg/kg/min 0.50	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0
mcg/kg/min 0.75	6.8	9.0	11.3	13.5	15.8	18.0	20.3	22.5	24.8	27.0

CARDIAC MEDICATIONS INOTROPES

Section 14.7

Dobutamine: Infusion: 2.5 – 20 mcg/kg/min continuous infusion; onset may be 10 minutes

Dopamine: 1-20 mcg/kg/min continuous infusion
Onset may be 10 minutes
See dosing chart below for different concentration solutions

Dopamine Dosing Chart
Single Concentration 1.6 mg / ml
800 mg / 500 ml
400 mg / 250 ml
mcg /kg /minute

Pt wt in Kg	1	2	3	4	5	10	15	20
35	1	3	4	5	7	13	20	26
40	2	3	5	6	8	15	23	30
45	2	3	5	7	8	17	25	34
50	2	4	6	8	9	19	28	38
55	2	4	6	8	10	21	31	41
60	2	5	7	9	11	23	34	45
65	2	5	7	10	12	24	37	49
70	3	5	8	11	13	26	39	53
75	3	6	8	11	14	28	42	56
80	3	6	9	12	15	30	45	60
85	3	6	10	13	16	32	48	64
90	3	7	10	14	17	34	51	68
95	4	7	11	14	18	36	53	71
100	4	8	11	15	19	38	56	75
105	4	8	12	16	20	39	59	79
110	4	8	12	17	21	41	62	83
115	4	9	13	17	22	43	65	86
120	5	9	14	18	23	45	68	90

ml/hr or drops/min. using minidrip tubing = 60 drops/ml
Dopamine (Single) Dosing Chart

Dopamine Dosing Chart
Double Concentration 3.2 mg/ml
800 mg/250 ml
mcg/kg/minute

Pt wt in Kg	1	2	3	4	5	10	15	20
35	1	1	2	3	3	7	10	13
40	1	2	2	3	3	7	11	15
45	1	2	3	3	4	8	13	17
50	1	2	3	4	5	9	14	19
55	1	2	3	4	5	10	16	21
60	1	2	3	5	6	11	17	23
65	1	2	4	5	6	12	18	24
70	1	3	4	6	7	13	20	26
75	1	3	4	6	7	14	21	28
80	2	3	5	6	8	15	23	30
85	2	3	5	7	8	16	24	32
90	2	3	5	7	8	17	25	34
95	2	4	5	8	9	18	27	36
100	2	4	6	8	9	19	28	38
105	2	4	6	8	10	20	30	39
110	2	4	6	9	10	21	31	41
115	2	4	6	9	11	22	32	43
120	2	5	7	9	11	23	34	45

ml/hr or drops/min. using minidrip tubing = 60 drops/ml
Dopamine (Double) Dosing Chart

CARDIAC MEDICATIONS INOTROPES

Section 14.7

Epinephrine:

Infusion: 1 – 10 mcg/min titrated to desired effect

Norepinephrine (Levophed):

Infusion: 0.5 – 1.0 mcg/min

Titrated up to 30 mcg/min to desired hemodynamic effect

Special Considerations:

- Use infusion pump
- For Inamrinone/Milrinone: do not mix with Lasix or dextrose-containing solutions
- Monitor for cardiac dysrhythmias; these may be caused by hypokalemia, pre-existing arrhythmias, abnormal drug levels, catheter placement, etc.
- Check blood pressure and heart rate frequently. Discontinue briefly if develop hypotension secondary to vasodilation. EMT-Ps may titrate up/down one increment without calling MC
- Contact MC for any adverse effects

CARDIAC MEDICATIONS NITROGLYCERINE DRIP

Section 14.8

Nitroglycerine Drip:

Uses: Acute Coronary Syndrome, CHF, Hypertension Decreases Preload, and to a lesser extent, afterload

Adverse Effects:
Excessive hypotension which can provoke angina, headache, restlessness, palpitations, tachycardia or dizziness

Dosing: Continuous infusion titrated to maintain therapeutic effect while avoiding hypotension. Usual range 10 – 2000 mcg/min. May be higher in treatment of pulmonary edema.

NITROGLYCERIN DOSING CHART
CONCENTRATION 200MCG/ML
100 MG/500 ML
50 MG/250 ML

MCG/MIN	PUMP SETTING	MCG/MIN	PUMP SETTING
10	3	160	48
20	6	170	51
30	9	180	54
40	12	190	57
50	15	200	60
60	18	210	63
70	21	220	66
80	24	230	69
90	27	240	72
100	30	250	75
120	36	260	78
130	39	270	81
140	42	280	84
150	45		

DOUBLE CONCENTRATION
NITROGLYCERIN DOSING CHART
CONCENTRATION 400MCG/ML
100 MG/250 ML

MCG/MIN	PUMP SETTING	MCG/MIN	PUMP SETTING
10	2	160	24
20	3	170	26
30	5	180	27
40	6	190	29
50	8	200	30
60	9	210	32
70	11	220	33
80	12	230	35
90	14	240	36
100	15	250	38
120	18	260	39
130	20	270	41
140	21	280	42
150	23		

Special Considerations:

- Use infusion pump
- Monitor heart rhythm
- Check BP and HR frequently (every 15 minutes); may increase to every 30 minutes if the same HR for > 1 hour
- Do not mix other medications in the same line

CARDIAC MEDICATIONS THROMBOLYTIC THERAPY

Section 14.9

Thrombolytic Therapy:

Uses: Dissolves clots in vessels. Generally used in the setting of acute MI or CVA; occasionally used in Pulmonary Embolus.

Adverse Effects:

Minor hemorrhages from IV sites and gums, major hemorrhage from GI and intracranial or spinal sites, reperfusion dysrhythmias often occur about 30-60 minutes after starting the infusion, allergic reactions including anaphylaxis may occur with streptokinase or APSAC

Dosing:

Streptokinase, APSAC, OR TPA:

Dose to be determined by transferring physician (determined by patient weight and indication for therapy)
Rate should not require adjusting en route

Tenecteplase (TNK):

Weight-based one-time dose, administered over 5 seconds

Pt weight:	<60 kg	Dose:	30mg
	≥60 - <70kg		35mg
	≥70 - <80kg		40mg
	≥80 - <90kg		45mg
	≥90kg		50mg

Occasionally used as a continuous infusion for peripheral artery thrombus 0.25-0.5 mg/hour up to 28 hours

Retevase:

Given in 2 doses of 10 mg each, 30 minutes apart. Given as a 2-minute IV push.

Special Considerations:

- Use Infusion pump
- Monitor heart rhythm
- Check BP and HR frequently
- Do not mix with other medications in the same line
- D/C infusion immediately if there is cardiac arrest, major hemorrhage, anaphylaxis or change in mental status and call MC.

SEDATION MEDICATIONS BENZODIAZEPINE

Section 14.10

Benzodiazepine Drips:

Uses: Sedation for patients who are intubated (and often concurrently on a paralytic drip)
May be used to treat Status Epilepticus

Adverse Effects:
May be more prone to hypotension if used with an opioid drug. Can cause paradoxical agitation, hypertension or tachycardia

Dosing:

Lorazepam (Ativan):
Loading dose: 0.5 – 4.0 mg IV Bolus; may be repeated in 10 min
Infusion: 0.02 – 0.1 mg/kg/hour

Midazolam (Versed):
Loading dose: 0.05 mg/kg IV bolus
Infusion: 0.02 – 0.1 mg/kg/hour

Special Considerations:
Only to be used in intubated patients

SEDATION MEDICATIONS MODERATE SEDATION AGENTS

Section 14.11

Moderate Sedation Agents:

Uses: Sedation for patients who are intubated (and often concurrently on a paralytic drip). May also be used for refractory seizures or therapeutic coma.

Adverse Effects:

May be more prone to hypotension if used with an opioid drug
Can cause paradoxical agitation, hypertension or tachycardia

Dosing:

Barbiturates: Pentobarbital is most commonly used
Loading dose: 10 mg/kg; infused up to 25 mg/min
Maintenance infusion: 1 – 2 mg/kg/hour

Ketamine:
Loading dose: 1 – 5 mg/kg
Maintenance infusion: 0.01 – 0.05 mg/kg/hour

Propofol:
Loading dose: 0.5 -5 mg/kg
Maintenance infusion: next page and CAM Chart

Special Consideration s:

- Only to be used in intubated patients
- Use only with infusion pump
- Loading dose should be administered prior to transport

SEDATION MEDICATIONS DIPRIVAN (PROPOFOL)

Section 14.11.1

Criteria:

1. Global anesthetic, sedative hypnotic for use in the sedation of an intubated patient. Produces hypnosis rapidly, within 30 seconds, with minimal excitation. Advantageous in that its effects reverse rapidly also. This is especially helpful in the patient whose neurological status is in question.
2. Used for the continued sedation of the intubated patient including status post cardiac arrest or post traumatic arrest.
3. Patients must have a transfer order for Diprivan {Propofol} with a pre-mixed solution infusing.

Contraindications / Precautions	Adverse Reactions
• In patients with known hypersensitivity to this drug. • Obstetric patients. • Patients with known allergies to eggs or sulfites. • Patients in cardiac or traumatic arrest. • Patients less than 3 years of age. • Strict, aseptic technique must be utilized. • This product contains no antibiotic preservatives and can support rapid growth of microbial organisms.	• Nausea, vomiting • Pain at the injection site • Hypoventilation to apnea • Snoring • Hypotension • Laryngospasm • Brady / tachycardia

Procedure:

1. Patients must have a transfer order for Diprivan with a pre-mixed solution infusing.
2. Patients must have an order for the rate of Diprivan infusion and be accompanied by an infusion pump device which regulates the flow of medication.
3. IV infusion only through a dedicated IV line:
   A: ADULT - 5 – 50 mcg/kg/min titrated to effect **(refer to CAM chart)**
   B: PEDIATRIC – 5 mcg/kg/min titrated to effect **(refer to CAM chart)**
4. Monitor vital signs every 15 minutes at a minimum.

Transport Considerations:

- Check the I.V. site - patency, redness, etc.
- Check for a copy of the order.
- Check for dedicated I.V. line.
- Check concentration.
- Check the dose.
- Why was the drip started?
- When was the drip started?
- Last time the drip was titrated and why?
- Has the patient experienced any complications?

SEDATION MEDICATIONS DIPRIVAN (PROPOFOL)

Section 14.11.1

DIPRIVAN (PROPOFOL) Dose Chart:

Weight in Kg	Weight in Lbs	Diprivan Minimum 5 mcg/kg/min	Diprivan Mid-Range 25 mcg/kg/min	Diprivan Maximum 50 mcg/kg/min
5 kg	11 lbs.	xxxx	xxxx	xxxx
10 kg	22 lbs.	xxxx	xxxx	xxxx
15 kg	33 lbs.	xxxx	xxxx	xxxx
20 kg	44 lbs.	0.60 gtts/min	3.00 gtts/min	6.00 gtts/min
25 kg	55 lbs.	0.75 gtts/min		7.50 gtts/min
30 kg	66 lbs.	0.90 gtts/min	4.50 gtts/min	9.00 gtts/min
35 kg	77 lbs.	1.05 gtts/min		10.50 gtts/min
40 kg	88 lbs.	1.20 gtts/min	6.00 gtts/min	12.00 gtts/min
45 kg	99 lbs.	1.35 gtts/min		13.50 gtts/min
50 kg	110 lbs.	1.50 gtts/min	8.00 gtts/min	15.00 gtts/min
55 kg	121 lbs.	1.65 gtts/min		16.50 gtts/min
60 kg	132 lbs.	1.80 gtts/min	9.00 gtts/min	18.00 gtts/min
65 kg	143 lbs.	1.95 gtts/min		19.50 gtts/min
70 kg	154 lbs.	2.10 gtts/min	11.00 gtts/min	21.00 gtts/min
75 kg	165 lbs.	2.25 gtts/min		22.50 gtts/min
80 kg	176 lbs.	2.40 gtts/min	12.00 gtts/min	24.00 gtts/min
85 kg	187 lbs.	2.55 gtts/min		25.50 gtts/min
90 kg	198 lbs.	2.70 gtts/min	14.00 gtts/min	27.00 gtts/min
95 kg	209 lbs.	2.85 gtts/min		28.50 gtts/min
100 kg	220 lbs.	3.00 gtts/min	15.00 gtts/min	30.00 gtts/min
110 kg	242 lbs.	3.30 gtts/min	16.00 gtts/min	33.00 gtts/min
120 kg	264 lbs.	3.60 gtts/min	18.00 gtts/min	36.00 gtts/min
130 kg	286 lbs.	3.90 gtts/min	20.00 gtts/min	39.00 gtts/min
140 kg	308 lbs.	4.20 gtts/min	21.00 gtts/min	42.00 gtts/min

SEDATION MEDICATIONS DEXMEDETOMIDINE (PRECEDEX)

Section 14.12

Criteria:

1. Is indicated for sedation of initially intubated and mechanically ventilated patient during treatment in an acute care transport setting or critical care transport setting.
2. Should be administered by continuous infusion not to exceed 24 hours.
3. Has been continuously infused in mechanically ventilated patients prior to extubation, during extubation, and post-extubation.
4. Patients must have a transfer order for Dexmedetomidine {Precedex} with a pre-mixed solution infusing.

Contraindications / Precautions	Adverse Reactions
• No known Contraindications • Use with caution in pediatric patients	• Hypotension • Sinus arrest • Bradycardia • Nausea and Vomiting

Procedure:

1. Patients must have a transfer order for Dexmedetomidine with a pre-mixed solution infusing.
2. Patients must have an order for the rate of Dexmedetomidine infusion and be accompanied by an infusion pump device which regulates the flow of medication.
3. IV infusion only through a dedicated IV line:
   A: ADULT - 0.2 – 0.7 mcg/kg/hour titrated to effect (**refer to CAM chart**)
   B: PEDIATRIC – 0.2 – 0.7 mcg/kg/hour titrated to effect (**refer to CAM chart**)
4. Monitor vital signs every 15 minutes at a minimum.

Transport Considerations:

- Check the I.V. site - patency, redness, etc.
- Check for a copy of the order.
- Check for dedicated I.V. line.
- Check concentration.
- Check the dose.
- Why was the drip started?
- When was the drip started?
- Last time the drip was titrated and why?
- Has the patient experienced any complications?

SEDATION MEDICATIONS DEXMEDETOMIDINE (PRECEDEX)

Section 14.11.2

Weight in Kg	Weight in lbs.	Precedex Range 0.1 mcg/kg/hr	Precedex Range 0.2 mcg/kg/hr	Precedex Range 0.3 mcg/kg/hr	Precedex Range 0.4 mcg/kg/hr	Precedex Range 0.5 mcg/kg/hr	Precedex Range 0.6 mcg/kg/hr	Precedex Range 0.7 mcg/kg/hr
40 kg	88 lbs.	1.0 mL/hr	2.0 mL/hr	3.0 mL/hr	4.0 mL/hr	5.0 mL/hr	6.0 mL/hr	7.0 mL/hr
45 kg	**90 lbs.**	**1.1 mL/hr**	**2.3 mL/hr**	**3.4 mL/hr**	**4.5 mL/hr**	**5.6 mL/hr**	**6.8 mL/hr**	**7.9 mL/hr**
50 kg	110 lbs.	1.3 mL/hr	2.5 mL/hr	3.8 mL/hr	5.0 mL/hr	6.3 mL/hr	7.5 mL/hr	8.8 mL/hr
55 kg	**121 lbs.**	**1.4 mL/hr**	**2.8 mL/hr**	**4.1 mL/hr**	**5.5 mL/hr**	**6.9 mL/hr**	**8.3 mL/hr**	**9.6 mL/hr**
60 kg	132 lbs.	1.5 mL/hr	3.0 mL/hr	4.5 mL/hr	6.0 mL/hr	7.5 mL/hr	9.0 mL/hr	10.5 mL/hr
65 kg	**143 lbs.**	**1.6 mL/hr**	**3.3 mL/hr**	**4.9 mL/hr**	**6.5 mL/hr**	**8.1 mL/hr**	**9.8 mL/hr**	**11.4 mL/hr**
70 kg	154 lbs.	1.8 mL/hr	3.5 mL/hr	5.3 mL/hr	7.0 mL/hr	8.8 mL/hr	10.5 mL/hr	12.3 mL/hr
75 kg	**165 lbs.**	**1.9 mL/hr**	**3.8 mL/hr**	**5.6 mL/hr**	**7.5 mL/hr**	**9.4 mL/hr**	**11.3 mL/hr**	**13.1 mL/hr**
80 kg	176 lbs.	2.0 mL/hr	4.0 mL/hr	6.0 mL/hr	8.0 mL/hr	10.0 mL/hr	12.0 mL/hr	14.0 mL/hr
85 kg	**187 lbs.**	**2.1 mL/hr**	**4.3 mL/hr**	**6.4 mL/hr**	**8.5 mL/hr**	**10.6 mL/hr**	**12.8 mL/hr**	**14.9 mL/hr**
90 kg	198 lbs.	2.3 mL/hr	4.5 mL/hr	6.8 mL/hr	9.0 mL/hr	11.3 mL/hr	13.5 mL/hr	15.8 mL/hr
95 kg	**209 lbs.**	**2.4 mL/hr**	**4.8 mL/hr**	**7.1 mL/hr**	**9.5 mL/hr**	**11.9 mL/hr**	**14.3 mL/hr**	**16.6 mL/hr**
100 kg	220 lbs.	2.5 mL/hr	5.0 mL/hr	7.5 mL/hr	10.0 mL/hr	12.5 mL/hr	15.0 mL/hr	17.5 mL/hr
105 kg	**231 lbs.**	**2.6 mL/hr**	**5.3 mL/hr**	**7.9 mL/hr**	**10.5 mL/hr**	**13.1 mL/hr**	**15.8 mL/hr**	**18.4 mL/hr**
110 kg	242 lbs.	2.8 mL/hr	5.5 mL/hr	8.3 mL/hr	11.0 mL/hr	13.8 mL/hr	16.5 mL/hr	19.3 mL/hr
115 kg	**253 lbs.**	**2.9 mL/hr**	**5.8 mL/hr**	**8.6 mL/hr**	**11.5 mL/hr**	**14.4 mL/hr**	**17.3 mL/hr**	**20.1 mL/hr**
120 kg	264	3.0 mL/hr	6.0 mL/hr	9.0 mL/hr	12.0	15.0	18.0	21.0

SEDATION MEDICATIONS DEXMEDETOMIDINE (PRECEDEX)

Section 14.11.2

	lbs.				mL/hr	mL/hr	mL/hr	mL/hr
125 kg	**275 lbs.**	**3.1 mL/hr**	**6.3 mL/hr**	**9.4 mL/hr**	**12.5 mL/hr**	**15.6 mL/hr**	**18.8 mL/hr**	**21.9 mL/hr**
130 kg	286 lbs.	3.3 mL/hr	6.6 mL/hr	9.8 mL/hr	13.0 mL/hr	16.3 mL/hr	19.5 mL/hr	22.8 mL/hr
135 kg	**297 lbs.**	**3.4 mL/hr**	**6.8 mL/hr**	**10.1 mL/hr**	**13.5 mL/hr**	**16.9 mL/hr**	**20.3 mL/hr**	**23.6 mL/hr**
140 kg	308 lbs.	3.5 mL/hr	7.0 mL/hr	10.5 mL/hr	14.0 mL/hr	17.5 mL/hr	21.0 mL/hr	24.5 mL/hr
145 kg	**319 lbs.**	**3.6 mL/hr**	**7.3 mL/hr**	**10.9 mL/hr**	**14.5 mL/hr**	**18.1 mL/hr**	**21.8 mL/hr**	**25.4 mL/hr**
150 kg	330 lbs.	3.8 mL/hr	7.5 mL/hr	11.3 mL/hr	15.0 mL/hr	18.8 mL/hr	22.5 mL/hr	26.3 mL/hr

SEDATION MEDICATIONS OPIOID DRUGS & DRIPS

Section 14.13

Opioid Dugs/Drips:

Uses: Typically, part of a sedation combination for patients who are intubated. Occasionally for pain control.

Adverse Effects:

May cause hypotension, especially in volume-depleted patients or those with right-sided heart failure.

Special Considerations:

Not advisable to give patients on narcotic drips Naloxone, as this may precipitate acute withdrawal

Antihistamines (both H1 and H2) may counteract hypotension; this is a MCO

PARALYTIC MEDICATIONS

Section 14.14

Paralytic Agents:

Uses: Total muscular paralysis when patient movement may:

1. Compromise airway control (e.g. causing unwanted extubation)
2. Exacerbate a real or potential illness or injury (e.g. spinal cord injury from a spinal fracture)
3. Endanger the patient, EMS care provider or others

Adverse Effects:

Bronchospasm, flushing, hypotension and tachycardia have been rarely reported

Dosing:

Vecuronium:

Initial dose: 10 mg IV push
Repeat dose of 10 mg IV push every 20 -40 minutes as needed
Maintenance infusion: May be an alternative 0.01 mg/kg/min

Rocuronium:

Loading dose: 0.6 mg/kg
May re-bolus: 0.2 mg/kg every 30-45 minutes
Maintenance infusion: May be an alternative 0.01 – 0.15 g/kg/min

Special Considerations:

- Produces COMPLETE APNEA; therefore, an intact airway (e.g. endotracheal intubation), and adequate ventilation oxygenation **MUST BE ESTABLISHED PRIOR TO ADMINISTRATION.** Likewise, personnel and equipment with the ability to restore an airway, ventilation and oxygenation must be available during transport.
- Causes paralysis only; **therefore, concomitant use of a sedative hypnotic is indicated.**
- Note: Paralysis may alter the clinical exam. For example, motor seizure activity will not be seen, but the brain will continue to undergo seizure activity, and this must be treated! Also, conditions such as shock, hypoxia, pain, intracranial injury, hypoglycemia, etc. may be the cause of this unwanted, spontaneous patient movement in the first place. **These conditions must be addressed but may be masked by the paralytic agent!**

CNS MEDICATIONS ANTICONVULSANTS

Section 14.15

Anticonvulsants:

Uses: Prevention and treatment of seizures

Adverse Effects:

If intravenous phenytoin is given too rapidly, may result in:

1) Cardiac dysrhythmias including ventricular fibrillation or asystole
2) Hypotension

Subcutaneous extravasations of intravenous phenytoin may cause tissue necrosis or pain at the IV site

Dosing:

Phenytoin:

100 – 1200 mg IV piggyback in normal saline
Rate not to exceed 50 mg/min

Fosphenytoin:

Dose expressed in phenytoin equivalents (PE)
15 – 20 PE/kg; rate up to 100 – 150 PE/min

Valproic Acid:

40 – 60 mg/kg Rate up to 3 mg/kg/min

Special Considerations:

- Use infusion pump
- Monitor heart rhythm
- Check BP frequently
- D/C infusion and contact MC for any adverse effects

CNS MEDICATIONS MANNITOL

Section 14.16

Uses: Treatment of increased intracranial pressure or selected fluid overload states

Adverse Effects:

Hypernatremia and Volume Depletion

Dosing:

25 – 50 grams IV push or bolus infusion (in 50 cc D_5W over 20 minutes)

Special Considerations:

- Patients receiving mannitol should have a Foley to monitor fluid status

CNS MEDICATIONS STEROIDS

Section 14.17

Uses: Spinal cord injury to decrease edema, Cerebral edema due to injury or CNS mass or lesion

Adverse Effects:

- GI Bleed
- Electrolyte disturbance and hyperglycemia
- Hypertension
- Acute CHF
- Agitation
- Corticosteroid hormonal suppression (hypoglycemia, hypotension, hypothermia)
- Higher risk for infection or masking symptoms of infection

Dosing:

Methylprednisolone (Solumedrol):

Initial bolus: 30 mg/kg over 15 minutes
Start infusion 45 minutes later: 5.4 mg/kg/hour for 23 hours

Dexamethasone (Decadron):

Cerebral Edema: Start with 10 mg IV x1, then 4 mg IM/IV q 6 hours

Special Considerations:

- Contact MC for questions of adverse effects

HYPERALIMENTAION/TPN MEDICATIONS

Section 14.18

Uses: Intravenous nutrition

Adverse Effects:

Catheter related sepsis
Air embolism if central venous IV tubing becomes disconnected
Subcutaneous extravasations of solution can cause tissue necrosis
Discontinuation of infusion may cause hypoglycemia

Dosage:

Continuous infusion usually through central venous catheter but occasionally through a peripheral IV line.
Rate should not require adjustment en route.

Special Considerations:

- Use infusion pump
- Do not administer any other medication through the same IV line
- Contact MC for any adverse effects listed above
- Consider use of a cardiac monitor

INSULIN MEDICATIONS

Section 14.19

Uses: Lowers blood glucose. Used in diabetics especially with ketoacidosis or hyperosmolar nonketonic coma

Adverse Effects:

Hypoglycemia related (tachycardia, diaphoresis, mental status changes, and seizures)

Dosage:

5 – 15 units per hour but dosages outside this range may be used

Special Considerations:

- Use infusion pump
- Do not administer medications in the same IV line except D50
- If symptoms of hypoglycemia develop:
  - Turn off infusion
  - Perform glucometer check
  - Administer 25 grams, (one AMP D50) if glucose <80
  - Contact MC
- Monitor blood sugar every 30 minutes during transport
- Cardiac monitor is required

EMT-Ps may manage isolated insulin drip or with one additional drip.

ELECTROLYTES MEDICATIONS POTASSIUM CHLORIDE

Section 14.20

Uses: Replacement therapy for hypokalemia

Adverse Effects:

Cardiac dysrhythmias (prolonged PR interval; wide QRS complex; depressed ST segment; tall, peaked T-waves; heart block; cardiac arrest)

Subcutaneous extravasations of solution can cause tissue necrosis

Dosage:

Usual range is up to 20 mEq/hr, continuous infusion

May be mixed with various IV solutions in various sized bags including "piggy back" solutions. Rate should not require adjustment en route

Special Considerations:

- Use infusion pump
- Monitor heart rhythm
- Often causes burning during infusion; contact MC if this is problematic
- Contact MC for change in EKG configuration and/or dysrhythmias

OBSTETRIC MEDICATIONS MAGNESIUM SULFATE

Section 14.21

Uses: Treatment of pre-eclampsia and eclamptic seizures
Premature rupture of membranes

Adverse Effects:
Lethargy, nausea, vomiting, hypotonia, respiratory depression, dysrhythmia

Dosing:
Loading dose: 2 – 6 gms IV over 15 mins (may give 2 gms over 5 mins)
Followed by maintenance infusion: 1 – 2 gms/hr

Special Considerations:

- Use infusion pump
- Monitor reflexes
- Use cardiac monitor
- For symptomatic toxicity: 10 mL or 10% Calcium Chloride IV and contact MC
- MC may also request furosemide and/or NS bolus as MCO
- In renal failure, patient may require emergency dialysis

OBSTETRIC MEDICATIONS OXYTOCIN (PITOCIN)

Section 14.22

Uses: Stimulates post-partum contraction of the uterus to control bleeding

Adverse Effects:

Hypertension, tachycardia, dysrhythmias

Dosing:

10 – 40 units added to 1000 mL IV fluid to control hemorrhage
Usual rate is 10 – 20 mill units/min

Special Considerations:

- Use infusion pump
- Monitor heart rhythm
- Check BP frequently
- Contact MC for any adverse effects

ANTIBOTICS & ANTIVIRAL MEDICATIONS

Section 14.23

Uses: Bacterial or Viral infections (treatment and prophylaxis)

Adverse Effects:

Allergic signs and symptoms, including anaphylaxis

Dosage:

Vary depending on the antibiotic or antiviral
Generally given as a "piggyback" solution
Rate should not require adjustment en route

Special Considerations:

D/C infusions if there are any allergic signs or symptoms, then contact MC

Most commonly used:

- **Acylcovir**
- **Azithromycin (Zithromax)**
- **Cefazolin (Ancef)**
- **Ceftriaxone (Rocephin)**
- **Gentamicin**
- **Levofloxacin (Levaquin)**
- **Metronidazole (Flagyl)**
- **Piperacillin/Tazobactam (Zosyn)**
- **Vancomycin**

ANTIFUNGAL MEDICATIONS

Section 14.24

Uses: Fungal infections

Often in Immune-compromised patients, those on chemotherapy or chronic Antibiotics

Adverse Effects:

Nausea or diarrhea

Amphotericin-fever, rigors, chills

Dosing:

Amphotericin B, Azoles or "Fungins":

Usually given as a bolus dosing once daily TID

May be given as a continuous irrigation: 50 mg/liter over 24 hours @ 42 mL/hour

Special Considerations:

- Drug interactions may occur with statins, Coumadin, antivirals, benzodiazepines, oral hypoglycemic drugs and transplant anti-rejection drugs
- Side effects can be pre-treated with Acetaminophen or Diphenhydramine

PAIN CONTROL MEDICATIONS OPIOIDS

Section 14.25

Uses: Control of pain

Adverse Effects:

May cause hypotension, especially in volume-depleted patients or those with right-sided heart failure, respiratory depression

Dosing:

Morphine:

Loading dose: titrate 5 mg increments to effect; max dose is 20 mg-may be higher in patients on chronic pain therapy.
Infusion: 1-10 mg/hr

Fentanyl:

Loading dose: 1 – 5 mcg/kg given IV push
Infusion: 1 – 5 mcg/kg/hour

Hydromorphone (Dilaudid):

Loading dose: 0.5 – 4 mg IV slow push
Continuous infusion: 1 – 10 mg/hour

Special Considerations:

- Always use infusion pump for infusion
- Avoid Naloxone as this could precipitate acute withdrawal
- Pump malfunction could precipitate acute withdrawal
- Antihistamines (both H1 and H2) may counteract hypotension; this is an MC option

ANTIDOTES MEDICATIONS NAC

Section 14.26

N-Acetyl Cysteine or NAC (Acetadote)

Uses: Acetaminophen overdose-toxic quantities

Adverse Effects:

Anaphylactoid type reactions (urticaria, flushing, hypotension and bronchospasm)

Dosing:

Loading dose: 150 mg/kg over 15 – 20 minutes

Maintenance infusion: 50 mg/kg over 4 hours

Then: 100 mg/kg over 16 hours

Special Considerations:

- Ideal time of onset of treatment is within 8 – 10 hours of ingestion
- Anaphylactoid reactions may be treated with IV Diphenhydramine
- Maintenance infusion must be doubled at the 4-hour period.

ANTIDOTES MEDICATIONS CYANIDE

Section 14.27

Cyanide Antidote Kit (Amyl Nitrate, Sodium Nitrate, Sodium Thiosulfate):

Uses: Cyanide poisoning

Adverse Effects:
May cause methemoglobinemia

Dosing:
Dosing as described in kit; weight based for children

Special Considerations:
Not to be used with Carbon Monoxide poisoning

Cyanokit

Uses: Cyanokit is indicated for the treatment of known or suspected cyanide poisoning

Adverse Effects:
Allergic Reaction. HTN, Hematochezia

Dosing:
Starting Dose: Adults: 5g (i.e. both 2.5g vials)
Administered as an intravenous infusion over 15 minutes (approximately 15 mL/min), i.e., 7.5 minutes/vial
Depending upon the severity of the poisoning and the clinical response, a second dose of 5g may be administered by intravenous infusion for a total dose of 10g.
The rate of infusion for the second dose may range from 15 minutes (for patients in extremis) to two hours, as clinically indicated.

Special Considerations:

- Caution should be exercised when administering other cyanide antidotes simultaneously with Cyanokit
- If a decision is made to administer another cyanide antidote with Cyanokit, these drugs should not be administered concurrently in the same intravenous line
- Comprehensive treatment of acute cyanide intoxication requires support of vital functions
- Cyanokit should be administered in conjunction with appropriate airway, ventilator and circulatory support
- Once reconstituted, hydroxocobalamin is stable for up to 6 hours at temperatures not exceeding 40° C (104° F). Do not freeze.
- Any reconstituted product not used by 6 hours should be discarded

ANTIDOTES MEDICATIONS THIAMINE

Section 14.28

Uses: Wernicke's encephalopathy

Adverse Effects:
Possible anaphylactic reactions

Dosing:
100 mg IV over 15 – 30 minutes

Special Precautions:
Glucose administration in nutritionally depleted patients should be accompanied by thiamine

ANTIDOTES MEDICATIONS BICARBONATE

Section 14.29

Uses: Tricyclic, aspirin or other acidotic overdoses
Renal protection after IV contrast or with severe muscle breakdown (rhabdomyolysis)

Adverse Effects:
Sodium load

Dosing:
Titrate to urine pH > 7 by hospital staff

Special Considerations:

- Use infusion pump
- Usually will have a Foley to check urine pH and output
- May be associated with hypokalemia

ANTIDOTES MEDICATIONS PYRIDOXINE (VITAMIN B6)

Section 14.30

Uses: Isoniazide (INH) overdose

Adverse Effects:

GI Upset, Headache, Sleepiness, Tingling or burning of hands/feet

Dosing:

5g IV over 3 – 5 minutes; repeat every 5 – 20 minutes until seizures resolve

Special Considerations:

Often patient is in status epilepticus; seizure may respond to benzodiazepines

ANTIDOTES MEDICATIONS ATROPINE/2-PAM/MARK I LIT
Section 14.31

Uses: For severe Cholinesterase Inhibitor poisoning (e.g. pesticides, nerve agent)

Adverse Effects: None Listed

Dosing:

Atropine:

2 – 4 mg given every 5 mins until signs of atropinization (this may take 25 – 50 mg)

2-PAM (2-pyridinealdoxime)

1 g slow IV injection; if muscle weakness persists, give additional 500 mg after 30 minutes

Mark I Kit

Mild Symptoms: Administer 1 Mark I Kit
Moderate Symptoms: Administer 1 or 2 Mark I kits
Severe Symptoms: Administer 3 Mark I kits

Special Considerations:

- 2-PAM should be given WITH Atropine
- For moderate and severe symptoms, the patient should be given Atropine with the Mark I kit(s)

GI MEDICATIONS ACID REDUCTION

Section 14.32

Uses: Decrease secretion of gastric acid or chronic reflux
Patients with UGI Bleed

Adverse Effects: (all rare)
Occasional CNS symptoms-more so in the elderly
Jaundice
GI upset

Dosing:
Pantoprazole (Protonix):
Bolus: 80 mg over 5 minutes
Infusion: 8 mg/hr
Lansoprazole (Prevacid):
Bolus: 30 – 60 mg over 30 minutes
Infusion: 6 mg/hr
Ranitidine (Zantac):
Bolus: 50 mg over 20 – 30 minutes
Infusion: 150 mg over 24 hours

Special Considerations:
May be used for antihistamine effects

GI MEDICATIONS BLEEDING RELATED

Section 14.33

Uses: Variceal Upper GI Bleed

Adverse Effects:

Gall Bladder sludging or stones
Diarrhea or GI upset
Hypoglycemia

Dosing:

Octreotide: 50 mcg IV bolus, then 50 mcg/hour

Special Considerations:

- Alters the balance between insulin/glucagon; could result in either hypoglycemia or hyperglycemia
- Vasopressin is presently rarely used due to its potent vasoconstrictive and catecholamine inducing properties

MEDICATIONS BLOOD AND BLOOD PRODUCTS

Section 14.34

Purpose:

This protocol is restricted to Advanced Scope Trained Paramedics and/or RNs. It applies to patients receiving or in need of receiving blood transfusions or any blood products in transit between facilities as provided by the transferring facility.

Blood administration may be required to restore circulating blood volume, improve oxygen-carrying needs, or correct specific coagulation components. The blood product may be in the form of:

1. Whole Blood (450 – 500 mL/unit).
2. Packed Red Blood Cells (250 mL/unit).
3. Platelets
4. Fresh Frozen Plasma
5. Cryoprecipitate
6. Albumin
7. Plasma Protein Fractions (83% Albumin and 17% globulins)
8. Synthetic Blood Substitutes

NOTE:

- DO NOT MIX BLOOD WITH 5% DEXTROSE IN WATER (CAUSES HEMOLYSIS).
- DO NOT MIX BLOOD WITH LACTATED RINGER (CAUSES CLOTTING).
- DO NOT MIX BLOOD WITH MEDICATIONS (MAY REACT).
- HAVE A SECOND VENOUS ACCESS AVAILABLE.
- ALL PRODUCTS MUST BE ADMINISTERED VIA AN I.V. PUMP

Special Note:

NO ADDITIONAL UNITS MAY BE INITIATED DURING TRANSPORT WITHOUT SPECIFIC PHYSICIAN WRITTEN ORDERS!

SECTION 15

CCT/SCT DIAGNOSIS

Ambitrans Ambulance

CCT/SCT DIAGNOSIS

Section 15.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

All personnel are responsible for the review and adherence of these protocols as directed by the Medical Director of Ambitrans Ambulance.

Daniel O'Leary, MD
Ambitrans Medical Director

AORTIC RUPTURE/DISSECTION

Section 15.1

Signs & Symptoms

Pulse deficit or blood pressure differences from one arm to the other
Hypotension
Decreased level of consciousness
Hypertension of the upper extremities
Decreased pulse amplitude in the lower extremities
Decreased blood pressure
Chest pain
Chest wall burning
Widened mediastinum on chest x-ray with blurring of the aortic knob
Fractures of the first and second ribs

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

CCT

Transport Management Guidelines:

- Maintain open airway; apply high flow oxygen, intervene as necessary
- Assist ventilations; be prepared to Intubate
- Initiate of continue IV fluids
- Orders may include administering beta-blockers (e.g. Esmolol or Metoprolol) and withhold fluids to keep MAP at 65 to 70 mm Hg
- Do not linger at transferring facility, load and go
- Monitor oxygen saturation, vital signs and the cardiac monitor

Physician Orders

- On-line medical control if needed

Notes:

Resuscitation efforts will have been initiated at the transferring hospital and will need to be continued in transit. Goal is directed at controlling the shearing forces, therefore controlling heart rate and blood pressure are important.

CARDIOGENIC SHOCK

Section 15.2

Signs & Symptoms	Differential Diagnosis
Poor cardiac output Severe reduction in cardiac index • <1.8 L/min/m^2 without support • <2.0 to 2.2 L/min/m^2 with support • Elevated ventricular filling pressure (i.e. left ventricular filling pressure of > 18 mm Hg or right ventricular filling pressure of > 10 to 15 mm Hg Low blood pressure (systolic blood pressure < 90 mm Hg or mean arterial pressure 30 mm Hg below baseline or MAP less than 65 mm Hg over time) Altered mental status Cool, pale, diaphoretic skin Decreased urine output Weak and thready pulse Distant or abnormal S3 or S4 heart sounds Fluid accumulation in the lungs or limbs (jugular vein distention or pedal edema) Tachycardia	Aortic dissection Coronary artery disease MI Pulmonary embolus Acute myocarditis

BLS

- Initiate Basic General Medical Supportive Care
  -

ALS

- Initiate Advanced General Medical Supportive Care

CCT

1. May cover the cause of cardiogenic shock.
   a. If cause was thought to be from cardiac tamponade and patient has a catheter in the pericardial sac with a stopcock connected to the external portion, obtain orders from the transferring physician for managing the catheter, including specific directions on when to drain off pericardial fluid. If no catheter is in place, and the patient is deteriorating, a pericardiocentesis may be performed by MD or personnel authorized by medical director. This will not be a routine procedure for any advanced scope transport team member.
   b. If cause was thought to be from a tension pneumothorax,
      i. Patient should have had a chest tube placed by the MD at the transferring facility.

1. Obtain orders on continued specific management of chest tube
2. See Chest Tube – Post Insertion Management Protocol

ii. If no chest tube was placed at the transferring facility and a tension pneumothorax is suspected or develops, two options:

1. Chest tube insertion by MD.
2. Chest needling per protocol **Needle Decompression**

2. Provide high-flow oxygen
3. Orders to eliminate chest pain
4. Orders to reduce anxiety
5. Perform hemodynamic and cardiac monitoring
6. Provide antiarrhythmic if arrhythmias are present
7. Provide judicious fluid therapy
   a. 200 – 250 mL boluses of NS at a time
   b. frequently assess breath sounds, vital signs and heart sounds
8. May include administering vasopressors to physician ordered parameters
   a. Dopamine
9. May include administering inotropic agents to physician ordered parameters
   a. Milrinone and Dobutamine may be used
   b. Use with caution. Research shows that high doses of inotropic support lead to a higher incidence of mortality
10. May include administering diuretics
    a. to reduce CVP and PCWP
11. May include using agents to decrease afterload
    a. Nitroprusside or Milrinone
12. Have transferring facility insert an indwelling catheter prior to departure to monitor urinary output

Physician Orders

- On-line medical control if needed

Notes:

HYPOVOLEMIC SHOCK

Section 15.3

Signs & Symptoms	Differential Diagnosis
Tachycardia Hypotension Signs of poor tissue perfusion (pallor and delayed capillary refill) Confusion Anxiety Cold, mottled and pulseless extremities Decreased mentation	Fever Dehydration Hemorrhage Burns Excessive third spacing

BLS

- Initiate Basic General Medical Supportive Care
  -

ALS

- Initiate Advanced General Medical Supportive Care

CCT

- Treatment of underlying condition
- 2. Administer oxygen
- 3. Maintain open airway an ensure optimal ventilations
- 4. Initiate volume replacement (normal saline or lactated ringers preferred, in 250 – 500 mL increments)
- 5. Administer vasopressors if hypotension is refractory to fluid resuscitation
- 6. Administer blood products early if hemorrhage is suspected

Physician Orders

- On-line medical control if needed

Notes:

NEUROGENIC SHOCK

Section 15.4

Signs & Symptoms	Differential Diagnosis
Relative hypovolemia as the result of vasodilation Bradycardia Significant drop in blood pressure Normal pulse pressure Decreased CVP/RAP Decreased PCWP Decreased CO/cardiac index Significant drop in SVR/SVRI Decreased SvO^2 Decreased urinary output Pink, warm, dry skin	Loss of sympathetic tone Trauma to the brain or spinal cord Pharmacologic agents such as general and spinal anesthetics, opiates, and barbiturates; insulin shock; various toxins, and extreme parasympathetic stimulation

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

CCT

- Appropriate airway management to ensure adequate ventilation and oxygenation.
- Maintain MAP at greater than 70 mm Hg and/or systolic blood pressure at greater than 90 mm Hg
- Consider administering vasopressors (Dopamine, Norepinephrine, Phenylephrine). Administer inotropic agents and vasopressors if traditional fluid resuscitation is insufficient to maintain MAP.
- Initiate fluid therapy with isotonic crystalloids
- Consider colloids if large volumes of crystalloid solutions are required to maintain blood pressure
- Maintain heart rate (increase heart rate via pacemaker therapy or atropine administration)
- patient needs an indwelling catheter

Physician Orders

- On-line medical control if needed

Notes:

Treatment for neurogenic shock is focused on maintaining an MAP greater than 90 mm Hg.

Transportation considerations for neurogenic shock center on ensuring a patent airway, adequate ventilation and oxygenation because, depending on the level of involvement, the patient may be unable to breathe without assistance or may have impaired ventilator capabilities.

SEPSIS/SEPTIC SHOCK

Section 15.5

• Signs & Symptoms	Target criteria for maintenance level:
• Distributive shock (beginning with hyperdynamic [warm] shock, and progressing to hemodynamic [cold] shock) • Infection confirmed or highly suspicious • Fever may or may not be present • Hypothermia • Cardiovascular changes • Tachycardia • Normal to low-normal blood pressure initially; hypotension once in septic shock • Normal skin color, normal mucous membrane color, but warm skin Initially • Cold clammy skin with pallor or cyanosis when sepsis is more progressed • Petechiae • Blood oozing from mucous membranes and procedure sites • Decreased pulse pressure • Increased respiratory rate • Increased respiratory depth • Respiratory alkalosis • ARDS	1. MAP greater than 70 mm Hg or systolic BP greater than 90 mm Hg 2. SvO^2 greater than 70% 3. CVP of 8 – 12 mm Hg 4. Urine output greater than 0.5 mL/kg/h 5. SaO^2 greater than 93% 6. Cardiac index of 2.5 to 4.0 L/min/m2

BLS

- Initiate Basic General Medical Supportive Care

ALS

- Initiate Advanced General Medical Supportive Care

CCT

- Orders received will be focused on maintaining the following
- MAP greater than 70 mm Hg or systolic BP > than 90 mm Hg
- SvO^2 greater than 70%
- CVP of 8 – 12 mm Hg
- Urine output greater than 0.5 mL/hg/h
- SaO^2 greater than 93%
- Cardiac index of 2.5 to 4.0 L/min/m^2
- Administer oxygen, monitor and maintain patent airway, intervene as needed

- Provide fluid resuscitation (isotonic crystalloids in 30 mL/kg [500 – 1000 mL of fluid] increments to stabilize filling pressures)
- Consider colloid therapy
- Administer vasoactive agents if two 30 mL/kg fluid challenges are inadequate to maintain blood pressure.
- Norepinephrine and Dopamine are the vasopressors of choice in hypotensive patients with sepsis.
- Dobutamine may also be given if ordered and supplied.
- Norepinephrine typically starts at 2 mcg/kg/min and titrated to desired MAP
- Dopamine dose may range between 5 – 30 mcg/kg/min
- Dobutamine typically started at 2.5 mcg/kg/min and may titrate as high as 40 mcg/kg/min
- Monitoring D-Dimer level is a tool used to determine severity of sepsis and response to treatment
- Provide mechanical ventilator support if patient has ARDS
- Maintain low tidal volumes at 6 mL/kg
- Provide high PEEP at ranges of 5 – 14 cm H_2O. The PEEP is increased as the need arises for higher oxygen saturation
- Make FIO^2adjustments for oxygen saturation as needed
- Maintain PaO^2 between 55 and 80 mm Hg and SaO^2 between 88% and 95%
- Keep end-inspiratory plateau pressures lower than 30 cm H_2O
- Monitor $PaCO^2$ closely
- The oxygen saturation goal is greater than 92%
- Sedation, if needed must be monitored closely
- Give antibiotic therapy as ordered
- Remove potential sources of infection: wound debridement, abscess drainage, and device removal
- Transferring MD may consider administration of a corticosteroid or recombinant human APC

Physician Orders

- On-line medical control if needed

Notes:

The primary goal of sepsis treatment is to maintain organ perfusion while enhancing tissue oxygenation. Achieving this requires balancing preload, afterload, and contractility to achieve an optimal level of homeostasis.

SECTION 16

CCT/SCT PROCEDURAL

Ambitrans Ambulance

CCT/SCT PROCEDURAL

Section 16.0

The following protocols have been developed and approved by the Ambitrans Medical Director, the Training Division, and QA/QI Department. These Protocols were developed in accordance with the Department of Health, as per meeting the criteria of 64J-1 F.A.C.

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Daniel O'Leary, MD
Ambitrans Medical Director

EMERGENCY ESCHARATOMY

Section 16.1

SCT

Escharotomy is a procedure in which an incision is made through the stiff edematous burned skin to restore mobility to the chest or circulation to an extremity.Most burn specialist discourage the use of field escharotomy **unless** absolutely and immediately necessary to preserve life or limb.

Indications:

- Patients with circumferential burns of a limb are at risk for vascular compromise. Circumferential burns to the torso can limit chest excursion and compromise respirations.
- It is imperative that an escharotomy is performed to increase chance of salvage of a limb and/or the patient.

Procedure:

1. Prepare your equipment
    a. Scalpel
    b. Pain Medication
    c. Sedation
    d. Sterile dressing
    e. 4" X 4" gauze pads
2. Administer sedation and pain medications. Burns that cause such injuries are deep and destroy nerve endings; therefore, this procedure can be performed without anesthesia.
    i. Versed 0.05 mg/kg IV/IO, max 10 mg
    ii. Morphine 4 mg IV initially then 2 mg increments up to 20 mg. Call med control if more is needed. **OR**
    iii. Fentanyl 50 mcg IV can repeat x1 then call med control if more is needed.
3. Maintain aseptic technique
4. Determine a well-defined incision pattern. The incision should be of sufficient depth for an obvious release in pressure on the skin and for fat to bulge through the incision.
5. For the chest, an incision is made along both anterior axillary lines and may also be performed transversely.
6. For an extremity, an incision is made parallel to the bone. A single incision may be sufficient for an extremity.
7. Hand escharotomies are performed with incisions in the medial and lateral surfaces of each finger and of the palm.
8. Incise the derma of the burned tissue. Built-up pressure should cause the tissue to open even more.
9. Prepare to manage bleeding
10. Apply a sterile dressing over the incision.

HEMODYNAMIC MONITORING/CENTRAL VASCULAR ACCESS LINES
Section 16.2

SCT

There will be occasions when an advanced scope care team is called upon to transport a patient who is in need of or has in place one or more invasive monitoring or central vascular access lines. The purpose of these invasive and/or central vascular access lines are to monitor a patient's hemodynamic status or for administering fluids and/or medications. The insertion of central vascular lines or invasive monitoring lines is restricted to qualified physicians or designated personnel (requires considerable skill and practice), and is beyond the scope of an advanced scope transport paramedic. Although the majority of transports will only require careful monitoring and maintenance of the central line to prevent accidental removal, it is imperative that members of the advanced scope team be familiar with the use and care of such lines. Advanced Scope Team Members must be familiar with the methods for using each type of catheter and have the knowledge to interpret the data provided. They must also be familiar with common complications involved with these invasive catheters, including what must be done if the catheter is prematurely removed.

Keep in mind, the physical assessment techniques, such as capillary refill, skin color, skin turgor, skin temperature, lung sounds, heart sounds, and mental status, should coincide with high-tech invasive hemodynamic measurements.

The following types of invasive monitoring/vascular access lines will be discussed:

- Central Venous Lines (for measuring CVP)
  - Monitoring of the CVP is used to determine right ventricular preload and intravascular volume status to assess right heart function.
- Arterial Lines (for measuring Arterial Blood Pressure and sampling arterial blood for ABGs)
- Pulmonary Artery Catheters (Swan-Ganz) (for measuring pulmonary artery pressure/right ventricular pressure and pulmonary capillary wedge pressure)

Procedure:

1. **General Management of Central IV Lines/Invasive Monitoring Catheters:**
   a. A: Mandatory cleansing of hands via washing with soap and water and/or with alcohol-based skin gel before and after contact with a central vascular access/invasive monitoring line/site.
   b. Use aseptic technique throughout.
   c. Upon patient contact, note the values being displayed and trace the tubing from each transducer to the pressure monitoring catheter it is connected to.
   d. Inspect the insertion site of the invasive catheter/central vascular access line.

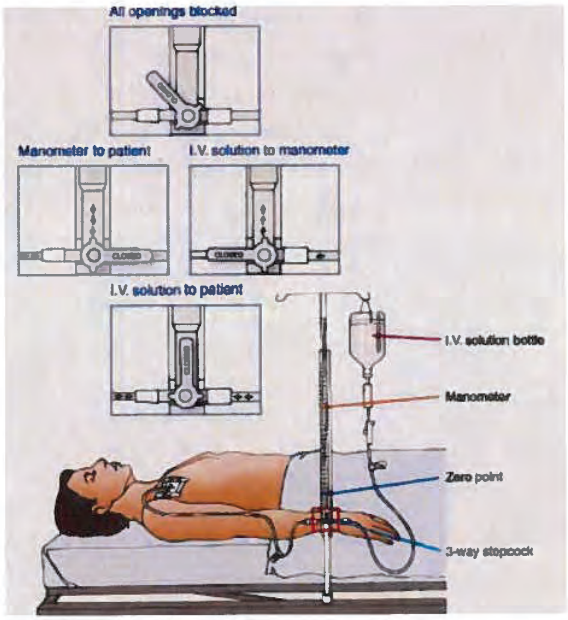
i. Check for redness, swelling, bleeding, and patency. If unable to directly visualize the site, ascertain from nursing staff the patency and condition of the insertion site based on the last dressing change.

e. Be sure you are familiar with the operation of the stopcocks and catheters in use, if not ask the nurse to give you a bedside review of its proper use.
f. Re-dress or keep insertion site covered with sterile dressing.
g. Secure the external portion of the central vascular/invasive monitoring catheter to the patient with tape, kling, or other method to prevent accidental removal during transport or movement of the patient.
h. Review most recent chest x-ray or x-ray report to confirm proper placement/position of the line (if in the chest). Confirm no pneumothorax.
i. Before loading the patient onto the stretcher, take note of the location/level of any transducer/monometer. Have nurse assist in getting a pressure reading prior to moving the patient.
j. Move one pressure cable at a time to the transport monitor, ensuring that the wave forms and values are similar to those that were displayed on the hospital monitor.
k. Review written transfer orders and check for orders that pertain to:
   i. Management of the central catheter/monitoring line in transit.
      1. If none found, question the nurse or physician if any orders need to be given for the management of the line.
      2. Desired values/pressure readings during hemodynamic monitoring and what steps to take (or adjustment in medications to make) if the values fall outside the desired parameters. These must be clearly understood before leaving the transferring hospital.
l. Re-assess the catheter/line setup each time the patient is moved to assure no change in position.
m. Pressure transducers MUST be re-leveled with every position change of the patient.
n. Mark the skin at the referencing level also called the phlebostatic axis.
o. If possible, secure the transducer to the phlebostatic axis.
p. All medications and/or IV Fluids used to treat critical patients MUST be on an IV pump and dosed as per physician orders.
q. In general, to accurately obtain invasive pressure measurements, it is important to take the readings at the end of expiration.
r. Should an invasive line come completely out of a patient, apply direct pressure to the insertion site and hold until the bleeding stops. Keep in mind holding pressure over an arterial site may take longer to control bleeding.

s. DO NOT attempt to replace a catheter that dislodges but does not come completely out of the patient.

2. **Leveling and Zeroing the Pressure Transducers:**
   a. Follow Zoll IBP Procedure (Section 12.30)

3. **Manual Measuring CVP via Central Venous Lines:**
   a. CVP measurement should be obtained at the end of expiration for accuracy.
   b. If measuring manually with a manometer, be sure the zero point on the monometeris level with the mid-axillary line on a supine patient. (see diagram)
   c. Turn the stopcock off to patient and allow the manometer to fill with IV fluid.
   d. Turn stopcock off to IV fluid and all the fluid in the manometer to flow into the patient.
   e. Take the measurement at the end of expiration when the level in the manometer reaches the level where it stops flowing.
   f. Record measurement
   g. Turn the stopcock off to manometer and resume IV fluid administration at desires rate.
   h. Secure manometer to prevent accidental disconnect or injury to the patient
   i. In general:
   j. Elevated CVO (>10) can be from
   k. Positive pressure ventilation
   l. Increased peripheral vascular resistance
   m. Hypovolemia
   n. Right sided heart failure
   o. Cardiac tamponade
   p. Tricuspid insufficiency
   q. Significant vasoconstriction
   r. Pulmonary embolus
   s. Obstructive pulmonary disease
   t. Low CVP (<2) can be from
   u. Hypovolemia
   v. Significant vasodilation
   w. Follow written orders from the transferring physician when measurements fall
   x. outside of normal parameters.



4: Arterial Blood Pressure via an Arterial Line

A. Continuous arterial pressure monitoring ("Art line") use for patients experiencing acute hypertension and hypotension, respiratory failure, shock, neurologic injury, coronary interventional procedures, continuous infusion of vasoactive drugs, and frequent ABG sampling.

B. Arterial line set up (see figure below) should include a bag of IV normal saline enclosed in a pressure bag (pressurized to 300 mm Hg) and connected to special arterial line tubing with a pressure transducer.

C. Level and **zero transducer**

D. Take special care/precaution to protect the attached tubing/pressurized bag of IV fluid and catheter from damage or accidental removal from the patient.

E. If arterial line is connected to a monitor for continuous monitoring of blood pressure, record measurements in the patient care record q 10 – 30 minutes as indicated by the severity of the patient's condition.

F. High - and low – pressure alarms set based on patient's current status. Measurements obtained at end expiration to limit effect of respiratory cycle on arterial pressure.

G. To help maintain line patency and limit thrombus formation, patient should have in place a continuous flush irrigation system that delivers 3 to 6 mL of IV fluid per hour.

H. Assess neurovascular status distal to arterial insertion site hourly. Neurovascular impairment –result in loss of limb –an emergency.

I. Inquire from transferring facility medical staff if arterial line needs to be flushed via the pigtail or squeezable flush system during transport, and if so, how frequently.

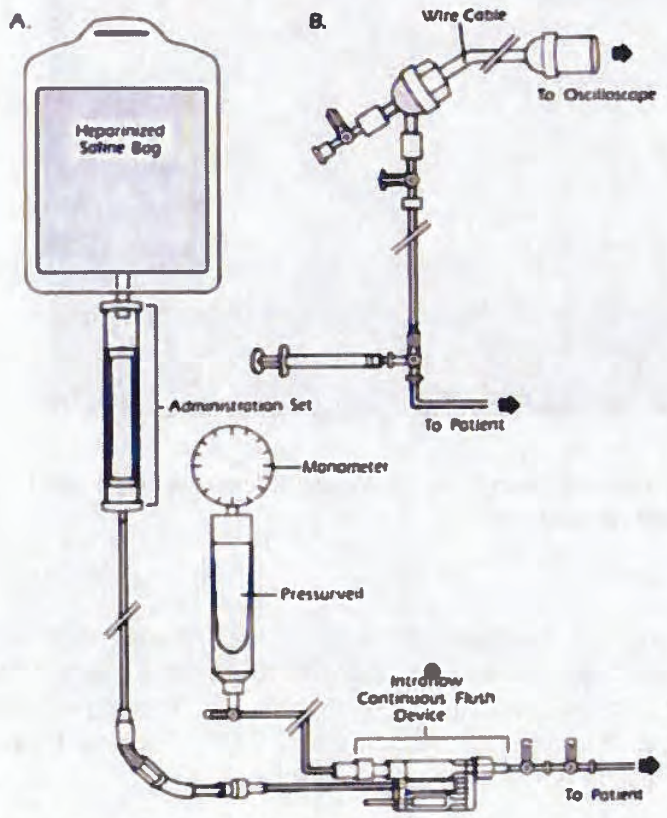
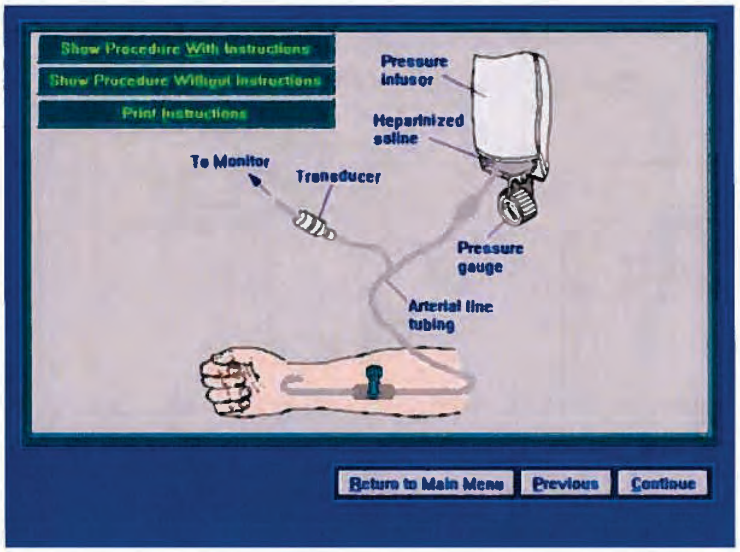


Figure 19–3. Arterial pressure monitoring systems. *A*, System for continuous flush. Heparin (2 ml of 1:1000 unit solution) is added to a 1-liter bag of normal saline, and the bag is pressurized to 300 mm Hg using a metered blood pump (not shown). The continuous flush device is set to deliver 3 ml of the heparinized saline per hour. A mechanical pressure transducer (Pressurveil, Concept Co.) is depicted. The transducer device is a sterile, inexpensive, fully assembled monitor that can be used during patient transfer. Alternatively, the electronic transducer depicted in *B* may be used. *B*, System for manual flush. A heparinized saline flush solution can be injected manually through a syringe at the proximal or distal port. The transducer dome should be maintained at the level of the patient's heart. (From Beal JM (ed): Critical Care for Surgical Patients. New York, Macmillan Publishing Co. Inc., 1982. Reproduced by permission.)



5: Pulmonary Artery Catheter/Swan-Ganz Catheter: (Measurements will be per Critical Care Nurse familiar with procedure)

A: General Considerations:

Pulmonary artery (PA) pressure monitoring, guide acute-phase management of patients with complicated cardiac, pulmonary, and intravascular volume problems. Normal PA (pulmonary artery pressure – PAP) pressure: 20-30 mm Hg systolic and 8 – 12 mm Hg diastolic usual is 25/10; mean is 15 mm Hg; increased systolic in pulmonary HTN, increased diastolic from ventricular failure; decreased PAP with hypovolemia, shock.

1. PA diastolic (PAD) pressure and PAWP-sensitive indicators of cardiac function and fluid volume status-routinely monitored.
2. Monitoring PA pressures-allows precise therapeutic manipulation of Preload- allows CO to be maintained without placing patient at risk for pulmonary edema.
3. PA flow-directed catheter (e.g., Swan-Ganz)-measure PA pressures, including PAWP

a) Distal lumen port (catheter tip) placed within PA, used to monitor PA pressures and sample mixed venous blood specimens (e.g., evaluate oxygen saturation)

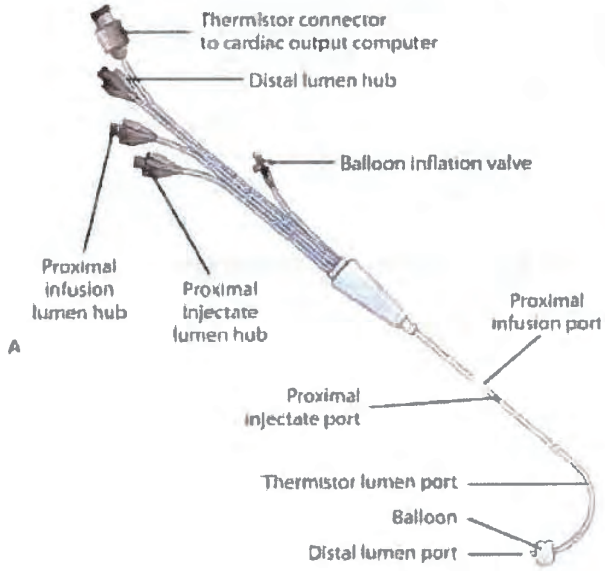
b) Additional lumens-exit ports in right atrium or right atrium and right ventricle (if two).

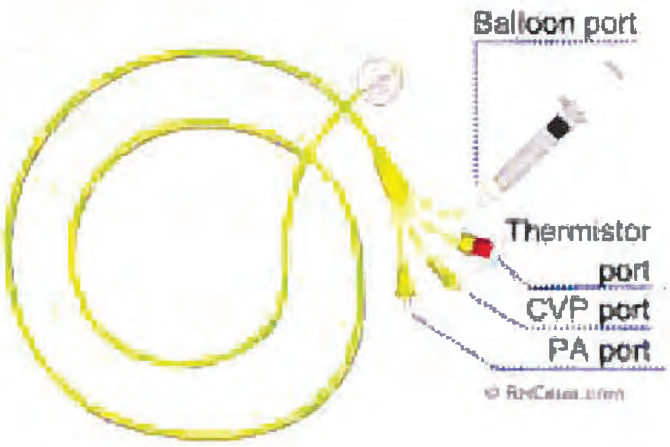
c) Right atrium port- used for measurement of CVP, injection of fluid for CO determination and withdrawal of blood specimens.

d) If a second proximal port available-used for infusion of fluids and drugs or blood sampling.

e) Thermistor (temperature sensor) lumen port located near distal tip-for monitoring blood or core temperature; used in thermodilution method of measuring CO.

f) During initial assessment, note the centimeter measurement of the PAC at the introducer and document in your run report.





B. Two of the lumens are connected to pressure transducers that continuously display measurements.
   1. RA pressure
   2. Pulmonary artery pressure (when balloon is deflated) and pulmonary capillary wedge pressure (when balloon is briefly inflated).

C. Connect the transducers to monitor

D. Zero the transducers

E. Monitor pressure in pressure bag frequently, maintain at 300 mm Hg.

F. If transfer will involve air medical transport, expel all the air left inside of the fluid bag that will be in the pressure bag to prevent expansion during flight.

G. PA measurements-obtained at end of expiration.
   1. Chronic elevation due to;
      i. Right heart failure
      ii. Pulmonary hypertension
      iii. Atrial/ventricular septal defect
      iv. Hypervolemia
   2. Elevation of pulmonary diastolic pressure due to
      i. Tachycardia
      ii. Pulmonary emboli
   3. Acute/sudden elevation due to hypoxemia and hypercarbia
   4. Decreased pulmonary artery diastolic pressure seen with hypovolemia

H. PAWP measurement –**obtained by slowly inflating balloon with air (balloon capacity usually 1 – 1.5 mL) until PA waveform changes to PAWP waveform; balloon** – not inflated more than four respiratory cycles or **8 to 15 seconds** – ***inflation of balloon blocks pressure from behind (wedging) – allows measurement of pressure generated by left ventricle** = Pulmonary Artery Wedge Pressure (PAWP). Measure at end of expiration.
   1. Patient – Peak
   2. Ventilator - Valley

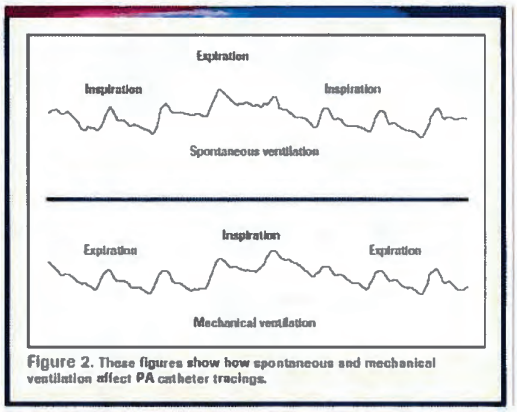
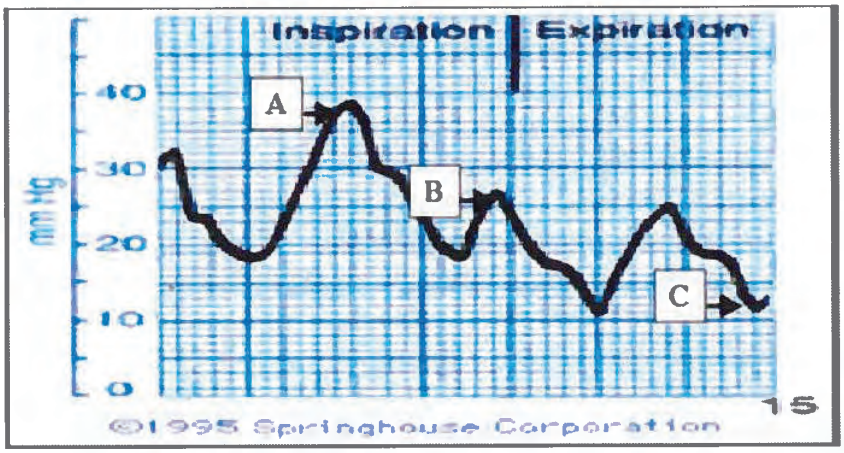


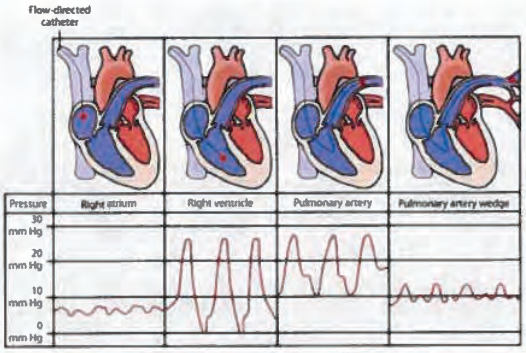
Figure 2. These figures show how spontaneous and mechanical ventilation affect PA catheter tracings.



If patient above were being ventilated, measure at "c".

3. Elevated PCEP
   i. Hypervolemia
   ii. Left ventricular failure
   iii. Mitral valve disease
   iv. > 18 mm Hg potential for pulmonary edema
   v. High Peep
      a) For every 5 cm H2O of peep, subtract 1.5 from measured PCWP. This is the corrected PCWP.

   i. Assess left ventricular function
   ii. Normal PAWP: 6 – 12 mm Hg (slightly different values various sources; average value) – Reflects preload of the LV or LVEDP; equal PA diastolic if no pulmonary problems
   i. Inc. PAWP due to left ventricular failure, mitral valve problems, hypervolemia and pericardial tamponade
   iv. Decreased PAWP due to low stroke volume, hypovolemia, shock



HEMODYNAMIC MONITORING/CENTRAL VASCULAR ACCESS LINES
Section 16.2

I. Common hemodynamic measurements and the method obtained

1. Central Venous Pressure (central line or PAC)
2. Systemic Blood Pressure (arterial line)
3. Diastolic Blood Pressure (arterial line)
4. MAP (arterial line, calculated)
5. Pulse Pressure (arterial line, calculated)
6. Pulmonary artery pressure (systolic, diastolic, and mean) (PAC)
7. PCWP (PAC)
8. CO (PAC)
9. Pulmonary vascular resistance (PAC, calculated)

Normal Ranges and values for Hemodynamic Measurements	
Assessment Parameter	**Normal Range/Value**
CVP mm Hg	2 to 6
SBP, mm Hg	100 to 200
DBP , mm Hg	60 to 80
MAP, mm Hg	70 to 105
Pulse Pressure, mm Hg	40 to 60
Heart Rate	60 to 100
Pulmonary artery pressure, systolic	15 to 30
Pulmonary artery pressure diastolic	8 to 15
PCWP	4 to 12
CO, L/min	4 to 8
Pulmonary vascular resistance, dyne-sec/cm^{-5}	100 to 250
SVR, dyne-sec/cm^{-5}	800 to 1,200
SV, mL/beat	60 to 100

SV_{O^2}, %	60 to 80
$ScvO^2$, %	≥ 70
Cardiac Index, L/min/m^2	2.5 to 4.2
Stroke volume index, mL/beat/m^2	30 to 50

Abbreviations:
CO = cardiac output; CVP = central venous pressure; DBP = diastolic blood pressure; MAP = mean arterial pressure; PCWP = pulmonary capillary wedge pressure; SBP = systolic blood pressure; $ScvO^2$ = mixed central venous oxygen saturation, SV = Stroke volume; SVO^2 = mixed venous oxygen saturation; SVR = systemic vascular resistance

6. Useful formulas for Advanced Scope Transport Teams

A. Cardiac Output: CO = SV xHR

Or using the Fick Principle

CO = Oxygen consumption / Arteriovenous Oxygen Content Difference

1. BSA
2. Hemoglobin level
3. Arterial Oxygen saturation (from blood gas) or O^2 sat from pulse ox

To Calculate CO:

1. Calculate the oxygen consumption based on presumed 125 mL oxygen consumed per square meter BSA (1.25 x BSA)
2. Calculate the arteriovenous oxygen content difference. Each gram of hemoglobin can carry 1.36 mL of oxygen. Hence the difference is expressed as follows:

   1.36 x hemoglobin x (Arterial Saturation – Venous Saturation) x 10
3. Divide the calculated oxygen consumption by the calculated arteriovenous oxygen content difference to produce the estimated CO in liters per minute. NOTE: Venous saturation is blood gas sample drawn from pulmonary artery port.

B. Cardiac Index: Cardiac Index = CO / BSA

C. Mean Arterial Pressure: MAP = DBP +1/3 (SBP – DBP)

D. Pulse Pressure: Pulse Pressure = SBP – DBP

E. Pulmonary Vascular Resistance:

$$PVR = \frac{(\text{Mean Pulmonary Artery Pressure} - PCWP)}{CO} \times 80$$

F. Systemic Vascular Resistance:

$$SVR = \frac{(MAP - CVP)}{CO} \times 80$$

G. Stroke Volume: SV = CO / HR

H. Stroke Volume Index: Stroke Volume Index = SV / BSA

SCT

The X Series unit has three invasive pressure channels: P1, P2, and P3. You can use these channels to measure arterial, venous, or intracranial pressures using invasive transducers with 5uV/V/mmHg sensitivity. Each channel requires its own connector, cabling, and pressure transducer

Procedure:

IBP Setup

To take safe and accurate IBP measurements using the X Series, you must perform the following steps, each of which corresponds to a section in this book. Read each section carefully before you perform IBP measurements.

1) Attach the invasive pressure transducer to the X Series unit.
2) Zero the transducer.
3) Set the invasive pressure alarms.
4) Select a label for the invasive pressure channel.

Attaching the Invasive Pressure Transducer

Follow these steps when attaching the invasive pressure transducer:

1) Inspect the transducer cable. If the cable shows any signs of wear, breakage, or fraying, replace the cable. Replace the transducer dome, if necessary.
2) Apply the transducer.
3) If the transducer is a disposable unit with a separate cable, connect the transducer to the transducer cable.
4) Plug the transducer cable into one of the three six-pin IBP cable connectors on the side of the X Series unit.

Figure 11-1 Plugging the Transducer into the X Series

When you plug the transducer cable into the unit, the message *ZERO PROBE* appears in the numeric display window for that IBP channel

Zeroing the Transducer

Follow these steps when zeroing a transducer:

1) Place the transducer at the same height as the patient's left atrium.

2) Close the transducer stopcock to the patient.

3) Open the transducer's venting stopcock to atmospheric air.

4) Allow the transducer a few seconds to settle.

5) Use the navigation keys to highlight and select the tranducer's IBP channel and display the IBP channel's parameter control panel:

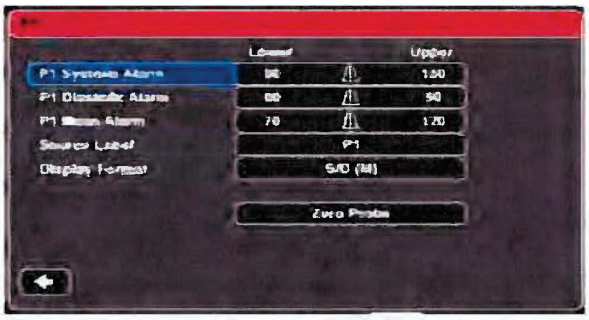


Figure 11.2 IBP Channel Parameter Control Panel

Zeroing the Transducer Continued

6) Select Zero Probe. The unit displays the message ZEROING in the IBP Channel's numeric display.

7) The message ZEROED appears in the IBP channel's numeric display.

8) Close the transducer's stopcock.

9) If the unit was unable to zero the transducer, the message ZERO REJECTED appears in the IBP channel's numeric display. The unit will not display pressure values for the IBP channel until it has successfully zeroed the transducer and established an acceptable zero reference.

Note: Check that the unit is open to atmospheric air and that it is properly connected to the unit, then try zeroing the transducer again. The X Series unit will not zero the transducer if it

detects pulsation in the pressure channel, if there is too much noise in the signal, or if transducer's offset is too great.

Warning! If you attempt to zero an IBP channel after the channel has been successfully zeroed and is currently monitoring a pressure waveform, the unit will display the message, ZERO REJECTED, in the IBP channel's numeric window. This message will preempt the display of the valid invasive pressure numeric.

Displaying IBP Measurements

After attaching and zeroing a transducer, the X Series unit displays the invasive pressure's systolic, diastolic, and MEAN values in the IBP channel's numeric display and, optionally (if enabled through the unit's Waveform Select menu) the waveform for that IBP channel:

The X Series unit allows you to specify a label that identifies the channel's IBP measurement, and to select a display format for the numeric display. The unit displays the waveform scales after you zero the transducer. When the unit accepts the zero reference value, it determines the waveform scales and displays them.

IBP Alarms and Limits

When enabled, the X Series unit sounds alarms whenever IBP measurements are outside set limits for the following:

- High and Low Systolic Pressure
- High and Low Diastolic Pressure
- High and Low Mean Arterial Pressure (MEAN)

To enable (or disable) IBP alarms and set Upper and Lower alarm limits and IBP channel, you can use the navigation buttons to highlight and select the IBP channel display.

Note: When enabled, any of the low alarms for IBP (systolic, diastolic, or mean) will also provide an alert in the event of a disconnected catheter.

ZOLL X SERIES IBP

Section 16.2.1

Patient Type	Systolic Limit	Systolic Limit Range	Diastolic Limit	Diastolic Limit Range	Mean Limit	Mean Limit Range
Adult	Lower: 75mmHg Upper: 220mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg	Lower: 35 mmHg Upper: 110 mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg	Lower: 50 mmHg Upper: 120 mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg
Pediatric	Lower: 75mmHg Upper: 145mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg	Lower: 35 mmHg Upper: 100 mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg	Lower: 50 mmHg Upper: 110 mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg
Neonate	Lower: 50mmHg Upper: 100mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg	Lower: 30 mmHg Upper: 70 mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg	Lower: 35mmHg Upper: 80mmHg	Lower: -30 to 298 mmHg Upper: -28 to 300 mmHg

IBP System Messages

System Message	Cause
TRANSDUCER FAILURE	The IBP probe is damaged and needs to be replaced.
INCOMPATIBLE TRANSDUCER	The IBP probe is not compatible. See the Appendix B, Accessories, for a list of ZOLL-approved IBP probes.
CHECK PROBE	The IBP probed has become disconnected.
ZERO PROBE	The IBP probe is connected and needs to be zeroed.
ZEROING	The IBP probe is zeroing.
IBP DISABLED	A system error has occurred, and the X Series unit should be serviced.
ZERO REJECTED	The IBP probe was not removed due to a pulsatile pressure signal, excessive IBP artifact or excessive transducer offset

Conditions Affecting IBP Measurements

- When reading blood pressure measurements on the IBP numeric display, keep in mind that the following conditions can affect the accuracy of IBP measurements:
- Catheter placement in the vasculature. Artifact such as catheter whip should be handled per your established clinical protocols.
- Position of the transducer stopcock, catheter, and flush port.
- Saline line flushes which will temporarily interrupt accurate pressure measurement.
- Position of the transducer relative to the patient's phlebostatic axis or catheter tip.
- Patient movement.
- Catheter clogging.
- Air bubbles in catheter or transducer dome.
- Electromagnetic interference.

INTRA-AORTIC BALLOON PUMP

Section 16.3

SCT

To guide the Advanced Scope transport team in transporting a patient on an Intra-aortic Balloon pump. At least one member of the transport team MUST be a certified perfusionist, critical care nurse trained to operate an Intra-Aortic Balloon Pump console, or other person certified to operate the IABP Console on all IABP transports.

Equipment:

1. IABP with transport module
2. Appropriately sized balloon catheters with insertion kit (only if qualified personnel will be accompanying the transport team to use this)
3. Spare helium tank (200 psi)
4. Operator's manual
5. Stopcocks
6. 60 mL syringe (luer tip)
7. Skin electrodes
8. IABP extension tubing
9. Doppler ultrasound device (to assess distal pulses)
10. Extra EKG cables
11. 2' cloth tape to secure IABP EKG electrodes and catheter to patient
12. Arterial pressure monitoring transducer and setup
13. Pressure transducer cables
14. Arterial flush solution (500 mL NS with 1,000 U of heparin)
15. Adapters to fit other brands of balloon catheters to the IABP console
16. Knee immobilizer
17. Soft restraints

General Guidelines:

1. When entering the facility to transport a patient receiving IABP therapy, visually assess the surroundings to ensure hallways, elevators and routes of travel will accommodate necessary equipment and personnel.
2. Obtain patient report
3. Ascertain current IABP settings and note typical pressures (console systolic, diastolic, augmentation and mean arterial pressures)
4. Determine IABP catheter model, size and insertion depth (measurement at insertion site). Know and document the insertion depth prior to moving
5. Ascertain that the balloon tip location has been verified by chest x-ray
6. Conduct an assessment. IABP focus includes inspection of the insertion site for active bleeding, peripheral pulses in both lower extremities (may require Doppler confirmation), and a radial pulse in the left upper extremity (to ensure subclavian blood flow)

7. Attach new EKG leads and secure each lead over the electrode with 2" cloth tape. This
   step will prevent lead disconnection and potential loss of trigger during transport.
8. Ensure the IAB tubing and catheter are taped securely to the patient's leg; however, **DO NOT TAPE THE IAB CATHETER AND THE IAB TUBING TOGETHER AT THE CONNECTOR. IF THE IAB TUBING IS ACCIDENTLY PULLED, IT IS BETTER FOR THE BALLOON CATHETER TO SEPARATE FROM THE TUBING AT THE CONNECTOR THAN FOR THE BALLOON TO BE PULLED OUT WITH THE TUBING.**
9. Apply a knee immobilization splint to the leg in which the IAB was inserted to prevent leg flexion during transport
10. Ensure that the appropriate connectors to attach the IABP to the transport console are
    available. Determine the console that will be used at the receiving facility, and be certain to take any necessary adapters or connectors (usually included in the IAB insertion kit)
11. Move the patient to the transport stretcher. Connect and secure all pumps, monitors, ventilators, and other equipment. Do not elevate the head of the bed greater than 30°.
12. Transfer the IAPB to the transport console at the bedside.
13. Establish power to the transport IABP console
14. Open the helium tank, verify pressure.
15. Follow the IABP console instructions for start-up (on the console help screens or in the manufacturer-provided user manual).
    A. Establish EKG and pressure waveforms from the patient
    B. Confirm initial pump settings
    C. Set timing
    D. Initiate IAB pumping
    E. Set console alarms
    F. Confirm all pump settings
16. Optimize IABP timing in the 1:2 mode
    A. Set inflation by adjusting inflation to a later time until the dicrotic notch becomes visible, then move inflation to an earlier time until a crisp V pattern appears at the dicrotic notch
    B. Set the deflation to achieve the lowest possible diastolic pressure while maintain maximal augmentation.
17. Assess pressures every 5 minutes or with any changes in the patient's condition during transport. Check the insertion site and pulses every 15 minutes.

18. Restrain and sedate the patient as needed
    A. Use soft restraints prn to protect the patient from causing harm if he/she is

confused and may pull tubes, etc.

B. Sedate with Versed 0.05 – 0.1 mg/kg IV/IO, max 10 mg

19. If the patient is being transported by air,
    A. Verify if IABP console has ability to compensate for altitude changes
    B. Switch to AUTO FILL mode (if available)
    C. If no auto-fill capability, the IABP operator can manipulate the extent to which the balloon inflates to make it safe. The manual fill must be performed at the same intervals that an auto fill would occur.
20. Document parameter q 15 minutes or prn changes in patient status
21. Monitor for complications frequently
    A. Bleeding at insertion site
    B. Frequently compare left radial pulse to right radial pulse to assess if catheter has moved cephalad (balloon may have occluded left subclavian artery)
    C. Monitor depth of catheter
    D. Watch for sudden decrease in urine output (balloon may have occluded renal arteries)
    E. Check pulses in distal extremity where catheter is inserted

NOTE: If any complication occurs, contact medical control (transferring MD, receiving MD, or Ambitrans MD) immediately for assistance or see below.

IABP EMERGENCY INTERVENTIONS

Section 16.3.1

SCT

Console Failure:

If the IABP console becomes disabled, manual inflation and deflation should be performed as soon as possible. The balloon must not remain idle (i.e., immobile) in a patient for more than 30 minutes. To manually inflate and deflate the IAB Catheter:

1. Disconnect the IAB from the male Luer end of the extension tubing
2. Attach the three-way stopcock and 60 mL syringe to the IAB catheter's male Luer. **Warning: Never inject air into the central lumen (female Luer hub).**
3. Aspirate to ensure that blood is not returned through the extracorporeal tubing.

   Warning: If blood is aspirated from the male Luer fitting of the extracorporeal tubing, immediately remove the IAB catheter owing to damage to IAB.
4. Inflate the IAB with 40 mL of air or helium, and immediately aspirate. Repeat every 5 minutes while IAB is inactive.

Cardiac Arrest:

1. Switch the IABP to trigger to pressure mode
2. Initiate CPR
3. Provide standard ACLS and BCLS resuscitation, including defibrillation, if indicated
4. Once return of spontaneous circulation occurs, MAP is adequate (> 60 mm HG), and the EKG rhythm us stable, return the IABP trigger to EKG mode.

Balloon Rupture or Leak:

1. Inspect IAB tubing for blood in air channel
   - A. If blood detected inside gas lumen of catheter, IABP therapy should be discontinued immediately.
   - B. Catheter should be disconnected
   - C. If signs/symptoms of gas embolus are present, place the patient in left lateral recumbent position
   - D. Administer high flow oxygen
   - E. Transport to the nearest appropriate facility
2. If gas alarm sounds on console
   - A. Assess the patient and tubing, check connections
   - B. If source of leak cannot be determined then assume IAB leak is possible.

   NOTE: Fever and tachycardia can cause a gas loss alarm to sound.

Depletion of Helium:

1. Apply direct pressure to the insertion site

2. If tank requires changing, close the valve on the depleted tank and replace with full one. Be sure the washer is in position between the tank and the regulator (similar to an oxygen tank).

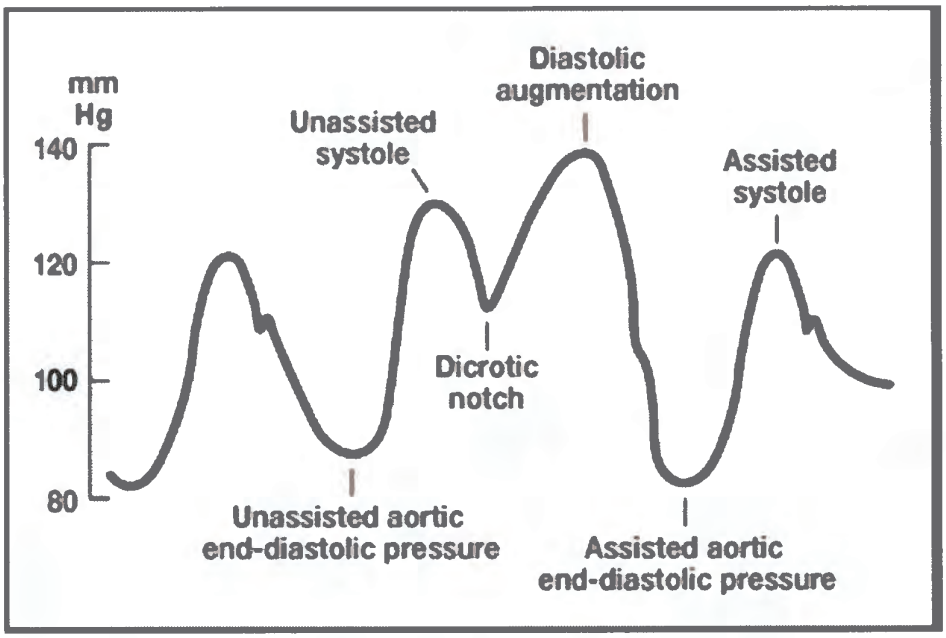
Excessive Bleeding:

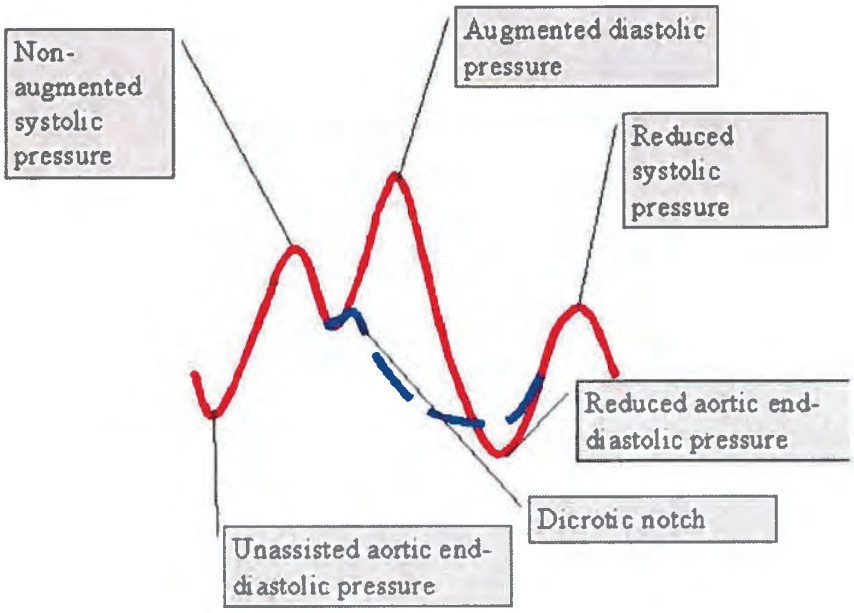
1. Apply direct pressure to insertion site.
2. Consult med control (transferring or receiving MD, or Ambitrans MD) for consideration to discontinue infusion or anticoagulation medications
3. If bleeding cannot be controlled, divert to the closest appropriate facility.

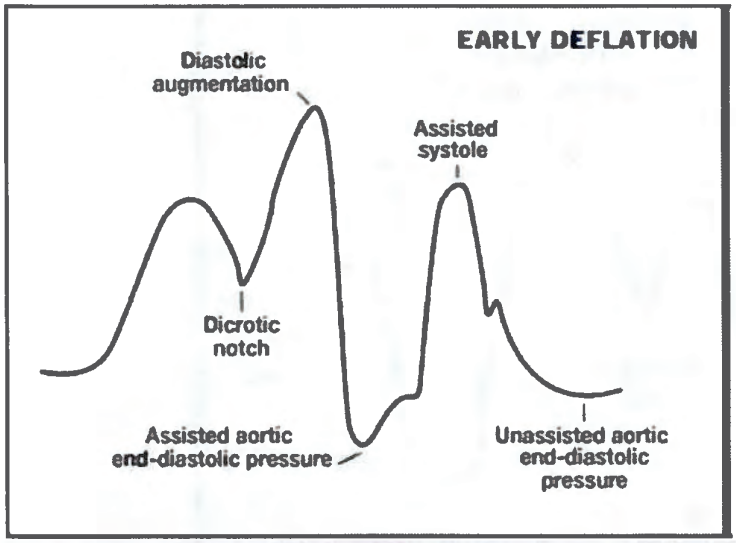
Catheter Migration or Accidental Removal:

1. IAB catheters have sterile sheaths that allow for the adjustment of the insertion depth without contaminating the catheter.
2. If the catheter has moved significantly but has not become dislodged or disconnected from the sterile sheath, the IABP should be placed on standby mode (pumping stopped) and the catheter reinserted to the appropriate depth (same level as when the patient was picked up)
    A. Significant accidental movement of more a few cm should not be adjusted without consulting med control (transferring MD, receiving MD, or Ambitrans MD).
3. If movement of catheter occurred at the referring facility;
    A. Request a chest x-ray prior to transport to verify the location of the cath
    B. Consult the MD who inserted the cath to re-evaluate position
4. If significant movement/migration or accidental removal occurred during transport, consider discontinuing IABP therapy after consulting with medical control

IABP timing of inflation/deflation in relation to wave forms;


mm Hg
140
120
100
80
Unassisted systole
Diastolic augmentation
Assisted systole
Dicrotic notch
Unassisted aortic end-diastolic pressure
Assisted aortic end-diastolic pressure


Non-augmented systolic pressure
Augmented diastolic pressure
Reduced systolic pressure
Reduced aortic end-diastolic pressure
Dicrotic notch
Unassisted aortic end-diastolic pressure



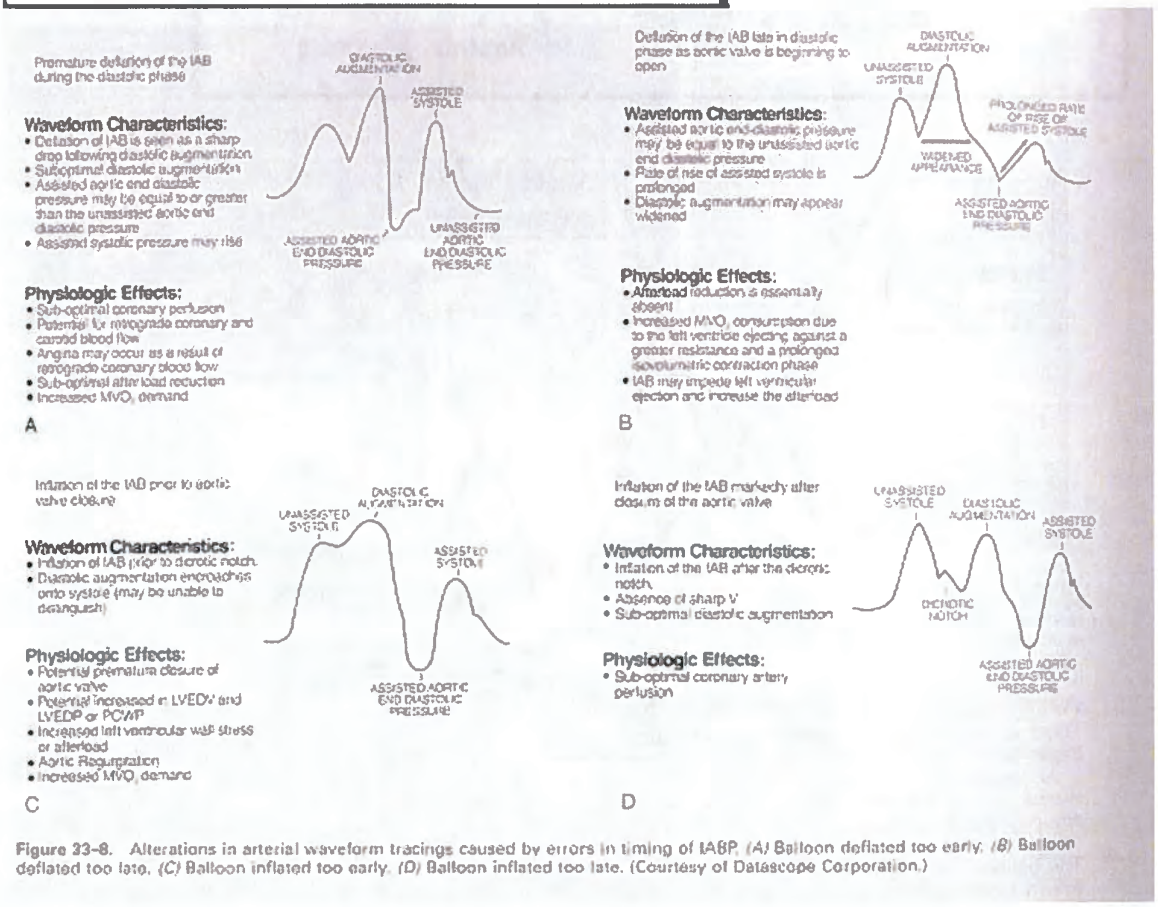


Figure 33-8. Alterations in arterial waveform tracings caused by errors in timing of IABP. *(A)* Balloon deflated too early. *(B)* Balloon deflated too late. *(C)* Balloon inflated too early. *(D)* Balloon inflated too late. (Courtesy of Datascope Corporation.)

INTRACRANIAL PRESSURE MONITORING {ICP}

Section 16.4

SCT

The transferring MD may only require that you take care of the ICP device and not necessarily monitor the ICP in transit. Care must be taken not to accidentally dislodge it.

The primary goals of ICP monitoring are identification of ICP trends and evaluation of therapeutic interventions to minimize ischemia in the brain-injured patient. ICP monitoring allows for early detection of intracranial hypertension (> 15 mm HG) and subsequent aggressive management.

Recall MAP – ICP = CPP where MAP is mean arterial pressure, ICP is intracranial pressure and CPP is cerebral perfusion pressure. If the ICP rises too high, it will decrease the CPP. The goal is for the cerebral perfusion pressure to be maintained between 50 to 70 mm HG. In order to achieve this, the Advanced Scope Team may be given orders from the transferring facility to maintain ICP and if necessary, drain off fluid to lower the ICP if it rises.

Signs and Symptoms:

1. Cushing's Triad (widening pulse pressure, bradycardia, and abnormal respiratory patterns)
2. Hypertension
3. Increased respiratory rate
4. Pulmonary Edema

Equipment Needed:

1. External drainage system with mounting card
2. Pressure tubing with 48" pressure tubing
3. Sterile 0.9% sodium chloride (NaCl) with sterile 20 mL syringe
4. Pressure monitoring cable
5. IV tubing
6. Bag-valve mask and 100% oxygen source
7. Cardiopulmonary monitor
8. BSI attire

Procedure:

1. USE aseptic technique at ALL times.
2. If using the CORDIS EDS DEVICE (most commonly used)
    A. Assemble the Cordis EDS as instructed per the package insert and per the mounting care diagrammatic instructions, using 0.9% NaCl to flush the system. Place the 48" tubing, with connected pressure transducer, on the plastic mounting card.

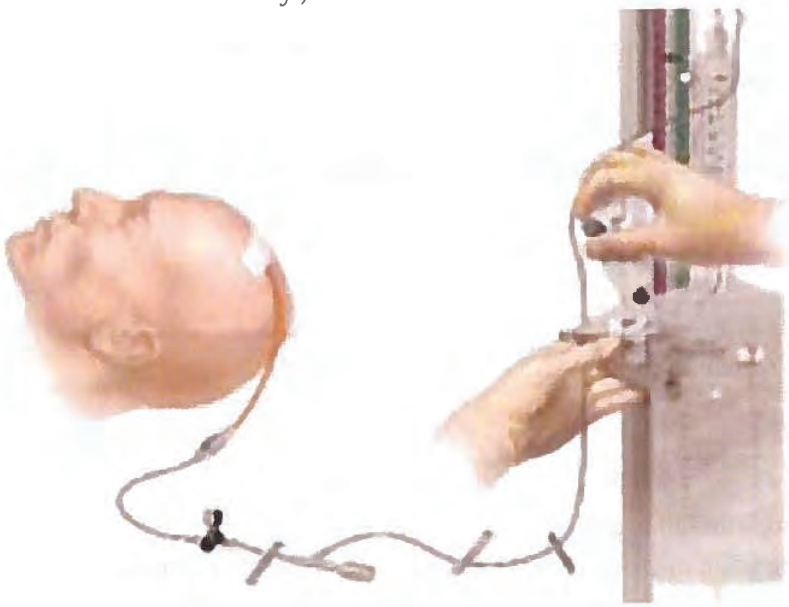
B. Avoid tension or kinking of the pressure mounting cable
C. Place the patient in a semi-fowler's position and position the zero reference point at the outer canthus of the eye.
D. Obtain the ICP waveform on the cardiopulmonary monitor. Turn the stopcock nearest the patient so that the ICP waveform is visualized.
E. Zero the transducer at the distal stopcock.
F. Record the ICP on the printer and mark and post the strip. Calculate and record the CPP on the strip.
G. For continuous drainage, turn the stopcock nearest the patient so the drainage resumes and pressure monitoring is discontinued. Note: it is recommended that pressure monitoring and CSF drainage not be done simultaneously.
H. Maintain a clean and intact dressing. If the dressing is soiled or contaminated, change it using a sterile technique.

3. If other type monitoring system and/or external drainage system is in use, the Team MUST review the equipment with the transferring staff and be absolutely confident in their capability of monitoring the ICP and/or draining the CSF as ordered by the transferring MD.
4. The physician's order for drainage must include a pressure reading either in mm Hg or cm H_2O and the height (as marked on the mounting card) at which the drainage cylinder must be maintained.
5. The zero-reference point for ICP monitoring always remains the outer canthus of the eye.
6. **Only small amount of CSF (not to exceed 3 mL) should be drained at one time. Rapid cerebral decompression from CSF over-drainage may result in herniation.**
7. Simultaneous drainage and pressure monitoring are not recommended
   A. To ensure precise pressure measurements, perform only pressure monitoring while keeping the stopcock closed to the drainage system

Precautions:

A. Tight connections must be maintained
B. System must remain free of air
C. Never use a flush device for ICP monitoring
D. Use only sterile 0.9% NaCl to fill the pressure tubing
E. Never use a heparinized solution
F. Must maintain proper leveling and zeroing of system
G. Care must be taken when turning or positioning patient to avoid accidental decannulation or disconnection of the tubing.
H. Maintain HOB at 30° to 45° head-up
I. Monitor

9. You may be given other orders and provided medications to administer to manage the increased ICP during transport including:
    A. Intubate and mechanically ventilate the patient. Do not hyperventilate the patient unless he/she acutely deteriorates.
    B. Administer an osmotic diuretic such as Mannitol
    C. Administration of dexamethasone or methylprednisolone
    D. Maintain blood pressure of systolic of less than 150 mm Hg
    E. If surgical drain (bolt) has been installed, you may be ordered to drain CSF if the ICP is greater than 20 cm H_2O
    F. If the patient with intracranial hemorrhage was on Coumadin, you may be requested to give fresh frozen plasma or platelets (provided by the transferring facility.)



BLOOD ADMINISTRATION

Section 16.5

Procedure: The procedure for administering blood or blood products are:

Indications:

- Significant hypovolemia as the result of acute blood loss
- Symptomatic anemia
- Decreasing hemoglobin level
- Decreasing hematocrit value
- To increase oxygen-carrying ability
- Decrease clotting factors
- Presurgical care in select cases

Equipment

- Physician orders
- Blood product, typed and cross matched (in some cases maybe cryoprecipitate,
- platelets, or plasma)
- Dedicated venous access line (18 – gauge or larger needle)
- Filtered administration set
- Normal saline solution

Complications

- Anaphylaxis
- Hemolytic reaction
- DIC
- Transfusion reaction
- Infection

Signs of complications include the following:

- Body temperature of 2 degrees F or more above the baseline temperature
- Hives, itching, or skin symptoms
- Swelling, soreness, or hematoma at the venous site
- Flank pain
- Tachycardia
- Respiratory distress
- Hypotension
- Bleeding from widely varied sites or previously clotted wounds
- Blood in the urine
- Anaphylaxis
- Nausea and vomiting

BLOOD ADMINISTRATION

Steps: If you are to start a blood product provided by the transferring facility;

- Prior to leaving the transferring facility, physically look at the product with the transferring nurse and confirm you have the right product for the right patient.
- Review the order with the transferring nurse.
- ALL PRODUCTS MUST BE ADMINISTERED VIA AN I.V. PUMP
- Re-confirm the order or protocol prior to administering
- Check the patient for the following: right patient, right blood product, right type.
- HAVE A SECOND PROVIDER CONFIRM STEPS ABOVE WITH YOU.
- Assess baseline vital signs.
- Ensure suitable venous access (usually requires 18 gauge or larger). At this point, patient preparation is complete, and the transfusion procedure begins.
- Assess the patient for the possibility of a transfusion reaction, and consider prophylactic administration of ibuprofen or acetaminophen and diphenhydramine
- Maintain the temperature of the blood product
- Flush the primary tubing with normal saline
- Cover the administration filter with blood
- Connect the blood to the tubing
- Piggyback into the I.V. line of normal saline
- Start the transfusion slowly
- Monitor every 5 minutes for adverse reactions

BLOOD TRANSFUSION REACTIONS

Section 16.5.1

Purpose: To identify the various types of transfusion reactions and how to manage them.

Criteria: Types of reactions with signs and symptoms and treatment protocols: If it is unclear what type of reaction the patient is having stop the transfusion, keep vein open with normal saline, contact physician (transferring, receiving, or Ambitrans MD) for guidance.

1. **Allergic reaction (Mild); sensitivity to infused plasma proteins**
   (Severe): antibody – antigen reaction

   A: S/S (Mild): chills, facial and laryngeal edema, pruritus, urticaria, and wheezing
   S/S (Severe): dyspnea, chest pain, circulatory collapse, cardiac arrest

   B: Tx:
   - i. Stop the transfusion. Disconnect the blood administration set from the adapter or hub of the venous access device.
   - ii. Keep the vein open with normal saline.
   - iii. Monitor vital signs.
   - iv. Notify med control or Ambitrans MD if able
   - v. Follow **Allergic Reaction Protocol**

2. **Bacterial contamination: Contaminated blood administration**

   A: S/S: chills, fever, vomiting, abdominal cramps, bloody diarrhea, hemoglobinuria, shock, renal failure, DIC.

   B: Tx:
   - i. Stop the transfusion. Disconnect the blood administration set from the adapter or hub of venous access device.
   - ii. Keep vein open with normal saline
   - iii. Hold and send the remaining blood to a laboratory (at receiving hospital if in transit or at transferring hospital if you haven't left yet)
   - iv. Obtain blood specimen from patient for culture
   - v. Administer I.V. fluids to maintain SBP > 90 mm Hg
   - vi. Further orders per med control (transferring MD, receiving MD, or Ambitrans MD).

3. **Febrile transfusion reactions: Sensitivity of the client's blood to white blood cells, platelets, or plasma proteins**

   A: S/S: Temp (as high as 104 degrees F), chills, headache, facial flushing, palpitations, cough. Chest tightness, increased pulse rate, flank pain

   B; Tx:

i. Discontinue the transfusion immediately
ii. Give antipyretics (Tylenol 650 mg to 1 gm or Ibuprofen 400 – 800 mg po)
iii. Keep vein open with Normal Saline
iv. Notify MD

4. **Hemolytic transfusion reaction: Incompatibility between client's blood and donor's Blood.**

A: S/S: Chills, fever, headache, backache, dyspnea, cyanosis, chest pain, tachycardia, Hypotension

B: Tx:

i. Discontinue the transfusion immediately. NOTE: when the transfusion is discontinued, the blood tubing must be removed as well. Use new tubing for the normal saline infusion.
ii. Keep the vein open with normal saline.
iii. Send the remaining blood, a sample of the patient's blood and a urine sample to the laboratory.
iv. Notify the transferring MD, receiving MD or Ambitrans MD as soon as possible.
v. Monitor vital signs
vi. Monitor fluid intake and output.

5. **Circulatory overload: Blood administered faster than the circulation can accommodate.**

A: S/S: Cough, dyspnea, crackles (rales), distended neck veins, tachycardia, hypertension

B: Tx:

i. Place patient upright with feet dependent
ii. Administer Lasix 20 – 40 mg I.V.
iii. Oxygen 2 – 4 lpm via nasal cannula
iv. Stop or slow the transfusion

1. **Other adverse reactions to consider and treatment options that may be ordered by transferring facility or Medical Control**

A: Bleeding tendencies: (from low platelets)

i. S/S: Bleeding and oozing from breaks in the skin or gums, abnormal bruising and petechiae.
ii. Tx: May be ordered to give platelets, FFP (fresh frozen plasma) or cryoprecipitate, if provided by transferring facility.

B: Hypocalcemia: (from citrate toxicity that binds calcium)

i. S/S: arrhythmias, hypotension, muscle cramping, nausea, vomiting, seizure

activity, and/or tingling sensation in the fingers

ii. Tx:

a: Slow or stop transfusion

b: If ordered by medical control (transferring MD, receiving MD, or Ambitrans MD), calcium gluconate 1 gm IV infused slowly.

C: Hypothermia

i: S/S: chills, shivering, hypotension, arrhythmias, bradycardia, and/or cardiac arrest if temp falls below 86 degrees F.

ii: Tx:

a: Stop the transfusion

b. Warm the patient

c: Obtain EKG reading (preferably 12 lead)

d: Warm the blood if the transfusion is resumed

D: Potassium intoxication (Hyperkalemia)

i: Diarrhea, intestinal colic, flaccidity, muscle twitching, oliguria, signs of renal failure, bradycardia, EKG changes (tall peaked T waves, prolonged PR interval, prolonged QRS and/or cardiac arrest).

ii: Tx:

a: Perform an EKG (preferably a 12 lead)

b: Administer Albuterol (only) nebulizer

c: Administer Sodium Bicarb 1 amp I.V.

d: If glucose < 200, administer 1 amp of D50W I.V.

2. **Documentation Guidelines**

A: Time and date of reaction

B: Type and amount of infused blood product

C: Patient's vital signs, and all signs and symptoms noted.

D: All specimens collected and sent to laboratory for testing

E: Time MD notified and emergency medical treatment provided, including medication administered, times and dosages, and the response to treatment.

F: Patient's status at the end of the incident.

AMBITRANS MEDICAL TRANSPORT, INC.
MANAGEMENT AND STAFFING PLAN

Ambitrans Medical Transport, Inc., submits its Management and Staffing Plan provide ground ambulance transportation services in Manatee County, Florida.

I. Organization

The management team at Ambitrans collectively has over 200 years of experience in the EMS industry. Ambitrans' Director of Operations oversee our Operations Supervisors, who work in 24-hour shifts so there is continuous oversight of Ambitrans' personnel.

Ambitrans' leadership team has a diversified skill set. Our Owner and President was the Majority Leader for the Florida House of Representatives and is a former Treasurer of the Florida Ambulance Association. Our Chief Executive Officer is Florida Bar Board Certified in Health Care Law as well as a past Charlotte County Airport Authority Commissioner and was awarded a certificate from Harvard Business School. Our Chief Operating Officer is a member of the Florida Ambulance Association and a . Our Director of Human Resources administers benefits, complies with reporting requirements, and oversees payroll.

Dr. Daniel V. O'Leary serves as our medical director of record as mandated under Florida Statute 401.265. This is in addition to his normal day-to-day duties as an emergency room physician at AdventHealth in Port Charlotte as well as serving as the Medical Director for Charlotte County Fire and EMS.

II. Staffing

Through the use of the company's computer aided dispatch software, Traumasoft™, management is able to staff according to anticipated demand. Staffing levels and patterns are determined using historical data and other internal statistics. Vehicles are posted in accordance with direction from our communications center personnel to specified areas to aid in proper deployment and call response. Our goal is to meet or exceed the performance measures defined in Manatee County's COPCN ordinance.

In the event of increased call volume, Ambitrans has the ability to schedule additional labor and resources to meet demand. We reassess, in real time, the needs of the system to ensure that we are meeting or exceeding all performance measures. One of the benefits of having a contiguous service area is that we can quickly adapt to any unforeseen spikes in demand by shifting resources from our southern counties to Manatee County. These synergies also permit us to respond to long-distance out of county calls, and to run back-up calls for the EMS system as needed.

Ambitrans also has expanded its market to allow the Manatee County Emergency Management System greater flexibility to concentrate on their core mission of emergency pre-hospital services. We have had success with this in other counties through facility outreach and education. Ambitrans works tirelessly on education regarding the proper use of 911. These efforts have reduced the stress on other counties' EMS systems so they can focus on their core 911 mission.

With over thirty years in the EMS industry, we are mindful of the risks of over-saturating the market. Manatee County is comparable to Collier County, in terms of population and number of acute, behavioral and skilled nursing facility beds. Collier County has approved two ground ambulance services to operate, and the system has not diluted. The table below shows a comparison of the two counties.

	Manatee County	**Collier County**
Total population (U.S. Census 2024 est)	454,099	408,574
Acute care beds	764	944
Behavioral beds	97	105
Skilled nursing facility beds	2,420	3,150

III. Communications

Ambitrans maintains a state-of-the-art communications department, overseen by our Communications Supervisor. Every telephone call in and out of Ambitrans is recorded for quality assurance purposes. Each of our ambulances is equipped with new radio systems, as well as cell phones. Ambitrans currently has a toll-free number for use by our Manatee County customers. Additionally, Ambitrans complies with Fla Admin. Code 64J-1.014(13) regarding aggregate reporting data.

IV. System Resources

Ambitrans maintains facilities and equipment to sustain its services in the event of an emergency. Our headquarters is built to withstand a category 4 hurricane. We maintain redundancies in our telephone system and computer servers to minimize any potential disruption. We have back-up generators to power our operations throughout an extended period without power.

Vanessa Grant Oliver, Esq.
Chief Executive Officer
4351 Pinnacle Street
Charlotte Harbor, FL 33980
(941) 743-3665 • Fax: (941) 629-7314

May 4, 2026

Via Hand Delivery

Board of County Commissioners
Manatee County, Florida
1112 Manatee Avenue West
Bradenton, FL 34205

RE: Letter of Interest and Business Experience

Dear Board of County Commissioners:

Ambitrans Medical Transport, Inc., is pleased to submit its renewal application for Certificate of Public Convenience and Necessity.

I. Company History and Experience.

Ambitrans began operations in 1983 as a one-vehicle wheelchair and non-emergency stretcher service in Charlotte County, Florida. In 1988, Michael and Lorraine Grant purchased Ambitrans and expanded its service to include basic life support and advanced life support inter-facility transfers. Today, Ambitrans operates in Manatee, Sarasota, Charlotte, Lee and Collier Counties, has forty-three (43) state-licensed ambulances, and employs over 250+ licensed EMTs, licensed paramedics, trained drivers, dispatchers, medical billers and support staff. Ambitrans contracts with hospitals, hospices, skilled nursing facilities and other facilities throughout the region, and provides non-contractual ambulance transportation services for other facilities in the area. Ambitrans maintains permanent bases in Sarasota, Collier, Lee, Charlotte Counties and two permanent bases in Manatee County.

II. Licenses, Certificates and Qualifications.

Ambitrans is licensed by the Florida Department of Health to provide ambulance transportation in the State of Florida.[1] Ambitrans is compliant with Florida Statute 401 and Florida Administrative Code 64J in accordance with standards set forth by the Bureau of EMS and Department of Health.

III. Performance.

Ambitrans operates twenty-four hours per day, seven days per week, including all holidays, and is always available via telephone, facsimile and email. Ambitrans has a local dispatch and billing office at our headquarters in Port Charlotte. We station our crew members and vehicles at convenient locations across Southwest Florida, including permanent stations in Manatee, Sarasota, Charlotte, Lee and Collier Counties, so we may promptly dispatch crews upon request. Our permanent Manatee station is located at 1500 15th Ave. Dr. E., Unit 107 in Palmetto. Additionally, we have purchased a new location at 5620 Tara Blvd, Units 201 & 202 in Bradenton in order to meet the growing needs of Manatee County.

Ambitrans prides itself on its prompt and efficient service. Each of Ambitrans' ambulances is properly registered and insured. Ambitrans maintains general liability insurance in the amount of $1,000,000 for each occurrence and $3,000,000 aggregate.[2] Ambitrans never makes additional pick-ups when transporting a patient, and is experienced at providing transportation in all locations, rural and urban. While we request that each facility provide us with reasonable notice in advance of transport, due to our large fleet, Ambitrans can typically accommodate calls on an as-needed basis.

IV. Ambulance Staffing, Employee Training and Certifications.

One of Ambitrans' core goals is to ensure that its employees are properly trained, educated and supervised. Each Ambitrans employee undergoes intensive training and orientation prior to beginning work. Employees are trained regarding many topics, including, but not limited to: HIPAA, PHI, EMTALA, Medicare and third-party compliance, OSHA, patient confidentiality, customer service, Stryker stretchers, lifting patients, wheelchair securement, IV infusion pumps, ventilation, driving and EVOC.[3] Ambitrans' employees are experienced at transporting patients with a range of concerns, including end-of-life patients, critical care patients, non-critical care patients, patients with psychiatric issues, Dementia and Alzheimer's, as well as obese and other special-needs patients.

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[1] *See Ambitrans' Advanced Life Support License attached hereto as Exhibit "20".*

[2] *For your convenience, Ambitrans has attached a copy of its Certificate of Liability Insurance as Exhibit "11".*

[3] *A complete copy of Ambitrans' Medical and Trauma Treatment Protocols is attached hereto as Exhibit "17".*

We employ personnel who are specifically assigned to our Training and Quality Assurance Department. Our Quality Assurance Manager reviews patient care reports for quality assurance and adherence to our medical protocols and standards of care. Our education team is also responsible for our in-house training, which includes CPR, Advanced Cardiac Life Support, Pediatric Advanced Life Support, Emergency Vehicles Operators Course and on-going continuing education units needed for bi-annual certification renewal.

Ambitrans follows Florida law regarding the staffing of its ambulances, which requires that each ambulance be staffed by a minimum of two persons.[4] If the ambulance is licensed for basic life support, then it is staffed with an EMT or paramedic to care for the patient, as well as a driver who meets the requirements of Fla. Stat. § 401.281 for drivers.[5] If the ambulance is a licensed advanced life support ambulance, then it is staffed with a certified paramedic and one certified emergency medical technician or certified paramedic who also meets the requirements of § 401.281 for drivers.[6]

Ambitrans is committed to its employees, as they are the backbone of this company. While attrition is normal, particularly in the EMS industry, Ambitrans has been successful in reducing employee turnover by providing its employees a range of benefits they will not find at most other private ambulance companies. Ambitrans provides free, in-house training to its employees to help them maintain their certifications. Ambitrans has also long-provided medical and ancillary benefits to its full-time employees, retirement benefits to its full and part-time employees, as well as tuition assistance to those who wish to advance their careers. Ambitrans also offers a variety of shifts to accommodate its employees, many of whom attend school in addition to working full-time schedules.

V. Billing and Activity Reporting.

Ambitrans' experienced in-house billing staff promptly and accurately bill for patient transports. Ambitrans is also able to provide activity reports to reflect response times, pick-up and destination locations, level of service, insurance/third-party payer status, monthly collections, and any other information the County requires, in a format compatible with County requests. As a Medicare provider, Ambitrans bills in accordance with Medicare guidelines. As always, our goal is

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[4] *See Fla. Stat. §§ 401.25(7)(a) and (7)(b).*

[5] *See Fla. Stat. § 401.25(7)(a) ("Each permitted basic life support ambulance not specifically exempted from this part…must be occupied by at least two persons: one patient attendant who is a certified emergency medical technician, certified paramedic, or licensed physician; and one ambulance driver who meets the requirements of s. 401.281…").*

[6] *See Fla. Stat. § 401.25(7)(b) ("Each permitted advanced life support ambulance not specifically exempted from this part…must be occupied by at least two persons: one who is a certified paramedic or licensed physician; and one who is a certified emergency medical technician, certified paramedic, or licensed physician who also meets the requirements of s. 401.281 for drivers. The person with the highest medical certifications shall be in charge of patient care").*

compliance with Federal, State and local laws regarding proper patient billing and proper patient care.

VI. Conclusion.

Ambitrans looks forward to the opportunity to service Manatee County. Please do not hesitate to contact me with any questions or comments.

Sincerely,

Vanessa Grant Oliver, Esq.

CEO

BRIAN W. CROSLAND, CPA, PL

CERTIFIED PUBLIC ACCOUNTING & CONSULTING

2200 KINGS HIGHWAY #3L242 PORT CHARLOTTE, FL 33980 PHONE: 941.676.8900

BRIAN W. CROSLAND, CPA

SHAWN M. COOLEY, CPA

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS
FLORIDA INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS
MEDICAL GROUP MANAGEMENT ASSOCIATION
COMMUNITY ASSOCIATIONS INSTITUTE

INDEPENDENT ACCOUNTANTS' COMPILATION REPORT

To the Board of Directors
Ambitrans Medical Transport, Inc.
Charlotte Harbor, Florida

We have compiled the accompanying statement of assets and liabilities of the ambulance transportation operations of Ambitrans Medical Transport, Inc. and subsidiaries as of April 30, 2026. This financial statement has been prepared on the income basis of accounting utilized by the Company for federal income tax reporting purposes. We have not audited or reviewed the accompanying financial statement and, accordingly, do not express an opinion or provide any assurance about whether the financial statement is in accordance with the income tax basis of accounting.

Management is responsible for the preparation and fair presentation of the financial statement in accordance with the income tax basis of accounting and for designing, implementing, and maintaining internal control relevant to the preparation and fair presentation of the financial statement.

Our responsibility is to conduct the compilation in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. The objective of a compilation is to assist management in presenting financial information in the form of a financial statement without undertaking to obtain or provide any assurance that there are no material modifications that should be made to the financial statement.

The accompanying statement was prepared for the purpose of presenting the assets and liabilities of the ambulance transportation operations of Ambitrans Medical Transport, Inc. and subsidiaries, and is not intended to be a complete presentation of Ambitrans Medical Transport, Inc. and subsidiaries consolidated assets and liabilities. Accordingly, this report and related financial statement is restricted for use only by known third parties with knowledge of these restrictions and should not be used for any other purpose.

Brian W. Crosland, CPA, PL

June 1, 2026
Port Charlotte, Florida

Ambitrans Medical Transport, Inc. and Subsidiaries
Statement of Assets and Liabilities of the Ambulance Transportation Operations
Income Tax Basis of Accounting
April 30, 2026
(Unaudited)

Assets

Current Assets:	
Cash available for ambulance transportation operations	$ 695,000
Property and Equipment:	
Office equipment and computers	166,605
Machinery and equipment	1,854,047
Medical transportation vehicles	3,644,301
	5,664,952
Less accumulated depreciation	(5,243,395)
Property and Equipment, net	421,557
Total Assets	$ 1,116,557

Liabilities

Current Liabilities:	
Accrued profit sharing	$ 222,329
Other liabilities	37,500
Notes payable to banks	97,299
	357,128
Long Term Liabilities:	
Notes payable to banks	97,299
Less current portion above	(97,299)
	-
Total liabilities	357,128
Net Assets Over Liabilities, income tax basis	$ 759,429

Ambitrans Medical Transport
Pro Forma Statement
24 Months

	May 24 - Apr 25 Year 9	May 25-Apr 26 Year 10
Sales		
Service Revenue	$ 2,300,000.00	$ 2,369,000.00
Total Sales	$ 2,300,000.00	$ 2,369,000.00
Materials and supplies	$ 10,000.00	$ 10,300.00
Direct Labor	$ 1,550,000.00	$ 1,596,500.00
Auto Fuel Expense	$ 141,000.00	$ 145,230.00
Auto & truck repairs/maintenance	$ 51,718.00	$ 53,269.54
Total Cost of Good Sold	$ 1,752,718.00	$ 1,805,299.54
Gross Profit	***$ 547,282.00***	***$ 563,700.46***
Operating Expenses		
Advertising	$ 4,407.00	$ 4,539.21
Payroll Preparation Fees	$ 7,790.00	$ 8,023.70
Insurance - Medical	$ 101,819.00	$ 104,873.57
Insurance - General	$ 100,000.00	$ 103,000.00
Insurance - Workers Compensation	$ 52,000.00	$ 53,560.00
Laundry and Uniforms	$ 4,300.00	$ 4,429.00
Medical Testing	$ 500.00	$ 515.00
Payroll Taxes	$ 106,549.00	$ 109,745.47
Rent	$ 53,000.00	$ 54,590.00
Repairs and Maintenance	$ 500.00	$ 515.00
Repairs and Maintenance (Equipment)	$ 3,500.00	$ 3,605.00
Retirement	$ 20,000.00	$ 20,600.00
Training and Expense	$ 3,300.00	$ 3,399.00
Taxes and Licenses	$ 250.00	$ 257.50
Telephone and Communications	$ 3,300.00	$ 3,399.00
Travel and Tolls	$ 900.00	$ 927.00
Utilities	$ 3,600.00	$ 3,708.00
Total Operating Expenses	***$ 465,715.00***	***$ 479,686.45***
Operating Income (loss)	**$ 81,567.00**	**$ 84,014.01**
	$165,581.01	

Ambitrans Medical Transport, Inc

Address: 4351 Pinnacle St
Punta Gorda, FL 33980-2902
United States

Phone: 941-743-3665

Website: AMBITRANS.COM

Experian BIN: 874909211

Agent: Grant Michael

Agent Address: 4351 Pinnacle Street
Charlotte Harbor, FL

Also is (or has been) operating as:
Ambitrans
Ambitrans Ambulance
Ambitrans Ambulance Service
Ambitrans Medical Transport, Inc

Family Linkage:

Ultimate Parent: Ambitrans Medical Transport, Inc
4351 Pinnacle St
Punta Gorda, FL United States

Parent / Headquarters: Ambitrans Medical Transport, Inc
4351 Pinnacle St
Punta Gorda, FL United States

Branches / Alternative Locations: Ambitrans Medical Transport, Inc
4351 Pinnacle St
Port Charlotte, FL United States

Ambitrans Medical Transport, Inc
51 Amazon Dr
Punta Gorda, FL United States

Key Personnel: Treasurer: Grant Oliver Vanessa

SIC Code:
4119-Local Passenger Transportation, Nec
8699-Membership Organizations, Nec
4522-Air Transportation, Nonscheduled

NAICS Code:
621910-Ambulance Services
333993-Packaging Machinery Manufacturing
423110-Automobile And Other Motor Vehicle Merchant Wholesalers

Business Type: Corporation

Experian File Established: January 2007

Experian Years on File: 19 Years

Years in Business: 40 Years

Total Employees: 100

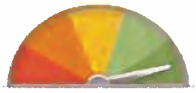
Sales: $2,500,000

Filing Data Provided by: Florida

Date of Incorporation: 03/27/1995

Experian Business Credit Score

82
Business Credit Score



Low Risk

The objective of the Experian Business Credit Score is to predict payment behavior. High Risk means that there is a significant probability of delinquent payment. Low Risk means that there is a good probability of on-time payment.

Key Score Factors:
- Number of good commercial accounts.
- Pct of aged commercial accts to total nbr of accts.

- Number of commercial accounts with high utilization.
- Length of time on Experian's file.

Business Credit Scores range from a low of 1 to high of 100 with this company receiving a score of 82. Higher scores indicate lower risk. This score predicts the likelihood of serious credit delinquencies within the next 12 months. This score uses tradeline and collections information, public filings as well as other variables to predict future risk.

Experian Financial Stability Risk Rating

1

Financial Stability Risk Rating

Low Risk

A Financial Stability Risk Rating of 1 indicates a 0.55% potential risk of severe financial distress within the next 12 months.

Key Rating Factors:
- Risk associated with the company's industry sector.
- Number of active commercial accounts.
- Risk associated with the business type.
- Balance to high credit ratio for commercial accounts.

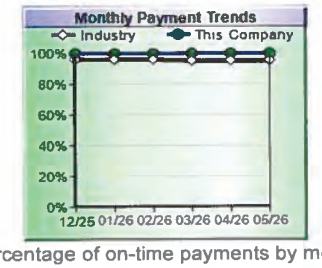
Financial Stability Risk Ratings range from a low of 1 to high of 5 with this company receiving a rating of 1. Lower ratings indicate lower risk. Experian categorizes all businesses to fit within one of the five risk segments. This rating predicts the likelihood of payment default and/or bankruptcy within the next 12 months. This rating uses tradeline and collections information, public filings as well as other variables to predict future risk.

Credit Summary

Current Days Beyond Terms (DBT):	**0**
Predicted DBT for 08/17/2026:	**2**
Average Industry DBT:	**3**
Payment Trend Indicator:	Stable
Lowest 6 Month Balance:	$4,000
Highest 6 Month Balance:	$6,528
Current Total Account Balance:	$5,100
Highest Credit Amount Extended:	$6,000

Payment Tradelines (see charts, detail):	10
Business Inquiries (see summary):	3
UCC Filings (see detail) (see summary):	1
✓**Businesses Scoring Worse:**	**81%**
✓**Bankruptcies:**	0
✓**Liens:**	0
✓**Judgments Filed:**	0
✓**Collections:**	0

Payment Trend Summary



*Percentage of on-time payments by month.

Monthly Payment Trends - Recent Activity

*Percentage of on-time payments by quarter.

Quarterly Payment Trends - Recent Activity

Victoria Harris

To: Mitch Medevic
Subject: RE: Manatee county units

From: Mitch Medevic <mmedevic@ambitrans.com>
Sent: Thursday, July 23, 2026 10:28 AM
To: Victoria Harris <vharris@ambitrans.com>
Subject: Re: Manatee county units

Unit	Level	Shift Duration	Operational Hours	Days
330	ALS	24 hrs	Continuous (24/7)	7
335	BLS	16 hrs	0600–2200	7
636	ALS	16 hrs	1000–0200	7
640	ALS	12 hrs	1100–2300	7
644	BLS	12 hrs	1600–0400	7

Mitch Medevic
Operations Manager
Ambitrans Ambulance
4351 Pinnacle Street
Charlotte Harbor, FL 33980
941.613.6438 Direct
941.661.4065 Mobile
941.629.7314 Fax
mmedevic@ambitrans.com
www.ambitrans.com

This electronic message is intended only for the individual or entity which it is addressed and may contain information that is confidential and protected by law. If you are not the intended recipient of this e-mail, you are cautioned that use of its contents or attachments in any way is prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by e-mail or telephone and return the original message by e-mail to the sender. Calls placed to our company may be recorded for quality assurance purposes. Thank you.

1. Agreement Overview

This Service Level Agreement ("Agreement") is entered into between Manatee County Information Technology Services (ITS) – Radio Division (the "Service Provider") and governmental entities, including but not limited to public safety agencies such as law enforcement, fire departments, and emergency medical services (collectively, the "Client(s)").

The purpose of this Agreement is to define the terms and expectations under which the Service Provider will deliver radio communication services to the Client(s).

The Service Provider owns and operates the 800 MHz Land Mobile Simulcast Project 25 (P25) Radio System, which is licensed by the Federal Communications Commission (FCC). Significant investments have been made in the system to enhance its ability to support public safety agencies in their mission to protect and serve the residents and businesses of Manatee County.

This Agreement establishes a framework for the reliable, efficient, and timely delivery of radio communications services and outlines the responsibilities of both parties.

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2. Goals and Objectives

This Agreement sets forth the System Access and Maintenance Fees and establishes standardized procedures for maintenance and testing to ensure the P25 Radio System remains reliable, effective, and secure. Compliance with FCC regulations is essential to prevent misuse and unauthorized access.

The key objectives of this Agreement are:

- To define clear ownership, accountability, roles, and responsibilities.
- To provide a concise and measurable description of services offered to Client(s).
- To align Client expectations with actual service levels and performance delivered by the Service Provider.

---

3. Client Requirements

The Client(s) agree to:

- Provide equipment-specific identifiers (aliases) for each radio accessing the P25 system.
- Maintain and manage a list of subscriber units (including model and serial numbers), and promptly notify the Radio Division of any changes.
- Allow the Radio Division to perform annual preventative maintenance on all radios using the County's system—at no additional cost—as part of this Agreement.

4. Service Provider Requirements

This Agreement outlines the scope of services, including usage guidelines, operational procedures, and technical standards necessary to ensure safe, effective, and compliant use of the P25 Radio System.

- Fee Assessment: The Access and Maintenance Fee Schedule applies equally to all users. Fees are determined by the Manatee County CFO.
- Onsite Services: Available during regular business hours for fixed and critical apparatus, including repairs, radio programming, and certain maintenance activities.
- The Radio Division is not responsible for third-party purchases made by the Client(s).

5. Coverage Parameters

Services outlined in this Agreement will be provided at the Radio Division Headquarters or a location agreed upon by both parties.

Radio Division Headquarters
1801 5th Street West
Bradenton, FL 34205
Operating Hours: Monday–Friday, 8:00 AM – 5:00 PM (excluding holidays)
Phone: 941-742-5966
After-Hours Emergencies: 941-720-0653

6. System Access and Maintenance Fee Schedule – FY26

The following fees are established to support the ongoing operation, maintenance, and enhancement of the P25 Radio System:

Annual Fees (Effective 10/01/2025 – 09/30/2026):

Service Category	Annual Fee	Monthly Prorated Fee (for new devices)
P25 Access – Subscriber Radio	$255 per radio	$21.25/month
Maintenance – Subscriber Radio	$255 per radio	$21.25/month
Access & Maintenance – Console	$1,000 per console	$83.34/month

Note: Monthly prorated fees apply for new radios or consoles received after annual billing.

7. Maintenance Contract Benefits

Subscriber radios covered under this maintenance contract are entitled to:

- Programming
- Repairs
- Annual Preventative Maintenance

These services ensure the continued operability, reliability, and compliance of each device, supporting the broader mission of providing high-quality public safety communication services.

This proactive maintenance approach supports system-wide health, aligns with the FCC's regulatory requirements, and reinforces the goals of this Agreement—to maintain a system ready for Client(s) in “Their Moments That Matter.”

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8. Client Acknowledgment and Approval

Customer	Approved Count	Signature of Approval	Approved Date
Ambitrans Ambulance	5	Ryan Lybeck	11 / 12 / 2025

Paycom Payroll, LLC

BACKGROUND SCREENING REPORT

Prepared for: AMBULANCE MANAGEMENT SERVICES

7501 W. Memorial Rd
Oklahoma City, OK 73142
800-580-4505

Subject Information:

Subject: VANESSA OLIVER
DOB: [redacted]
Social Security Number: [redacted]
Order Number(s): [redacted]
US
Report Disposition clear

Requestor Information:

Billing Identifier 1: 15157
Billing Identifier 2: ev6a57e45dd6d3d0.03954298
Billing Identifier 3: 15158

Report Summary Information:

Component	Status	Last update
National Criminal Scan for VANESSA OLIVER, page 2	COMPLETE	7/15/26 03:03 PM Central
Statewide Criminal Search in Florida for VANESSA OLIVER, page 3	COMPLETE - clear	7/16/26 08:33 AM Central

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National Criminal Scan for VANESSA OLIVER	COMPLETE :

Completed

Statewide Criminal Search in Florida for VANESSA OLIVER **COMPLETE - clear** :

No Reportable Records Found

Para información en español, visite www.consumerfinance.gov/learnmore o escribe a la Consumer Financial Protection Bureau, 1700 G Street NW, Washington, DC 20552.

A Summary of Your Rights Under the Fair Credit Reporting Act

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- **You must be told if information in your file has been used against you.** Anyone who uses a credit report or another type of consumer report to deny your application for credit, insurance, or employment – or to take another adverse action against you – must tell you, and must give you the name, address, and phone number of the agency that provided the information.

- **You have the right to know what is in your file.** You may request and obtain all the information about you in the files of a consumer reporting agency (your "file disclosure"). You will be required to provide proper identification, which may include your Social Security number. In many cases, the disclosure will be free. You are entitled to a free file disclosure if:

    - a person has taken adverse action against you because of information in your credit report;
    - you are the victim of identity theft and place a fraud alert in your file;
    - your file contains inaccurate information as a result of fraud;
    - you are on public assistance;
    - you are unemployed but expect to apply for employment within 60 days.

    In addition, all consumers are entitled to one free disclosure every 12 months upon request from each nationwide credit bureau and from nationwide specialty consumer reporting agencies. See www.consumerfinance.gov/learnmore for additional information.

- **You have the right to ask for a credit score.** Credit scores are numerical summaries of your credit-worthiness based on information from credit bureaus. You may request a credit score from consumer reporting agencies that create scores or distribute scores used in residential real property loans, but you will have to pay for it. In some mortgage transactions, you will receive credit score information for free from the mortgage lender.

- **You have the right to dispute incomplete or inaccurate information.** If you identify information in your file that is incomplete or inaccurate, and report it to the consumer

reporting agency, the agency must investigate unless your dispute is frivolous. See www.consumerfinance.gov/learnmore for an explanation of dispute procedures.

- **Consumer reporting agencies must correct or delete inaccurate, incomplete, or unverifiable information.** Inaccurate, incomplete, or unverifiable information must be removed or corrected, usually within 30 days. However, a consumer reporting agency may continue to report information it has verified as accurate.

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- **Access to your file is limited.** A consumer reporting agency may provide information about you only to people with a valid need – usually to consider an application with a creditor, insurer, employer, landlord, or other business. The FCRA specifies those with a valid need for access.

- **You must give your consent for reports to be provided to employers.** A consumer reporting agency may not give out information about you to your employer, or a potential employer, without your written consent given to the employer. Written consent generally is not required in the trucking industry. For more information, go to www.consumerfinance.gov/learnmore.

- **You may limit "prescreened" offers of credit and insurance you get based on information in your credit report.** Unsolicited "prescreened" offers for credit and insurance must include a toll-free phone number you can call if you choose to remove your name and address from the lists these offers are based on. You may opt out with the nationwide credit bureaus at 1-888-567-8688.

- The following FCRA right applies with respect to nationwide consumer reporting agencies**:**

  CONSUMERS HAVE THE RIGHT TO OBTAIN A SECURITY FREEZE

  You have a right to place a "security freeze" on your credit report, which will prohibit a consumer reporting agency from releasing information in your credit report without your express authorization. The security freeze is designed to prevent credit, loans, and services from being approved in your name without your consent. However, you should be aware that using a security freeze to take control over who gets access to the personal and financial information in your credit report may delay, interfere with, or prohibit the timely approval of any subsequent request or application you make regarding a new loan, credit, mortgage, or any other account involving the extension of credit.

  As an alternative to a security freeze, you have the right to place an initial or extended fraud alert on your credit file at no cost. An initial fraud alert is a 1-year alert that is

placed on a consumer's credit file. Upon seeing a fraud alert display on a consumer's credit file, a business is required to take steps to verify the consumer's identity before extending new credit. If you are a victim of identity theft, you are entitled to an extended fraud alert, which is a fraud alert lasting 7 years.

A security freeze does not apply to a person or entity, or its affiliates, or collection agencies acting on behalf of the person or entity, with which you have an existing account that requests information in your credit report for the purposes of reviewing or collecting the account. Reviewing the account includes activities related to account maintenance, monitoring, credit line increases, and account upgrades and enhancements.

- **You may seek damages from violators.** If a consumer reporting agency, or, in some cases, a user of consumer reports or a furnisher of information to a consumer reporting agency violates the FCRA, you may be able to sue in state or federal court.

- **Identity theft victims and active duty military personnel have additional rights.** For more information, visit www.consumerfinance.gov/learnmore.

States may enforce the FCRA, and many states have their own consumer reporting laws. In some cases, you may have more rights under state law. For more information, contact your state or local consumer protection agency or your state Attorney General. For information about your federal rights, contact:

TYPE OF BUSINESS:	CONTACT:
1.a. Banks, savings associations, and credit unions with total assets of over $10 billion and their affiliates b. Such affiliates that are not banks, savings associations, or credit unions also should list, in addition to the CFPB:	a. Consumer Financial Protection Bureau 1700 G Street NW Washington, DC 20552 b. Federal Trade Commission Consumer Response Center 600 Pennsylvania Avenue NW Washington, DC 20580 (877) 382-4357
2. To the extent not included in item 1 above: a. National banks, federal savings associations, and federal branches and federal agencies of foreign banks b. State member banks, branches and agencies of foreign banks (other than federal branches, federal agencies, and Insured State Branches of Foreign Banks), commercial lending companies owned or controlled by foreign banks, and organizations operating under section 25 or 25A of the Federal Reserve Act. c. Nonmember Insured Banks, Insured State Branches of Foreign Banks, and insured state savings associations d. Federal Credit Unions	a. Office of the Comptroller of the Currency Customer Assistance Group P.O. Box 53570 Houston, TX 77052 b. Federal Reserve Consumer Help Center P.O. Box 1200 Minneapolis, MN 55480 c. Division of Depositor and Consumer Protection National Center for Consumer and Depositor Assistance Federal Deposit Insurance Corporation 1100 Walnut Street, Box #11 Kansas City, MO 64106 d. National Credit Union Administration Office of Consumer Financial Protection 1775 Duke Street Alexandria, VA 22314
3. Air carriers	Assistant General Counsel for Office of Aviation Consumer Protection Department of Transportation 1200 New Jersey Avenue SE Washington, DC 20590
4. Creditors Subject to the Surface Transportation Board	Office of Public Assistance, Governmental Affairs, and Compliance Surface Transportation Board 395 E Street SW Washington, DC 20423
5. Creditors Subject to the Packers and Stockyards Act, 1921	Nearest Packers and Stockyards Division Regional Office
6. Small Business Investment Companies	Associate Administrator, Office of Capital Access United States Small Business Administration 409 Third Street SW, Suite 8200 Washington, DC 20416
7. Brokers and Dealers	Securities and Exchange Commission 100 F Street NE Washington, DC 20549
8. Institutions that are members of the Farm Credit System	Farm Credit Administration 1501 Farm Credit Drive McLean, VA 22102-5090
9. Retailers, Finance Companies, and All Other Creditors Not Listed Above	Federal Trade Commission Consumer Response Center 600 Pennsylvania Avenue NW Washington, DC 20580 (877) 382-4357

Paycom Payroll, LLC

BACKGROUND SCREENING REPORT

Prepared for: AMBULANCE MANAGEMENT SERVICES

7501 W. Memorial Rd
Oklahoma City, OK 73142
800-580-4505

Subject Information:

Subject: LORRAINE BUTLER GRANT
DOB: [redacted]
Social Security Number: [redacted]
Order Number(s): [redacted]
US
Report Disposition clear

Requestor Information:

Billing Identifier 1: 15157
Billing Identifier 2: ev6a57e50a7dfc46.29754266
Billing Identifier 3: 15158

Report Summary Information:

Component	Status	Last update
National Criminal Scan for LORRAINE BUTLER GRANT, page 2	COMPLETE	7/20/26 10:11 AM Central
Statewide Criminal Search in Florida for LORRAINE BUTLER GRANT, page 3	COMPLETE - clear	7/20/26 12:18 PM Central

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National Criminal Scan for LORRAINE BUTLER GRANT	COMPLETE :

Completed

Statewide Criminal Search in Florida for LORRAINE BUTLER GRANT **COMPLETE - clear** :

No Reportable Records Found

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    - a person has taken adverse action against you because of information in your credit report;
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    In addition, all consumers are entitled to one free disclosure every 12 months upon request from each nationwide credit bureau and from nationwide specialty consumer reporting agencies. See www.consumerfinance.gov/learnmore for additional information.

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- **Identity theft victims and active duty military personnel have additional rights.** For more information, visit www.consumerfinance.gov/learnmore.

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TYPE OF BUSINESS:	CONTACT:
1.a. Banks, savings associations, and credit unions with total assets of over $10 billion and their affiliates b. Such affiliates that are not banks, savings associations, or credit unions also should list, in addition to the CFPB:	a. Consumer Financial Protection Bureau 1700 G Street NW Washington, DC 20552 b. Federal Trade Commission Consumer Response Center 600 Pennsylvania Avenue NW Washington, DC 20580 (877) 382-4357
2. To the extent not included in item 1 above: a. National banks, federal savings associations, and federal branches and federal agencies of foreign banks b. State member banks, branches and agencies of foreign banks (other than federal branches, federal agencies, and Insured State Branches of Foreign Banks), commercial lending companies owned or controlled by foreign banks, and organizations operating under section 25 or 25A of the Federal Reserve Act. c. Nonmember Insured Banks, Insured State Branches of Foreign Banks, and insured state savings associations d. Federal Credit Unions	a. Office of the Comptroller of the Currency Customer Assistance Group P.O. Box 53570 Houston, TX 77052 b. Federal Reserve Consumer Help Center P.O. Box 1200 Minneapolis, MN 55480 c. Division of Depositor and Consumer Protection National Center for Consumer and Depositor Assistance Federal Deposit Insurance Corporation 1100 Walnut Street, Box #11 Kansas City, MO 64106 d. National Credit Union Administration Office of Consumer Financial Protection 1775 Duke Street Alexandria, VA 22314
3. Air carriers	Assistant General Counsel for Office of Aviation Consumer Protection Department of Transportation 1200 New Jersey Avenue SE Washington, DC 20590
4. Creditors Subject to the Surface Transportation Board	Office of Public Assistance, Governmental Affairs, and Compliance Surface Transportation Board 395 E Street SW Washington, DC 20423
5. Creditors Subject to the Packers and Stockyards Act, 1921	Nearest Packers and Stockyards Division Regional Office
6. Small Business Investment Companies	Associate Administrator, Office of Capital Access United States Small Business Administration 409 Third Street SW, Suite 8200 Washington, DC 20416
7. Brokers and Dealers	Securities and Exchange Commission 100 F Street NE Washington, DC 20549
8. Institutions that are members of the Farm Credit System	Farm Credit Administration 1501 Farm Credit Drive McLean, VA 22102-5090
9. Retailers, Finance Companies, and All Other Creditors Not Listed Above	Federal Trade Commission Consumer Response Center 600 Pennsylvania Avenue NW Washington, DC 20580 (877) 382-4357

Paycom Payroll, LLC

BACKGROUND SCREENING REPORT

Prepared for: AMBULANCE MANAGEMENT SERVICES

7501 W. Memorial Rd
Oklahoma City, OK 73142
800-580-4505

Subject Information:

Subject: MICHAEL JUDE GRANT
DOB: [redacted]
Social Security Number: [redacted]
Order Number(s): [redacted]
[redacted]
US
Report Disposition clear

Requestor Information:

Billing Identifier 1: 15157
Billing Identifier 2: ev6a57e4ae1ed518.04567840
Billing Identifier 3: 15158

Report Summary Information:

Component	Status	Last update
National Criminal Scan for MICHAEL JUDE GRANT, page 2	COMPLETE	7/22/26 04:41 PM Central
Statewide Criminal Search in Florida for MICHAEL JUDE GRANT, page 3	COMPLETE - clear	7/21/26 11:08 AM Central

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National Criminal Scan for MICHAEL JUDE GRANT	COMPLETE :

Completed

Statewide Criminal Search in Florida for MICHAEL JUDE GRANT **COMPLETE - clear** :

No Reportable Records Found

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- The following FCRA right applies with respect to nationwide consumer reporting agencies**:**

  CONSUMERS HAVE THE RIGHT TO OBTAIN A SECURITY FREEZE

  You have a right to place a "security freeze" on your credit report, which will prohibit a consumer reporting agency from releasing information in your credit report without your express authorization. The security freeze is designed to prevent credit, loans, and services from being approved in your name without your consent. However, you should be aware that using a security freeze to take control over who gets access to the personal and financial information in your credit report may delay, interfere with, or prohibit the timely approval of any subsequent request or application you make regarding a new loan, credit, mortgage, or any other account involving the extension of credit.

  As an alternative to a security freeze, you have the right to place an initial or extended fraud alert on your credit file at no cost. An initial fraud alert is a 1-year alert that is

placed on a consumer's credit file. Upon seeing a fraud alert display on a consumer's credit file, a business is required to take steps to verify the consumer's identity before extending new credit. If you are a victim of identity theft, you are entitled to an extended fraud alert, which is a fraud alert lasting 7 years.

A security freeze does not apply to a person or entity, or its affiliates, or collection agencies acting on behalf of the person or entity, with which you have an existing account that requests information in your credit report for the purposes of reviewing or collecting the account. Reviewing the account includes activities related to account maintenance, monitoring, credit line increases, and account upgrades and enhancements.

- **You may seek damages from violators.** If a consumer reporting agency, or, in some cases, a user of consumer reports or a furnisher of information to a consumer reporting agency violates the FCRA, you may be able to sue in state or federal court.

- **Identity theft victims and active duty military personnel have additional rights.** For more information, visit www.consumerfinance.gov/learnmore.

States may enforce the FCRA, and many states have their own consumer reporting laws. In some cases, you may have more rights under state law. For more information, contact your state or local consumer protection agency or your state Attorney General. For information about your federal rights, contact:

TYPE OF BUSINESS:	CONTACT:
1.a. Banks, savings associations, and credit unions with total assets of over $10 billion and their affiliates b. Such affiliates that are not banks, savings associations, or credit unions also should list, in addition to the CFPB:	a. Consumer Financial Protection Bureau 1700 G Street NW Washington, DC 20552 b. Federal Trade Commission Consumer Response Center 600 Pennsylvania Avenue NW Washington, DC 20580 (877) 382-4357
2. To the extent not included in item 1 above: a. National banks, federal savings associations, and federal branches and federal agencies of foreign banks b. State member banks, branches and agencies of foreign banks (other than federal branches, federal agencies, and Insured State Branches of Foreign Banks), commercial lending companies owned or controlled by foreign banks, and organizations operating under section 25 or 25A of the Federal Reserve Act. c. Nonmember Insured Banks, Insured State Branches of Foreign Banks, and insured state savings associations d. Federal Credit Unions	a. Office of the Comptroller of the Currency Customer Assistance Group P.O. Box 53570 Houston, TX 77052 b. Federal Reserve Consumer Help Center P.O. Box 1200 Minneapolis, MN 55480 c. Division of Depositor and Consumer Protection National Center for Consumer and Depositor Assistance Federal Deposit Insurance Corporation 1100 Walnut Street, Box #11 Kansas City, MO 64106 d. National Credit Union Administration Office of Consumer Financial Protection 1775 Duke Street Alexandria, VA 22314
3. Air carriers	Assistant General Counsel for Office of Aviation Consumer Protection Department of Transportation 1200 New Jersey Avenue SE Washington, DC 20590
4. Creditors Subject to the Surface Transportation Board	Office of Public Assistance, Governmental Affairs, and Compliance Surface Transportation Board 395 E Street SW Washington, DC 20423
5. Creditors Subject to the Packers and Stockyards Act, 1921	Nearest Packers and Stockyards Division Regional Office
6. Small Business Investment Companies	Associate Administrator, Office of Capital Access United States Small Business Administration 409 Third Street SW, Suite 8200 Washington, DC 20416
7. Brokers and Dealers	Securities and Exchange Commission 100 F Street NE Washington, DC 20549
8. Institutions that are members of the Farm Credit System	Farm Credit Administration 1501 Farm Credit Drive McLean, VA 22102-5090
9. Retailers, Finance Companies, and All Other Creditors Not Listed Above	Federal Trade Commission Consumer Response Center 600 Pennsylvania Avenue NW Washington, DC 20580 (877) 382-4357

REVISED ORDINANCE

Exhibit B

ORDINANCE NO. 17-041

AN ORDINANCE OF MANATEE COUNTY, FLORIDA, REGARDING THE AUTHORIZATION OF LIFE SUPPORT TRANSPORT AND NON-TRANSPORT SERVICES WITHIN THE COUNTY; AMENDING AND RESTATING ARTICLE II OF CHAPTER 2-13 OF THE MANATEE COUNTY CODE OF ORDINANCES; MAKING RELATED FINDINGS; DEFINING CERTAIN TERMS; REQUIRING CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY FOR LIFE SUPPORT TRANSPORT AND NON-TRANSPORT SERVICES; PROVIDING EXEMPTIONS; ESTABLISHING THE AUTHORITY OF THE COUNTY EMS MEDICAL DIRECTOR; ESTABLISHING STANDARDS FOR APPLICATIONS, RENEWALS AND AMENDMENTS OF CERTIFICATES; PREVENTING DISCONTINUATION OR INTERRUPTION OF LIFE SUPPORT TRANSPORT AND NON-TRANSPORT SERVICES; PROVIDING FOR INSURANCE REQUIREMENTS; REGULATING RATES; ESTABLISHING RIGHTS AND DUTIES GRANTED BY CERTIFICATION; REQUIRING VEHICLE PERMITS FOR AMBULANCES AND AIR AMBULANCES; ESTABLISHING CONDITIONS OF VEHICLE OPERATING PERMITS FOR AMBULANCES AND AIR AMBULANCES; PROVIDING FOR RESPONSE IN A STATE OF EMERGENCY OR DISASTER; PROVIDING FOR VIOLATIONS, PROVIDING FOR ENFORCEMENT AND PENALTIES; PROVIDING FOR APPEALS; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, it is the intent of the Board of County Commissioners ("Board") to promote the health, safety and welfare of its citizens, residents and visitors, by providing for the regulation of life support services thereby promoting the development and maintenance of safe, healthy, efficient and service-oriented life support transport and non-transport services for Manatee County ("County"); and

WHEREAS, the County has established rules and regulations for the provision of life support transport and non-transport services, set forth as Article II of Chapter 2-13 of the County Code of Ordinances ("Code"); and

WHEREAS, the Board finds that due to the Town of Longboat Key's unique location in both Manatee and Sarasota County, that Longboat Key Fire Rescue has been providing advanced life support transport services to the County for over thirty years pursuant to a longstanding County certificate of public convenience and necessity ("certificate"), and that Longboat Key Fire Rescue is subject to regulation by Sarasota County for these same services, the Board finds that it is reasonable and appropriate that the certificate granted to the Town of Longboat Key prior to the adoption of this Ordinance shall be exempt from the requirements of Article II of Chapter 2-13; and

WHEREAS, the Board finds that it is in the best interests of protecting the health, safety and welfare of the citizens of the County and its visitors to amend and restate Article II of Chapter 2-13 of the Code as provided herein.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MANATEE COUNTY, FLORIDA:

Section 1. Purpose and Intent. This Ordinance is enacted to carry out the purpose and intent of, and exercise the authority set forth in Chapter 401, Florida Statutes, as amended.

Section 2. Findings. The Board relies upon the following findings in the adoption of this Ordinance:

A. Pursuant to Section 401.25, Florida Statutes, the Board is authorized to establish and enforce reasonable rules and regulations for providers applying for and maintaining a Certificate of Public Convenience and Necessity ("certificate") from the County.

B. Chapter 2-13 of the Code sets forth the policies and rules regarding the regulations for providers applying for and maintaining a certificate.

C. It is in the interest of the public health, safety and welfare to amend and restate Chapter 2-13 of the Code, as set forth in this Ordinance for the purposes of prescribing and enforcing reasonable rules and regulations for the issuance of a certificate.

Section 3. Article II of Chapter 2-13 of the Code is hereby amended and restated to read in its entirety as follows:

ARTICLE IV. - LIFE SUPPORT TRANSPORT AND NON-TRANSPORT SERVICES

Sec. 2-13-50. - Definitions.

As used in this article, the following words and terms shall have the following meanings:

(a) *Advanced life support (ALS)* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(b) *Advanced life support (ALS) service* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(1) *Transport*. ALS service maintained or operated with the intention of providing emergency, non-emergency or inter-facility patient transportation on a regular basis as a matter of established operational policy.

(2) *Non-transport*. ALS service maintained or operated with the intention of accessing, assessing, treating and stabilizing patients at the scene of medical emergencies and not providing patient transportation as a matter of established operational policy.

(c) *Air ambulance* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(d) *Ambulance* or *emergency medical services vehicle* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(e) *Ambulance service* shall mean any service whereby any private, public, or governmental entity offers to provide or provides, for compensation or as a courtesy, basic life support or advanced life support to sick or injured persons being transported from one location to another upon the roads within Manatee County or in the airspace above Manatee County.

(f) *Basic life support (BLS)* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(g) *Basic life support (BLS) service* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(h) *Certificate* shall mean a certificate of public convenience and necessity issued by the county.

(i) *Emergency medical technician* (EMT) shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(j) *EMS medical director* shall mean a board-certified emergency physician who meets the requirements of the Florida Department of Health, Bureau of Emergency Medical Services and who provides clinical oversight, medical protocols and policy development, quality assurance and quality improvement services.

(k) *Governmental entity* shall mean any county or municipality, or special fire control district of the State of Florida.

(l) *Interfacility transfer* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(m) *Intra-county* shall mean the receiving and delivering of patients within Manatee County.

(n) *Non-governmental entity* shall mean any entity including, but not limited to, a corporation, partnership, limited liability company, or sole proprietorship that is not affiliated, through ownership or control, with a governmental entity.

(o) *Paramedic* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(p) *Permit* shall have the meaning provided for in Section 401.23, Florida Statutes, as amended.

(q) *Vehicle operating permit* shall mean the vehicle operating permit issued in accordance with section 2-13-60.

Sec. 2-13-51. - Certificates of public convenience and necessity.

(a) Every person, non-governmental entity, or governmental entity owning or acting as an agent for the owner of any business or service which furnishes, operates, conducts, maintains, advertises, engages in, proposes to engage in, or professes to engage in any of the business or services described in this article shall first obtain a certificate from the county, except for the provision of basic life support non-transport services by a governmental entity.

(b) Providers of ambulance service having no headquarters or other facilities within the county shall be required to obtain a certificate from the county and to otherwise comply with this article if they provided intra-county ambulance service within the county at least twice in any prior twelve-month period.

Sec. 2-13-52. - Classifications of certificates.

(a) The classification of certificates are as follows:

(1) *Basic Life Support (BLS), Interfacility Transfer*;
(2) *Advanced Life Support (ALS) Non-Transport Services*;
(3) *Advanced Life Support (ALS) Transport Services;*
(4) *Advanced Life Support (ALS) Interfacility Transfer*; and
(5) *Advanced Life Support (ALS) Air Ambulance Services (rotor and fixed).*

(b) Providers of services granted a certificate(s) in accordance with this article are limited to providing the level of service indicated on each certificate issued by the county to the provider. Applicants may apply for more than one classification at the same time, but must provide the information and application responses required of each certificate sought.

Sec. 2-13-53. - Exemptions.

(a) Per Section 401.33, Florida Statutes, as amended, the following are exempt from the provisions of this article:

(1) Fixed wing air ambulances used or intended to be used for air transportation of sick or injured persons who may need medical attention during transport;

(2) Any ambulance owned and operated by the federal government or sovereign Indian tribe;

(3) Vehicles used for transporting a patient pursuant to Section 768.13, Florida Statutes, known as the Good Samaritan Act;

(4) A vehicle used to transport patients in the event of a major catastrophe or local or state declared emergency when ambulances with current certificates and state licenses are insufficient in number to render the services needed as determined by the Public Safety Director or designee;

(5) A privately-owned vehicle not ordinarily used in the business of transporting persons who are sick, injured, wounded, incapacitated, or helpless; and

(6) Any state licensed hospital utilizing its own vehicles in transporting, to or from a hospital or a medical facility, nonemergency patients whose medical condition is such that they are confined to a wheelchair or to a stretcher but who do not need, nor are likely to need, medical attention during transport if the hospital does not charge a fee for this service.

(b) The Town of Longboat Key shall be exempt from the provisions of this article so long as it is operating under a certificate issued prior to April 25, 2017 (the date of the amendment and restatement of this article via Ordinance 17-041) and its Sarasota County certificate for these services is valid.

Sec. 2-13-54. – County EMS Medical Director.

In addition to the authority and responsibilities provided for in Section 401.265, Florida Statutes, and Section 64J-1.004, Florida Administrative Code, the county EMS medical director shall have the ultimate decision-making authority for any paramedics and EMTs that practice under his or her supervision. The county EMS medical director has the right to suspend the practicing privileges of any paramedic or EMT operating under his or her supervision.

Sec. 2-13-55. - Applications for certificates, renewals and amendments.

(a) *Application.* Every application for a certificate, renewal of a certificate or an amendment to a certificate shall be filed with the county's Public Safety Department, on a form approved by the county and include all the required supporting information identified in the application. The application shall include the requisite nonrefundable application fee as set by resolution. Upon the complete filing of an application, a notice of the application shall be transmitted by the county to all current certificate holders in Manatee County.

(b) *Administrative review of application.* The Public Safety Director shall review the application and the attached documents.

(1) The investigation and review of the application for a non-governmental entity shall include the following:

a. The financial responsibility of the applicant;
b. The applicant's past performance and service record, if any, in providing services within Manatee County;
c. Local and state criminal records;
d. Except for applications for ALS non-transport services, a current version of the certificate holder's Medical and Trauma Transport Protocols;
e. Except for applications for ALS non-transport services, documentation of academic credentials, the most current medical director contract, medical director's current Florida license, and a Drug Enforcement Agency certification; and
f. Any other facts the applicant has submitted for consideration.

(2) The investigation and review of the application for a governmental entity shall include the following:

a. A copy of the applicant's most recent Comprehensive Annual Financial Report (CAFR);
b. Except for applications for ALS non-transport services, a current version of the certificate holder's Medical and Trauma Transport Protocols;
c. Except for applications for ALS non-transport services, documentation of academic credentials, the most current medical director contract, medical director's current Florida license, and a Drug Enforcement Agency certification; and
d. Any other facts the applicant has submitted for consideration.

If the application is missing information, the information or supporting documentation is untrue or falsified, the applicant failed to include all required supporting information, or if the required fees have not been paid, the Public Safety Director may reject the application.

(c) *Board consideration of applications.* Complete applications shall be reviewed by the Board of County Commissioners ("Board") at a duly noticed public hearing. At the hearing, the Board shall consider the application, the Public Safety Director's report on the factors referenced in Section 2-13-55(b) and recommendation, and all matters presented at the public hearing. These factors shall include the following criteria:

(1) For an applicant that is a non-governmental entity:

a. The financial responsibility of the applicant to maintain safe, comfortable services, maintain or replace medical equipment, and maintain all insurance coverage required under this article based on the following criteria:

1. Audited financial statements or federal tax returns or, for newly formed corporations, personal audited financial statements from the principal(s);

2. Pro forma statements;

3. Credit and bank references;

4. A current official credit report; and

5. Disclosure of all pending liabilities;

b. The adequacy of the standard operating procedures of the applicant;

c. The past performance and service record of the applicant;

d. The number and type(s) of service(s) currently being provided to the area;

e. The effect of the proposed services on the quality of existing life support transport or non-transport services;

f. The effect of the proposed service on the overall cost of life support transport and non-transport services to the County;

g. The community's need for the proposed service. The applicant shall bear the burden of proving there is a need for the proposed service. The basis for determination shall include:

1. A computation of the ratio of estimated annual requests for service in the certificate category, to the current number of ambulances satisfying requests;

2. A computation of the ratio of ambulances per 1,000 population; and

3. A benchmark comparison with other entities of similar size and geography providing emergency medical services;

h. The extent to which the applicant and all proposed equipment and personnel conform to the requirements of Chapter 401, Florida Statutes, any amendments thereto, and any rules promulgated thereunder; and

i. Any other facts the applicant submitted for consideration.

(2) For an applicant that is a governmental entity, the Board shall approve the application for

a certificate upon the applicant's complete submittal of the following information:

a. A completed form application and documentation submitted in support of the application;

b. The application fee, if applicable;

c. EMS policy and procedures as approved by the County EMS medical director; and

d. An annual report of its services, to include information as to the ALS and BLS service time per permitted vehicle.

(d) *Issuance of certificate.* After consideration of the criteria set forth in subsection (c) of this article, if the Board finds that public convenience and necessity will be promoted by the approval of the application, then the application shall be approved, subject to any limitations or restrictions reasonably required by the Board.

(1) Following Board approval, the Public Safety Director shall issue the applicant a certificate. Services approved by the Board shall not begin until the county's receipt of the following from the certificate holder:

a. Documentation of operational approval by all appropriate state agencies;

b. An estimated number of drivers, emergency medical technicians, and paramedics;

c. A list of all permitted vehicles by the Department of Health;

d. Documentation that the insurance required by this article is current;

e. Documentation that the certificate holder has passed all the inspections required by Chapter 401, Florida Statutes;

f. Documentation that the certificate holder has passed county inspection of ambulances and air ambulances; and

g. Documentation that the certificate holder has received vehicle operating permits as required by Section 2-13-60 for its ambulance and air ambulances authorized by the certificate (if applicable).

(2) A certificate holder may elect to phase in the operation of the total number of authorized ambulances so long as no less than two (2) ambulances are active at all times. If a certificate holder elects to phase into operation the number of ambulances approved by the Board, the certificate holder is required to have county vehicle operating permits on all Board-approved active and reserve ambulances, on or before two (2) years following the date of approval of the certificate.

(3) If the applicant fails to comply with the requirements of this subsection within one hundred twenty (120) days after notification of Board approval, such approval shall be automatically revoked and a certificate shall not be issued. For good cause shown, the Public Safety Director may extend this time frame so long as the total time period does not exceed one hundred and eighty (180) days.

(4) Certificates shall be issued for a term not to exceed two (2) years. The two (2) year term shall begin to run on the date of receipt of the items specified in (d)(1) of this section.

(e) *Certificate forms.* Each certificate shall contain, at minimum:

(1) The name and address of the applicant;

(2) The maximum number of active ambulances authorized to operate;

(3) The maximum number of reserve ambulances or air ambulances permitted to serve as temporary replacement for active vehicles;

(4) The date on which the certificate expires;

(5) The boundaries of the territory to be served, and if the certificate holder is a governmental entity, such certificate shall include the governmental entity's jurisdiction and any areas in which the governmental entity has an automatic aid or mutual aid agreement for fire and emergency medical services or in accordance with a closest unit response agreement; and

(6) Such additional terms, conditions, provisions, and limitations as were authorized in the approval process.

The certificate holder must recognize that a permitted ALS non-transport vehicle may operate as a BLS vehicle when the vehicle is not staffed by a certified paramedic or licensed physician in accordance with Rule 64J-1.003, Florida Administrative Code, as amended, provided the vehicle service time is 70% ALS non-transport services annually.

(f) *Renewal of certificates.* The renewal of certificates shall follow the same process as set forth in this section, using such renewal application forms as may be promulgated by the county Public Safety Director.

(1) Application for renewals shall be submitted no later than ninety (90) days prior to the expiration of the current certificate(s), and shall be accompanied by the applicable fee.

(2) No formal application for renewal shall be required for governmental entities that have been granted a certificate prior to the adoption of this Ordinance. The certificate issued shall stay in effect throughout the governmental entity's licensure period, including all renewals.

(g) *Amendment of certificates.* Following a minimum of six (6) months in operation, a non-governmental entity certificate holder may submit the county's ambulances addition form and a letter to the Public Safety Director stating the need and reason for the increase in active ambulances.

(1) An increase shall not be authorized unless the certificate holder submits verifiable documentation which demonstrates that the certificate holder's trips-to-car ratio is equivalent to or exceeds five (5) trips per active vehicle, per average weekday, for the sixty (60) consecutive weekdays (Monday through Friday) preceding the date of application. The 5:1 trips-to-car ratio shall be calculated as follows: total number of trips where a patient is transported for the sixty (60) weekdays, divided by sixty (60) weekdays, divided by the number of authorized ambulances.

(2) The Public Safety Director shall only authorize the number of additional active ambulances necessary to lower the applicant's average weekday trips per active ambulances vehicle ratio below the 5:1 threshold.

(3) All increases in the number of active ambulances shall be reported to the Public Safety Director on a semiannual basis. The applicant may also request a proportional increase in reserve ambulances or air ambulances in accordance with the provisions of this article.

Sec. 2-13-56. - Preventing discontinuation or interruption of life support services.

(a) A certificate holder shall not discontinue or interrupt service in any part of the county or during any part of the certificate holder's term without express prior written approval of the Public Safety Director for good cause shown. If a certificate holder has knowledge that discontinuation or interruption of service may occur, the certificate holder shall immediately provide the Public Safety Director with written notice of such occurrence.

(b) Where there is an actual or threatened discontinuation or interruption of life support services, the Public Safety Director may take the following action:

(1) Authorize another certificate holder or any other qualified person or entity to provide temporary life support services;

(2) Initiate proceedings to terminate the certificate of the certificate holder that failed to provide service;

(3) Advertise for a new certificate holder; and

(4) Take such other actions as may be necessary to protect the health, safety or welfare of the county and ensure the continuation of service.

Sec. 2-13-57. - Insurance requirements.

(a) A certificate holder shall carry insurance as set forth in this section to secure payment for any loss or damage resulting from any occurrence arising out of or caused by the operation or use of any of the certificate holder's ambulances, air ambulances or vehicles. Every insurance policy or contract for such insurance shall provide for the payment and satisfaction of any financial judgment entered against the certificate holder or any person operating an ambulance, air ambulance or vehicle on behalf of the certificate holder.

(b) Prior to commencing operations within the county, the certificate holder shall furnish to the county certificate(s) of insurance, or at the request of the county, full certified copies of required insurance policies, which shall indicate that insurance coverage has been obtained which meets the requirements set forth in this section.

(c) Non-governmental entity certificate holders—Ambulances and air ambulances:

(1) Each ambulance or air ambulance shall be insured in an amount not less than one million dollars ($1,000,000.00) per occurrence combined single limit for bodily injury and property damage.

(2) Each certificate holder shall maintain medical malpractice insurance in an amount not less than one million dollars ($1,000,000.00) per occurrence.

(d) Insurance certificates shall be endorsed to provide for no modification or material change, cancellation, or expiration without thirty (30) days written notice by registered mail to the county. No policy shall be accepted for a shorter period than six (6) months.

(e) All insurance policies required in this section shall be issued by companies authorized to do business in Florida, with a management and financial strength rating approved by the county's risk manager.

Sec. 2-13-58. - Rates.

(a) *Disclosure and assessment of rates.* Rates charged by certificate holders shall be assessed in a uniform manner throughout the incorporated and unincorporated parts of the county. Each certificate holder shall maintain an internet website containing a listing of its rates within the county and each ambulance and air ambulance shall have a rate schedule posted in a place that is readily visible to patients. It shall be unlawful for any certificate holder to charge, demand, request, or accept any rate for services unless that rate has been established pursuant to the following:

(1) Federal or state law;

(2) Countywide emergency and non-emergency ambulance service and non-emergency medical transportation vehicle service contracts between one or more private ambulance providers and the county; or

(3) A lower uniform rate to provide private inter-facility transfer of indigent or Medicaid patients to or from a state-designated and licensed rural hospital, as defined in Section 395.602, Florida Statutes, as amended, where said rate has been negotiated by the hospital and a private certificate holder.

(b) *Ambulance rates charged by county.* Notwithstanding the foregoing, all ambulance rates charged by the county's EMS service shall be set by resolution.

Sec. 2-13-59. – Rights and duties granted by certification.

All certificate holders operating within the county shall comply with the following operating standards as applicable to the issued certificate:

(a) Operate in conformance with this article, all federal and state laws, as well as applicable administrative codes;

(b) No certificate issued pursuant to this article shall be assignable or transferable, except upon approval by the Board in the same manner and subject to the same application process, applicable fee(s) and public hearing(s) for an original application for a certificate. For non-governmental entities, any majority transfer of shares of stock or interest of any person or operator that causes a change in the directors, officers, majority shareholders or managers of such person or operator shall be deemed a transfer or assignment as contemplated in this article;

(c) Obtain and maintain a valid license with the Florida Department of Health for the classification of certificate issued by the county;

(d) Keep such records as may be required by the federal or state government or by the Board and make such records available to the Public Safety Director for inspection recognizing that information that is protected by the Health Insurance Portability and Accountability Act (HIPAA) and Florida Information Protection Act (FIPA), as amended, may not be disclosed to the County unless an agreement addressing HIPAA and FIPA has been executed between the certificate holder and county. Operational and financial records shall be maintained for up to two (2) years beyond the end of a certificate holder's fiscal year

(e) Submit electronic patient care report (ePCR) data to Florida's Prehospital Emergency Medical Services Tracking and Reporting System;

(f) Maintain a central place of business in the county where all records related to the certificate holder's operations within the county shall be available for inspection or audit by the county during normal business office hours recognizing that information that is protected by HIPAA and FIPA, as amended, may not be disclosed to the County unless an agreement addressing HIPAA and FIPA has been executed between the certificate holder and county;

(g) Provide the Public Safety Director with a current list of telephone numbers and addresses of responsible management personnel to be contacted in the event of emergencies;

(h) Provide continuous, prompt and uninterrupted services to the extent authorized by the certificate(s);

(i) Each permitted ambulance or air ambulance shall respond to all calls for service, as indicated by the Medical Priority Dispatching Software;

(j) A certificate holder shall not self-dispatch to medical calls;

(k) When present, Manatee County Emergency Medical Services (MCEMS) shall maintain medical authority on all medical and trauma scenes;

(l) Providers of transport services shall load and transport patients without being subject to unreasonable delays and without regard to a patient's financial ability to pay;

(m) Maintain a twenty-four-hour public access telephone number for receiving calls for service;

(n) The transportation of more than one patient in one ambulance shall be prohibited, with the exception of transportation terms pursuant to a contract between a certificate holder and the county;

(o) Certificate holders shall have direct two-way communications with a central dispatcher at all times. Radio communications shall be operated on a platform capable of communicating on

the countywide radio system. Radio communications capability shall remain compliant for the duration of the certificate;

(p) Electronically record all radio and telephonic service related conversations received through the communications center requesting ambulance service. Said recordings shall be maintained for a minimum of sixty (60) days. Copies of specific recordings shall be maintained for longer periods if requested by the Public Safety Director;

(q) Inform complainants of their right to redress unresolved grievances by providing the name, mailing address, and telephone number of the Public Safety Director;

(r) The certificate holder shall conduct a criminal background check upon hiring all drivers, emergency medical technicians, and paramedics and require that such persons notify the certificate holder of any criminal offense during their employment. All employees of the certificate holder shall meet the requirements set forth in Chapter 401, Florida Statutes, and Chapter 64J, Florida Administrative Code;

(s) Comply with the conditions of the vehicle operating permit;

(t) Each certificate holder shall submit and provide the following information to the Public Safety Director upon amendment or update to the following:

(1) A complete version of the certificate holder's Medical and Trauma Transport Protocols.

(2) Documentation of academic credentials, the most current medical director contract, medical director's current Florida license, and a Drug Enforcement Agency certification.

(u) In addition, providers of ALS non-transport services shall also:

(1) Utilize the county's EMS medical director;

(2) Participate in EMS system quality assurance activities as directed by the county EMS medical director;

(3) Comply with the county EMS medical director's credentialing standards for EMTs and paramedics;

(4) Abide by the county's Medical and Trauma Transport Protocols and standard operating medical procedures promulgated by the county EMS medical director;

(5) Utilize major medical equipment as approved by the county EMS Medical Director and Medical Protocols, to include cardiac monitors/defibrillators, medications, and cervical collars;

(6) Utilize the same ePCR software as the Public Safety Department to promote a seamless transmission of patient information;

(7) Relinquish patient care to MCEMS, a county contracted provider or a county certified transport provider upon their arrival to the scene, unless otherwise directed by the charge paramedic or higher MCEMS medical authority;

(8) Not submit a bill for service to a patient or the County for the cost of performing ALS non-transport services; and

(9) Not use ambulances or other patient transport-capable vehicles when providing ALS non-transport services. Permitted vehicles shall consist of fire engines or fire suppression apparatus that are ordinarily used in the business of fire extinguishment or fire prevention services for the protection of life and property.

Sec. 2-13-60. - Vehicle operating permits for ambulances and air ambulances.

(a) Before any ambulances or air ambulance is operated under the authority of the certificate, the certificate holder shall make a separate application to the Public Safety Director for a vehicle operating permit for each ground or air ambulance to be operated pursuant to said certificate.

(b) Upon payment of the annual permit fee and compliance with this article, the Public Safety Director shall issue the applicant an annual vehicle operating permit.

(c) A certificate holder shall notify the county in writing within seven (7) days of adding, deleting, or replacing any active or reserve ambulances or aircraft. Before a certificate holder adds, removes or replaces an active or reserve ambulances or air ambulances, the certificate holder shall notify the county within seven (7) days and shall apply for an additional vehicle operating permit.

(d) Before September 30th of each year, each certificate holder shall attest to the number of ambulances or air ambulances in operation on a form provided by the county.

(e) A vehicle operating permit shall expire September 30th of each year, and may be renewed upon payment of the fee set by separate resolution.

(f) It shall be unlawful to operate any ambulances or air ambulance required to have a vehicle operating permit without a current valid vehicle operating permit displayed within the vehicle. Such permit shall be available for inspection by any authorized personnel or police officer.

(g) Permits issued hereunder shall not be transferable or assignable.

Sec. 2-13-61. - Conditions of vehicle operating permit for ambulances and air ambulances.

(a) All ambulances must remain compliant with Chapter 64J, Florida Administrative Code, as amended.

(b) Certificate holders shall have each ambulance annually inspected by the county for compliance with safety and sanitation requirements pursuant to Florida Statutes. A provider of air ambulance services shall comply with the inspection requirements of the state. Within thirty (30) days of a state inspection, air ambulance certificate holders shall provide a copy of the most recent state inspection report form and any other inspection-related documentation to the county.

(c) Permitted ambulances are subject to random inspections by the Public Safety Director. Ambulances and air ambulances shall be inspected for compliance in accordance with the applicable provisions of the Florida Administrative Code.

(d) A certificate holder's ambulances and air ambulances must meet the following criteria/standards:

(1) All ambulances used in the transportation of patients must be equipped with all items required by the Florida Department of Health, Division of Emergency Medical Operations;

(2) Any ambulance used by the certificate holder for transporting patients shall conform to all standards as promulgated and defined by the county EMS medical director, and all rules and regulations promulgated and set forth in any state and local ordinance; and

(3) Each ambulance must permanently display the name of or other suitable corporate identification number.

(e) A certificate holder shall not operate more than the specified number of authorized ambulances and air ambulances.

Sec. 2-13-62. - State of emergency or disaster.

(a) Where a state of emergency has been declared, the county administrator is authorized to suspend any of the provisions of this article.

(b) Each certificate holder shall make available ambulance resources to the county during periods of abnormal ALS call activity periods of peak call volume when county resources are depleted.

Sec. 2-13-63. - Violations, enforcement and penalties.

(a) It shall be unlawful for any governmental or non-governmental entity to violate any provision of this article or certificate issued hereunder, or to provide or hold itself out as providing ambulance services within the county without a current certificate of public necessity.

(b) *Grounds for probation, suspension or revocation.* Any certificate issued under this article may be subject to probation, suspension or revocation if the following occurs:

(1) The certificate holder has failed to render services as required by the certificate, this article, Chapters 316, 322, 395, 401, Florida Statutes, as amended, or Chapter 64J, Florida Administrative Code, as amended;

(2) The certificate holder has failed to comply with the requirements of state law regarding the standards for ambulances, air ambulances, vehicles, equipment, and personnel as provided for in Chapters 316, 322, 395, 401, Florida Statutes, as amended, or Chapter 64J, Florida Administrative Code, as amended;

(3) The certificate holder has been found guilty of or entered a plea to a felony charge;

(4) The certificate was obtained by an application in which any material fact was omitted or stated falsely;

(5) The certificate holder has demanded money or compensation other than that established in accordance with this article or established by separate resolution;

(6) The certificate holder has failed to load and promptly transport patients with a medical emergency regardless of ability to pay; or

(7) The certificate holder or any of its employees has induced or sought to induce a change of destination to or from a hospital or another facility other than the destination specified by the patient unless specifically warranted by protocol or the patient's medical condition.

(c) *Probation.* The Public Safety Director has the authority to place a certificate holder on probation if he or she has reasonable cause to believe that a violation of any of the conditions listed in subsection 2-13-63(b) has occurred.

(1) The certificate holder shall be served a copy of the probation notice by certified mail with the violation(s), the probation period, and corrective action, if any, specified in the notice.

(2) The probation period shall not exceed 120 days.

(3) If the certificate holder corrects all or some of the violation(s) identified in the notice of probation prior to the expiration of the probationary period and notifies the Public Safety Director of such corrective action, the Public Safety Director may terminate the probation at any time or proceed with other enforcement action as provided in this section.

(4) If the certificate holder fails to correct the violation(s) identified in the notice of probation prior to the expiration of the probationary period, or fails to notify the Public Safety Director of such corrective action, the Public Safety Director may proceed with the applicable enforcement actions provided in this section.

(d) *Suspension.* For a substantial violation or a repeat violation, the Public Safety Director has the authority to immediately suspend a certificate if he or she has reasonable cause to believe that a violation of any of the conditions listed in subsection 2-13-63(b) has occurred.

(1) The certificate holder shall be served a copy of the suspension notice with the violation(s), the period of the suspension, and corrective action, if any, specified by certified mail at least ten (10) days before the effective suspension period.

(2) If the certificate holder corrects the violation(s) identified in the notice of suspension prior to the expiration of the time period provided therein and notifies the Public Safety Director of such corrective action, the Public Safety Director may reinstate the certificate.

(3) If the certificate holder fails to correct the violation(s) identified in the notice of suspension within the time period provided therein or fails to notify the Public Safety Director of such corrective action, the Public Safety Director may extend the period of suspension and proceed with the applicable enforcement actions provided in this section.

(e) *Revocation.* For repeat violations of subsection 2-13-63(b) or a certificate holder that fails to correct the violations identified in the probation or suspension notice in the time frame specified therein, a certificate may be subject to revocation or amendment. If the Public Safety Director determines that revocation or amendment of any certificate is warranted, notice shall be sent to the certificate holder by certified mail of such findings and of the date of the public hearing on the matter, not less than ten (10) days prior to the hearing. The Board shall thereupon consider the issues identified in the notice and either revoke, suspend or amend the certificate or dismiss the complaint. The Board shall provide notice of revocation or alteration to the violator by certified mail, at least ten (10) days before the violator must comply with the Board's decision.

(f) Additional enforcement remedies. In addition to probation, suspension or revocation of a certificate, this article may be enforced as provided by Section 125.69, Florida Statutes, as amended, or by an action in equity, including injunctive or declaratory relief, in a court of competent jurisdiction, in order to prevent or abate violations of this article.

Sec. 2-13-64. Appeal

(a) All decisions rendered by the Public Safety Director shall be appealable by requesting a hearing before a special magistrate.

(1) The hearing shall be requested within fifteen (15) days of the date of the decision to be challenged.

(2) A hearing date shall not be postponed or continued unless a request for continuance is received in writing by the hearing officer at least ten (10) calendar days prior to the date set for the hearing. No additional continuances shall be granted without concurrence of the Public Safety Director.

(3) The fact-finding determination of the special magistrate shall be limited to whether the alleged violation occurred or whether competent, substantial evidence supports the Public Safety Director's decision. Based upon this fact-finding determination, the special magistrate shall either affirm or reverse the decision of the Public Safety Director. If the special magistrate affirms the decision of the Public Safety Director, the named party shall have fifteen (15) days from the date of the decision of the special magistrate to comply with the decision of the Public Safety Director unless some other period is agreed to by the county.

(b) All decisions rendered by the Board or a special magistrate shall be appealable as permitted by Florida Rules of Appellate Procedure, as amended, or Section 162.11, Florida Statutes, as amended.

Section 4. The publisher of this County's Code, the Municipal Code Corporation, is directed to incorporate the amendments in Section 3 into the Code.

Section 5. If any clause, phrase, provision, section or sentence of this Ordinance is held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not be construed as to render invalid or unconstitutional the remaining provisions of this Ordinance.

Section 6. This Ordinance shall take effect immediately upon filing with the Department of State.

DULY ADOPTED, with a quorum present and voting, this 25th day of April, 2017.

BOARD OF COUNTY COMMISSIONERS
OF MANATEE COUNTY, FLORIDA

By: _____
Chairperson

ATTEST: ANGELINA COLONNESO
CLERK OF THE CIRCUIT COURT AND COMPTROLLER

By: _____
Deputy Clerk

BRADENTON HERALD

WWW.BRADENTON.COM
P.O. Box 921
Bradenton, FL 34206-0921
1111 3rd Ave. W.
Bradenton, FL 34205
941-746-7077

Bradenton Herald
Published Daily
Bradenton, Manatee County, Florida

STATE OF FLORIDA
COUNTY OF MANATEE

Before the undersigned authority personally appeared Michael G. Stinson, who, on oath, says that she is a Legal Advertising Representative of The Bradenton Herald, a daily newspaper published at Bradenton in Manatee County, Florida; that the attached copy of the advertisement, being a Legal Advertisement in the matter of **Notice of Public Hearing, Manatee County** was published in said newspaper in the issue(s) **3/23/17.**

Affidavit further says that the said publication is a newspaper published at Bradenton, in said Manatee County, Florida, and that the said newspaper has heretofore been continuously published in said Manatee County, Florida, each day and has been entered as second-class mail matter at the post office in Bradenton, in said Manatee County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

(Signature of Affiant)

Sworn to and subscribed before me this
23 Day of March 2017

FLORENCE KONESKO
Notary Public - State of Florida
My Comm. Expires Sep 20, 2017
Commission # FF 047577
Bonded Through National Notary Assn.

SEAL & Notary Public
Personally Known _____ OR Produced Identification _____
Type of Identification Produced _____

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN, pursuant to Section 125.66, Florida Statutes, that the Board of County Commissioners of Manatee County, Florida, will conduct a public hearing in chambers at the Manatee County Administrative Center, 1112 Manatee Avenue West, 1st Floor, Bradenton, Florida, on the **4th day of April 2017, at 9:00 a.m.,** or soon thereafter to consider, act upon, adopt, or reject the following ordinance:

ORDINANCE NO. 17-041

AN ORDINANCE OF MANATEE COUNTY, FLORIDA, REGARDING THE AUTHORIZATION OF EMERGENCY MEDICAL TRANSPORTATION AND NON-TRANSPORTATION SERVICES WITHIN THE COUNTY; AMENDING AND RESTATING ARTICLE II OF CHAPTER 2-13 OF THE MANATEE COUNTY CODE OF ORDINANCES; MAKING RELATED FINDINGS; DEFINING CERTAIN TERMS; REQUIRING CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY FOR EMERGENCY MEDICAL SERVICES; PROVIDING EXEMPTIONS; ESTABLISHING THE AUTHORITY OF THE COUNTY EMS MEDICAL DIRECTOR; ESTABLISHING STANDARDS FOR APPLICATIONS, RENEWALS AND AMENDMENTS OF CERTIFICATES; PREVENTING DISCONTINUATION OR INTERRUPTION OF EMERGENCY MEDICAL SERVICES; PROVIDING FOR INSURANCE REQUIREMENTS; REGULATING RATES; ESTABLISHING RIGHTS AND DUTIES GRANTED BY CERTIFICATION; REQUIRING VEHICLE PERMITS FOR GROUND AND AIR AMBULANCES; ESTABLISHING CONDITIONS OF VEHICLE OPERATING PERMITS FOR GROUND AND AIR AMBULANCES; PROVIDING FOR RESPONSE IN A STATE OF EMERGENCY OR DISASTER; PROVIDING FOR VIOLATIONS, PROVIDING FOR ENFORCEMENT AND PENALTIES; PROVIDING FOR APPEALS; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

Copies of proposed **ORDINANCE 17-041** may be inspected by the public during normal business hours in the Office of the County Attorney, 1112 Manatee Avenue West, Suite 969, Bradenton, Florida. Interested parties may appear at the meeting or public hearing and be heard with respect to the proposed ordinance.

According to Section 286.0105, Florida Statutes, any person desiring to appeal any decision made by the Board of County Commissioners with respect to any matter considered at the above-referenced meeting or public hearing will need a record of the proceedings, and, for such purposes, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

MARCH 23, 2017

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

May 1, 2017

Honorable Angelina Colonneso
Clerk of the Circuit Court
Manatee County
Post Office Box 25400
Bradenton, Florida 34206

Attention: Robin Toth, Deputy Clerk

Dear Ms. Colonneso:

Pursuant to the provisions of Section 125.66, Florida Statutes, this will acknowledge receipt of your electronic copy of Manatee County Ordinance No. 17-041, which was filed in this office on May 1, 2017.

Sincerely,

Ernest L. Reddick
Program Administrator

ELR/lb

MANATEE COUNTY GOVERNMENT

STATE OF FLORIDA

COUNTY OF MANATEE

Before the undersigned authority personally appeared **Quantana Acevedo**, who on oath says that she is a **County Employee of Manatee County Government, Manatee County, Florida**; that the attached copy of advertisement, being a public notice in the matters of **Notice of Hearing for Ambitrans Medical Transport Renewal Application for a Certificate of Public Convenience** for the **Manatee County Board of County Commissioners Regular Meeting on August 25, 2026**, in Manatee County Florida, was published on the publicly accessible website of Manatee County Government, Manatee County, Florida, of www.mymanatee.org on **August 12, 2026**.

Affiant further says that the website complies with all legal requirements for publication in Chapter 50, Florida Statutes.

By: Q Acevedo
Quantana Acevedo
Planning and Zoning Tech III

Sworn to and subscribed before me this 12th day of August 2026, by Quantana Acevedo, who is personally known to me or who has produced (type of identification) as identification.

Abigail Bonds
(Signature of Notary Public)

Abigail Bonds
(Print Name of Notary Public)

Notary Public
(Title)

ABIGAIL RUTH-ELLEN BONDS
Notary Public-State of Florida
Commission # HH 815493
My Commission Expires
July 26, 2030

My Commission Expires: JULY 26, 2030

Commission Number: HH 815493

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN, pursuant Section 401.25, Fla. Stat. and Section 2-13-55 of the Manatee County Code of Ordinances, that the Manatee County Board of County Commissioners will hold a Public Hearing on **August 25, 2026, at 9:00 a.m**. (or as soon thereafter as may be heard), located on the first floor of the Manatee County Administrative Center, 1112 Manatee Avenue West, Bradenton, Florida, to consider and act upon the following matter:

Ambitrans Medical Transport Renewal Application for a Certificate of Public Convenience to provide Advanced Life Support and Basic Life Support Transport in Manatee County

All interested parties are invited to appear at this hearing and be heard, subject to the proper rules of conduct. Additionally, any public comments submitted will be considered by the Board of County Commissioners and entered in the record. Link to: Public Comment

Copies of the application and supporting documents and the Public Safety Director's report and recommendation are available for public inspection from 8:00 a.m. to 5:00 p.m. Monday through Friday at the Manatee County Public Safety Center, 2101 47th Terrace East, Bradenton, Florida. These documents are also available on the County's website. Link to: Agendas

Interested parties may obtain assistance regarding this matter by calling (941) 749-3070 or emailing at planning.agenda@mymanatee.org during normal business hours.
In accordance with Section 286.0105, Florida Statutes, if any person decides to appeal any decision made with respect to any matters considered at such meeting or hearing, that person will need a record of the proceedings, and for such purpose, that person may need to assure that a verbatim record of the proceedings is made, which record would include any testimony or evidence upon which the appeal is to be based.

Americans With Disabilities: The Board of County Commissioners does not discriminate upon the basis of any individual's disability. Manatee County is committed to providing full access to facilities, programs, and services to all, as well as supporting the employment of qualified individuals with disabilities in its workforce in accordance with federal and state laws and regulations, including the Americans with Disabilities Acts of 1990 (ADA) and as amended ("ADAA), and 503 and 504 of the Rehabilitation Act of 1973. Anyone requiring reasonable accommodation for this meeting as provided for in the ADA, or assistance with accessing any of these documents, should contact Carmine DeMilio, ADA Compliance Coordinator, at 941-792-4501 ext. 6016 or carmine.demilio@mymanatee.org, at least 3 business days prior to the scheduled meeting. If you are deaf/hard of hearing and require the services of an interpreter, please contact the Florida Relay Service at 711.

SAID HEARING MAY BE CONTINUED FROM TIME TO TIME PENDING ADJOURNMENTS.

MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS
Manatee County Public Safety Department
Manatee County, Florida
Date Published: August 12, 2026