



Diploma and Certificate Program Catalog

The Resuscitation Group
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<http://resuscitationgroup.com/>



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Our Vision

The Resuscitation Group seeks to showcase the exceptional healthcare system in Washington State, improve healthcare systems in the region, increase the effectiveness of the healthcare system, enhance the education of healthcare practitioners, and provide a model for other regions and countries.

Our Philosophy

The Resuscitation Group (TRG) is committed to a philosophy of educational excellence and attention to detail both in our programs and in our students. We accept responsibility for preparing students who are knowledgeable in the field, responsive to service in the community and dedicated to continued expansion of human understanding through study.

To this end, we hold to simple goals:

- To promote ethical codes of conduct and high professional standards, while fostering participation in professional organizations and activities.
- To prepare participants to assume responsibility for management of critical care patients in a wide range of environments, utilizing the principles of emergency and critical care medicine.
- Academically preparing students for successful completion of boards, as well as international, national, and state certification examinations.
- Assuring student competencies in emergency and critical care medicine prior to allowing patient contact and then assuring high standards of compliance with competencies during patient care.

Summary of Programs offered at The Resuscitation Group

1. Advanced Practice Paramedic

The Advanced Practice Paramedic (or Extended Scope of Practice Paramedic) is a physician extender capable of extensive, advanced patient care interventions in critical and emergent patients. This individual possesses the complex knowledge and advanced interventional skills necessary to provide physician extension to the patient's side, allowing their physician medical program director (MPD) the ability to have their physician-level care extended to the scene of any emergency, through the hand, eyes, and ears of the APP. Advanced Practice Paramedics are the pinnacle of a comprehensive EMS response under medical oversight. Advanced Practice Paramedics perform interventions and patient care management with the advanced and diagnostic equipment typically found in an advanced response vehicle, on an advanced practice ALS ambulance, on critical care transport units, or in an emergency department. The Advanced Practice Paramedic is a tertiary link from the scene into the tertiary health care system, serving as an advanced responder, critical care transport provider, aeromedical provider, resuscitation officer,



and providing atypical care. Students are provided with a challenging, comprehensive education with didactic, laboratory, simulation, and clinical components during this extensive program with The Resuscitation Group.

After program completion and appropriate internship, the participant may wish to pursue certification through the Global Emergency Medical Registry (GEMR) as an Advanced Practice Paramedic. Please see Appendix 2 for detailed program information.

2. Advanced Paramedic Refresher

The CAPCE accredited, 30 hour and 60 hour Paramedic Refresher Course Certificate is designed to accomplish the NREMT Paramedic National Continued Competency Program (NCCP) completion and update the Advanced Provider with the newest research and techniques being applied in the global environment.

The Resuscitation Group is able to provide a 30 hour CAPCE Accredited National Component Hours Paramedic recertification certificate for those whom only require the national component hours; as well as a 60 hour CAPCE Accredited Paramedic National Continued Competency Program (NCCP) Refresher.

The NCCP system requires a total of 60 hours of continuing education to recertify. The complete model requires continuing education in three components:

- 30 hours of National component content per the NREMT,
- 15 hours of local/state component content, and,
- 15 hours of individual component content.

If the participant completes the 60 hour program of study, the participant will be awarded a 60 hour Paramedic - NRP Recertification Course Certificate. The participants will also receive a complete set of high risk/low frequency skills sheet (surgical cricothyroidotomy, endotracheal intubation, ultrasound guided procedures/vascular access, simple thoracostomy) evaluations completed with an instructor and/or physician during the component hours.

This program is taught at an advanced knowledge level, using the current science standards and ILCOR recommendations. Please see Appendix 3 for detailed program information.

3. Critical Care Provider

This program is designed for providers involved in rural/critical access hospitals, emergency medical transport, remote site care, or site-specific care of critically ill patients. Upon completion of the program, the participant will be prepared to stabilize and facilitate safe and efficacious transport of the critically ill or injured patient by air or ground. Students are provided with a challenging comprehensive education with didactic, laboratory, and simulation components.



The program includes didactic, practical lab, and simulation at our campus. The program of learning includes multiple vital topics for today's healthcare environment, including: advanced airway management, basic ventilator management, current international science guideline updates, advanced 12 Lead ECG interpretation, quantitative waveform capnography interpretation, bedside ultrasound assessments, vascular access, advanced cardiac care, advanced stroke care, orientation to conscious sedation procedures, and adult/adolescent/pediatric consideration in critical care. After completion of the program, the participants may wish to pursue GEMR, IBSC, and/or BCEN CTRN certification as a critical care transport or remote care professional. Please see Appendix 4 for detailed program information.

4. Dental Anesthesia Assistant

The Dental Anesthesia Assistant Program is a certificate program approved by the Washington State Dental Commission and the Oregon Dental Board. A Dental Anesthesia Assistant works at the direction of a Dentist, Oral Surgeon, Maxillofacial Surgeon, or other provider in preoperative, operative, and postoperative anesthesia, monitoring, and interventional care.

Among other duties, Anesthesia Assistants obtain a pre-anesthetic health history, perform vascular access, establish non-invasive monitoring, assist with the preparation and administration of medications, assist in the treatment of life-threatening situations, and assist with all aspects of anesthesia techniques, as allowed by certification and as directed by a licensed provider. The Resuscitation Group students learn and apply anesthesia skills and manage life-threatening situations in simulation. The practical experience gained is not typical of all programs and is extremely valuable to the participants when real world situations occur. Please see Appendix 5 for detailed program information.

5. Healthcare and Emergency Systems Leadership

Today's healthcare systems, emergency medical systems, and healthcare organizations are in constant need of leaders to navigate the complexities of healthcare, EMS, and operational competency, management, tactics, strategies, regulatory compliance, and development of the future of service delivery. Designed for hospital, emergency medical services, rescue, and healthcare professionals; the program is built upon the NHTSA Leadership Guide to Quality Improvement for Emergency Medical Services (EMS) Systems, the National Center for Healthcare Leadership objectives, Agency for Healthcare Research & Quality TeamSTEPPs objectives, National MEMS Academy (SGAUS) objectives, and the Emergency Management Institute Leadership and Influence course objectives. The program provides the knowledge and skills to those interested in functioning as a leader-manager within an EMS, rescue, or healthcare service. Explore the basis of delivery systems, risk management and safety initiatives, legal and regulatory requirements,



quality management, medical direction, research principles, and community risk reduction. Develop a multipoint process or leadership and management strategies as applied to the rapidly changing world of service provision. Courses are taught by experienced medical professionals who are experts in their field and have real world management experience from a variety of aspects of the healthcare delivery system. Please see Appendix 6 for detailed program information.

Contact Telephone Numbers

Rod Rowan	Director of School Operations	+1-855-739-2257
Michael Christie	Director of Curriculum and Programs	+1-855-739-2257
Dr. Luke Parr	Medical Director	+1-855-739-2257
Maria Sagolili	Compliance and CME Manager	+1-855-739-2257

Program Staff and Duties:

Rod Rowan - Director of School Operations:

The DOSO manages the day-to-day operations of the entire school environment, as well as assures compliance with equipment, support services, and legal documents.

Michael Christie – Curriculum, Science, and Program Director

The CCPD will review and approve the educational content of the program curriculum to certify its ongoing appropriateness and medical accuracy against current regional, national, and international guidelines. The CCPD will review and approve the quality of medical instruction, supervision, and evaluation of the students in all area of the program. The CCPD will assure and attest to the competence of each graduate in the cognitive, psychomotor, and affective domains.

Dr. Luke Parr - Medical Director

The Medical Director is responsible for all adherence to medical science in the curriculum, supervision of the CCPD, issuance of medical privileges, and final approval of all patient contact protocols and treatment processes.

Ms. Maria Elena Sagolili - Compliance and CME Manager

The Compliance and CME Manager is responsible for operating and compliance for The Resuscitation Group continuing medical education accreditation processes.

The Resuscitation Group is owned by ATREC Inc (50% of shares) and Rowan Inc (50% of shares)

Faculty

The Resuscitation Group faculty is comprised of numerous healthcare practitioners at a variety of levels; including Physicians, Nurses, Paramedics, Ultrasonography Specialists, Healthcare Administrators, Safety Specialists, and Leadership experts. Instructor qualifications and information is available at

info@resuscitationgroup.com



The Resuscitation Group practices non-discriminatory faculty recruitment regarding disability, race, color, creed, gender, sexual preference, affectional preference, veteran status, and national origin; but The Resuscitation Group does seek the highest qualified educational staff in the United States and abroad.

Facilities

The Resuscitation Group Campus is located at 7815 Highway 99, Vancouver, Washington (+1-855-739-2257). The Resuscitation Group main campus in Vancouver, Washington is a 6,000 sq ft training facility. The Facility has three classrooms, two full immersive simulation labs, and a “wet” lab area. All areas of the facility have integrated AV services and Wi-Fi for instruction and student use. The Facility includes a student lounge, drink service and snack area, as well as restroom facilities. The Facility has a total capacity of 60 students present at once for educational activities.

Accreditation and Regulatory Approvals

1. The Resuscitation Group is a licensed vocational /technical educational institution in Washington State.
2. The Resuscitation Group is accredited as National Training Center by the American Heart Association (AHA).
3. The Resuscitation Group is accredited by the Postgraduate Institute for Medicine (PIM).
4. The Resuscitation Group is accredited by the Commission on Accreditation for Prehospital Continuing Education. (CAPCE).
5. The Resuscitation Group is approved by the Global Emergency Medical Board (GEMR) to allow students from programs of instruction to directly apply for certification following training programs.
6. The Resuscitation Group is an Oregon Non-Transport Emergency Medical Services (EMS) organization.
7. Our commitment to excellence is reflected in our affiliation with these and other reputable organizations, ensuring the highest standards in healthcare education.

Instructor to Participant ratio

While no set standard exists for the educational process associated with the educational programs at The Resuscitation Group, the school holds itself to the international medical education practice of not more than a 1:48 ratio during didactic lecture sessions, a ratio of not greater than 1:8 in simulation sessions, a ratio of not greater than 1:4 during ultrasound and high risk procedure training, and a ratio not to exceed 1:4 in the clinical setting under an assigned educator.



Academic Calendar, Hours of Operation, and Holidays

Programs and enrollment is ongoing throughout the calendar year.

Instructional hours and dates for the programs are listed on The Resuscitation Group website (www.resuscitationgroup.com) under the registration button at the bottom of each course, workshop, or program.

The Resuscitation Group observes the following holidays and classes will not be held on the following United States Holidays:

- New Year's Day
- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas Eve
- Christmas Day

General Admission Requirements

Students should have read catalog and asked questions as to benefit prior to enrollment.

Student Documents: All documentation and forms must be submitted to The Resuscitation Group at the time of admission and payment.

Pre-requisites: As listed within each program curriculum in appendixes

Insurance Requirements: None required

Immunizations Required: Immunizations recommended by the Centers for Disease Control and Prevention (<https://www.cdc.gov/vaccines-adults/recommended-vaccines/index.html>) for Healthcare Workers.

Tuition, Fees, and Deposits

Tuition, fees, and deposits are paid to The Resuscitation Group via credit card, third party payment, contract client invoice, USPS money order, or cashier's check.

Tuition and fees are noted in each program description in the appendixes of this catalog.

Textbooks must be obtained by the participants prior to the program start date and participants must complete reading as directed in program description.

Tuition is listed in each program description in the specific program appendices.

No financial aid programs are available at the school.



Refund Policy

All refunds will be made within thirty (30) calendar days from the time of cancellation from the program; provided cancellation was made at least 30 days prior to program start date.

The official date of termination or withdrawal for a student shall be determined in the following manner:

1. The date on which the school recorded the student's last day of attendance; or,
2. The date on which the student is terminated for a violation of a published school policy which provides for termination.

No student shall be continued on an inactive status in violation of school policy without written consent of the student. Inactive students must be terminated within thirty days of the next available start date and refunded appropriate prepaid tuition and fees at that time.

Refunds must be calculated using the official date of termination or withdrawal and the date designated on the current enrollment agreement executed with the student. Refunds must be paid within thirty calendar days of the student's official date of withdrawal or termination.

Application/registration fees may be collected in advance of a student signing an enrollment agreement; however, all monies paid by the student shall be refunded if the student does not sign an enrollment agreement and does not commence participation in the program.

The school must refund all money paid if the applicant is not accepted; this includes instances where a starting class is canceled by the school.

The school must refund all money paid if the applicant cancels within five business days (excluding Sundays and holidays) after the day the contract is signed or an initial payment is made, if the applicant has not begun training; the applicant may request cancellation in any manner, in the event of a dispute over timely notice. The burden of proof rests on the applicant.

The school may retain an established registration fee equal to ten percent of the total tuition cost, or one hundred dollars, whichever is less, if the applicant cancels after the fifth business day after signing the contract or making an initial payment. A "registration fee" is any fee charged by a school to process student applications and establish a student records system.



If training is terminated after the student enters classes, the school may retain the registration fee established under this subsection, plus a percentage of the total tuition as described in the following table:

If the student completes this amount of training:	The school will keep this % of the tuition:
One week or up to 10%, whichever is less	10%
More than one week or 10%, but less than 25%	25%
25% through 50%	50%
More than 50%	100%

Should The Resuscitation Group (TRG) cancel the program after a student has paid the full tuition, TRG will refund all monies paid by the student, including the application fee.

Attendance

The education program is a rigorous program of study where any absences are detrimental to a student’s chances of passing all required phases. Attendance is required for all classes. Excused absences will be granted for emergency situations only. Students are required to attest to attendance for each day of class. Absences, tardiness and/or early exits, and operational policies are as follows:

Absences:

A student will be allowed only three (3) absences with notification. Absences above this limit may result in expulsion from the program with any reimbursement provided in accordance with TRG scheduled refund policy.

An absence with prior notification means that the student has contacted the TRG staff more than one hour prior to the scheduled start of class.

After one (1) absence without prior notification or two (2) absences with notification, the student shall meet with the Program Director to create a remediation plan, and the student will be placed on probation.

In addition, if a student is absent for three (3) or more consecutive days, he or she will be expelled from the program with no reimbursement for tuition already paid.



Tardiness and Early Exits:

A student will be allowed only three (3) unexcused tardy or early exits. A tardy is defined as arriving to class more than 10 minutes after the scheduled start time. An early exit is defined as leaving class more than 20 minutes prior to the end of scheduled class time.

Tardy arrivals or early exits above this limit will be a cause for expulsion from the program with any reimbursement provided in accordance with TRG scheduled refund policy.

Make-up Work:

Students who miss assignments, exams, or any other work due to absences, tardiness, or early exits must make-up any missed assignments. Missed exams must be taken before the next day class can be attended.

Inclement Weather:

During inclement weather, TRG will hold class according to the Clark County School District weather condition policy. Students should use added discretion when traveling from more rural areas. If class is in session, and the student deems it unsafe to travel to class, the Program Director should be contacted immediately.

Cell Phones and Personal Media Devices

All cell phones, personal media devices, and other such electronic communication devices will be turned to vibrate during class and will not be utilized except for emergencies during instructional periods. There is absolutely no recording of instructional periods, lecture materials, and/or instructors while in a program of study at The Resuscitation Group.

Dress Code

During didactic and laboratory sessions, students may wear any form of clothing they feel is appropriate, keeping in mind that The Resuscitation Group does not, under any circumstances, take responsibility for clothing which becomes soiled, stained, torn, or ruined during didactic or laboratory sessions.

The Resuscitation Group strongly recommends clothing that the participant can perform exercise intensive activities in, such as chest compressions and patient movement, during practical, laboratory, and simulation sessions; The Resuscitation Group also recommends a non-slip foot wear for these sessions.

The resuscitation Group recommends all students have a light weight to medium weight sweatshirt, jacket, or other clothing item to put on when they are cold.



Confidentiality of Student Records

Student records are released only for legitimate educational reasons or pursuant to a student's express written consent. Students may provide written consent to the TRG staff by filling out and submitting the **Consent to Release Student Information** form. A copy of this document is available at the back of this catalog.

TRG adheres to the guidelines set forth in the federal Family Educational Rights and Privacy Act (FERPA).

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S Department of Education.

For additional information or technical assistance, you may call (202) 260-3887 (voice). Individuals who use TDD may call the Federal Information Relay Service at 1-800-877-8339.

Or you may contact the following address:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington D.C. 20202-5920

Student Evaluations

Students will be evaluated relative to the cognitive, psychomotor, and affective educational domains. Evaluation of students shall be conducted on a recurring basis and with sufficient frequency to provide both the student and program faculty with valid and timely indicators of the student's progress toward and achievement of entry level competencies stated in the curriculum.

Student Conduct

Representation of the TRG Education Program:

Through their professional conduct, students represent TRG. The quality of medical care, abilities to explain and/or justify the care provided and even personal appearance all reflects the educational and professional philosophies of TRG.

The Resuscitation Group maintains an excellent reputation in the healthcare community because our faculty and students take pride in the TRG Education Program. Students should not make statements on behalf of TRG, or represent TRG in administrative, financial, educational, or policy matters without the express written authorization of TRG staff.



Honor Code:

Students are responsible for conducting themselves in a manner that is above reproach at all times. The TRG staff maintains that above all, ethical conduct, especially honesty, is one of the most important attributes of a competent healthcare professional. Having adopted the high ethical standard of the healthcare profession, the student is charged with the responsibility for the behavior of his or her colleagues as well as his/her own.

Violations of this honor code can be cause for dismissal from the program. Students with knowledge of an infraction of this honor code are obligated to provide this information to the TRG staff immediately. If a student fails to notify TRG staff immediately, the student could face disciplinary action up to and including expulsion.

Prohibited Conduct:

The following is a list of prohibited conduct. This list is not meant to be exhaustive, nor should it be inferred that items not expressly listed are acceptable. Students are required to abide by all rules, policies, and procedures dictated by TRG staff, whether indicated herein or communicated later.

- Submitting material in assignments, examinations, or other academic work which is based upon sources prohibited by the instructor or the furnishing of materials to another person for the purposes of aiding another person to cheat
- Submitting material in assignments, examinations, and other academic work which is not the work of the student in question
- Knowingly producing false evidence or false statements, making charges in bad faith against any other person, or making false statements about one's own behavior related to educational or professional matters
- Falsification or misuse of TRG records, permits, or documents.
- Exhibiting behavior which is disruptive to the learning process or to the academic or community environment.
- Conviction of a crime, either:
 - Before becoming a student under circumstances bearing on the suitability of a student to practice a health or related profession, or
 - While a student at the program.
- Disregard for the ethical standards appropriate to the practice of a health or related profession while a student
- Attending any TRG Program while under the influence of alcohol, drugs, or medication that may impair one's ability to perform required functions is prohibited. It is inappropriate to be under the influence or have consumed within the last eight (8) hours any substance that would alter your state of mind, or jeopardize patient care (e.g. alcohol, drugs, or medications). Students should be aware that tolerances may vary and the eight (8) hour minimum may not be sufficient time for some individuals.



- If a student is suspected of being under the influence of alcohol, drugs, or impairing medication, he/she will be dismissed immediately from class, lab, or clinical placement. In such an instance, the student will fall under the procedures outlined in the Academic Discipline/Dismissal Procedure.
- Obstruction or disruption of teaching, research, administration, disciplinary procedures, or other institutional activities including the TRG public service functions or other authorized activities on institutionally owned or controlled property.
- Obstruction, disruption, and/or interfering with freedom of movement, either pedestrian or vehicular, on TRG owned or controlled property.
- Possession or use of firearms, explosives, dangerous chemicals, or other dangerous weapons or instruments on institutionally owned, TRG controlled property, or Clinical placement, unless the student is a law enforcement officer or active duty military personnel on specific assignment requiring armed capability.
- Detention or physical abuse of any person or conduct intended to threaten imminent bodily harm or endanger the health of any person on any TRG owned, TRG controlled property, or Clinical site.
- Malicious damage, misuse, or theft of TRG property, or the property of any other person where such property is located on TRG owned or controlled property or regardless of location, is in the care, custody, or control of TRG or a clinical site.
- Refusal by any person while on TRG owned or controlled property (or clinical site) to comply with TRG staff orders or an appropriate authorized official to leave such premises because of conduct proscribed by this rule when such conduct constitutes a danger to personal safety, property, or educational or other appropriate institutional activities on such premises.
- Unauthorized entry to or use of TRG facilities, including buildings and grounds.
- Use of TRG or clinical site computers for any activities involving (a) buying or selling of items not required for program use, (b) downloading programs off the Internet, including music or video files, (c) accessing Internet sites containing pornography or gambling.
- Inciting others to engage in any of the conduct or to perform any of the acts prohibited herein. Inciting means that advocacy of proscribed conduct which calls upon a person or persons addressed for imminent action and is coupled with a reasonable apprehension of imminent danger to the functions and purposes of the TRG including the safety of persons and the protection of its property.

Knowledge of Misconduct:

Any person who witnesses or has firsthand knowledge of misconduct as described in the section above is obligated to send a written report of the infraction to TRG Staff. Failure to do so may result in disciplinary action up to and including dismissal from the program.



Drug and Alcohol Awareness

TRG recognizes the obligation of the administration, faculty, staff, and students to support and maintain a community atmosphere that emphasizes the development of healthy lifestyles and the making of responsible, informed decisions concerning drug and alcohol use. Efforts to provide this atmosphere will include: education through curriculum infusion, intervention, treatment referral, and especially the support of healthy lifestyle alternatives.

The goal of these efforts is to provide factual information about use and abuse and to increase awareness of indicators of harmful involvement; to educate students, faculty, and staff concerning options for dealing with excessive consumption by self and/or others; and to educate concerning possible interventions to prevent further abuse.

Whenever a person is concerned about another's abuse of chemicals. The concerned individual is encouraged to speak privately with the abuser. Students needing assistance should consult with TRG staff for counseling and/or referral.

Academic Discipline/Dismissal Procedure

Any student for whom a recommendation for discipline/dismissal is considered will have received ample notification of unsatisfactory work. The student will be notified in writing, either by email, personal delivery or posted letter, of the following:

1. Factors the TRG Program intends to consider in the discipline/dismissal proceedings.
2. The time and place for a meeting with members of the program staff.

From the time of written notification to the time in which the proceeding is held and a final decision rendered, the student loses all attendance privileges. This time will not exceed three (3) business days.

A meeting will be convened, attended by members of the program staff and the student. During this meeting, the following will be reviewed:

- Policies and Procedures relevant to the disciplinary proceedings.
- Student's signed statement, agreeing to be bound by the TRG Education Program policies.
- TRG Education Program documentation regarding student's deficient performance.
- Student rebuttal.



Within five (5) business days of this meeting TRG Staff shall provide the student with a written decision. The student has the right to appeal the Instructors decision based on the Appeal Process outlined below.

Appeal Process

A student who has been dismissed from TRG program or disciplined in any way that the student feels is unfair may appeal the decision of the staff.

1. **Step 1:**
Within five (5) working days of receiving the Instructor's decision, the student shall provide to the Director staff (or his or her designee) a written request for an appeals hearing. The request should outline the alleged behavior that led to discipline and why the student does not believe this is a fair outcome.
2. **Step 2:**
Within five (5) working days of receiving the request for an appeals hearing, the Director staff (or his or her designee) shall meet with the student. During this meeting the student will present his or her case as to why he or she believes the discipline to be unfair.
3. **Step 3:**
Within five (5) working days of this meeting, the Director staff (or his or her designee) shall provide a written response to the student regarding this matter. The decision of the Director staff (or his or her designee) is final and may not be appealed.

Discrimination and Harassment

In addition to the prohibited behaviors listed above, TRG prohibits any type of discrimination or harassment against any person based on the following:

- Race
- National Origin
- Sex
- Age
- Creed
- Presence of physical, sensory, or mental disability
- Religion
- Color
- Disabled veteran status
- Sexual Orientation
- Affectional Preference
- U.S. Military Veteran status
- Marital Status



The responsibility for, and the protection of this commitment extends to students, faculty, administration, staff, contractors, and those who develop or participate in TRG programs. It encompasses every aspect of employment and every student and community.

Trainees are seeking to assume a vital position of trust in the community and taking on the responsibility of serving everyone in need of their services, regardless of gender, race, age, national origin, sexual orientation, economic or educational background, religion, or any other factor. This is the responsibility that goes with having access to people's private homes and lives in times of their great stress. It is your obligation to treat every patient and their families with equal respect. Everyone in the community must be approached and served with equal respect, care, and professionalism.

Persons who believe they have been discriminated against or harassed by TRG or its employee(s) or agent(s) on the basis of any status listed above, may request informal assistance and/or lodge a formal complaint.

Students with a disability may request accommodation in writing to the school.

Complaint Process

The process for filing a complaint for alleged discrimination or harassment is as follows:

1. **Step 1:**
The student shall provide TRG with a written summary of the alleged behavior which led to the complaint. If the complaint involves the instructor, the student shall provide the complaint to the Director staff.
2. **Step 2:**
Having received the complaint, TRG shall review the facts with the Director staff and determine the appropriate course of action. Many situations can be resolved by the instructor mediating a meeting between the complainant and the alleged offender. If that is not a viable option, or if it is not successful in resolving the matter, TRG shall initiate an investigation.
3. **Step 3:**
The investigation shall include interviews with the complainant and the alleged offender(s). This investigation may be conducted by TRG staff or outside investigators. This investigation will be completed within 45 days of the original complaint. Once the investigation is complete, the instructor shall provide the complainant with a written summary of the findings and the action to be taken by TRG
 - a. No one shall be singled out, penalized, or retaliated against in any way by a member of the agency for initiating or participating in the complaint process. Retaliation may be grounds for disciplinary action.



If desired, inquiries or appeals beyond TRG level may be directed to:

1. **Equal Employment Opportunity Commission**
909 First Avenue, Suite 400
Seattle, WA 98104
(206) 220-6883
2. **Washington State Human Rights Commission**
711 South Capitol Way, Suite 402
PO BOX 42490
Olympia, WA 98504
(360) 753-6770
3. **Workforce Training and Education Coordinating Board**
128 10th Avenue, SW
PO BOX 43105
Olympia, WA 98504-3105
(360) 709-4600

Bloodborne/Airborne Pathogens

In the laboratory and clinical settings students are at risk for exposure to blood borne pathogens and infectious diseases. All bodily substances should be considered potentially infectious. Personal protective equipment (PPE) is readily available in the laboratory, clinical, and field internship settings and should be used at any time where there is a possibility of exposure to blood borne pathogens.

The minimum recommended PPE includes:

- **Gloves:** Disposable gloves should be worn BEFORE initiating patient care when there is any risk of exposure to bodily substances.
- **Masks and Protective Eyewear:** Masks and protective eyewear should be worn when there is any risk of blood or other bodily fluids splashing or spattering.
- **Gowns:** Gowns should be worn when there is any risk of blood or other bodily fluids splashing or spattering.
- **Hand Washing:** Hand washing is mandatory before and after any patient contact. All students must wash their hands after eating or using the restroom facilities.
- Any student who is exposed to a patient's bodily fluids should immediately decontaminate themselves and report the incident to their instructor or preceptor. Failure to adhere to precautions will result in disciplinary action.



Patient Care and Confidentiality

Students should expect the risk of caring for patients with infectious diseases during their educational activities. Students will follow Bloodborne/Airborne Precautions to avoid transmission of or infection from infectious diseases. The procedures deemed necessary should be those recommended by the Centers for Disease Control (CDC).

- 1) It shall be the responsibility of TRG or clinical placement site to provide adequate protective materials (e.g. disposable gloves, masks, eye protection), or to ensure that the student is not put in a position where unprotected exposure is likely. Some facilities may require the student to supply his/her own HEPA-filter masks as protection against airborne pathogens.
- 2) It shall be the responsibility of TRG or clinical site to instruct the student about accepted infection control procedures applicable to the student's activities.
- 3) It shall be the responsibility of the student to use the protective barriers provided, and to follow the instructions given, to minimize the risk of being infected by or transmitting any infectious diseases.

Student Illness or Injury:

Students are expected to exercise prudence in attending mandatory class or clinical sessions when ill. Healthcare professionals at clinical sites are empowered to restrict the activities of/or prohibit a student from completing a clinical shift.

Patient Confidentiality:

The following guidelines should be followed to protect the patient's right to privacy:

1. Students, staff, and faculty of TRG will comply with the patient confidentiality guidelines established in the Health Insurance Portability & Accountability Act (HIPAA) of 1996.
2. TRG Patient Charting Forms and the clinical logs submitted for review should not have patients name, social security number, address, phone number, hospital identification number, or any other uniquely distinguishing information noted on them.
3. Patient condition and/or therapy will not be discussed with anyone not directly involved in that patient's care. Cases may be discussed as part of the educational process of the TRG Program. During these case presentations, every effort will be made to protect the patient's confidentiality. Any discussion regarding patient condition or care will be undertaken in an area and under circumstances which prevent dissemination of information to others not directly involved in the patient care conference.
4. If patient care assessment or management problems are perceived, or questions arise regarding the care, the case may be discussed in private with the Program Director.



Record Keeping

The TRG maintains all training records in electronic format within its school software system. All records will be made available to students and to authorized agencies upon request. Only the Instructor, Compliance Manager, Medical Director, and the Director staff are permitted access to these records. Each student shall be permitted to review their file upon request. In addition, TRG conforms with all laws under the Family Education Rights and Privacy Act (FERPA) regarding any records released to outside sources. The student's academic records will be kept on file at TRG for a minimum of fifty (50) +1 years using secured cloud capabilities as required per state law WAC 490-105-200.

TRG Program Files:

TRG Program files will contain for each course: summary of student attendance, summary of all written exams and all practical exams, copies of all written exams with answer keys, copy of practical exam plan to include evaluators utilized. Also included for each course is a detailed syllabus, copy of applicable handbook(s), and records pertaining to clinical experiences.

Student Files:

Student files will contain the student application and any applicable documentation for prerequisites, waivers, signed code of conduct agreements, attendance record, skill competency record, exams, counseling forms, clinical evaluations, incident reports (as needed), clinical records, and copies of certifications earned.

Access to Student Files:

Any student shall have access to their personal class records upon request. This request should be made to the Instructor or the Director staff. The instructor and student issuing the request will then review the student's file. Time to access will be five business days.



Grading

The program is a preparatory program for exam process, such as the BCCTPC, BCEN, AREMT, HSI, and PHECC, as well as preparation to care for patients. It is important for all students to know at least 85% of the course content to successfully complete the program. This is ensured through homework, skills competency examination, authentic assessment, and exams.

Self-Paced Student Assignments:

Assignments are graded as pass/fail; and are due according to the course syllabus. Any assignments not turned in on time will be entered into the grade book as failed and successful completion of the course will not occur.

Exams:

Each student must pass exams to successfully complete the program. A minimum score of 85% on all exams is required. If an exam is failed, the student will be allowed one retest, after meeting with the director of the program. The exam must be retested within five (5) days of failing the exam. If the exam is not tested within five (5) days the student will be dismissed from the program.

If the student fails, the retest, they will be dismissed from the program. If a second exam is failed, the student will meet with the director to discuss continuing in the program. It is the responsibility of the student to arrange to meet with the director and schedule a retest.

If a student misses an exam due to an absence, they must take the exam before their next class day.

If a retest is passed the maximum score the student will receive for that exam will be 85%.

Exam Grading Scale:

Grades during the didactic phase will be determined on the basis of the following:

A	95% - 100%	Exceeds Expectations
B	86% - 94%	Exceeds Standard
C	85%	Satisfactory
F	0% - 84%	Failing

Method to report Student Grades

Students' grades will be posted to their registration email and accessible via request to The resuscitation Group.



Academic Probation / Remediation

Failure of a student to meet academic or skill performance standards will result in remedial action to address educational strategies. Such corrective action may include additional course work in the form of oral presentations, written assignments, additional examinations, and/or one-on-one coaching by peers or staff. Remediation may be initiated by the student or the Director staff. All remedial sessions will be documented and recorded in the student's personal file.

Inability to resolve academic or skill performance deficiencies with remedial course work is grounds for dismissal. A student may discuss academic or skill performance difficulties at any time by making an appointment directly with the Director staff.

Academic Guidelines

1. Reading assignments are to be completed prior to class.
2. Attendance is required for all classes. Excused absences will be granted for emergency situations only.
3. You will be responsible and accountable for all equipment assigned to you during skill stations and patient care scenarios.
4. You are expected to assist in the cleaning and proper storage of equipment after each class.
5. Examinations will include the material from the resource texts, online resources, and classroom work.
6. Any student may withdraw from the program at any time; refunds will be made according to the refund policy.
7. Any student may be dismissed if they do not meet the course standards; this will include technical skills, clinical skills, and written grades (after review by the Director staff and the individual).
8. Passing score for this program is 85% or greater on exams and "meets standard" on skills competencies and clinical skills evaluations.
9. If the student does not successfully pass any clinical skills or practical skills portion of the class, they will not receive a passing grade or a course completion certificate.

Graduation Requirements

1. Payment in full of all TRG Program tuition and fees.
2. Meet minimum attendance requirements.
3. Satisfactory completion of all didactic requirements with grade scores of at least 85%.
4. Satisfactory completion of all skills competency examinations with a "meets standard" rating.
5. Satisfactory completion of clinical placement and submission of supporting documentation.
6. Submission of all assigned writing assignments



Program Certificate and Student Permanent Record

Students successfully completing the program will receive a certificate in Anesthesia Assistant. An example of the certificate is below:



The Resuscitation Group
7815 Highway 99
Vancouver, Washington USA
+1-855-739-2257
<http://resuscitationgroup.com>

After (INSERT HOURS) hours of program study

(INSERT NAME)

Has successful completed the required course of study, authorized by the Washington State Dental Commission and the Oregon Dental Board, delivered by The Resuscitation Group (Vocational/Technical School licensed under Chapter 28C.10RCW.), and is therefore awarded this

(INSERT PROGRAM NAME)

_____	_____
Medical Director	Course Director
_____	_____
CAPCE Manager	Date

The student's academic records will be kept on file at TRG for a minimum of fifty (50) +1 years using secured cloud capabilities as required per state law WAC 490-105-200.



Program Relationships to Boards of Registry and State/Country Licensing Examinations

1. Upon graduation the Anesthesia Assistant student may apply to the Washington State Department of Health Dental Anesthesia Assistant Licensing process (<https://doh.wa.gov/licenses-permits-and-certificates/professions-new-renew-or-update/dental-anesthesia-assistant/licensing-information>) or the Oregon Dental Board for certification endorsement for Dental Anesthesia Assistant (<https://www.oregon.gov/dentistry/Documents/Board%20Approved%20IV%20or%20Phlebotomy%20Courses.pdf>)
2. Upon graduation the Advanced Practice Paramedic student, and after their internship is completed, may apply for examination and certification as an Advanced Practice Paramedic under the Global Emergency Medical Registry GEMR) (<https://www.gemr.org/app/>)
3. Upon graduation the Critical Care Provider student may apply for examination and certification as a Critical Care Paramedic under the International Board of Specialty Certification (ISBSC) (<https://www.ibscertifications.org/roles/critical-care-paramedic#gsc.tab=0>), or if a Registered Nurse with a Bachelor's degree, the Certified Transport Registered Nurse (CTRN) certification through the Board Certification for Emergency Nursing (<https://bcen.org/ctrn/>)
4. Upon graduation from the Advanced Paramedic Refresher, the student will receive a certificate for the National Registry of Emergency Medical Technicians (NREMT) NCCP National Core Content which can be applied to the NREMT NRP Recertification Process (<https://www.nremt.org/paramedic/recertification>)

Program Placement Services

The Resuscitation Group is not a licensed medical staffing agency and does not provide placement services. Agencies and Clients of The resuscitation Group may choose to make students aware of career openings and employment opportunities during or after their program of instruction.

NOTICE OF LICENSURE

The Resuscitation Group is a licensed Washington State School under Chapter 28C.10RCW. Inquiries or complaints regarding this private vocational school may be made to the:

Workforce Training Board

128 – 10th Ave., SW, Box 43105, Olympia, Washington 98504

Web: wtb.wa.gov

Phone: (360) 709-4600

E-Mail Address: pvs@wtb.wa.gov



APPENDIX 1

Student Enrollment and Waiver Forms

The Student must complete the following forms and return them to The Resuscitation Group, no later than five (5) days prior to the start of their program start.



NOTICE OF FINANCIAL OBLIGATION

Washington law requires the following information to be supplied to each student enrolling in a private vocational school licensed under Chapter 28C.10 RCW. One copy of this notice bearing original signatures must be attached by the school as addenda to that individual's enrollment agreement, as well as a copy provided to the enrollee by the school.

ACKNOWLEDGMENT BY ENROLLEE

1. I understand and accept that any contract for training I enter into with the above-named school contains legally binding obligations and responsibilities.
2. I understand and accept that repayment obligations will be placed upon me by any loans or other financing arrangements I enter into as a means to pay for my training.
3. I understand that any enrollment contract I enter into will not be binding or take effect for at least five days, excluding Sundays and holidays, following the last date such a contract is signed by the school and me, provided that I have not entered classes.

Name: _____

Signature: _____ Dated this: _____ day of _____, 20__

ACKNOWLEDGMENT BY SCHOOL

Prior to being enrolled in this school, the applicant whose name and signature appears above has been made aware of the legal obligations he/she takes on by entering a contract for training. Those discussions included cautions by the school about acquiring an excessive debt burden that might become difficult to repay given employment opportunities and average starting salaries in his/her chosen occupation.

Name: _____ Title: _____

Signature: _____ Dated this: _____ day of _____, 20__



Consent to Release Student Information

The TRG policy regarding student information is that TRG does not share student academic and/or financial records with third parties without consent. At the same time, we will share a student's education records where the student has given consent and in other cases permitted by federal law. The Family Educational Rights and Privacy Act of 1974 (FERPA) and the TRG policy on the confidentiality of student records protect the privacy of student education records and generally limit access to the information contained in those records by third parties. FERPA does however, provide for situations in which TRG sometimes must, disclose information without a student's consent; for example, we may disclose education records to a parent without the consent of the student of the student if listed as a financial dependent on the parent's federal tax submission (financial aid applicants).

You may choose to grant TRG the right to disclose education records to certain individuals in accordance with FERPA and TRG policy by filling out and signing this consent form.

You have the right to revoke the permissions granted here at any time by submitting your written revocation to the office maintaining this consent form. Such revocation will not affect disclosure made by TRG relying on your consent prior to receipt of such notice of revocation.

Note: this form does not pertain to medical inquiries.

Student's Name: _____

Last four digits of your SSN: _____

I have listed below the individual(s) to whom TRG may release information:

Name: _____

Relationship to Student: _____

Address & Telephone #: _____

Name: _____

Relationship to Student: _____

Address & Telephone #: _____

The above-named individual(s) may have access to the following information (examples: all academic information, all financial information):

Student Signature _____ Date _____



GENERAL RELEASE

I understand that the education and work of a healthcare provider, including lab work and clinical rotations within hospitals or other healthcare facilities with which I may be associated, are inherently dangerous and could expose me to accident and injury, including but not limited to blood borne and airborne pathogens, needle sticks, and many other dangerous and hazardous situations and environments, and I hereby release and hold harmless The Resuscitation Group and any other their employees, instructors and volunteers from any liability associated with these risks.

All students have the understanding that taking and successfully completing the required written and practical material does not guarantee the student will obtain certification and/or practice as a Healthcare Provider in the state of Washington, any other state, or country.

I, (Print Student Name) _____, understand the Student Code of Conduct from this handbook and agree to follow these policies and procedures of TRG.

I, (Print Student Name) _____, understand this activity will fundamentally place me in an environment that has risks, dangerous situations, and exposure to potentially deadly diseases and accept this potential risk as my own, holding all organizations and staff associated with this program harmless from liability.

Student Signature

Date



Student Data Form

The Resuscitation Group requires the following information for each participant enrolled in a program of instruction, please complete and return with all other student forms.

Please print clearly on each item below.

Participant Full Legal Name (Print): _____

Participant Mailing Address: _____

Participant Email Address: _____

Participant Cell Phone Number: _____

State of Residence: _____

Country of Residence: _____

Country of Citizenship: _____

Professional Qualification (check): Physician: Physician's Assistant:
Nurse Practitioner: Resuscitation Officer:
Advanced Practice Paramedic: Paramedic:
Registered Nurse: Respiratory Therapist:
Other (print): _____

Professional License: Lis #: _____ State/Country: _____

Certification: NREMT#: _____ Other: _____



APPENDIX 2

Advanced Practice Paramedic Program (Extended Scope of Practice Paramedic)



Advanced Practice Paramedic/Extended Scope of Practice Paramedic Program

The Advanced Practice Paramedic (also known as Extended Scope of Practice Paramedic) is a physician extender, capable of extensive, advanced patient care interventions in critical and emergent patients. This individual possesses the complex knowledge and advanced interventional skills necessary to provide physician extension to the patient's side, allowing their physician medical program director (MPD) the ability to have physician level care extended to the scene of any emergency, through the hand, eyes, and ears of the APP. Advanced Practice Paramedics are the pinnacle of a comprehensive EMS response, under medical oversight. Advanced Practice Paramedics perform interventions and patient care management with the advanced and diagnostic equipment typically found in an advanced response vehicle, on an advanced practice ALS ambulance, on a critical care transport unit, or in an emergency department setting. The Advanced Practice Paramedic is a tertiary link from the scene into the tertiary health care system, serving as advanced level responders, critical care transport providers, aeromedical providers, resuscitation department, anaesthesia assistant settings, and in atypical care provision in the global environment.

The program is designed for healthcare personnel who are already paramedics, nurses, midlevel providers, or general practice physicians and ready to move to the highest level of assessment, diagnostics, and intervention for the patient in resuscitative events.

Program Tuition: \$6000 usd

Prerequisites for Program Participants:

Participants must have the following at the initiation of the course:

1. Current Paramedic (or equivalent country licence) or current Registered Nurse;
2. Current State or Country Licence in good standing.
3. Minimum 1 year emergency or intensive care experience.

Media and Print Resources Required for Course Participants:

Participants should plan to obtain the listed resource materials and textbooks at least 30 days prior to the start of the program and initiate study of all materials.

This program utilizes resources from multiple formats including but not limited to:

1. Basics of Anesthesia 8th Edition by Manuel Pardo MD.
2. Emergency Department Resuscitation of the Critically Ill, 2nd Edition, Michael E. Winters MD.
3. Critical Care Transport 2nd Edition, American Academy of Orthopaedic Surgeons (AAOS)



4. Alaska Air Medical Escort Training Manual, Department of Health and Social Services, State of Alaska, 2006.
5. Introduction to Flight Physiology, Federal Aviation Administration.
6. GEMR Resuscitation and Stabilization Treatment Guidelines; gemr.org
7. ACLS Experienced Provider, American Heart Association, 2018. (2025 as soon as available)
8. PALS Provider Manual, American Heart Association, 2020.
9. Advanced Trauma Care (ATC) Program Reference Manual, Christie, ATREC Inc, 2024.
10. Basic Emergency Ultrasound Student Reference Manual, ATREC Inc, 2024

Professional Certification and/or License:

1. The Global Emergency Medical Registry (gemr.org) certifies Advanced practice Paramedics.
2. Several US states have advanced paramedic levels of licensure or endorsement for Paramedics and prehospital nurses.
3. Several countries and exploration companies have certification or licensure processes for advanced scope paramedics.

While currently, in the United States, there are no internship requirements for advanced level paramedics, that we are aware of; this is not true for many countries and the Global Emergency Medical registry (gemr.org). The standard for GEMR certification requires the candidate show they have completed a Clinical Internship, during which the candidate was be able to demonstrate competence at the APP level with integration of the course foundations through practice in the EMS critical patient response environment or in an Emergency Department Resuscitation Service under the supervision of specialist physicians and/or APP Field Training Officer.

This program does not include a clinical internship, as many US States do not require it; but The Resuscitation Group can enroll the participant in a clinical internship immediately following the completion of the program if the participant desires this level of additional guided instruction in real world patient care environments to attain professional certification.

Program Length: 650 hours of instruction

Program Objectives Development:

The program objectives are unique to the needs of this program, but incorporate the Global Emergency Medical Registry (GEMR) Advanced practice Paramedic standard objectives (<https://www.gemr.org/app/>), while blending in the objectives required for the unique environment and challenges of the Pacific Rim environments, with additional objectives incorporated to meet the highest level of clinical expectation under the current United States CMMS Specialty Transport guidelines. Specific Program Objectives can be found below.





Program Objectives:

Didactic Objectives - the participant will be able to:

1. Identify the components of a multi-team system that must work together effectively to ensure patient safety.
2. Identify a structured process by which information is clearly and accurately exchanged among team members.
3. Demonstrate the ability to maximize the activities of team members by ensuring that team actions are understood, changes in information are shared, and team members have the necessary resources.
4. Demonstrate the process of actively scanning and assessing situational elements to gain information or understanding, or to maintain awareness to support team functioning.
5. Demonstrate the ability to anticipate and support team member's needs through accurate knowledge about their responsibilities and workload
6. Complete emergency warning score (EWS) utilizing a standard EMS tool.
7. Interpret correctly cardiac, great vessels, abdominal content, and lung ultrasound findings related to the FAST, RUSH, CAUSE, and Lung ultrasound exams.
8. Interpret, respond, and apply principles of flight physiology to presented case studies in aeromedical evacuation.
9. Explain the considerations in caring for a patient in the aeromedical flight environment in unpressurized and pressurized aircraft.
10. Explain the considerations for caring for a patient in the maritime environment.
11. Interpret, respond, and apply principles of resuscitation to presented case studies in the online case study program.
12. Show the ability to interpret and respond to knowledge assessments presented in the online knowledge assessment process.
13. Demonstrate knowledge of standard laboratory values, including blood gases, chemistry, and enzyme screens.
14. Demonstrate knowledge of Intra-Aortic Balloon Pump (IABP).
15. Demonstrate knowledge of the principles of Extracorporeal Membrane Oxygenation (ECMO).
16. Demonstrate a knowledge of the principles of Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA).
17. Demonstrate a knowledge of the principles of emergency transfusion procedures.
18. Demonstrate a knowledge of the critical pathways to the assessment and management of Undifferentiated Shock.



19. Demonstrate a knowledge of the critical pathways to the assessment and management of the Difficult Airway.
20. Demonstrate a knowledge of the critical pathways to the assessment and management of the decompensating Ventilated Patient.
21. Demonstrate a knowledge of the critical pathways to the assessment and management of Fluid Management in resuscitation.
22. Demonstrate a knowledge of the critical pathways to the assessment and management of the cardiac arrest patient, utilizing the current research and the ILCOR guidelines for management.
23. Demonstrate a knowledge of the critical pathways to the assessment and management of the post cardiac arrest patient, utilizing the current ILCOR guidelines for management.
24. Demonstrate a knowledge of the critical pathways to the assessment and management of lethal arrhythmias
25. Demonstrate a knowledge of the critical pathways to the assessment and management of the cardiogenic shock patient, utilizing the current ILCOR guidelines for management.
26. Demonstrate a knowledge of the critical pathways to the assessment and management of the cardiac tamponade patient, utilizing the current ILCOR guidelines for management.
27. Demonstrate a knowledge of the critical pathways to the assessment and management of aortic catastrophes.
28. Demonstrate a knowledge of the critical pathways to the assessment and management of severe sepsis and septic shock, utilizing the current research and ILCOR guidelines for management.
29. Demonstrate a knowledge of the critical pathways to the assessment and management of the decompensating morbidly obese patient, utilizing the current research and ILCOR guidelines for management.
30. Demonstrate a knowledge of the critical pathways to the assessment and management of the pulmonary hypertension patient, utilizing the current research and ILCOR guidelines for management.
31. Demonstrate a knowledge of the critical pathways to the assessment and management of left ventricular assist devices (LVAD), utilizing the current research and ILCOR guidelines for management.
32. Demonstrate a knowledge of the critical pathways to the assessment and management of the toxidrome patient, utilizing the current research and ILCOR guidelines for management.
33. Demonstrate a knowledge of the critical pathways to the assessment and management of the decompensating trauma patient, utilizing the current research and ILCOR guidelines for management.
34. Demonstrate a knowledge of the critical pathways to the assessment and management of intracerebral hemorrhage, utilizing the current research and ILCOR guidelines for management.



35. Demonstrate a knowledge of the critical pathways to the assessment and management of subarachnoid hemorrhage utilizing the current research and ILCOR guidelines for management.
36. Demonstrate a knowledge of the critical pathways to the assessment and management of severe sepsis and septic shock, utilizing the current research and ILCOR guidelines for management.
37. Demonstrate a knowledge of the critical pathways to the assessment and management of the decompensating anaphylaxis patient, utilizing the current research and ILCOR guidelines for management.
38. Demonstrate a knowledge of the critical pathways to the assessment and management of life threatening gynecological and obstetric pathologies, utilizing the current research and ILCOR guidelines for management.
39. Demonstrate a knowledge of neonatal resuscitation, utilizing the current research and ILCOR guidelines for management.
40. Demonstrate a knowledge of pediatric resuscitation, utilizing the current research and ILCOR guidelines for management.

Practicum/Simulation Module Objectives - the participant will be able to:

1. Demonstrate the ability to observe clinical signs, recognize deterioration, manage deterioration in the critically ill patient
2. During simulation, interpret patient condition(s), respond to changes in physiology, and apply interventions; specifically, with the post cardiac arrest patient, the multi-system trauma patient, and the septic shock patient.
3. Communicate effectively during drills and transport with all stakeholders in the transport process.
4. Demonstrate an awareness of the importance of situational awareness, advanced decision-making skills and human factors in emergency medicine.
5. Assess the probable cause of a critical event using critical thinking
6. Develop an advanced practice approach to the patient's condition when presented with real or simulated patients.
7. Demonstrate competence at integration of multiple advanced skills and assessments with a patient in a state of physiologic exhaustion during simulation, and demonstrate planning and actions taken to mitigate pre/post procedure adverse effects and risks.
8. Provide optimal airway management for the crashing patient in the emergency medicine environment.
9. Demonstrate the ability to identify and mitigate time, anatomy, and physiologic influences on the patient nearing physiologic exhaustion in the trauma and medical etiologies.



10. Demonstrate the ability to care for a complex trauma or medical patient during a 60-minute period in the real world or simulation environment.
11. Demonstrate the ability to correctly perform cardiac, great vessels, abdominal content, and lung ultrasound in the FAST, RUSH, CAUSE, and Lung ultrasound exams.
12. Demonstrate the ability to perform moderate sedation (“conscious sedation”) per the definition of General Anesthesia Levels and Levels of Sedation/Analgesia from the American Society of Anesthesiologists.
13. Demonstrate the ability to perform deep sedation per the definition of General Anesthesia Levels and Levels of Sedation/Analgesia from the American Society of Anesthesiologists.
14. Demonstrate the ability to perform general anesthesia per the definition of General Anesthesia Levels and Levels of Sedation/Analgesia from the American Society of Anesthesiologists.
15. Demonstrate the ability to manage the complex and difficult airway.
16. Demonstrate the ability to perform endotracheal intubation with direct laryngoscopy and first pass success.
17. Demonstrate the ability to perform endotracheal intubation with direct laryngoscopy in the emesis patient.
18. Demonstrate the ability to perform endotracheal intubation with video laryngoscopy and first pass success.
19. Demonstrate the ability to perform endotracheal intubation with bronchoscopy and first pass success.
20. Demonstrate the ability to perform endotracheal intubation with guide wire technique.
21. Demonstrate the ability to successfully place a supraglottic airway (SGA)
22. Demonstrate the ability to perform surgical cricothyrotomy.
23. Demonstrate the ability to perform endotracheal intubation with rapid sequence induction algorithm.
24. Demonstrate the ability to perform tracheal foreign body airway obstruction.
25. Demonstrate the ability to perform needle chest decompression.
26. Demonstrate the ability to perform simple thoracotomy (fingertip thoracotomy).
27. Demonstrate the ability to perform chest tube insertion.
28. Demonstrate the ability to perform pericardiocentesis with ultrasound guidance.
29. Demonstrate the ability to perform ultrasound guided deep vein cannulation.
30. Demonstrate the ability to perform intraosseous (IO) needle placement.
31. Demonstrate the ability to perform skull trephination under online guidance.
32. Demonstrate the ability to utilize raney scalp clips.
33. Demonstrate the ability to perform pelvic fracture immobilization.
34. Demonstrate the ability to perform suprapubic cystostomy.



35. Demonstrate the ability to utilize the IMMO spinal protocol and the Canadian C-Spine Rule criteria.
36. Demonstrate the ability to perform basic lateral cervical spine x-ray interpretation.
37. Demonstrate the ability to perform basic Head CT interpretation.
38. Demonstrate the ability to perform ultrasound guided regional nerve blocks.
39. Demonstrate the ability to perform surgical decompression of oral and subcutaneous lesions when the lesion is interfering with an intervention or presents a life threat.
40. Demonstrate the ability to place REBOA under ultrasound guidance.

Advanced Practice Paramedic - Sample Program Outline

The APP course outline is subject to change, based on the instructional environment, module time frames, and location. Following as a sample course outline:

Didactic Module:

The 400-hour didactic module requires both online (instructor led in TEAMS environment) and classroom activities with significant emphasis on a team instructional approach with the latest science and integration of the current ILCOR science guidelines. Instructional hours are a combination of assignments, discussion, case study, lecture, and self-guided learning. The module is broken into the following topical areas.

- | | |
|----------|---|
| 24 hours | Resuscitation Systems and TeamSTEPPS <ul style="list-style-type: none">▪ Components of a multi-team system that must work together effectively to ensure patient safety.▪ Structured process by which information is clearly and accurately exchanged among team members.▪ Maximize the activities of team members by ensuring that team actions are understood, changes in information are shared, and team members have the necessary resources.▪ Active scanning and assessing of situational elements to gain information or understanding, or to maintain awareness to support team functioning.▪ Anticipate and support team member's needs through accurate knowledge about their responsibilities and workload. |
| 2-hour | Emergency warning score (EWS) systems and use. |
| 24 hours | Basic Ultrasound <ul style="list-style-type: none">• Interpret correctly cardiac, great vessels, abdominal content, eye exam, and lung ultrasound findings• FAST, RUSH, CAUSE, and Lung ultrasound exams. |



- 8 hours Basics of Intra-Aortic Balloon Pump (IABP).
- 8 hours Basic principles of Extracorporeal Membrane Oxygenation (ECMO).
- 16 hours Basic of the principles of Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA).
- 8 hours Basic principles of emergency transfusion procedures.
- 8 hours Assessment and management of Undifferentiated Shock.
- 8 hours Assessment and management of the Difficult Airway.
- 8 hours Assessment and management of the decompensating Ventilated Patient.
- 8 hours Fluid Management in resuscitation.
- 8 hours Assessment and management of the cardiac arrest patient, utilizing the current research and the ILCOR guidelines for management.
- 8 hours Critical pathways to the assessment and management of the post cardiac arrest patient, utilizing the current ILCOR guidelines for management.
- 8 hours Critical pathways to the assessment and management of lethal arrhythmias
- 8 hours Critical pathways to the assessment and management of the cardiogenic shock patient, utilizing the current ILCOR guidelines for management.
- 8 hours Critical pathways to the assessment and management of the cardiac tamponade patient, utilizing the current ILCOR guidelines for management.
- 8 hours Critical pathways to the assessment and management of aortic catastrophes.
- 8 hours Critical pathways to the assessment and management of severe sepsis and septic shock, utilizing the current research and ILCOR guidelines for management.
- 8 hours Critical pathways to the assessment and management of the decompensating morbidly obese patient, utilizing the current research and ILCOR guidelines for management.
- 8 hours Critical pathways to the assessment and management of the pulmonary hypertension patient, utilizing the current research and ILCOR guidelines for management.
- 8 hours Assessment and management of left ventricular assist devices (LVAD), utilizing the current research and ILCOR guidelines for management (includes Thoratec Training)
- 16 hours Basic laboratory values, interpretation, and use of point of care testing (includes ISTAT training)
- 8 hours Assessment and management of the toxidrome patient, utilizing the current research and ILCOR guidelines for management.
- 8 hours Assessment and management of the decompensating trauma patient, utilizing the current research and ILCOR guidelines for management.
- 8 hours Assessment and management of intracerebral hemorrhage, utilizing the current research and ILCOR guidelines for management.



- 8 hours Assessment and management of subarachnoid hemorrhage utilizing the current research and ILCOR guidelines for management.
- 8 hours Assessment and management of severe sepsis and septic shock, utilizing the current research and ILCOR guidelines for management.
- 8 hours Assessment and management of the decompensating anaphylaxis patient, utilizing the current research and ILCOR guidelines for management.
- 16 hours Assessment and management of life threatening gynecological and obstetric pathologies, utilizing the current research and ILCOR guidelines for management.
- 8 hours Neonatal resuscitation, utilizing the current research and ILCOR guidelines for management.
- 16 hours Pediatric resuscitation, utilizing the current research and ILCOR guidelines for management.
- 8 hours Basic cervical radiograph interpretation.
- 16 hours Basic head CT interpretation.
- 24 hours Interpret, respond, and apply principles of resuscitation to presented case studies in the online case study program (pass/fail grade).
- 2 hour Online examination #1 (80% required to pass).
- 2 hour Online examination #2 (80% required to pass).
- 2 hour Online examination #3 (80% required to pass).
- 30 hours Final Paper on assigned resuscitation topic (80% required to pass, original work, referenced, and not more than 4000 words).

Practicum and Simulation Module:

The 250-hour practical and simulation module is a practical laboratory and simulation format with significant emphasis on a team instructional approach with the latest science and integration of the current ILCOR science guidelines. Instructional hours are a combination of assignments, discussion, case study, lecture, and self-guided learning. The module is broken into the following topical areas.

- 24 hours Basic Imaging Lab #1 (Ultrasound skills, RUSH, CAUSE, BLUE, FOCUS, procedural assistance)
- 24 hours Advanced Airway Management Lab (intubation, video, bronchoscope, RSI, surgical cricothyrotomy, guide wire, and ventilator management)
- 24 hours Sedation/Anesthesia Skills Lab and Simulation
- 12 hours Basic Surgical Skills Lab #1 (needle chest decompression, fingertip thoracotomy, chest tube insertion, pericardiocentesis with ultrasound guidance, ultrasound guided deep vein cannulation, intraosseous needle placement).



- 12 hours Basic Surgical Skills Lab #2 (skull trephination, raney scalp clips, pelvic fracture immobilization, suprapubic cystostomy).
- 24 hours Putting it together (skills integration) and Imaging Lab #2 (NEXUS, Canadian C-Spine Rule criteria, lateral cervical spine x-ray interpretation, basic Head CT interpretation)
- 24 hours Stress Inoculation Simulation (SIS) lab #1 (integration of multiple advanced skills and assessments with a patient in a state of physiologic exhaustion during simulation, and demonstrate planning and actions taken to mitigate pre/post procedure adverse effects and risks)
- 24 hours Stress Inoculation Simulation (SIS) lab #2 (integration of multiple advanced skills and assessments with a patient in a state of physiologic exhaustion during simulation, and demonstrate planning and actions taken to mitigate pre/post procedure adverse effects and risks)
- 12 hours Stress Inoculation Simulation (SIS) lab #3 (integration of multiple advanced skills and assessments with a patient in a state of physiologic exhaustion during simulation, and demonstrate planning and actions taken to mitigate pre/post procedure adverse effects and risks)
- 12 hours Stress Inoculation Simulation (SIS) lab #4 (integration of multiple advanced skills and assessments with a patient in a state of physiologic exhaustion during simulation, and demonstrate planning and actions taken to mitigate pre/post procedure adverse effects and risks)
- 50 hours Patient evaluation and management in the simulation setting with medical actors.

Final Testing and Evaluation:

Participants will be required to complete all portions and assignments, as well as skills and proficiencies in the APP course.



Use of Extended Scope of Practice Paramedics

Extended Scope of Practice Paramedics (or Advanced Practice Paramedics) outside the intensive care unit setting, began development in the late 1980's in response to the growing need for qualified specialists in the area of critical care interfacility transfer, as well as, the need for personnel able to perform high risk, low frequency skills in critical patient populations in the field environment, both normal EMS environments and special operations environments.

A critical patient is one that will die without continuous monitoring and interventions. These are the fragile patients who require a level of understanding beyond a frivolous shrug of the shoulders and a treatment plan that features diesel as a substitute for stabilization and a transport process.

A critical patient continually tests the limits of bedside clinical knowledge, intuition, and skill. Critical care is all about understanding the patient and the treatment. It's about knowing why a heart failure patient should be treated with afterload reduction. It's appreciating that hypoxic respiratory failure is many times best treated by increasing alveolar pressure rather than giving high flow oxygen. It's about understanding the use of diagnostic tools and their role in focusing treatment for the critically ill patient. It is understanding that interventions the provider performs may have consequences that must also be mitigated to provide benefit to the patient.

Critical care is about understanding that profound patient care is centered on great diagnostic capability and the ability to perform interventions flawlessly under extreme pressure. There is a gap between the curriculum for EMS professionals and the care of the critical patient. In light of advancing capabilities, research modalities, and proliferation of tertiary level centers, more and more patients are surviving profound ailments previously thought to be immitigable. These patients are far more complex than those for which EMS typically trains. How do we get these patients to specialized centers? Or more importantly, how do we get the ICU level of care to the patient?

It helps to prepare providers to serve with competence and confidence in meeting the needs of critical care patients undergoing inter-facility transports, as well as those patients requiring advanced skills and diagnostic capability in the prehospital environment. While traditional paramedic education programs teach essential skills, and provide a knowledge base for the management of patients in the average pre-hospital setting, these training programs seldom teach the skills and knowledge necessary to manage critical patients between hospitals, specialty referral centers, and extended care facilities; as well as, complex patients in the prehospital environment.



It can be difficult to change what is, address what is not, and embrace what is new. Critical care patient management is not a definable curriculum or scope of practice. It's the unique combination of experience, stress inoculation, didactic, and practical training in a package meeting the national standards established by various private guideline organizations and the approval of the medical director.

Critical care training is not about simply sitting while listening to lectures, viewing online materials, or trying to remember enough to pass a test. It's about making a commitment to the patient whose life is influenced in real time by the provider with superior knowledge, a high level of skill, increased scope, increased speed, and experience.

Training in the form of critical care courses will not miraculously turn out advanced practice providers, but it can be effective in providing the foundational concepts. Further and continued growth then involves personal commitment, field training, acquired intuition, a fine touch, and passionate learning.

Ultimately, the concepts of critical care are science and process based. A respectable critical care education process will concentrate on this science and process in explaining how all critical patients are managed by balancing the working differential diagnoses with the needs of airway, ventilation, perfusion, and pharmacology for the purposes of sedation, antimicrobial therapy, and course of disease process; while working to mitigate adverse effects of interventions and pharmacology utilized to influence positive outcomes.

Over the past decade, an ever-increasing volume of critical care level patients have been encountered in the prehospital and interfacility environments. This, coupled with the ever-increasing expectations of the ILCOR and AHA science guidelines for providers to apply advanced interventions and treatment bundles in complex patient care situations, as created a need for Advanced Practice Paramedic level capability within the service.

In addition, with increasing focus in the US Department of Health and Human Services (HHS) for definable and reportable competencies for providers billing as specialty rates, such as the Medicare critical care transport rate, necessitate the service pursuing additional capabilities.

At its core, critical care medicine for the advanced practice provider in the transport and holding environment is the application of science and artistry to the care of the profoundly ill patient in order to being improving that patient's physiologic status from the moment the Advanced Practice Paramedic arrives at their side.



In this document, we will explore a pathway for providers to develop critical care skills and knowledge to improve patient outcomes and create a recognized system of care.



Evidence Based Placement of ESP Providers within System Design

Purpose: Provide clarity for placement of Extended Scope of Practice (ESP) Paramedics to provide advanced back up on complex trauma and medical patients, as well as manage specific high risk patient events and critical care transports. ESP Paramedics are trained as advanced practice providers, able to function as the “hands, eyes, and ears” of the physician, providing advanced decision making, advanced diagnostics, and advanced care under the direct authority of a specific physician through online and offline medical direction. The focus of these resources are to improve neurologically and functionally intact survival in the patient population through application of advanced medications and procedures. This system of advanced providers has shown dramatic results in Washington, Oregon, Victoria, South Africa, and Raleigh.

Application:

In King County Washington, the Portland Metropolitan Area in Oregon, and Clark County Nevada during the past ten years, there has been an ever increasing rate of neurologically intact survival from cardiac arrest, functionally intact recovery from trauma, and functionally intact recovery from myocardial infarction and cerebral vascular accidents. With all three system being top performing EMS systems in the world, and the King County Medic One system taking firm hold as the top performing EMS system in the world today with cardiac arrest neurologically intact survival exceeding 50% in 2013!

For an EMS system to become a world leader in EMS and match the results of the highest performing EMS systems in the world, there must be a unique, close, and intimate integration of clinical governance, education, and operations management similar to the methodologies utilized in the three systems discussed above, because only through acknowledgement of the equal footing of medical direction and operations can an EMS system be successful in advanced practice. EMS systems can move to a high fidelity, high performance, and high impact model with the implementation of a tiered response system with a small group of paramedics functioning at an extended scope of practice which mirrors the scope of paramedics in several high-performance systems. This small cadre of Medical Director approved and mentored ESP providers to provide a supplemental paramedic with a high frequency of critical patient care encounters to augment the care being provided by our outstanding ambulance-based EMS providers and provide those advanced interventions that must be done right now or the patient will perish.

A sample of those impacts follow:



1. As discussed at the International science symposium ^(1a, 1b, 1c, 1d), full application of the immediate post cardiac arrest algorithm, advanced preparation steps for PCI, and direct PCI admission can improve cardiac arrest survival from 27% to 43%! With an average of 40 cardiac arrest incidents treated a month by National Ambulance, this level of intervention combined with rapid defibrillation and CPR from first in units and the general public (through increased public response with the use of PulsePoint) would result in a potential 206 neurologically intact cardiac arrest survivors due to National Ambulance!
2. While the use of standard paramedic interventions make a large impact on patient's suffering ventricular fibrillation arrest, only through application of advanced techniques can the patient in PEA arrest have an equal chance at survival, by the application of a modified approach to the PEA patient, rapid intervention is possible to improve lives saved ^(2a).
3. In the current lexicon of trauma, Damage Control Resuscitation (DCR) has been the standard of care since 2008 in the military medical systems worldwide for the 3-8% of trauma patients on the edge of physiologic exhaustion and cardiac arrest; but only through application of advanced techniques ^(3a, 3c, 3d, 3e, 3f), can these patients experience the dramatic recovery rates (approaching 7%^{3b} in traumatic arrest and 80% in multisystem trauma) shown in high performance EMS systems within South Africa and the United States. The addition of blood products for specific trauma patients allows the ESP paramedic to again increase survival ^(3g, 3h), when coupled with ultrasound identification of specific traumatic injuries, the ESP paramedic will be able to reduce some injury fatality rates by as much as 50% ^(5a, 5b, 5c).
4. Through the use of advanced techniques and treatment protocols, the ESP provider will be able to improve outcomes secondary to myocardial infarction in a dramatic fashion, through ESP protocols and direct admission to PCI processes established between the cardiology PCI staff and the small cohort of ESP paramedics, the time of event to PCI intervention can be under 90 minutes ^(1e)
5. The application of ESP paramedics with advanced airway capability will improve airway management success and improve patient outcomes ^(4a-g)

Fiscal Impacts:

Fiscal impacts are negligible for implementation of this program, if the model for advanced practice utilized by American Medical Response is utilized in this circumstance:

1. Personnel must apply for the available positions and attend a training/selection academy on their own time.
2. The Medical Director appoints a single supervising educator for the program, this individual works directly with the advanced personnel as the medical director's designee and intimately



with operations to develop an effective team of personnel while guiding and assessing their education and clinical competencies in the classroom and field.

3. The supervising training officer selects field training officers at a ratio of 10:1 for the advanced practice personnel, these FTO personnel work as shift personnel, but report to the Medical Director and Supervising Educator.
4. ***No additional monetary compensation is offered to these personnel***, the only return for their time and investment in their clinical practice is dramatically increased training opportunities, field mentoring, the addition of three “education days” to their leave time per year, and a small increase in work schedule privileges.

Fiscal impacts to the healthcare system can exceed \$2,000,000 per patient who is converted from a disabled state to a fully functional state by the application of these techniques. In the United States, the CDC estimates that in 2000 the medical costs and indirect costs (lost productivity) of TBI in United States totaled \$60 billion, with extended care for comatose patients exceeded \$1,000 usd/day. The Markov model estimated rehabilitation costs of \$1.4 million and nursing home cost of \$4.8 million per long term maintenance patient care; and the American Heart Association estimated significant savings in their “Cost and Outcome of Mechanical Ventilation for Life-Threatening Stroke” consensus statement for patients whose functionality could be improved rather than long term care being required. This process also applies to the post cardiac arrest and trauma patient populations.

Evidence References:

1. Improving Post Cardiac Arrest Survival and ACS:
 - a. *Implementation of complete field post cardiac arrest care and direct admission to PCI resulted in an adjusted unpaired analysis of 27.4% neurologically survival without immediate PCI versus 43.7% neurologically intact survival with PCI* (Immediate PCI after Cardiac Arrest is associated with short and long term outcome; Guillaume Geri, Florence Dumas, etAl; Original Research Presented November 16, 2014 at AHA/ILCOR Science Meeting, Chicago, Illinois, USA)
 - b. *Few systems worldwide have achieved the benchmark time of less than 90 minutes from emergency medical services (EMS) contact to balloon inflation (E2B) for patients sustaining ST-segment elevation myocardial infarction (STEMI)* (Paramedic contact to balloon in less than 90 minutes: a successful strategy for st-segment elevation myocardial infarction bypass to primary percutaneous coronary intervention in a Canadian emergency medical system. Cheskes S, Turner L, Foggett R, Huiskamp M, Popov D, Thomson S, Sage G, Watson R, Verbeek R.; Prehosp Emerg Care. 2011 Oct-Dec;15(4):490-8)

- c. *Overall, optimizing advanced and systemic implementation is the action most likely to result in widespread improvement in survival after OHCA (Implementation Strategies for Improving Survival After Out-of-Hospital Cardiac Arrest in the United States; Robert W. Neumar, et Al; Circulation; 2011; 123: 2898-2910)*
 - d. *If Out Of Hospital Cardiac Arrest (OOHCA) associated with STEMI, field providers should bypass nearest hospitals and go directly to a cardiac receiving hospital so patients can receive angiography within 90 minutes (Regional Systems of Care for OOHCA: A Policy Statement from the AHA, Circulation Feb 9, 2010)*
 - e. *Hospital door-to-balloon time for those patients averaged 47 minutes and only 87 minutes from when the 9-1-1 call was answered until the patient received a PCI. (Paramedics Activate Cath Lab for STEMI Patients in Some Areas; JEMS, June 25, 2007)*
 - f. *A STEMI system allowing EMS to transport patients directly to a primary PCI center was associated with a significant reduction in mortality (Reduction in Mortality as a Result of Direct Transport From the Field to a Receiving Center for Primary Percutaneous Coronary Intervention; Michel R. Le May, MD, et Al; Journal of the American College of Cardiology Vol. 60, No. 14, 2012)*
2. Improving Cardiac Arrest Survival
- a. *A modified approach to PEA focuses on “cause-specific” interventions utilizing two simple tools: ECG and Bedside Ultrasound (US) (Simplified and Structured Teaching Tool for the Evaluation and Management of Pulseless Electrical Activity. Littmann L, Bustin D, Haley M. A; Med Princ Pract 2014; 23:1-6)*
 - b. *In CARES, survival was higher among OHCA receiving ETI than those receiving SGA (McMullan J, Gerecht R, Bonomo J, et al. Airway management and out-of-hospital cardiac arrest outcome in the CARES registry. Resuscitation. 2014;85(5):617–622. doi:10.1016/j.resuscitation.2014.02.007)*
 - c. *“In out-of-hospital urban and rural settings, patients intubated during resuscitation had a better survival rate than patients who were not intubated, whereas in an in-hospital setting, patients who required intubation during CPR had a worse survival rate. A recent study found that delayed endotracheal intubation combined with passive oxygen delivery and minimally interrupted chest compressions was associated with improved neurologically intact survival after out-of-hospital cardiac arrest in patients with adult witnessed VF/pulseless VT “ (2010 CPR/ECC Science Guidelines, Part 8.1, Advanced Airways)*
 - d. *The presence of an intensive care paramedic had a significant effect on survival (OR = 1.43, 95% CI = 1.02 to 1.99). (Impact of advanced cardiac life support-skilled*

paramedics on survival from out-of-hospital cardiac arrest in a statewide emergency medical service; John Woodall, Molly McCarthy and Vivienne Tippet, *Emerg Med J*. Feb 2007; 24(2): 134–138)

3. Improving Trauma Survival

- a. *The natural extension and development of DCR has been damage control resuscitation. DCR is a structured, mobile intervention that can be delivered to a critically ill patient in any location. Basic principles include arresting hemorrhage; restoring blood volume; and correcting coagulopathy, acidosis and hypothermia (Damage control resuscitation: history, theory and technique; Chad G. Ball, MD, MSc; Can J Surg. Feb 2014; 57(1): 55–60)*
- b. *6.6% of the patients survived with a CNR. Our data allow us to state beyond any doubt that advanced life support should be initiated in TCA patients regardless of the initial rhythm, especially in children and those with VF or PEA as the initial rhythm. (Traumatic cardiac arrest: should advanced life support be initiated?; Leis CC1, Hernández CC, Blanco MJ, Paterna PC, Hernández Rde E, Torres EC; J Trauma Acute Care Surg. 2013 Feb;74(2):634-8)*
- c. *Contrasted patients kept at a MAP of 65 verses those kept at a MAP of 50; Patients in the low MAP group: Had lower transfusion requirements, Developed coagulopathy less frequently, Had a lower 24-hour mortality (Hypotensive Resuscitation Strategy Reduces Transfusion Requirements And Coagulopathy In Trauma Patients With Hemorrhagic Shock; Morrison CA. J Trauma 2011; 70:652-663)*
- d. *Targeted pre-hospital ventilation is associated with lower mortality after severe TBI (The impact of prehospital ventilation on outcome after severe traumatic brain injury; Warner KJ, Cuschieri J, Copass MK, Jurkovich GJ, Bulger EM; J Trauma. 2007 Jun;62(6):1330-6)*
- e. *Aeromedical crews appear to appropriately select major trauma victims to undergo field needle thoracostomy and tube thoracostomy. A low incidence of complications and a small but significant group of unexpected survivors support continued use of this procedure by aeromedical personnel. (The safety and efficacy of prehospital needle and tube thoracostomy by aeromedical personnel; Davis DP, Pettit K, Rom CD, Poste JC, Sise MJ, Hoyt DB, Vilke GM; Prehosp Emerg Care. 2005 Apr-Jun;9(2):191-7)*
- f. *Found that advanced scope paramedics could safely provide ALS care in a backcountry environment. This care improved patient comfort during long extrication and allowed for life-saving interventions such as advanced airway management, at the patient's side preventing loss of life. (Advanced life support in the wilderness: 5-year experience of the Reach and Treat team; Terri A. Schmidt; Carol S. Federiuk; Andrew Zechnich; Markus*

- Forsythe; Michael Christie; Christopher Andrews; Wilderness and Environmental Medicine. 1996;7(3):208-215.)
- g. *Similar to the data published from the ongoing war, improved early outcomes are associated with placing blood products prehospital, allowing earlier infusion of life-saving products to critically injured patients.* (Prehospital Transfusion of Plasma and Red Blood Cells in Trauma Patients; John B. Holcomb, Daryn P. Donathan, et Al; Prehospital Emergency Care, June 16, 2014)
 - h. *It is feasible and practical to provide prehospital trauma teams with pRBCs for use in the field. Use of pRBCs in the prehospital setting is associated with similar rates of pRBC wastage to that reported in emergency departments.* (The feasibility of civilian prehospital trauma teams carrying and administering packed red blood cells; Daniel Bodnar, et Al; Emerg Med J 2014;31:93-95)
4. Airway Management at the ESP Level:
- a. *In this population-based cohort of out-of-hospital cardiac arrest, RSI was used in 15% of patients and associated with a better prognosis than intubation attempted without paralytics. Because this subset with a favorable prognosis may not be readily intubated in systems without paralytics, these findings could help to explain the adverse relationship between intubation and survival observed in prior studies.* (Use of rapid sequence intubation predicts improved survival among patients intubated after out-of-hospital cardiac arrest; Kwok, et Al; Resuscitation. 2013 Oct;84(10):1353-8)
 - b. *In adults with severe TBI, pre-hospital rapid sequence intubation by paramedics increases the rate of favorable neurologic outcome at 6 months compared with intubation in the hospital.* (Prehospital Rapid Sequence Intubation Improves Functional Outcome for Patients With Severe Traumatic Brain Injury; Stephen A. Bernard MD, Vina Nguyen BSc, Peter Cameron MD, et Al; Annals of Surgery Volume 252, Number 6, December 2010)
 - c. *Seattle Medic One's first-pass success rate for oral endotracheal intubation is 75%; its overall success rate is 98.4%.* (Prehospital Management of the Difficult Airway: A Prospective Cohort Study; Keir J. Warner, BS, Sam R. Sharar, MD, Michael K. Copass, MD, Eileen M. Bulger, MD; Journal of Emergency Medicine, Volume 36, Issue 3, Pages 257–265, April 2009)
 - d. *Although rarely performed, cricothyroidomy can be a life-saving procedure. Evidence from model lung studies shows that the surgical method provides effective ventilation independent of the degree of upper airway restriction, whereas the efficacy of initial ventilation via a cannula reduces as an inverse function of increasing upper airway restriction, and becomes totally inadequate within 60 s if a low pressure (15 l.min⁻¹)*

- self-assembled ventilation system is used (Needle vs surgical cricothyroidomy: a short cut to effective ventilation; I. Scrase and M. Woollard; Anaesthesia; Volume 61, Issue 10, pages 962–974, October 2006)*
- e. *Surgical cricothyrotomy appeared to be a preferable method for establishing a definitive airway over the percutaneous method (A laboratory comparison of emergency percutaneous and surgical cricothyrotomy by prehospital personnel; Keane MF, Brinsfield KH, Dyer KS, Roy S, White D; Prehosp Emerg Care. 2004 Oct-Dec;8(4):424-6.)*
 - f. *In this study, only 1.1% of patients required a surgical airway. We attribute this low rate to the use of paralytic agents. The availability of paralytic agents also allows expansion of the indications for prehospital airway control. (An analysis of advanced prehospital airway management; Bulger EM1, Copass MK, et Al; J Emerg Med. 2002 Aug;23(2):183-9.)*
 - g. *Paramedics successfully intubated 95.5% (1,582) of all patients receiving Succinylcholine; 94% (1,045) of trauma patients and 98% (538) of medical patients. They were unable to intubate 4.5% (74) of the patients. All of these were successfully managed by alternative advanced methods, such as SGA or surgical cricothyroidomy. (Prehospital use of Succinylcholine: a 20-year review; Wayne MA, Friedland E.; Emergency Medical Services, Bellingham/Whatcom County, Prehosp Emerg Care. 1999 Apr-Jun;3(2):107-9.)*
5. Ultrasound Application for Patient Improvement:
- a. *Pre-hospital ultrasound when applied by an proficient examiner using a goal-directed, time sensitive protocol is feasible, does not delay patient management and provides diagnostic and therapeutic benefit. Further studies are warranted to identify the exact indications and role of pre-hospital sonography. (Portable ultrasound in pre-hospital emergencies: a feasibility study; M. Busch, et Al; Acta Anaesthesiologica Scandinavica, Volume 50, Issue 6, pages 754–758, July 2006)*
 - b. *Prehospital emergency ultrasound has many clinical applications that would reduce morbidity and improve outcomes of patients with life-threatening emergency conditions. This imaging modality improves diagnostic accuracy and provides crucial information to prehospital providers to guide management and help triage patients to appropriate destinations (Prehospital Emergency Ultrasound: A Review of Current Clinical Applications, Challenges, and Future Implications; Mazen J. El Sayed and Elie Zaghrini; Department of Emergency Medicine, Beirut Medical Center, Beirut, Lebanon; Emergency Medicine International, 2013)*



- c. *Logistic regression revealed that ABD CT was independently associated with more than a 70% higher risk of mortality. (OR, 1.71; 95% CI 1.2-2.2, $p < 0.001$) (Over reliance of CT imaging in patients with severe abdominal injury: Is the delay worth the risk?; Neal MD. J Trauma 2011; 70:278-284)*



APPENDIX 3

Advanced Paramedic Refresher Program



2024 Advanced Paramedic Refresher Program

The Resuscitation Group CAPCE accredited, Paramedic Refresher has two options, a 30 hour National Core Program and a 60 hour completed refresher designed to provide the participant with either completion of the National Core Component or the complete National Paramedic refresher.

The 30 hour program is designed to accomplish the NREMT Paramedic National Continued Competency Program (NCCP) National Content and update the paramedic at the advanced level with the newest research and techniques being applied in the global environment. Upon completion of this course, participants will be awarded a 60 Hour NCCP Paramedic Refresher Certificate attesting to completion of all refresher component hours.

The 60 hour program is designed to accomplish the NREMT Paramedic National Continued Competency Program (NCCP) complete content and update the paramedic at the advanced level with the newest research and techniques being applied in the global environment. Upon completion of this course, participants will be awarded a 30 Hour National Component Paramedic Refresher Certificate attesting to completion of all national component hours and two hours of individual component hours.

As a review, completion of the new Paramedic National Continued Competency Program (NCCP) requires a total of 60 hours of continuing education to recertify. The complete model requires continuing education in three components:

1. 30 hours of National component content per the NREMT,
2. 15 hours of local/state component content, and,
3. 15 hours of individual component content.

Courses that cannot be applied towards recertification requirements include duplicate courses, clinical rotations, instructor courses, management/leadership courses, performance of duty, preceptor hours, serving as a skill examiner, and volunteer time with agencies.

National Component (30hr):

The National Component requires Paramedics to complete 30 hours of approved continuing education as per the following:

Airway/Resp/Ventilation (3.5hrs): Ventilation (2hrs), Capnography (1hr), Oxygenation (0.5hr)

Cardiovascular (9.5hrs): Post-Resuscitation Care (0.5hr), Ventricular Assist Devices (0.5hrs), Stroke (1.5hrs), Cardiac Arrest (2hrs), Pediatric Cardiac



Resuscitation

Group

- Arrest (2.5hrs), Congestive Heart Failure (0.5hrs), Acute Coronary Syndrome (1.5hrs).
- Trauma (3hrs): Trauma Triage (1hr), Central Nervous System (CNS) Injury (1hr), Hemorrhage Control (0.5hr), Fluid Resuscitation (0.5hr)
- Medical (8.5hr): Special Healthcare Needs (2hr), OB Emergencies (0.5hr), Infectious Diseases (0.5hr), Medication Delivery (1hr), Pain Management (1hr), Psychiatric and Behavioral Emergencies (1hr), Toxicological Emergencies with Opioids (0.5hr), Neurological Emergencies with Seizures (0.5hr), Endocrine Emergencies with Diabetes (1hr), Immunological Emergencies (1hr).
- Operations (6.5hrs): At-Risk Populations (1hr), Ambulance Safety (0.5hr), Field Triage for Disasters/MCIs (1hr), EMS Provider Hygiene, Safety, and Vaccinations (0.5hr), EMS Culture of Safety (0.5hr), Pediatric Transport (0.5hr), Crew Resource Management (1hr), EMS Research (1hr), Evidence Based Guidelines (0,5hr)

State Component (15hr):

If specific local and/or state are not specified, these required hours are considered flexible content. You may use any state or Commission on Accreditation for Pre-Hospital Continuing Education (CAPCE) approved EMS-related education to fulfill these requirements. A maximum of 10 hours of distributive education may be used to meet the 15-hour requirement.

Individual Component (15hr):

The individual hours are considered flexible content. You may use any state or Commission on Accreditation for Pre-Hospital Continuing Education (CAPCE) approved EMS-related education to fulfill these requirements. A maximum of 15 hours of distributive education may be used to meet the 15 hour requirement.

Program Tuition: \$550 usd for 30 Hour Refresher Program
 \$1100 usd for 60 Hour Refresher Program

Preparing for the Course:

1. Please review registration email and ask any questions you may have.
2. Prior to the course, you will receive an email inviting you to take the Advanced Trauma Course (ATC) Exam, please complete this exam prior to the first day of class. Failure to complete the exam with a score of 85% or more, will make you ineligible to receive a course completion



certificate for the CAPCE accredited Paramedic Refresher. This exam is open resource and queued to the pre-course reading and viewing sent out with this email.

3. Attached to this email, you will find the Advanced Trauma Course (ATC) pre-course materials sheet; please review all of the materials prior to attempting the exam!
4. Prior to the course, you will receive an email inviting you to take the Pre-Course Exam for the Paramedic Refresher, please complete this exam prior to the first day of class. Failure to complete the exam with a score of 85% or more, will make you ineligible to receive a course completion certificate for the CAPCE accredited Paramedic Refresher
5. Prior to the course, you will receive an email inviting you to take the Pre-Course Exam for the ACLS EP Course, please complete this exam prior to the first day of class. Failure to complete the exam with a score of 85% or more, will make you ineligible to receive a course completion certificate for the CAPCE accredited Paramedic Refresher. This exam is open resource.

Course Outline: Resuscitation Group – CAPCE Accredited 32 Hour National Component

DAY 1: 1.5hrs Cardiovascular, 6.5hrs Medical

0800-0930 Critical 12 Leads and Acute Coronary Syndrome

0930-1000 Simulation: Toxicological Emergencies with Opioids

1000-1015 Break

1015-1045 Simulation: OB Emergencies

1045-1200 Psychiatric, Behavioral Emergencies, and Special Healthcare Needs of The Mental Health Patient

1145-1245 Lunch

1245-1400 Current Science in Pain Management

1400-1515 Simulation: Immunological Emergencies

1515-1530 Break

1530-1600 Simulation: Neurological Emergency and Seizure

1600-1700 Endocrine Emergencies and Diabetes

-
DAY 2: 8hrs Cardiovascular (*ACLS EP*)

0900-1200 CPR Challenge, and Overview of the current ILCOR Adult Cardiovascular Science (Stroke and Neurological Emergency, Cardiac Arrest, Post Arrest Care)

1200-1300 Lunch

1300-1800 Cardiac Simulation Cases (Arrhythmia, ACS, VF, PEA, One Hour, VAD, Heart Failure) with Debrief

DAY 3: 3.5 hrs - Airway/Respiration/Ventilation, 3hrs Trauma, 1.5hrs Medical (*ATC Course*)



- 0745-0800 Welcome
- 0800-0930 Infectious Disease Considerations and large-scale infectious disease events (Infectious Disease, EMS Culture of Safety, Current Science in Disasters, MCI, and Field Triage)
- 0930-1100 Considerations in Airway Management - Trauma Airway Management (Oxygenation, Ventilation, Capnography, Ventilators, Advanced Airways, and Difficult Airways)
- 1100-1200 Chest Trauma Skills – Needle Chest Decompression and Simple Thoracostomy
- 1200-1300 Lunch on your own
- 1300-1700 Advanced Trauma Simulation (Trauma Triage/Assessment, Central Nervous System (CNS) Injury, Hemorrhage Control, Traumatic Cardiac Arrest, Fluid Resuscitation and Blood Use)
- Case Simulation #1 – Chest trauma w/ hypotension and hypoxia (interventions include: oxygenation, airway management, decompression, chest tube placement, and vascular access/fluid resuscitation)
 - Case Simulation #2 – Extremity trauma w/ Hypotension (interventions include: tourniquet placement, oxygenation, vascular access, fluid resuscitation, splinting)
 - Case Simulation #3 – Head trauma (interventions include: oxygenation, airway management, vascular access, fluid resuscitation, mannitol use)
 - Case Simulation #4 – Poly Trauma w/ Hypotension (interventions include: oxygenation, airway management, spinal immobilization, vascular access, fluid resuscitation, TXA, blood administration)
 - Case Simulation #5 – Trauma Arrest (interventions include: oxygenation, compressions, airway management, chest tube, pericardiocentesis, vascular access, fluid resuscitation, Blood administration, TXA)

- DAY 4: 1.5hr Medical, 6.5hrs Operations
- 0800-1000 Special Healthcare Needs for At Risk Populations
- 1000-1200 Simulation Cases - Pediatric Transport Consideration
- 1200-1300 Lunch
- 1300-1400 Crew Resource Management - Introduction to TeamSTEPPS (AHRQ)
- 1400-1500 EMS Provider Hygiene, Safety, and Vaccinations
- 1500-1700 EMS Research and Evidence Based Guidelines



Course Outline: Resuscitation Group – CAPCE Accredited 60 Hour Refresher

- DAY 1:** 1.5hrs Cardiovascular, 6.5hrs Medical
- 0800-0930 Critical 12 Leads and Acute Coronary Syndrome
- 0930-1000 Simulation: Toxicological Emergencies with Opioids
- 1000-1015 Break
- 1015-1045 Simulation: OB Emergencies
- 1045-1200 Psychiatric, Behavioral Emergencies, and Special Healthcare Needs of The Mental Health Patient
- 1145-1245 Lunch
- 1245-1400 Current Science in Pain Management
- 1400-1515 Simulation: Immunological Emergencies
- 1515-1530 Break
- 1530-1600 Simulation: Neurological Emergency and Seizure
- 1600-1700 Endocrine Emergencies and Diabetes
-
- DAY 2:** 8hrs Cardiovascular (*ACLS EP*)
- 0900-1200 CPR Challenge, and, Overview of the current ILCOR Adult Cardiovascular Science (Stroke and Neurological Emergency, Cardiac Arrest, Post Arrest Care)
- 1200-1300 Lunch
- 1300-1800 Cardiac Simulation Cases (Arrhythmia, ACS, VF, PEA, One Hour, VAD, Heart Failure) with Debrief
- DAY 3:** 3.5 hrs - Airway/Respiration/Ventilation, 3hrs Trauma, 1.5hrs Medical (*ATC Course*)
- 0745-0800 Welcome
- 0800-0930 Infectious Disease Considerations and large-scale infectious disease events (Infectious Disease, EMS Culture of Safety, Current Science in Disasters, MCI, and Field Triage)
- 0930-1100 Considerations in Airway Management - Trauma Airway Management (Oxygenation, Ventilation, Capnography, Ventilators, Advanced Airways, and Difficult Airways)
- 1100-1200 Chest Trauma Skills – Needle Chest Decompression and Simple Thoracostomy
- 1200-1300 Lunch on your own
- 1300-1700 Advanced Trauma Simulation (Trauma Triage/Assessment, Central Nervous System (CNS) Injury, Hemorrhage Control, Traumatic Cardiac Arrest, Fluid Resuscitation and Blood Use)



- Case Simulation #1 – Chest trauma w/ hypotension and hypoxia (interventions include: oxygenation, airway management, decompression, chest tube placement, and vascular access/fluid resuscitation)
- Case Simulation #2 – Extremity trauma w/ Hypotension (interventions include: tourniquet placement, oxygenation, vascular access, fluid resuscitation, splinting)
- Case Simulation #3 – Head trauma (interventions include: oxygenation, airway management, vascular access, fluid resuscitation, mannitol use)
- Case Simulation #4 – Poly Trauma w/ Hypotension (interventions include: oxygenation, airway management, spinal immobilization, vascular access, fluid resuscitation, TXA, blood administration)
- Case Simulation #5 – Trauma Arrest (interventions include: oxygenation, compressions, airway management, chest tube, pericardiocentesis, vascular access, fluid resuscitation, Blood administration, TXA)

DAY 4: 1.5hr Medical, 6.5hrs Operations
0800-1000 Special Healthcare Needs for At Risk Populations
1000-1200 Simulation Cases - Pediatric Transport Consideration
1200-1300 Lunch
1300-1400 Crew Resource Management - Introduction to TeamSTEPPS (AHRQ)
1400-1500 EMS Provider Hygiene, Safety, and Vaccinations
1500-1700 EMS Research and Evidence Based Guidelines

DAY 5: 8hr State or Medical Director Content (Resuscitation Group Medical Director content)
0800-1700 Pediatric Advanced Life Support (PALS)

DAY 6: 8hr State or Medical Director Content (Resuscitation Group Medical Director content)
0800-1700 Critical Patient Immersive Simulation Cases with Debrief and Follow up content delivery

DAY 7: 8hr Individual Content
0800-1700 Basic Ultrasound Course – Day 1

DAY 8: 8hr Individual Content
0800-1700 Basic Ultrasound Course – Day 2



APPENDIX 4

Critical Care Provider Program



Critical Care Provider Program

This 250 hour program is designed for providers involved in rural/critical access hospitals, emergency medical transport, remote site care, or site-specific care of critically ill patients. Upon completion of the program, the participant will be prepared to stabilize and facilitate safe and efficacious transport of the critically ill or injured patient by air or ground. Students are provided with a challenging comprehensive education with didactic, laboratory, and simulation components.

The program includes didactic, practical lab, and simulation at our campus. The program of learning includes multiple vital topics for today's healthcare environment, including: advanced airway management, basic ventilator management, current international science guideline updates, advanced 12 Lead ECG interpretation, quantitative waveform capnography interpretation, bedside ultrasound assessments, vascular access, advanced cardiac care, advanced stroke care, orientation to conscious sedation procedures, and adult/adolescent/pediatric consideration in critical care. After completion of the program, the participants may wish to pursue GEMR, IBSC, and/or BCEN CTRN certification as a critical care transport or remote care professional.

Program Tuition: \$4000 usd

Prerequisites for Program Participants:

Participants must have the following at the initiation of the course:

1. Current Midlevel Practitioner, Registered Nurse, Paramedic, or Respiratory Therapist;
2. Current State or Country Licence in good standing.
3. Minimum 1 year patient care experience.

Media and Print Resources Required for Course Participants:

Participants should plan to obtain the listed resource materials and textbooks at least 30 days prior to the start of the program and initiate study of all materials.

This program utilizes resources from multiple formats including but not limited to:

1. Emergency Department Resuscitation of the Critically Ill, 2nd Edition, Michael E. Winters MD.
2. Critical Care Transport 2nd Edition, American Academy of Orthopaedic Surgeons (AAOS)
3. Alaska Air Medical Escort Training Manual, Department of Health and Social Services, State of Alaska, 2006.
4. Introduction to Flight Physiology, Federal Aviation Administration.
5. GEMR Resuscitation and Stabilization Treatment Guidelines; gemr.org
6. ACLS Experienced Provider, American Heart Association, 2018. (2025 as soon as available)
7. PALS Provider Manual, American Heart Association, 2020.



8. Advanced Trauma Care (ATC) Program Reference Manual, Christie, ATREC Inc, 2024.
9. Basic Emergency Ultrasound Student Reference Manual, ATREC Inc, 2024

Professional Certification and/or License:

1. The Global Emergency Medical Registry (gemr.org) certifies Advanced practice Paramedics.
2. Participants may wish to pursue IBSC, and/or BCEN CTRN certification as a critical care transport or specialty care professional.
3. Several US states have critical care transport licensure or endorsement for Paramedics and prehospital nurses.
4. Several countries and exploration companies have certification or licensure processes for critical care transport, remote site critical care level provider, and critical access hospital designators for personnel.
5. Participants planning helicopter or maritime environment professional deployment should consider completing a Helicopter Underwater Egress Training (HUET) course and Sea Survival Course after program completion.

Program Delivery:

Educational delivery will be a combination of:

1. In person, instructor led classroom session;
2. In person, instructor led practical/lab skills sessions;
3. Instructor led, online sessions, utilizing The Resuscitation Group TEAMS software system; and,
4. Online test completion by the participants.

Program Length: 250 hours of instruction

Program Objectives Development:

The program objectives are unique to the needs of this program, but incorporate the Global Emergency Medical Registry (GEMR) Critical Care Provider standard objectives (<https://www.gemr.org>), while blending in the objectives required for the unique environment and challenges of the Pacific Rim environments, with additional objectives incorporated to meet the highest level of clinical expectation under the current United States CMMS Specialty Transport guidelines. Specific Program Objectives can be found below.

Objectives:

Didactic Objectives:



1. Demonstrate command of human anatomy and physiology, as it relates to the critical patient in a state of physiologic exhaustion.
2. Demonstrate an understanding of the risks and challenges involved in the transport of a critically ill patient.
3. Identify the key issues in ground and air transport of specific patient groups, specifically the post cardiac arrest patient, the post-surgical trauma patient, and the septic shock patient.
4. Demonstrate an awareness of the importance of situational awareness, advanced decision-making skills and human factors in emergency medicine.
5. Demonstrate a familiarity with the resources, situational analysis, and capabilities for critical care provision in the critical access facilities.
6. Assess the probable cause of a critical event using critical thinking
7. Demonstrate an understanding of the physical atmosphere and the physics behind the laws of gases
8. Apply gas laws as part of a risk assessment when evaluating a patient for aeromedical transport.
9. Demonstrate the ability to apply the concepts of Flight Physiology to the following:
 - a. The effect of altitude on oxygenation, liquid/gas interfaces, temperature and humidity, medical equipment
 - b. Effects from noise and vibration
 - c. Effects of acceleration/deceleration forces
 - d. Effects in special medical consideration:
 - i. HEENT disease,
 - ii. cardiovascular disease,
 - iii. pulmonary disease,
 - iv. hematological disease,
 - v. neurosurgical disease,
 - vi. ophthalmologic disease,
 - vii. gastrointestinal disease,
 - viii. orthopedic disease,
 - ix. burns,
 - x. pediatric patient,
 - xi. air-embolism, and,
 - xii. decompression sickness injuries
10. Develop a strategy for patient management which does not impact the patient's physiologic state.
11. Demonstrate the ability to identify and mitigate time, anatomy, and physiologic influences on the patient nearing physiologic exhaustion in the trauma and medical etiologies.
12. Demonstrate an understanding of guidelines for air transport, including:
 - a. Dispatching procedure: routine flights (rotary wing and emergent and non-emergent fixed-wing transports), pilot approval issues (e.g., weather, weight/balance considerations), and administrative approval
 - b. Guidelines for scene response: safety issues—extrication, fire, hazmat, landing zone selection; on-scene command; direct medical oversight; medical care issues on scene (risk/benefit); interface with ground EMS units



- c. Guidelines for interhospital transfer: flight-team interaction, direct and indirect medical oversight, medical care issues prior to transfer (risk/benefit)
 - d. Guidelines for emergent and non-emergent fixed-wing response
 - e. Patient preparation for flight
 - f. Patient care by medical crew members
 - g. Receiving facilities
 - h. Coordinating ground transport
 - i. Flight following
 - j. Precautionary landings
 - k. Accessing of the system for inter-facility transfers and scene responses
13. Participants will be oriented to the specifics of the CCP environment, including:
- a. Program Specifics
 - b. History of extended scope and advanced practice
 - c. Specific policies and procedures for the CCP
 - i. Administrative
 - ii. Medical
 - d. Integration of air and ground transport programs into regional disaster and MCI planning
 - e. Post-incident processes
 - f. Plan for responding to the crash of a transport vehicle
 - g. Search and rescue procedures
 - h. Infection control procedures for the aircraft and transport vehicles
 - i. Documentation (medical charting and other documentation)
 - j. Equipment and personnel assignment processes for staffing and scheduling
 - k. Equipment stocking
14. Participants will demonstrate knowledge of aviation and general aircraft safety and operational knowledge, including:
- a. Weight restrictions and weight/balance assessments
 - b. Weather minimums and overview of weather as relates to air transport
 - c. Routine aviation issues
 - d. helipad/hangar safety
 - e. routine aircraft ingress/egress
 - f. routine maintenance and refueling
 - g. aircraft start up/cool down procedures
 - h. Landing zone criteria and safety
 - i. Pre-designated landing zones
 - j. Emergency landing zones
 - k. LZ approach and assessment
 - l. LZ safety (rotor wash, rotor hazards)
 - m. Patient and equipment loading and unloading
 - n. Patient and team clothing and blankets
 - o. Refueling procedures
 - p. Routine flight activities



- q. take-off and landing procedures
- r. aircraft sighting/spotting
- 15. Participants will successfully complete a Crew Resource Management (CRM) program by:
 - a. Demonstrating awareness of the limitations of human performance under various environmental and interpersonal conditions.
 - b. Demonstrating awareness of the limitations of performance created at the human-machine interface.
 - c. Applying knowledge of human task performance limitations in the aviation environment with a view to improving safety
 - d. Participants will successfully demonstrate safe and effective use of fire suppression equipment found in ground areas and within the aircraft
- 16. Participants will understand the tenets of maritime operations and the ability to apply those tenets to the critical care transport in the maritime environment.
- 17. Demonstrate an awareness of the importance of situational awareness, advanced decision making skills and human factors in emergency medicine.
- 18. Assess the probable cause of a critical event using critical thinking
- 19. Demonstrate the ability to identify and mitigate time, anatomy, and physiologic influences on the patient nearing physiologic exhaustion in the trauma and medical etiologies.
- 20. Interpret correctly cardiac, great vessels, abdominal content, and lung ultrasound findings related to the FAST, RUSH, and Lung ultrasound exams.
- 21. Interpret, respond, and apply principles of resuscitation to presented case studies in the online case study program.
- 22. Show the ability to interpret and respond to knowledge assessments presented in the online knowledge assessment process.
- 23. Demonstrate knowledge of Intra-Aortic Balloon Pump and ECMO.
- 24. Participants will successfully complete online exams, comprehensive of program objectives and materials, with a score of 85% or greater.

Lab, Practical Skill, and Simulation Objectives:

- 1. Complete a FAST, RUSH, and Lung exam skill assessment on a patient or manikin in a proctored environment.
- 2. Complete a needle thoracotomy and chest tube thoracotomy assessment with and without POCUS on a manikin in a proctored environment.
- 3. Complete a pericardiocentesis skill assessment with POCUS on a patient in a proctored environment.
- 4. Complete a cricothyrotomy skill assessment on a manikin in a proctored environment cricothyrotomy.
- 5. Complete ten Trauma Case Scenario Simulation as a team leader and team member.
- 6. Complete ten Medical Case Scenario Simulation as a team leader and member.



7. Perform an assessment on a patient with a variety of critical events during real time simulation.
8. Recognize a patient with a critical event occurring during simulation exercises and create a treatment plan commiserate with the patient's condition(s).
9. Develop an advanced practice approach to the patient's condition when presented with real or simulated patients.
10. Demonstrate competence at integration of multiple advanced skills and assessments with a patient in a state of physiologic exhaustion during simulation, and demonstrate planning and actions taken to mitigate pre/post procedure adverse effects and risks.
11. Perform rapid sequence induction (RSI) to facilitate placement of an advanced airway cricothyrotomy in compliance with the GEMR Skills Sheet.
12. Perform needle or chest tube thoracotomy in compliance with the GEMR Skills Sheet.
13. Identify structures, free fluid, and high-risk conditions utilizing a FAST, RUSH, and Lung Exam on a real or simulated patient.
14. Perform pericardiocentesis in compliance with the GEMR Skills Sheet.
15. Provide optimal airway management for the crashing patient in the emergency medicine environment.
16. Demonstrate the ability to care for a complex trauma or medical patient during an extended transport or critical access hospital wait time of at least 60 minutes in the simulation environment.
17. Apply principles of flight physiology and effects as part of a risk assessment when developing a treatment plan for the patient during air transport.
18. Participants will demonstrate knowledge and application of the medical equipment provided for use by the Paramedic Extended Scope of Practice environment, including:
 - a. Oxygen systems (liquid, internal, external)
 - b. Monitor/defibrillator/cardioversion/pacer system
 - c. Quantitative waveform capnography (PEtCO₂)
 - d. Pulse oximeter (SpO₂)
 - e. Non-invasive blood pressure monitor (NIBP)
 - f. Doppler for Fetal Heart Tones (FHT)
 - g. Transport ventilators
 - h. Intravenous (IV) pump
 - i. Neonatal isolette
 - j. Aortic Balloon pump system
 - k. Aircraft security, restraint, and electrical interference equipment
19. Participant will demonstrate aircraft equipment use, including:
 - a. appropriate securing of all equipment
 - b. oxygen systems
 - c. restraints
 - d. stretcher, patient pod, or system



- e. basics of radio and navigation
- 20. Participant will show competency in aircraft emergency procedures and equipment, including:
 - a. master switch shut down
 - b. fuel shutoff
 - c. door jettison process
 - d. fire extinguisher placement and checks
 - e. survival kit and emergency locator beacon operation/placement/checks
 - f. rotor brake activation
 - g. oxygen shutoff valve
- 21. During simulation, interpret patient condition(s), respond to changes in physiology, and apply interventions, specifically with the post cardiac arrest patient, the multi-system trauma patient, and the septic shock patient.
- 22. Communicate effectively during drills and transport with all stakeholders in the transport process.
- 23. Develop an advanced practice approach to the patient's condition when presented with simulated patients.
- 24. Demonstrate competence at integration of multiple advanced skills and assessments with a patient in a state of physiologic exhaustion during simulation, and demonstrate planning and actions taken to mitigate pre/post procedure adverse effects and risks.
- 25. Provide optimal airway management for the crashing patient in the emergency medicine environment during simulation involving stabilization of a patient for transport.
- 26. Demonstrate the ability to care for a complex trauma or medical patient during an extended transport of at least 60 minutes in the simulation environment.
- 27. Participants will be able to demonstrate competence in integration of the course foundations through real world observation of their patient care and interaction with the simulation environment by program instructors.

Sample Course Schedule:

100 hours	Didactic Objective Sessions via instructor led TEAMS environment and Instructor Led Classroom Setting.
20 hours	Ultrasound Lab
20 hours	Difficult Airway Lab, Ventilator Management, and Simulation cases
20 hours	Critical Skills Lab: Surgical Cricothyrotomy, Simple Thoracostomy, Chest Tube Thoracotomy, Ultrasound Guided Pericardiocentesis, Wound Packing, general interventions.
8 hours	Vascular Access Lab: Fluids, Blood Administration, Syring Drivers, IV Pumps, PCA Pumps
12 hours	Critical care Equipment Lab: Oxygen systems (liquid, internal, external), Monitor/defibrillator/cardioversion/pacer system, Quantitative waveform capnography



(PEtCO₂), Pulse oximeter (SpO₂) advanced systems, Non-invasive blood pressure monitor (NIBP), Doppler for Fetal Heart Tones (FHT), ECMO, Aortic Balloon pump system.

- 20 hours Transport Lab: Vehicle and Aircraft orientation and patient management in the transport vehicles.
- 50 hour Immersive simulation



APPENDIX 5

Dental Anesthesia Assistant Program



Dental Anesthesia Assistant Program

The Dental Anesthesia Assistant Program is a certificate program approved by the Washington State Dental Commission and the Oregon Dental Board. A Dental Anesthesia Assistant works at the direction of a Dentist, Oral Surgeon, Maxillofacial Surgeon, or other provider in preoperative, operative, and postoperative anesthesia, monitoring, and interventional care.

Among other duties, Anesthesia Assistants obtain a pre-anesthetic health history, perform vascular access, establish non-invasive monitoring, assist with the preparation and administration of medications, assist in the treatment of life-threatening situations, and assist with all aspects of anesthesia techniques, as allowed by certification and as directed by a licensed provider. The Resuscitation Group students learn and apply anesthesia skills and manage life-threatening situations in simulation. The practical experience gained is not typical of all programs and is extremely valuable to the participants when real world situations occur.

Program Tuition: \$1500 usd

Prerequisites for Program Participants:

Participants must have the following at the initiation of the course:

1. Washington State KNOW HIV Prevention Education for Health Care Facility Employees (7 hour course certificate).
2. Prior experience in dental or outpatient environment

Media and Print Resources Required for Course Participants:

Participants should plan to obtain the listed resource materials and textbooks at least 30 days prior to the start of the program and initiate study of all materials.

Students are required to obtain and read the following textbooks, as well as, have them available during class:

1. Basics of Anesthesia 8th Edition by Manuel Pardo MD
2. American Heart Association ACLS Provider Manual 2020

This program utilizes resources from multiple formats including but not limited to the following required pre-course study materials:

1. Conscious Sedation for Minor Procedures in Adults NEJM <https://youtu.be/BSYYq01Y9xQ>



2. Understanding IV Conscious Sedation Gina L. Salatino DMD, FAGD <https://youtu.be/bZHzQsgovy8>
3. Principles of Capnography Lesson 1 <https://youtu.be/KLRPlvbw3M8>
4. Principles of Capnography Lesson 2: Basic principles <https://youtu.be/rsd5C7FLXXo>
5. Principles of Capnography Lesson 3: Capnography waveforms <https://youtu.be/GUV7BT1GLeM>
6. Nitrous Oxide Oxygen Sedation; Royal College; <https://youtu.be/1o35MoG3cc8>
7. How to start an IV: Antecubital Fossa. Med School Made Easy Inc. <https://youtu.be/IxhXahrXLbQ>
8. Reasons Why People Miss Veins When Starting an IV or Drawing Blood. RegisteredNurseRN.com; <https://youtu.be/jNf-8DwW224>
9. Complete reading of Anesthesia 101 at <https://www.asahq.org/whensecondscount/anesthesia-101/>

Professional Certification and/or License:

Upon successful completion of the Anesthesia Assistant Program, the participant may apply to the Washington State Department of Health Dental Anesthesia Assistant Licensing process (<https://doh.wa.gov/licenses-permits-and-certificates/professions-new-renew-or-update/dental-anesthesia-assistant/licensing-information>) or the Oregon Dental Board for certification endorsement for Dental Anesthesia Assistant (<https://www.oregon.gov/dentistry/Documents/Board%20Approved%20IV%20or%20Phlebotomy%20Courses.pdf>)

Program Delivery:

Educational delivery will be a combination of:

1. In person, instructor led classroom session.
2. In person, instructor led practical/lab/simulation skills sessions.

Program Length: 80 hours of instruction and a minimum of 20 hour pre-course learning required

Participation Expectations:

In order to successfully complete this course of instruction, a registered participant must be present for all scheduled hours and be engaged in the interactive discussions, case reviews and knowledge evaluation.

Participants will successfully:

1. Complete a comprehensive written examination with a score of 85% or better.



2. Successfully manage three anesthesia emergencies in an immersive simulation environment, under the observation of instructor staff and scored against the GEMR scenario skills sheet.
3. Successfully complete five (5) intravenous catheter placements under the observation of the instructor staff, using the GEMR IV Access Skills Sheet Standard.
4. Successfully complete ten (10) intravenous catheter placements under the supervision of their Dental or Medical Provider.

Program Objectives:

Educational content covered in this course includes a review of current science and best practices, with the following objectives:

1. Demonstrate synthesis of the continuum of sedation.
2. Demonstration of pre-procedure patient evaluation and monitoring.
3. Demonstrate recognition of respiratory and/or circulatory compromise.
4. Ability to describe patient safe monitoring procedures.
5. Recognize the role of pulse oximetry and quantitative waveform capnography in sedation.
6. Demonstrate the ability to interpret common waveform capnography waveforms.
7. Demonstrate familiarity with common anesthesia pharmacological agents; including, but not limited to: Ketamine, Lorazepam, Midazolam, Methoxyflurane, Nitrox, Opioids, and Propofol.
8. Demonstrate the ability to respond with a systematic resuscitative approach to the following common anesthesia emergencies; including: hypoxia, hypotension, hypertension, bradycardia, cardiac arrest, respiratory conditions, angina, syncope, stroke, allergy, and hypoglycemia.
9. Recognize the role of IV Therapy and medication infusion.
10. List factors that affect flow rates of IV solutions.
11. Describe proper use of specific IV therapy equipment.
12. Initiate IV therapy utilizing standard precautions and patient safety by:
 - a. Preparing the patient psychologically
 - b. Explaining the rationale for venipunctures
 - c. Differentiating between the types of skin puncture, venipunctures and arterial devices and their appropriate uses
 - d. Differentiating between skin puncture, arterial puncture, and venipunctures
 - e. Distinguishing between types of intravenous solutions and their appropriateness
 - f. Preparing equipment properly and aseptically
 - g. Selecting and correctly preparing the most appropriate vein for venipuncture
 - h. Preparing the site in a manner which reduces the chance of infection
 - i. Performing venipuncture utilizing direct or indirect method
 - j. Dressing site according to policy

- k. Securing and immobilizing device appropriately and safely
 - l. Regulating flow rate and fluid accurately
 - m. Documenting on medical record
13. Recognize complications related to venipunctures.
 14. Recognize local and systemic reactions related to intravenous therapy and medications.
 15. List the measures taken to reduce local and systemic reactions
 16. List three reasons to discontinue and restart IV access.
 17. List the cause and differentiate clinical symptoms of electrolyte imbalances.
 18. Identify the role of IV therapy and pH balance.
 19. Differentiate actions, dosages, side effects, and implications of specified intravenous solutions.
 20. Correlate the IV fluid container label with the name of the solution as commonly ordered.
 21. Examine the differences between techniques used in adult and pediatric IV therapy.
 22. Discuss situations related to IV therapy and legal implications.
 23. Describe appropriate ways of minimizing legal risks in IV therapy and blood withdrawal practice.
 24. Identify the safety precautions in regards to administering IV fluids.
 25. Properly calculate, draw up, and administer IV medications.
 26. Successfully manage three anesthesia emergencies in an immersive simulation environment.

Outcomes:

Participants who successful complete this course will be able to:

1. Discuss the continuum of sedation.
2. Explain the perimeters for patient safe monitoring during conscious sedation.
3. Describe pharmacological agents for conscious sedation.
4. Demonstrate proper administration of pharmacological agents.
5. Discuss proper pre-procedure evaluation and physical exam processes.
6. Demonstrate proper response to anesthesia emergencies in a simulation environment.
7. Discuss the structure and function of veins.
8. Identify the names and the locations of the veins most suitable for phlebotomy and cannulation/venipuncture.
9. Assemble equipment and supplies needed to collect blood and for cannulation/venipuncture and discuss the correct use of each.
10. Demonstrate the steps in performing blood collection and cannulation/venipuncture procedure.
11. Assess techniques and equipment used to minimize biohazard exposure in blood collection and cannulation/venipuncture.



12. Evaluate procedural errors in blood collection and cannulation/venipuncture and discuss remedies for each.
13. Differentiate complications associated with blood collection and cannulation/venipuncture and their effect on the quality of laboratory results.

Special Considerations:

1. Students will be establishing IV access on each other during the course and should be prepared for that eventuality.
2. Students may bring a volunteer for IV access to the IV Access Lab, the volunteer may not have any chronic medical conditions and must sign a waiver after verbal orientation by the instructor to the dangers of IV Access.
3. A minimum of five successful IV skills sheets must be completed under instructor observation during the course, students may obtain an additional five with their provider outside of class but must complete ten successful skills sheets by the end of the course.

Sample Course Outline:

Day -30 to 0: Participants complete pre-course learning and study their textbooks.

Day 1:

0900-1700 ACLS Provider

Day 2:

0900-1500 ACLS Provider

1500-1700 Resuscitation Immersive Simulation

Day 3:

0900-1030 Intravenous Therapy standards and practice didactic

1030-1700 IV Therapy Lab and completion of a minimum of five IV skills sheets

Day 4:

0900-1000 Medication preparation and administration didactic

1000-1700 IV Therapy and Medication Administration Lab

Day 5:

0900-1000 Questions from previous sessions or reading assignments

1000-1200 Continuum of Sedation



1200-1300 Lunch (on your own)
1300-1500 Pre-Anesthesia Check List
1500-1700 Emergency Procedures - Airway

Day 6:

0900-1100 Physiologic monitoring (EtCO₂, SpO₂, ECG, NIBP)
1100-1230 Pharmacology
1230-1330 Lunch
1330-1730 Immersive Simulation – Anesthesia Emergencies (Respiratory)

Day 7:

0900-0930 Questions from previous course material
0930-1100 Emergency Response Actions
1100-1200 Immersive Simulation – Anesthesia Emergencies (Shock)
1200-1300 Lunch
1300-1700 Immersive Simulation – Anesthesia Emergencies (Cardiac, CVA, Hyperthermia)

Day 8:

0900-1200 Written Exam
1200-1300 Lunch
1300-1630 Immersive Simulation – Anesthesia Emergencies (Completion of final simulation scoring sheet)
1630-1700 Course Wrap



APPENDIX 6

Healthcare and Emergency Systems Leadership Program



Healthcare and Emergency Systems Leadership

Today's healthcare systems, emergency medical systems, and healthcare organizations are in constant need of leaders to navigate the complexities of healthcare, EMS, and operational competency, management, tactics, strategies, regulatory compliance, and development of the future of service delivery.

Designed for hospital, emergency medical services, rescue, and healthcare professionals; the program is built upon the NHTSA Leadership Guide to Quality Improvement for Emergency Medical Services (EMS) Systems, the National Center for Healthcare Leadership objectives, Agency for Healthcare Research & Quality TeamSTEPPs objectives, National MEMS Academy (SGAUS) objectives, and the Emergency Management Institute Leadership and Influence course objectives. The 100 hour program provides the knowledge and skills to those interested in functioning as a leader-manager within an EMS, rescue, or healthcare service. Explore the basis of delivery systems, risk management and safety initiatives, legal and regulatory requirements, quality management, medical direction, research principles, and community risk reduction. Develop a multipoint process or leadership and management strategies as applied to the rapidly changing world of service provision. Courses are taught by experienced medical professionals who are experts in their field and have real world management experience from a variety of aspects of the healthcare delivery system.

There's an immense need for effective leadership in healthcare; the global pandemic has highlighted the importance of innovative healthcare leaders who are able to quickly formulate effective solutions. As important, it has become clear that healthcare and emergency systems require leadership at all levels of management, from field training officers and floor supervisors, to group leaders and C level personnel.

According to the World Population Review, the United States has higher healthcare costs than any other country, while still having a very high percentage of under and uninsured patients in the country.

According to a report from the Peterson-KFF Health System Tracker

<https://www.kff.org/other/slide/the-u-s-has-the-lowest-life-expectancy-among-large-wealthy-countries-while-far-outspending-them-on-health-care/#:~:text=An%20updated%20Peterson%2DKFF%20Health,COVID%2D19%20pandemic%20in%202019>), compared to similar countries, the United States has:

- The highest pregnancy-related mortality rate.
- A higher-than-average rate of diabetes and congestive heart failure; and,



- A higher percentage of reported medication and treatment errors than the majority of comparable countries.

According to Dr. Robert H. Shmerling, MD, Senior Faculty Editor, Harvard Health Publishing; Editorial Advisory Board Member, Harvard Health Publishing (<https://www.health.harvard.edu/blog/is-our-healthcare-system-broken-202107132542>); Despite spending far more on healthcare than other high-income nations, the US scores poorly on many key health measures, including:

- Life expectancy,
- Preventable hospital admissions,
- Suicide,
- Mental Health, and,
- Maternal mortality.

Despite that expense, satisfaction with the current healthcare system is relatively low in the US. High costs combined with high numbers of underinsured or uninsured means many people risk bankruptcy if they develop a serious illness. Prices vary widely, and it's nearly impossible to compare the quality or cost of your healthcare options, or even to know how big a bill to expect. And even when you ask lots of questions ahead of time and stick with recommended doctors in your health insurance network, you may still wind up getting a surprise bill.

One of the most prevalent challenges facing the healthcare industry today is the chronic shortage of healthcare professionals. 18% of health care workers quit their jobs during the COVID-19 pandemic, while another 12% have been laid off. Among health care workers who kept their jobs during the pandemic, 31% have considered leaving. 79% of health care professionals said the national worker shortage has affected them and their place of work (<https://pro.morningconsult.com/articles/health-care-workers-series-part-2-workforce>).

Moreover, although the majority of disease burden and health care resources is related to the treatment of chronic conditions, the nation's health care system is organized and oriented largely to provide acute care and is inadequate in meeting the needs of the chronically ill (Wagner et al., 2001)

Leadership is often defined as an ability to manage a team effectively; while useful at face value, this definition does not adequately prepare personnel to go beyond "maintaining the status quo". In today's ever-changing conditions, leadership must be able to identify challenges in the system and troubleshoot a methodology to mitigate those challenges. This means the functionality of leadership involves more than managing a healthcare organization, overseeing staff, or dealing with insurance.



Leadership, that is effective, can accomplish a number of goals:

- Improve Quality of Care
- Create Adaptable Leaders
- Effect stress management in unpredictable and uncertain times
- Encourage Forward-Thinking
- Produce Innovative Future Leaders

Are You Ready to Develop Your Leadership Skills?

If you're hoping to advance your career in healthcare to a leadership position, it's important to ensure that you're prepared. One of the best ways to obtain the relevant skills and qualifications to advance to a leadership role is to obtain relevant education.

If you want to become a more effective leader and advance your career, consider the Certificate in Healthcare and Emergency Systems Leadership at The Resuscitation Group. The program will provide you with the skills and knowledge necessary to take your first steps into a successful leadership role.

Program Tuition: \$1500 usd

Prerequisites for Program Participants:

Participants have no requirements for this program

Media and Print Resources Required for Course Participants:

This program utilizes the following resources from multiple formats including:

1. If Disney Ran Your Hospital: 9 1/2 Things You Would Do Differently; Fred Lee, 2004.
2. TeamSTEPPS Pocket Guide; US Agency for Healthcare Quality and Research, 2023.
3. AHRQ EvidenceNow model (<https://www.ahrq.gov/evidencenow/tools/search/index.html>)
4. Implementation Guide for AHRQ's Making Informed Consent an Informed Choice Training Modules (<https://www.ahrq.gov/health-literacy/professional-training/informed-choice/guide.html>)
5. Introduction to Health Care Management 4th Edition; Sharon B. Buchbinder, 2019

Participants should plan to have all resources obtained prior to the program start date.

Professional Certification and/or License:

There is currently no professional certification or license for this discipline.

Program Delivery:



Educational delivery will be a combination of:

1. In person, instructor led classroom session, or,
2. Instructor led virtual sessions via The resuscitation group TEAMS software system.

Program Length: 100 hours of instruction

Objectives:

The program objectives are unique to the needs of this program, but prepare students with the essential knowledge and skills to enter the healthcare and emergency services environment in a leadership role.

Objectives for the program include:

1. Participants will be able to explain why standard service excellence initiatives in healthcare and emergency systems have not led to better patient outcomes, high patient satisfaction, and loyalty.
2. Participants will be able to site examples of how the “SHARE principle” will help hospitals and emergency systems gain the competitive advantage that comes from being seen as "the best" by their own employees, consumers, and community.
3. Participants will be able to apply the TeamSTEPPS process to optimize patient outcomes by improving communication and teamwork skills among healthcare teams, including patients and family caregivers.
4. Participants will be able to apply the Comprehensive Unit-based Safety Program (CUSP) in their own setting.
5. Participants will be able to apply cultural competencies to the healthcare and emergency systems setting.
6. Participants will be able to apply the EvidenceNOW Model for supporting practice improvement.
7. Participants will be able to apply the AHRQ's Making Informed Consent an Informed Choice program in their setting.
8. Participants will be familiar with practices in conducting a qualitative research project.
9. Participants will be familiar with current practices in human resources.
10. Participants will be familiar with basic operations management.
11. Using case studies, participants will be able to apply leadership principles to resolve a challenge brought forth by the case study assigned.

Sample Program Schedule:

The program has a significant emphasis on team instructional approach with the latest science, research, and integration of the current concepts in healthcare leadership. Instructional hours are a combination of assignments, discussion, case study, lecture, and examination. The module is broken into the following topical areas:

24 hours Introduction to Healthcare and Emergency Systems Management



16 hours	TeamSTEPPS and critical incident communications
2 hours	Emergency warning score (EWS) systems and use.
9 hours	Utilizing resource management to attain system enhancement and alternative practices in system operations
8 hours	Understanding the Comprehensive Unit-based Safety Program (CUSP) and associated safety issues.
8 hours	Applying cultural competencies to the healthcare and emergency systems setting.
2 hours	Using the Evidence NOW Model for supporting practice improvement.
2 hours	Using the AHRQ's Making Informed Consent an Informed Choice program.
4 hours	Understanding the basics of medical research and interpreting studies.
4 hours	Basics of current practices in human resources.
4 hours	General investigative practices for medical, operational, or human resource incidents.
14 hours	Interactive case studies in healthcare and emergency systems leadership.
2 hour	Final Exam

Outside of Classroom Expectations:

Participants should expect there to be extensive course materials reading and summarization of case studies outside of classroom time, generally prior to specific classroom sessions.

Final Testing and Evaluation:

Participants will be required to complete all portions and assignments, as well as proficiencies in the program.



Education, Competency Assurance, Privileges to Practice Considerations

What is the best way to determine if a provider is competent? This question is increasingly being asked by employers, regulators, certifying agencies, insurance companies, and professional associations. Currently in the majority of jurisdictions and courts, a practitioner is determined to be competent when initially licensed, able to show proof of skills competencies, and has the approval of medical oversight; thereafter unless proven otherwise, the issue of competency has been through this pathway, yet in the past decade, legal actions and media investigations have thrown a poor light on this pathway.

As a result, the simple fiscal impacts to the major carriers has resulted in a standard determination that the standard must change. Many organizations and regulatory authorities are exploring alternative approaches to assure continuing competence in today's environment where technology and practice are continually changing, new health care systems are evolving and consumers are pressing for providers who are competent, both privately, through legal action, and through social media processes.

The purpose of this discussion is to explore various approaches and views related to continuing competency and examine the difficult policy, development and implementation issues related to continuing competency.

Both the American Medical Association (AMA) and the American Nurses Association (ANA) have been asked this question by their membership, regulators, consumers and the public. Since competence of the provider has become a primary concern of the profession, Both the AMA and ANA have embarked on the development of policy addressing the continuing competence of practicing providers.

The American College of Emergency Physicians (ACEP) believes that:

1. The exercise of clinical privileges in the emergency department is governed by the rules and regulations of the department;
2. The medical director (or their designee) is responsible for periodic assessment of clinical privileges of emergency physicians against the national competency guidelines;
3. When a physician applies for reappointment to the medical staff and for clinical privileges, including renewal, addition, or rescission of privileges, the reappraisal process must include assessment of current competence by the medical director (or their designee);
4. The medical director (or their designee) will determine the means by which each emergency physician will maintain competence and skills and the mechanism by which the proficiency of each physician will be monitored.

(Revised and approved by the ACEP Board of Directors October 2014, June 2006 and June 2004)

Mechanisms for continuing competence include regulatory and private sector approaches, as well as approaches by national organizations, certifying entities, and state boards.





Regulatory Approaches to Continuing Competence:

Health care practitioners are regulated by state regulatory boards with the purpose of protecting the health, safety and welfare of the public. When a practitioner is initially licensed, they are deemed by the state to have met minimal competency standards. The challenge of licensure boards is to assure practitioners are competent throughout their practice career not just with initial licensure. As well as address the issues of post licensure inexperience during the first licensure period.

The ongoing demonstration of continuing competence is not a new regulatory issue.

According to a national commission on health manpower sponsored by the U.S. Department of Health, Education and Welfare recommended physicians undergo periodic reexaminations (*Schmitt Shimberg 1996*). In 1971, a similar report recommended that requirements to ensure continued competence should be developed by professional associations and states. The alternative to periodic reexamination was deemed to be continuing education (CE) and states began requiring mandatory CE as a condition of licensure renewal for a variety of professions. The National Registry of Emergency Medical Technicians (NRAPP) required both continuing medical education and skills competency evaluation in its very first year of establishment.

Continuing Education and Clinical Competence:

This approach to continuing competence proved to be controversial. Given the broad parameters of what continuing education consists of and the lack of formal research to support the correlation between participation in continuing education and continuing competence related to improved practice outcomes, this method has been called into question. However, several investigators are working to make this link by designing a longitudinal descriptive research study to determine the relationship between education sessions and practice.

The 2006 study, National Reregistration and the Continuing Competence of Paramedics, by Keith Holtermann and colleagues, found that NRAPP Paramedics who reregistered 4 and 6 years after initial registration were twice as likely to pass the exam as their State-certified cohort counterparts who did not reregister with the NRAPP. The registered group, compared to the nonregistered group, had significantly more Continuing Medical Education. The findings suggest that Paramedics who reregister with the NRAPP are more knowledgeable than those who do not reregister.

In a 2011 study (*The Association Between Emergency Medical Services Field Performance Assessed by High-fidelity Simulation and the Cognitive Knowledge of Practicing Paramedics; Jonathan R. Studnek PhD, NRAPP-P, Antonio R. Fernandez PhD, NRAPP-P, Brian Shimberg NRAPP-P, et Al*), investigators simultaneously assessed cognitive knowledge and simulated field performance. Utilization of these measurement techniques allowed for the assessment and comparison of field performance and cognitive knowledge. Results demonstrated an association between a practicing paramedic's performance on a cognitive examination and field performance, assessed by a simulated EMS response.



Substantial research demonstrates that the stressors accompanying the profession of paramedicine can lead to mental health concerns. In contrast, little is known about the effects of stress on paramedics' ability to care for patients during stressful events. In this study, investigators examined paramedics' acute stress responses and performance during simulated high-stress scenarios. Advanced care paramedics participated in simulated low-stress and high-stress clinical scenarios. The paramedics provided salivary cortisol samples and completed an anxiety questionnaire at baseline and following each scenario. Clinical performance was videotaped and scored on a checklist of specific actions and a global rating of performance. The paramedics also completed patient care documentation following each scenario. Results showed that clinical performance and documentation both appeared vulnerable to the impact of acute stress. Developing systems and training interventions aimed at supporting and preparing emergency workers who face acute stressors as part of their everyday work responsibilities is a vital avenue to successful patient outcomes. (LeBlanc VR, Regehr C, Tavares W, Scott AK, MacDonald R, King K. *The impact of stress on paramedic performance during simulated critical events. Prehosp Disaster Med.* 2012)

In a randomized controlled trial, simulation based learning was superior to problem based learning for the acquisition of critical assessment and management skills (*Simulation-based training is superior to problem-based learning for the acquisition of critical assessment and management skills; Steadman, Randolph H. MD; Coates, Wendy C. MD; et Al; Critical Care Medicine; January 2006 - Volume 34*)

The link between exposure to patients and improvement in performance has been established many times in literature, but perhaps most compelling of recent studies is from Australia, where patient survival after OHCA significantly increases with the number of OHCA's that paramedics have previously treated (*Paramedic Exposure to Out-of-Hospital Cardiac Arrest Resuscitation Is Associated With Patient Survival; Kylie Dyson, Janet E. Bray, et Al; Circulation: Cardiovascular Quality and Outcomes; January 26, 2016*)

In the past twenty years, state legislative action related to continuing competency has increased. In 1999, legislation was passed in Tennessee requiring the development of continuing competence requirements of providers. In the same year, legislation was passed in Vermont mandating continuing competency evaluations of physicians, chiropractors, and podiatrists. Currently, twenty-four states have introduced legislation relative to continuing competence of health professions. Most legislation would require licensees to demonstrate continuing competence to a licensure board upon re-licensure while some bills would require a provider to demonstrate competency in the workplace setting.

A bill in Massachusetts that would authorize the Board of Registration (Board of Nursing) to require periodic competency testing of all licensed and registered nursing including testing of current nursing practice and procedures. Failure to pass this test would result in automatic suspension of a nurses' license until competency was established. A bill introduced in Hawaii would require nurses in hospitals to demonstrate competence in providing care in order to be assigned to a nursing unit. Other continuing competence bills apply to chiropractors, podiatrists, dentists, dietitians, physicians, paramedics, pharmacists and speech-language pathologists.



As states regulate advanced practice, they are turning to certification as an indicator of entry-level competence. Certification in these instances is therefore not a voluntary process, but instead constitutes a regulatory requirement to ensure public safety and enhance public health. As a result, certifying bodies are expected to demonstrate that their initial certification exams truly reflect entry level and that their recertification process reflects continuing competence.

The underlying assumptions regarding the use of certification to ensure competence and its inherent value have been increasingly questioned since the late 1970's. There is a dearth of empirical data which substantiate the predictive power of certification and recertification exams, which has led to the assertion that certification does not have an impact on patient outcomes.

Private Sector Approaches to Continuing Competence:

The Joint Commission of Accreditation of Healthcare Organizations (JCAHO) requires hospitals to assess the competency of employees when hired and then regularly throughout employment. The competence assessment is defined as "the systematic collection of practitioner-specific data to determine an individual's capability to perform up to defined expectations." (*Joint Commission on Accreditation of Healthcare Organizations, 1998*).

Pew Commission Reports on health professions licensure issues have been a catalyst in bringing the issue of continued competence to the public's attention. In its 1995 report, *Reforming Health Care Workforce Regulation: Policy Considerations for the 21st Century*, one of the proposed recommendations is: "States should require each board to develop, implement and evaluate continuing competency requirements to assure the continuing competence of regulated health care professionals." Accompanying the recommendation was a series of policy options. In formal responses to the report from the public, this recommendation received the highest score for level of concern and one of the highest scores for level of support. There were 76 formal responses to the report; 45% were from the nursing community which included state and national organizations as well as nursing boards; 26% of the responses were from individuals; and 29% from other health care professions including occupational therapy, physical therapy, medicine, pharmacy and dentistry (*Gagnola, Stone, 1997*). Identified barriers to reform included the complexity of the health care environment and the vast differences in practice. These differences make testing for competence difficult as areas of expertise may not fit into standardized testing.

A second Pew Report, *Strengthening Consumer Protection: Priorities for Health Care Workforce Regulation* was released in October of 1998. One of the three priority issues included in the report was continuing competence. The report recommended that state regulatory boards should be held responsible to require health care practitioners to demonstrate competence throughout their careers. However, the report added that the "actual assessment of competence may best be left to the professional associations, private testing companies and specialty boards" (*Pew Health Professions Commission, 1998*).

The Interprofessional Workgroup on Health Professions Regulation, which represents 17 health professions, received a Pew Foundation grant to sponsor a continuing competence Summit entitled,



"Assessing the Issues, Methods and Realities for Health Care Professions," July 25 - 26, 1997 in Chicago, Illinois. The objective of the Summit was for participants to recognize the significance of ensuring continued competence for health care professionals. The Summit focused on analyzing the issues related to continuing competence and promoted discussion of various methods of assessing continuing competence.

Other measures to promote competence have been indirectly aimed at the prevention of potential problems through accreditation of educational institutions, background checks on licensees and the threat of disciplinary action if the licensee is reported to the board.

Whose role is it to assure continuing competence? Is it the role of the individual provider, professional association, employer, regulatory board, or certifying agency to assure continued competence? Should all of the stakeholders be involved, or just one or two?

Dennis Wentz, American Medical Association, points out that 90% of physicians take specialty board examinations and pass. There are continuing medical education requirements for recertification. Fourteen programs are now operational and moving toward maintenance of competence rather than testing at intervals.

The ANA sponsored Expert Panel appointed in 1999 has formulated the following assumptions regarding continuing competence:

1. The purpose of ensuring continuing competence is the protection of the public and advancement of the profession through the professional development of providers.
2. The public has a right to expect competence throughout provider's careers.
3. Any process of competency assurance must be shaped and guided by the profession of the provider.
4. Assurance of continuing competence is the shared responsibility of the profession, regulatory bodies, organizations/workplaces and individual providers.
5. Providers are individually responsible for maintaining continuing competence.
6. The employer's responsibility is to provide an environment conducive to competent practice.
7. Continuing competence is definable, measurable and can be evaluated.
8. Competence is considered in the context of level of expertise, responsibility, and domains of practice.

Building on existing regulatory models and the mission of its organizations, the National Council of State Boards of Nursing (NCSBN) has explored various approaches to determine continued competence. NCSBN has investigated the use of computer simulated testing (CST) for assessing nursing competence, reviewed and utilized mandated continuing education, and is now focusing on the licensee's responsibility for individual competence. NCSBN has also explored through the Continuing Competence Accountability Profile (CCAP), a self-assessment tool, which "provides a framework for nurses to track and document a synthesis of professional growth activities across a nurse's career." NCSBN recognizes that continued competence is a multifaceted issue that compels the profession,



consumers and other to assist in comprehensive development of options to best assure ongoing nursing education and skill levels. (National Council of State Boards of Nursing, 1998).

In addition to competency assessment, the issue of clinical privileges is significant.

In its Guidelines for Credentialing and Delineation of Clinical Privileges in Emergency Medicine, the American College of Emergency Physicians (ACEP) states the medical director (or designee) is responsible for setting competence criteria. The medical director is also ultimately responsible for determining the competence of individual department members.

The medical director must also be in compliance with established department proficiency and competence criteria. In the event of question or dispute over the medical director's competency, the matter may be referred to the medical staff's credentials committee or to the medical executive committee.

Establishing criteria for proficiency and the evaluation of proficiency may be problematic. For those medical specialties that perform major procedures (i.e.: surgery, emergency medicine, etc.), establishing numerical thresholds may be a valid methodology (i.e., requiring that a minimal number of procedures be performed during the privileging period under review). Lack of numerical compliance requires stress inoculation simulation performance appraisal.

However, for those specialties that are primarily "cognitive" in nature, which employ a wide armamentarium of "minor" procedural skills, establishing numerical thresholds for numerous procedures may be very difficult to track. Further, it is not clear whether such tracking of "minor" procedural skills is a valid component of proficiency assessment.

Many departments will choose to establish clinical privileges assessment methodologies that utilize a combination of procedure tracking (frequency), plus assessment based on sentinel events, training, assessment, and information forthcoming from the department's overall quality improvement plan.

Establishing frequency thresholds in emergency medicine may be problematic. Certain procedures may be performed very rarely (e.g., cricothyrotomy). Yet, all emergency physicians must be capable of performing this and several other rarely-performed emergency procedures. In the event that a member does not meet or exceed numerical thresholds for procedures when such thresholds have been set, an option is to extend a providers procedure privileges through a "skills lab" (e.g., educational review, demonstration, simulation and testing) is a recommended process.

In their work, *Defining and Assessing Professional Competence*, Epstein and Hundert (*JAMA* 2002;287(2):226-235) stated that in addition to assessments of basic skills, new formats that assess clinical reasoning, expert judgment, management of ambiguity, professionalism, time management, learning strategies, and teamwork promise a multidimensional assessment while maintaining adequate reliability



and validity. Institutional support, reflection, and mentoring must accompany the development of assessment programs.

Summary:

Clinical competency, defined as, “The capability to perform acceptably those duties directly related to patient care. competence in professional activities directly related to patient care”, has been an issue for decades in healthcare. As early as 1967, a national commission on health manpower sponsored by the U.S. Department of Health, Education and Welfare recommended licensed physicians be re-examined periodically; this commission later recommended CE as an alternative to re-licensure. State legislatures continue to address continuing competence, as do the courts and private accreditation and certification agencies.

The reality of critical care medicine, especially as applied in the prehospital environment, requires that each and every provider have base licensure, recognized educational processes, regular competency assessment, and a formal process for clinical privilege granting.

Failure to have a defensible program that does not include skills demonstration, simulation, and supervised clinical practice as components of the process will not lead to improved patient outcomes, and most certainly will lead to professional or legal complications.