



## Allan Hancock College | Emergency Medical Services

### AHC Paramedicine Program Entrance Examination

## Candidate Competencies Guide

Each question on the Paramedic candidate entrance examination is related to one or more of the following competencies. The competencies serve as a study guide for the examination.

Annotated references: *Emergency Care of the Sick and Injured, 12<sup>th</sup> Edition* (AAOS, 2021) and the *2021 National EMS Education Standards*.

### The paramedic candidate should be able to:

1. Define:

|                              |                                 |
|------------------------------|---------------------------------|
| Scope of practice            | Acute coronary syndrome         |
| Crackles                     | Aerobic metabolism              |
| Capnography                  | Situational awareness           |
| Hot zone                     | Automatic cardiac defibrillator |
| Osteoporosis                 | 3 stages of labor               |
| Sudden infant death syndrome | Avulsion                        |
| Hypoperfusion                | Implied consent                 |
| Kyphosis                     | Gallbladder                     |
| Islets of Langerhans         | Polypharmacy                    |
| Metabolism                   | Evisceration                    |
| Bulb syringe                 | Pulse oximeter                  |
| Recovery position            | Systolic blood pressure         |
| Bills of lading              | Histamines                      |

- Describe the route of blood flow through the heart.
- Identify the goal for performing the primary assessment.
- Describe how the EMT can assist a Paramedic with an endotracheal intubation.
- List the steps for inserting a nasopharyngeal airway.
- Identify the indications for administering:
  - The DuoDote Auto-Injector
  - Aspirin
  - Epinephrine
- Identify the location where most serious ambulance crashes occur.
- List the situations that require mandatory reporting.



9. List the diseases that are transmitted through a needlestick with infected blood.

10. List the treatment for:

- Snakebite
- Peptic ulcer disease
- Head and face thermal burns
- External bleeding
- Nosebleed
- Hypoglycemia
- Severe airway obstruction in a responsive infant
- Electrical burn with an exit wound
- Human bite
- Postpartum bleeding
- Cardiac arrest in the third trimester of pregnancy

11. Identify the pathophysiology, signs, and symptoms of:

- Braxton-Hicks contractions
- Preeclampsia
- Flail chest
- Acute myocardial infarction
- Chronic bronchitis
- Urinary tract infection
- Cerebral palsy
- Cyanide exposure
- Excited delirium
- Closed head injury
- Hepatitis
- Hypoglycemia
- Hyperglycemia
- Traumatic asphyxia
- Appendicitis
- Ectopic pregnancy
- Tension pneumothorax
- Skin turgor
- Ischemic stroke
- Hypoxia
- Angina pectoris
- Diabetic ketoacidosis
- CPAP
- Hematemesis
- Febrile seizure
- Croup
- Congestive heart failure



- Ruptured aneurysm in the brain
  - Neurogenic shock
  - Hemorrhagic shock
  - Obstructive shock
  - Supine hypotension syndrome
  - Methicillin-resistant *Staphylococcus aureus* (MRSA)
  - Syncope in the elderly
12. Describe the function of the coronary arteries.
  13. List the complications of ventilating a child with a bag-mask device.
  14. List the complications associated with an intubated patient.
  15. Describe how to manage a motor vehicle crash scene with multiple patients.
  16. Describe when it is necessary to obtain a blood pressure by palpation.
  17. List the definitive or conclusive signs of death.
  18. Describe techniques for clearing the airway.
  19. Describe the action of:
    - Naloxone
    - Activated charcoal
    - Nitroglycerin
    - Epinephrine
  20. Describe how to manage an injured minor who refuses treatment.
  21. List the signs of shock in a child.
  22. Describe the only way to convert ventricular fibrillation.
  23. Describe how to deliver chest compressions for a child in cardiac arrest.
  24. Describe the causes of heat emergencies in a geriatric patient.
  25. List the risk factors for drowning of a geriatric patient in a hot tub.
  26. Identify the dimensions required to select and establish a helicopter landing zone.
  27. Identify the most difficult vital sign to obtain in pediatric patients.
  28. List the adverse effects of nitroglycerin.
  29. List the phases of extrication.
  30. List the devices that deliver naloxone.
  31. Describe how to make a correction to a patient care report.
  32. Describe how the anatomy of the pediatric airway differs from the anatomy of the adult airway.
  33. List the normal blood pressure, pulse rate, and respirations for a/an:



- Infant
  - Adult
  - Adult - 61 years and older
34. Identify which organ consumes more oxygen than any other.
  35. Given the newborn's appearance, pulse, grimace or irritability, activity or muscle tone, and respiration, calculate the Apgar score.
  36. Identify the condition most often associated with cardiac arrest in children and infants.
  37. Identify the condition that most frequently forces EMTs and Paramedics out of the profession.
  38. Describe where to position an ambulance at the scene of a motor vehicle crash after law enforcement has arrived.
  39. Identify the condition which causes the most serious injuries and deaths from hazardous materials.
  40. Describe how a do-not-resuscitate (DNR) order is validated.
  41. Describe the type of injury that a pillow can be used to stabilize.
  42. Identify the chemical in the marijuana plant that produces euphoria, relaxation, and drowsiness.
  43. Describe the relationship between angina pectoris and atherosclerotic coronary artery disease.
  44. Describe the function of the medulla oblongata.
  45. List the stroke screening tests associated with the Cincinnati Prehospital Stroke Scale.
  46. List the vital signs associated with a patient with a traumatic brain injury who has increased intracranial pressure.
  47. Describe how to interact with family members of a child who is being resuscitated for cardiac arrest.
  48. Identify the percentage of oxygen inspired into the lungs from fresh air.
  49. Identify which organ is most likely injured by left flank blunt trauma.
  50. List the components of the mnemonics:
    - SAMPLE
    - SLUDGEM
    - OPQRST
  51. Describe the management for a patient who achieves return of spontaneous circulation from cardiac arrest.
  52. Identify the medication that is called a "blood thinner."
  53. Describe how to manage suspicion of elderly abuse.



54. Given the body surface area, using the rule of nines, calculate the percentage of burn for a/an:
  - Infant
  - Child
  - Adult
55. Identify the medication commonly prescribed for a patient at risk for coronary artery disease.
56. Identify the body system stimulated by methamphetamine.
57. Describe the first rule of safely driving an emergency vehicle.
58. Identify the term used interchangeably with spontaneous abortion.
59. Describe situations for using the rapid extrication technique.
60. Describe the effect of the pupils caused by using fentanyl.
61. Identify the percentage of oxygen delivered by the nonrebreathing mask.
62. Describe the use of triage tags.
63. Identify when the AED should be applied to the patient.
64. List the risk factors for suicide in a geriatric patient.
65. Describe the management for a stable patient in a motor vehicle crash complaining of neck and back pain.
66. Identify which devices administer albuterol.
67. Describe the management strategies for a patient with:
  - A behavioral health emergency
  - Schizophrenia
68. List the treatment for a bleeding stab wound to the chest.