



GLOBAL EMERGENCY MEDICAL REGISTRY

Paramedic Program Minimum Standard Objectives

The Global Emergency Medical Registry (GEMR) establishes minimum standard educational objectives for the registry levels. The following are the 2019 minimum educational objectives for an initial Paramedic education program, the registry written examinations and psychomotor examinations are created from these objectives.

1. Outline key historical events that influenced the development of emergency medical services (EMS) systems.
2. Identify the key elements necessary for effective EMS systems operations.
3. Outline the five components of the EMS Education Agenda for the Future: A Systems Approach.
4. Describe the benefits of continuing education.
5. Differentiate among training and roles and responsibilities of the recognized levels of certification: Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, Paramedic, and Advanced Practice Paramedic.
6. List the benefits of membership in professional EMS organizations.
7. Differentiate among professionalism and professional licensure, certification, registration, and credentialing.
8. List characteristics of the professional paramedic.
9. Describe the paramedic's role in patient care situations.
10. Describe the benefits of each component of off-line (indirect) and online (direct) medical direction.
11. Outline the role and components of an effective continuous quality improvement (CQI) program.
12. Explain what the International Liaison Committee on Resuscitation (ILCOR) is and describe the process of science recommendations.
13. Recognize EMS activities that pose a high risk for patients.
14. Describe actions the paramedic may take to reduce the chance of errors related to patient care.
15. Describe the components of wellness and associated benefits.
16. Discuss the paramedic's role in promoting wellness.
17. Outline the benefits of specific lifestyle choices that promote wellness, including proper nutrition, weight control, exercise, sleep, and smoking cessation.
18. Identify risk factors and warning signs of cancer and cardiovascular disease.
19. List measures to take to reduce the risk of infectious disease exposure.
20. Outline actions to be taken following a significant exposure to a patient's blood or other body fluids.
21. Identify preventive measures to minimize the risk of work-related illness or injury associated with exposure, lifting and moving patients, hostile environments, vehicle operations, and rescue situations.
22. List signs and symptoms of addiction and addictive behavior.
23. Describe guidelines for working effectively in a diverse workplace.



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24. Distinguish between normal and abnormal anxiety and stress reactions.
25. Give examples of stress-reduction techniques.
26. Outline the 10 components of critical incident stress management.
27. Given a scenario involving death or dying, identify therapeutic actions you may take based on your knowledge of the dynamics of this process.
28. Identify roles of the emergency medical services (EMS) community in injury prevention.
29. Describe the epidemiology of trauma under the World Health Organization model.
30. Define injury.
31. Describe Haddon's matrix and the injury triangle.
32. Describe public health goals and activities.
33. Outline the aspects of the emergency medical services system that make it a desirable resource for involvement in public health activities.
34. Describe essential activities for the active participation of emergency medical services in community wellness activities.
35. List situations in which paramedics may participate in injury prevention.
36. Differentiate among primary, secondary, and tertiary health prevention activities.
37. Evaluate a situation to determine opportunities for injury prevention.
38. Identify resources necessary to conduct a community health assessment.
39. Relate how alterations in the epidemiological triangle can influence injury and disease patterns.
40. Describe strategies to implement a successful injury prevention program.
41. Identify the purpose of the patient care report.
42. Describe the uses of the patient care report.
43. Outline the components of an accurate, thorough patient care report.
44. Describe the elements of a properly written emergency medical services (EMS) document.
45. Describe an effective system for documenting the narrative section of a prehospital patient care report.
46. Identify differences necessary when documenting special situations.
47. Describe the appropriate method to make revisions or corrections to the patient care report.
48. Recognize consequences that may result from inappropriate documentation.
49. Outline the phases of communications that occur during a typical emergency medical services (EMS) event.
50. Describe the role of communications in EMS.
51. Outline the basic model of communication.
52. Define common EMS communications terms.
53. Describe how to communicate effectively using the primary modes of EMS communication.
54. Outline the elements of an EMS communications system.
55. Describe the characteristics of EMS communications operation modes.
56. Describe the role of dispatching as it applies to prehospital emergency medical care.
57. Outline techniques for relaying EMS communications clearly and effectively.



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58. Describe how EMS communications are regulated.
59. Distinguish between EMS frequency ranges.
60. Outline procedures for EMS communications.
61. Describe the basic structure of the legal system.
62. Relate how laws affect the paramedic's practice.
63. List situations that the paramedic is legally required to report in most states.
64. Describe the four elements involved in a claim of negligence.
65. Describe measures paramedics may take to protect themselves from claims of negligence.
66. Describe the paramedic's responsibilities regarding patient confidentiality.
67. Outline the process for obtaining expressed, informed, and implied consent.
68. Describe legal complications relating to consent.
69. Describe actions to be taken in a refusal-of-care situation.
70. Describe legal considerations in situations that require the use of force.
71. Describe legal considerations related to patient transportation.
72. Outline legal implications related to resuscitation and patient death.
73. List the paramedic's responsibilities at a crime scene.
74. Define ethics and bioethics.
75. Distinguish between professional, legal, and moral accountability.
76. Outline strategies to use to resolve ethical conflicts.
77. Describe the role of ethical tests in resolving ethical dilemmas in health care.
78. Discuss specific prehospital ethical issues, including allocation of resources, decisions surrounding resuscitation, confidentiality, and consent.
79. Identify ethical dilemmas that may occur related to care in futile situations, obligation to provide care, patient advocacy, and the paramedic's role as physician extender.
80. Explain the importance of EMS research.
81. Distinguish between types of EMS research.
82. Outline 10 steps to perform research identified in this chapter.
83. Define evidence-based practice.
84. Describe criteria to evaluate when reading a research paper.
85. Describe what medical terms are used to describe.
86. Explain the role of a prefix, root word, combining vowel, and suffix in a medical term.
87. Interpret selected examples of medical prefixes, root words, combining vowels, and suffixes.
88. Distinguish between singular and plural forms of medical terms.
89. Use accepted medical abbreviations appropriately.
90. Discriminate between similar medical terms and abbreviations.
91. Discuss the importance of human anatomy as it relates to the paramedic profession.
92. Describe the anatomical position.
93. Properly interpret anatomical directional terms and body planes.
94. List the structures that compose the axial and appendicular regions of the body.
95. Define the divisions of the abdominal region.
96. List the three major body cavities.



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97. Describe the contents of the three major body cavities.
98. Discuss the functions of the following cellular structures: the cytoplasmic membrane, the cytoplasm (and organelles), and the nucleus.
99. Describe the process by which human cells reproduce.
100. Differentiate and describe the following tissue types: epithelial tissue, connective tissue, muscle tissue, and nervous tissue.
101. For each of the 11 major organ systems in the human body, label a diagram of anatomical structures, list the functions of the major anatomical structures, and explain how the organs of the system interrelate to perform the specified functions of the system.
102. For the special senses, label a diagram of the anatomical structures of the special senses, list the functions of the anatomical structures of each sense, and explain how the structures of the senses interrelate to perform their specialized functions.
103. Describe the normal characteristics of the cellular environment and the key homeostatic mechanisms that strive to maintain an optimal fluid and electrolyte balance.
104. Outline pathophysiological alterations in water and electrolyte balance and list their effects on body functions.
105. Describe the treatment of patients with particular fluid or electrolyte imbalances.
106. Describe the mechanisms in the body that maintain normal acid-base balance.
107. Outline pathophysiological alterations in acid-base balance.
108. Describe the management of a patient with an acid-base imbalance.
109. Describe the changes in cells and tissues that occur with cellular adaptation, injury, neoplasia, aging, or death.
110. Describe the effect of the Strong Ionic Difference (SID) in human physiology.
111. Describe the normal versus derangements in laboratory values in the pediatric and adult patient.
112. Outline the effects of cellular injury on local and systemic body functions.
113. Describe changes in body functions that can occur as a result of genetic and familial disease factors.
114. Outline the causes, adverse systemic effects, and compensatory mechanisms associated with hypoperfusion.
115. Describe the ways in which the inflammatory and immune mechanisms respond to cellular injury or antigenic stimulation.
116. Explain how changes in immune status and the presence of inflammation can adversely affect body functions.
117. Describe the impact of stress on the body's response to illness or injury.
118. Describe factors that influence disease.
119. Describe the normal vital signs and body system characteristics of the newborn, neonate, infant, toddler, preschooler, school-age child, adolescent, young adult, middle-aged adult, and older adult.
120. Identify key psychosocial features of the infant, toddler, preschooler, school-age child, adolescent, young adult, middle-aged adult, and older adult.



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121. Explain the effect of parenting styles, sibling rivalry, peer relationships, and other factors on a child's psychosocial development.
122. Discuss the physical and emotional challenges faced by the older adult.
123. Explain what a drug is.
124. Identify the four types of drug names.
125. Outline drug standards and legislation and the enforcement agencies pertinent to the paramedic profession.
126. Distinguish between characteristics of routes of drug administration.
127. Discuss factors that influence drug absorption, distribution, and elimination.
128. Describe how drugs react with receptors to produce their desired effects.
129. List variables that can influence drug interactions.
130. Distinguish among drug forms and actions.
131. Describe the paramedic's responsibilities to understand drug profiles.
132. Identify special considerations for administering pharmacological agents to pregnant patients, pediatric patients, and older patients.
133. Outline drug actions and care considerations for a patient who is given drugs that affect the nervous, cardiovascular, respiratory, endocrine, and gastrointestinal systems.
134. Explain the meaning of drug terms that are necessary to interpret information in drug references safely.
135. Convert selected units of measurement into the household, apothecary, and metric systems.
136. Identify the steps in the calculation of drug dosages.
137. Calculate the correct volume of drug to be administered in a given situation.
138. Compute the correct rate for an infusion of drugs or intravenous fluids.
139. List measures for ensuring the safe administration of medications.
140. Describe actions paramedics should take if a medication error occurs.
141. List measures for preserving asepsis during parenteral administration of a drug.
142. Explain drug administration techniques for the enteral and parenteral routes.
143. Describe the steps for safely initiating an intravenous infusion.
144. Identify complications and adverse effects associated with intravenous access.
145. List the steps for safely initiating intravenous access.
146. Describe the steps for safely initiating an intraosseous infusion.
147. Explain drug administration techniques for percutaneous routes.
148. Identify special considerations in the administration of pharmacological agents to pediatric patients.
149. Explain the technique for obtaining a venous blood sample.
150. Describe the safe disposal of contaminated items and sharps.
151. Describe the anatomy of the airway and respiratory structures.
152. Distinguish between respiration, pulmonary ventilation, and external and internal respiration.
153. Explain the mechanics of ventilation and respiration.
154. Explain the relationship between partial pressures of gases in the blood and lungs to atmospheric gas pressures.



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155. Describe pulmonary circulation.
156. Explain the process of exchange and transport of gases in the body.
157. Describe voluntary, nervous, and chemical regulation of respiration.
158. Discuss the assessment and management of airway obstruction.
159. Describe risk factors and preventive measures for pulmonary aspiration.
160. Outline assessment of airway and breathing.
161. Describe the indications, contraindications, and techniques to deliver supplemental oxygen.
162. Discuss the methods of patient ventilation based on the indications, contraindications, potential complications, and use of each method.
163. Describe the use of manual airway maneuvers and mechanical airway adjuncts based on knowledge of their indications, contraindications, potential complications, and techniques for each.
164. Describe effective techniques to verify proper placement of endotracheal and peritracheal airway devices.
165. Explain variations in assessment and management of airway and ventilation problems in pediatric patients.
166. Given a patient scenario, identify possible alterations in oxygenation and ventilation and appropriate interventions to treat those alterations.
167. Describe the purpose of scene size-up.
168. Outline the components of scene size-up.
169. Recognize factors that may contribute to an unsafe scene.
170. Describe scene evaluation techniques.
171. Identify steps in scene management.
172. Outline measures to lower the risks associated with illness or injury on an unsafe scene.
173. Identify additional resources that may be needed to manage multiple patient incidents.
174. Define therapeutic communication.
175. List the elements of effective therapeutic communication.
176. Identify internal factors that influence effective communication.
177. Identify external factors that influence effective communication.
178. Explain the elements of an effective patient interview.
179. Summarize strategies for gathering appropriate patient information.
180. Discuss methods of assessing the individual's mental status during the patient interview.
181. Describe ways the paramedic can improve communication with a variety of patients. Such patients include (1) those who are unmotivated to talk; (2) hostile patients; (3) children; (4) older adults; (5) hearing-impaired patients; (6) blind patients; (7) patients under the influence of drugs or alcohol; (8) sexually aggressive patients; and (9) patients whose cultural traditions are different from those of the paramedic.
182. Describe methods to communicate in a culturally sensitive manner.
183. Describe the purpose of effective history taking in prehospital patient care.
184. List components of the patient history as defined by the National EMS Education Standards.



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185. Outline effective patient interviewing techniques to facilitate history taking.
186. Describe how the paramedic uses clinical reasoning.
187. Outline the process to determine differential diagnoses.
188. Identify strategies to manage special challenges in obtaining a patient history.
189. Identify the components of the scene size-up.
190. Identify the priorities in each component of patient assessment.
191. Outline the critical steps in primary patient assessment.
192. Describe findings in the primary assessment that may indicate a life-threatening condition.
193. Discuss interventions for life-threatening conditions that are identified in the primary assessment.
194. Distinguish priorities in the care of the medical versus trauma patient.
195. Define the purpose of the secondary assessment.
196. Describe physical examination techniques commonly used in the prehospital setting.
197. Describe the examination equipment commonly used in the prehospital setting.
198. Describe the general approach to physical examination.
199. Outline the steps of a comprehensive physical examination.
200. Detail the components of the mental status examination.
201. Distinguish between normal and abnormal findings in the mental status examination.
202. Outline the steps in the general patient survey.
203. Distinguish between normal and abnormal findings in the general patient survey.
204. Describe physical examination techniques used for assessment of specific body regions.
205. Distinguish between normal and abnormal findings when assessing specific body regions.
206. Outline the process of patient reassessment.
207. State modifications to the physical examination that are necessary when assessing children.
208. State modifications to the physical examination that are necessary when assessing older adults.
209. List the key elements of paramedic practice.
210. Discuss the limitations of protocols, standing orders, and patient care algorithms.
211. Outline the key components of the critical thinking process for paramedics.
212. Identify elements necessary for an effective critical thinking process.
213. Describe situations that may necessitate the use of the critical thinking process while delivering prehospital patient care.
214. Describe the six elements required for effective clinical decision making in the prehospital setting.
215. Identify risk factors and prevention strategies associated with cardiovascular disease.
216. Describe the normal anatomy and physiology of the heart.
217. Discuss electrophysiology as it relates to the normal electrical and mechanical events in the cardiac cycle.
218. Outline the activity of each component of the electrical conduction system of the heart.



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219. Describe basic monitoring techniques that permit electrocardiogram (ECG) interpretation.
220. Explain the relationship of the electrocardiogram tracing to the electrical activity of the heart.
221. Describe in sequence the steps in electrocardiogram interpretation.
222. Identify the characteristics of normal sinus rhythm.
223. When shown an electrocardiogram tracing, identify the rhythm, site of origin, possible causes, clinical significance, and prehospital management that is indicated.
224. Outline the appropriate assessment of a patient who may be experiencing a cardiovascular disorder.
225. Describe prehospital assessment and management of patients with selected cardiovascular disorders based on knowledge of the pathophysiology of the illness.
226. Describe the cause and nature of selected congenital cardiovascular defects.
227. List indications, contraindications, and prehospital considerations when using selected cardiac interventions, including basic life support, monitor-defibrillators, defibrillation, implantable cardioverter defibrillators, synchronized cardioversion, and transcutaneous cardiac pacing.
228. List indications, contraindications, dose, and mechanism of action for pharmacological agents used to manage cardiovascular disorders.
229. Identify appropriate actions to take in the prehospital setting to terminate resuscitation.

230. Label a diagram of the eye.
231. Describe the pathophysiology, signs and symptoms, and specific management techniques for each of the following disorders of the eye: conjunctivitis, corneal abrasion, foreign body, inflammation (Chalazion and Hordeolum), glaucoma, iritis, papilledema, retinal detachment, central retinal artery occlusion, and orbital cellulitis.
232. Label a diagram of the ear.
233. Describe the pathophysiology, signs and symptoms, and specific management techniques for each of the following conditions that affect the ear: foreign body; impacted cerumen; labyrinthitis, Meniere's disease, otitis media, and perforated tympanic membrane.
234. Label a diagram of the nose.
235. Describe the pathophysiology, signs and symptoms, and specific management techniques for each of the following conditions that affect the nose: epistaxis, foreign body, rhinitis, and sinusitis.
236. Label a diagram of the oropharynx.
237. Describe the pathophysiology, signs and symptoms, and specific management techniques for each of the following conditions that affect the oropharynx and throat: toothache and dental abscess, Ludwig's angina, epiglottitis, laryngitis, tracheitis, oral candidiasis, peritonsillar abscess, pharyngitis/tonsillitis, and temporomandibular joint disorders.
238. Distinguish the pathophysiology of respiratory emergencies related to ventilation, diffusion, and perfusion.



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239. Outline the assessment process for the patient who has a respiratory emergency.
240. Describe the causes, complications, signs and symptoms, and prehospital management of patients diagnosed with obstructive airway disease, pneumonia, adult respiratory distress syndrome, pulmonary thromboembolism, upper respiratory infection, spontaneous pneumothorax, hyperventilation syndrome, and lung cancer.
241. Describe the anatomy and physiology of the nervous system.
242. Outline pathophysiological changes in the nervous system that may alter the cerebral perfusion pressure.
243. Describe the assessment of a patient with a nervous system disorder.
244. Describe the pathophysiology, signs and symptoms, and specific management techniques for each of the following neurologic disorders: coma, stroke and intracranial hemorrhage, seizure disorders, headaches, brain neoplasm and brain abscess, and degenerative neurological diseases.
245. Describe how hormones secreted from the endocrine glands help the body maintain homeostasis.
246. Describe the anatomy and physiology of the pancreas and how its hormones maintain normal glucose metabolism.
247. Discuss pathophysiology as a basis for key signs and symptoms, patient assessment, and patient management for diabetes and diabetic emergencies of hypoglycemia, diabetic ketoacidosis, and hyperosmolar hyperglycemic nonketotic syndrome.
248. Discuss pathophysiology as a basis for key signs and symptoms, patient assessment, and patient management for disorders of the thyroid gland.
249. Discuss pathophysiology as a basis for key signs and symptoms, patient assessment, and management of emergencies related to Cushing syndrome and Addison disease.
250. Outline the structure of the immune system.
251. Describe the antigen-antibody response.
252. Distinguish between natural and acquired immunity.
253. Differentiate between a normal immune response and an allergic reaction.
254. Distinguish between the four types of hypersensitivity reaction.
255. Describe signs and symptoms and management of local allergic reactions based on an understanding of the pathophysiology associated with this condition.
256. Identify allergens associated with anaphylaxis.
257. Describe the pathophysiology, signs and symptoms, and management of non-systemic allergic reaction.
258. Describe the pathophysiology, signs and symptoms, and management of anaphylaxis.
259. Define autoimmune disease.
260. Describe the pathophysiology, signs and symptoms, and prehospital considerations for patients who have collagen vascular diseases such as systemic lupus erythematosus and scleroderma.
261. Identify major complications associated with organ transplant.
262. List infections associated with organ transplant.
263. Outline characteristics of organ rejection.
264. Recognize side effects associated with anti-rejection medications.
265. Identify general public health principles related to infectious disease.



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266. Describe the chain of elements necessary for an infectious disease to occur.
267. Explain how internal and external barriers affect susceptibility to infection.
268. Differentiate the four stages of infectious disease: the latent period, the incubation period, the communicability period, and the disease period.
269. Describe the mode of transmission, pathophysiology, prehospital considerations, and personal protective measures for the human immunodeficiency virus (HIV), hepatitis, tuberculosis, meningococcal meningitis, and pneumonia.
270. Describe the mode of transmission, pathophysiology, signs and symptoms, and prehospital considerations for patients who have rabies or tetanus.
271. List the signs, symptoms, and possible secondary complications of selected childhood viral diseases.
272. List the signs, symptoms, and possible secondary complications of influenza, severe acute respiratory syndrome (SARS), and mononucleosis.
273. Describe the mode of transmission, pathophysiology, prehospital considerations, and personal protective measures for sexually transmitted diseases.
274. Identify the signs, symptoms, and prehospital considerations for scabies and lice.
275. Outline the reporting process for exposure to infectious or communicable diseases.
276. Discuss the paramedic's role in preventing disease transmission.
277. Label a diagram of the abdominal organs.
278. Describe the function of the abdominal organs.
279. Outline prehospital assessment of a patient who is complaining of abdominal pain.
280. Distinguish between pain characteristics in abdominal pain.
281. Describe general prehospital management techniques for a patient who is complaining of abdominal pain.
282. Describe signs and symptoms, complications, and prehospital management for the following abdominal and gastrointestinal (GI) disorders: gastrointestinal bleeding, acute and chronic gastroenteritis, ulcerative colitis, diverticulosis, appendicitis, peptic ulcer disease, bowel obstruction, Crohn's disease, pancreatitis, esophagogastric varices, hemorrhoids, cholecystitis, acute hepatitis, and hereditary hemochromatosis.
283. Label a diagram of the urinary system.
284. Distinguish between acute and chronic renal failure.
285. Outline the pathophysiology of renal failure.
286. Identify the signs and symptoms of renal failure.
287. Describe the process of hemodialysis and peritoneal dialysis.
288. Describe the signs and symptoms and care of emergent conditions associated with dialysis.
289. Describe the pathophysiology, signs and symptoms, assessment, and prehospital management of the patient with urinary retention, urinary tract infection, pyelonephritis, urinary calculus, epididymitis, Fournier's gangrene, phimosis, paraphimosis, priapism, benign prostatic hypertrophy, testicular masses, and testicular torsion.
290. Outline the physical examination for patients with genitourinary disorders.
291. Discuss general prehospital management for the patient with a genitourinary disorder.
292. Describe the physiological processes of menstruation and ovulation.



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293. Describe the pathophysiology of the following nontraumatic causes of abdominal pain in females: pelvic inflammatory disease, Bartholin's abscess, vaginitis, ruptured ovarian cyst, ovarian torsion, cystitis, dysmenorrhea, mittelschmerz, endometriosis, ectopic pregnancy, vaginal bleeding, uterine prolapse, and vaginal foreign body.
294. Outline the prehospital assessment and management of the female with abdominal pain or bleeding.
295. Outline specific assessment and management for the patient who has been sexually assaulted.
296. Describe specific prehospital measures to preserve evidence in sexual assault cases.
297. Describe the physiology of blood and its components.
298. Discuss the pathophysiology and signs and symptoms of specific hematological disorders.
299. Outline the general assessment and management of patients with hematological disorders.
300. Outline musculoskeletal structure and function.
301. Describe how to perform a detailed assessment of the extremities and spine.
302. Specify questions in the patient history that help identify musculoskeletal problems.
303. Describe assessment and management of specific nontraumatic musculoskeletal disorders based on an understanding of the pathophysiology.
304. Define poisoning.
305. Describe general principles for assessment and management of the patient who has ingested poison.
306. Describe the causative agents and pathophysiology of selected ingested poisons and management of patients who have taken them.
307. Describe how physical and chemical properties influence the effects of inhaled toxins.
308. Distinguish among the three categories of inhaled toxins: simple asphyxiants, chemical asphyxiants and systemic poisons, and irritants or corrosives.
309. Describe general principles of managing the patient who has inhaled poison.
310. Describe the signs, symptoms, and management of patients who have inhaled cyanide, ammonia, or hydrocarbon.
311. Describe the signs, symptoms, and management of patients injected with poison by insects, reptiles, and hazardous aquatic creatures.
312. Describe the signs, symptoms, and management of patients with organophosphate or carbamate poisoning.
313. Outline the general principles of managing patients with drug overdose.
314. Describe the effects, signs and symptoms, and specific management for selected therapeutic and illegal drug overdoses.
315. Describe the short- and long-term physiological effects of ethanol ingestion.
316. Describe signs, symptoms, and management of alcohol-related emergencies.
317. Identify general management principles for the most common toxic syndromes based on a knowledge of the characteristic physical findings associated with each syndrome.
318. Define what constitutes a behavioral emergency.
319. Identify potential causes for behavioral and psychiatric illnesses.



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320. List three critical principles that should be considered in the prehospital care of any patient with a behavioral emergency.
321. Outline key elements in the prehospital patient examination during a behavioral emergency.
322. Describe effective techniques for interviewing a patient during a behavioral emergency.
323. Distinguish between key symptoms and management techniques for selected behavioral and psychiatric disorders.
324. Identify factors that must be considered when assessing suicide risk.
325. Formulate appropriate interview questions to determine suicidal intent.
326. Explain prehospital management techniques for the patient who has attempted suicide.
327. Describe assessment of the potentially violent patient.
328. Outline measures that may be used in an attempt to safely diffuse a potentially violent patient situation.
329. List situations when patient restraints can be used.
330. Discuss key principles in patient restraint.
331. Describe safety measures taken when patient violence is anticipated.
332. Explain variations in approach to behavioral emergencies in children.
333. Define shock.
334. Outline the factors necessary to achieve adequate tissue oxygenation.
335. Describe how the diameter of resistance vessels influences preload.
336. Calculate mean arterial pressure when given a blood pressure.
337. Outline the changes in the microcirculation during the progression of shock.
338. List the causes of hypovolemic, cardiogenic, neurogenic, anaphylactic, and septic shock.
339. Describe pathophysiology as a basis for signs and symptoms associated with the progression through the stages of shock.
340. Describe key assessment findings that distinguish the etiology of the shock state.
341. Outline the prehospital management of the patient in shock based on knowledge of the pathophysiology associated with each type of shock.
342. Discuss how to integrate the assessment and management of the patient in shock.
343. Describe principles of fluid administration in shock.
344. Describe the Terminal Inflection Point in Shock.
345. Describe permissive hypotension strategies.
346. Describe the incidence and scope of traumatic injuries and deaths.
347. Identify the role of each component of the trauma system.
348. Predict injury patterns based on knowledge of the laws of physics related to forces involved in trauma.
349. Describe injury patterns that should be suspected when injury occurs related to a specific type of blunt trauma.
350. Describe the role of restraints in injury prevention and injury patterns.
351. Discuss how organ motion can contribute to injury in each body region depending on the forces applied.



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352. Identify selected injury patterns associated with motorcycle and all-terrain vehicle collisions.
353. Describe injury patterns associated with pedestrian collisions.
354. Identify injury patterns associated with sports injuries, blast injuries, and vertical falls.
355. Describe factors that influence tissue damage related to penetrating injury.
356. Describe the normal structure and function of the skin.
357. Describe the pathophysiological responses to soft tissue injury.
358. Discuss pathophysiology as a basis for key signs and symptoms, and describe the mechanism of injury and signs and symptoms of specific soft tissue injuries.
359. Outline management principles for prehospital care of soft tissue injuries.
360. Describe, in the correct sequence, patient management techniques for control of hemorrhage.
361. Identify the characteristics of general categories of dressings and bandages.
362. Describe prehospital management of specific soft tissue injuries not requiring closure.
363. Discuss factors that increase the potential for wound infection.
364. Describe the prehospital management of selected soft tissue injuries.
365. Describe the incidence, patterns, and sources of burn injury.
366. Describe the pathophysiology of local and systemic responses to burn injury.
367. Classify burn injury according to depth, extent, and severity based on established standards.
368. Discuss the pathophysiology of burn shock as a basis for key signs and symptoms.
369. Outline the physical examination of the burned patient.
370. Describe the prehospital management of the patient who has sustained a burn injury.
371. Discuss pathophysiology as a basis for key signs, symptoms, and management of the patient with an inhalation injury.
372. Outline the general assessment and management of the patient who has a chemical injury.
373. Describe specific complications and management techniques for selected chemical injuries.
374. Describe the physiological effects of electrical injuries as they relate to each body system based on an understanding of key principles of electricity.
375. Outline assessment and management of the patient with electrical injury.
376. Describe the distinguishing features of radiation injury and considerations in the prehospital management of these patients.
377. Describe the mechanisms of injury, assessment, and management of maxillofacial injuries.
378. Describe the mechanisms of injury, assessment, and management of ear, eye, and dental injuries.
379. Describe the mechanisms of injury, assessment, and management of anterior neck trauma.
380. Describe the mechanisms of injury, assessment, and management of injuries to the scalp, cranial vault, or cranial nerves.
381. Distinguish between types of traumatic brain injury based on an understanding of pathophysiology and assessment findings.



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382. Outline the prehospital management of the patient with cerebral injury.
383. Calculate a Glasgow Coma Scale, trauma score, Revised Trauma Score, and pediatric trauma score when given appropriate patient information.
384. Describe the incidence, morbidity, and mortality related to spinal injury.
385. Predict mechanisms of injury that are likely to cause spinal injury.
386. Describe the anatomy and physiology of the spine and spinal cord.
387. Outline the general assessment of a patient with suspected spinal injury.
388. Distinguish between types of spinal injury.
389. Describe prehospital evaluation and assessment of spinal cord injury.
390. Identify prehospital management of the patient with spinal injuries.
391. Distinguish between spinal shock, neurogenic shock, and autonomic hyperreflexia syndrome.
392. Describe selected nontraumatic spinal conditions and the prehospital assessment and treatment of them.
393. Discuss mechanism of injury associated with chest trauma.
394. Describe the mechanism of injury, signs and symptoms, and management of skeletal injuries to the chest.
395. Describe the mechanism of injury, signs and symptoms, and prehospital management of pulmonary trauma.
396. Describe the mechanism of injury, signs and symptoms, and prehospital management of injuries to the heart and great vessels.
397. Outline the mechanism of injury, signs and symptoms, and prehospital care of the patient with esophageal and tracheobronchial injury and diaphragmatic rupture.
398. Identify mechanisms of injury associated with abdominal trauma.
399. Describe mechanisms of injury, signs and symptoms, and complications associated with abdominal solid organ, hollow organ, retroperitoneal organ, and pelvic organ injuries.
400. Outline the significance of injury to intra-abdominal vascular structures.
401. Describe the prehospital assessment priorities for the patient suspected of having an abdominal injury.
402. Outline the prehospital care of the patient with abdominal trauma.
403. Describe the features of each class of musculoskeletal injury.
404. Describe the features of bursitis, tendonitis, and arthritis.
405. Given a specific patient scenario, outline the prehospital assessment of the musculoskeletal system.
406. Outline general principles of splinting.
407. Describe the significance and prehospital management principles for selected upper extremity injuries.
408. Describe the significance and prehospital management principles for selected lower extremity injuries.
409. Identify prehospital management priorities for open fractures.
410. Describe the principles of realignment of angular fractures and dislocations.
411. Describe the physiology of thermoregulation.



GLOBAL EMERGENCY MEDICAL REGISTRY

412. Discuss the risk factors, pathophysiology, assessment findings, and management of specific hyperthermic conditions.
413. Discuss the risk factors, pathophysiology, assessment findings, and management of specific hypothermic conditions and frostbite.
414. Discuss the risk factors, pathophysiology, assessment findings, and management of submersion and drowning.
415. Identify the mechanical effects of atmospheric pressure changes on the body based on a knowledge of the basic properties of gases.
416. Discuss the risk factors, pathophysiology, assessment findings, and management of diving emergencies and high-altitude illness.
417. Describe the basic anatomy and physiology of the female reproductive system.
418. Outline fetal development from ovulation through birth.
419. Explain normal maternal physiological changes that occur during pregnancy and how they influence prehospital patient care and transportation.
420. Describe appropriate information to be elicited during the obstetrical patient's history.
421. Describe specific techniques for assessment of the pregnant patient.
422. Describe the general prehospital care of the pregnant patient.
423. Discuss the special implications of trauma in pregnancy.
424. Outline principles of care for a pregnant patient in cardiac arrest or peri-arrest.
425. Recognize and begin treatment for complications of pregnancy such as hyperemesis gravidarum, Rh sensitization, diabetes mellitus, and infection.
426. Describe the assessment and management of patients with preeclampsia and eclampsia.
427. Explain the pathophysiology, signs and symptoms, and management of vaginal bleeding in pregnancy.
428. Outline the physiological changes that occur during the stages of labor.
429. Describe the role of the paramedic during normal labor and delivery.
430. Compute an Apgar score.
431. Describe assessment and management of postpartum hemorrhage.
432. Discuss the identification, implications, and prehospital management of complicated deliveries.
433. Describe Bi-Manual Massage
434. Identify risk factors associated with the need for neonatal resuscitation.
435. Describe physiological adaptations at birth.
436. Describe pathophysiology and implications of selected genetic anomalies present in some neonates.
437. Outline the prehospital assessment and management of the neonate.
438. Describe resuscitation of the distressed neonate.
439. Discuss postresuscitative management and transport.
440. Describe signs and symptoms and prehospital management of specific neonatal resuscitation situations.
441. Identify injuries associated with birth.
442. Describe appropriate interventions to manage the emotional needs of the neonate's family.



GLOBAL EMERGENCY MEDICAL REGISTRY

443. Identify the role of the Emergency Medical Services for Children program.
444. Identify age-related illnesses and injuries in pediatric patients.
445. Outline the general principles of assessment and management of the pediatric patient.
446. Identify modifications in patient assessment techniques that assist in the examination of patients at different developmental levels.
447. Describe the pathophysiology, signs and symptoms, and management of selected pediatric respiratory emergencies.
448. Describe the pathophysiology, signs and symptoms, and management of shock in the pediatric patient.
449. Describe the pathophysiology, signs and symptoms, and management of selected pediatric dysrhythmias.
450. Describe the pathophysiology, signs and symptoms, and management of pediatric seizures.
451. Describe the pathophysiology, signs and symptoms, and management of hypoglycemia and hyperglycemia in the pediatric patient.
452. Describe the pathophysiology, signs and symptoms, and management of infectious pediatric emergencies.
453. Identify common causes of poisoning and toxic exposure in the pediatric patient.
454. Describe special considerations for assessment and management of specific injuries in children.
455. Outline the pathophysiology and management of sudden infant death syndrome.
456. Describe the risk factors, key signs and symptoms, and management of injuries or illness resulting from child abuse and neglect.
457. Identify prehospital considerations for the care of infants and children with special needs.
458. Explain the physiology of the aging process as it relates to major body systems and homeostasis.
459. Describe general principles of assessment specific to older adults.
460. Describe the pathophysiology, assessment, and management of specific illnesses that affect selected body systems in the geriatric patient.
461. Identify specific problems with sensations experienced by some geriatric patients.
462. Discuss effects of drug toxicity and alcoholism in the older adult.
463. Identify factors that contribute to environmental emergencies in the geriatric patient.
464. Discuss prehospital assessment and management of depression and suicide in the older adult.
465. Describe epidemiology, assessment, and management of trauma in the geriatric patient.
466. Identify characteristics of elder abuse.
467. Define battering.
468. Describe the characteristics of abusive relationships.
469. Outline findings that indicate a battered patient.
470. Describe prehospital considerations when responding to and caring for battered patients.
471. Identify types of elder abuse.



GLOBAL EMERGENCY MEDICAL REGISTRY

472. Discuss legal considerations related to all forms of abuse.
473. Describe characteristics of abused children and their abusers.
474. Outline the physical examination of the abused child.
475. Describe the characteristics of sexual assault.
476. Outline prehospital patient care considerations for the patient who has been sexually assaulted.
477. Identify considerations in prehospital management related to physical challenges such as hearing, visual, and speech impairments; obesity; and patients with paraplegia or quadriplegia.
478. Identify considerations in prehospital management of patients who have mental illness, are developmentally disabled, or are emotionally or mentally impaired.
479. Describe special considerations for prehospital management of patients with selected pathological challenges.
480. Outline considerations in management of culturally diverse patients.
481. Describe special considerations in the prehospital management of terminally ill patients.
482. Identify special considerations in management of patients with communicable diseases.
483. Describe special considerations in the prehospital management of patients with financial challenges.
484. Discuss general issues related to the home health care patient.
485. Outline general principles of assessment and management of the home health care patient.
486. Describe medical equipment, assessment, and management of the home health care patient with inadequate respiratory support.
487. Identify assessment findings and acute interventions for problems related to vascular access devices in the home health care setting.
488. Describe medical equipment, assessment, and management of the patient with a gastrointestinal (GI) or genitourinary crisis in the home health care setting.
489. Identify key assessments and principles of wound care management in the home health care patient.
490. Outline maternal/child problems that may be encountered early in the postpartum period in the home health care setting.
491. Describe medical therapy associated with hospice and comfort care in the home health care setting.
492. List standards that govern ambulance performance and specifications.
493. Discuss the tracking of equipment, supplies, and maintenance on an ambulance.
494. Outline the considerations for appropriate stationing of ambulances.
495. Describe measures that can influence safe operation of an ambulance.
496. Identify aeromedical crew members and training.
497. Describe the appropriate use of aeromedical services in the prehospital setting.
498. Outline the components that define a major incident.
499. Identify the components of an effective incident command system.



GLOBAL EMERGENCY MEDICAL REGISTRY

500. Outline the activities of the preplanning, scene management, and postdisaster follow-up phases of an incident.
501. Identify the five major functions of the incident command system.
502. List command responsibilities during a major incident response.
503. Describe the section responsibilities in the incident command system.
504. Identify situations that may be classified as major incidents.
505. Describe the steps necessary to establish and operate the incident command system.
506. Given a major incident, describe the groups and/or divisions that would need to be established and the responsibilities of each.
507. List common problems related to the incident command system and to mass casualty incidents.
508. Outline the principles and technology of triage.
509. Identify resources for the management of critical incident stress.
510. Describe factors that must be considered to ensure appropriate timing of medical and mechanical skills during a rescue.
511. Outline each phase of a rescue operation.
512. Identify the appropriate personal protective equipment (PPE) for rescue operations.
513. Describe important considerations for emergency medical services (EMS) crews in a surface water rescue.
514. Discuss important considerations for EMS crews in rescues associated with hazardous atmospheres, including confined spaces and trench or cave-in situations.
515. Describe hazards that may be present during an EMS rescue operation on a highway.
516. Describe important considerations for EMS crews in a rescue involving hazardous terrain.
517. Outline special considerations for prehospital assessment and management during a rescue operation.
518. Describe general techniques for determining whether a scene is violent and choosing the appropriate response to a violent scene.
519. Outline techniques for recognizing and responding to potentially dangerous residential calls.
520. Outline techniques for recognizing and responding to potentially dangerous calls on the highway.
521. Describe signs of danger and emergency medical services (EMS) response to violent street incidents.
522. Identify characteristics of and EMS response to situations involving gangs, clandestine drug labs, and domestic violence situations.
523. Outline general safety tactics that EMS personnel can use if they find themselves in a dangerous situation.
524. Describe special EMS considerations when providing tactical patient care.
525. Discuss EMS documentation and preservation of evidence at a crime scene.