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Advanced Cardiovascular Life Support Exams A and B

November 9, 2020

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Contents

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Student Answer Sheet
Advanced Cardiovascular Life Support Exam

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Question	Answer			
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27.	A	B	C	D
28.	A	B	C	D
29.	A	B	C	D
30.	A	B	C	D
31.	A	B	C	D
32.	A	B	C	D
33.	A	B	C	D
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37.	A	B	C	D
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39.	A	B	C	D
40.	A	B	C	D
41.	A	B	C	D
42.	A	B	C	D
43.	A	B	C	D
44.	A	B	C	D
45.	A	B	C	D
46.	A	B	C	D
47.	A	B	C	D
48.	A	B	C	D
49.	A	B	C	D
50.	A	B	C	D

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Advanced Cardiovascular Life Support Exam A

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Advanced Cardiovascular Life Support Exam A

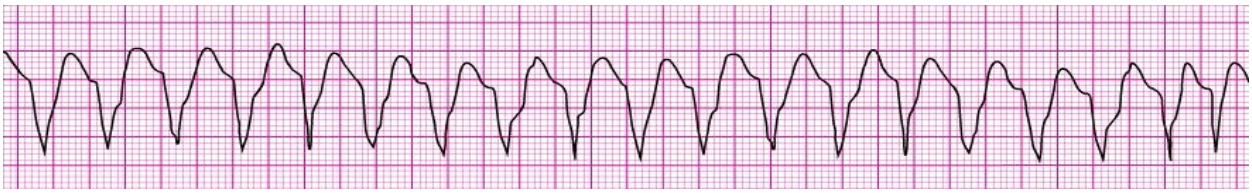
(50 questions)

Please do not mark on this exam. Record the best answer on the separate answer sheet

1. Which of these tests should be performed for a patient with suspected stroke as early as possible but no more than 20 minutes after hospital arrival?

   A. 12-Lead ECG
   B. Cardiac enzymes
   C. Coagulation studies
   D. Noncontrast CT scan of the head

2. Which best describes this rhythm?



   A. Monomorphic ventricular tachycardia
   B. Polymorphic ventricular tachycardia
   C. Supraventricular tachycardia
   D. Ventricular fibrillation

3. Which is an acceptable method of selecting an appropriately sized oropharyngeal airway?

   A. Measure from the corner of the mouth to the angle of the mandible
   B. Measure from the thyroid cartilage to the bottom of the earlobe
   C. Estimate by using the formula weight (kg)/8 + 2
   D. Estimate by using the size of the patient's finger

4. You are caring for a patient with a suspected stroke whose symptoms started 2 hours ago. The CT scan was normal, with no signs of hemorrhage. The patient does not have any contraindications to fibrinolytic therapy. Which treatment approach is best for this patient?

   A. Hold fibrinolytic therapy for 24 hours
   B. Give fibrinolytic therapy as soon as possible and consider endovascular therapy
   C. Order an echocardiogram before fibrinolytic administration
   D. Wait for the results of the MRI

5. Which is the recommended next step after a defibrillation attempt?

   A. Check the ECG for evidence of a rhythm
   B. Open the patient's airway
   C. Determine if a carotid pulse is present
   D. Resume CPR, starting with chest compressions

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6. Which of the following signs is a likely indicator of cardiac arrest in an unresponsive patient?

   A. Slow, weak pulse rate
   B. Cyanosis
   C. Agonal gasps
   D. Irregular, weak pulse rate

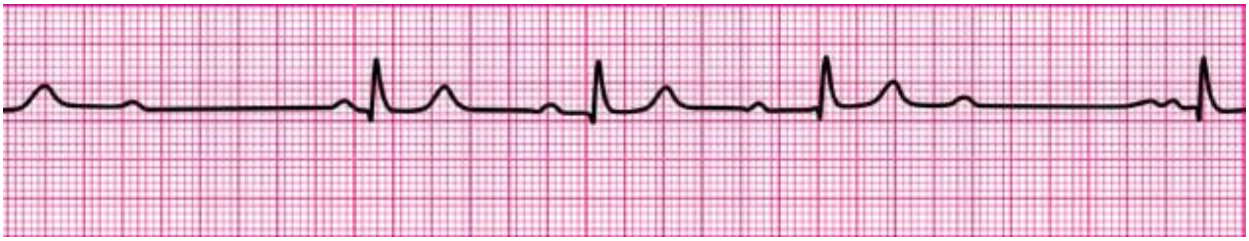
7. You are evaluating a 58-year-old man with chest discomfort. His blood pressure is 92/50 mm Hg, his heart rate is 92/min, his nonlabored respiratory rate is 14 breaths per minute, and his pulse oximetry reading is 97%. Which assessment step is most important now?

   A. Evaluating the P_{ETCO_2} reading
   B. Requesting a chest x-ray
   C. Obtaining a 12-lead ECG
   D. Requesting laboratory testing

8. During post–cardiac arrest care, which is the recommended duration of targeted temperature management after reaching the correct temperature range?

   A. At least 8 hours
   B. At least 24 hours
   C. At least 36 hours
   D. At least 48 hours

9. Which type of atrioventricular block best describes this rhythm?



   A. Third-degree atrioventricular block
   B. Second-degree atrioventricular block type I
   C. First-degree atrioventricular block
   D. Second-degree atrioventricular block type II

10. Your rescue team arrives to find a 59-year-old man lying on the kitchen floor. You determine that he is unresponsive. Which is the next step in your assessment and management of this patient?

   A. Apply the AED
   B. Check the patient's breathing and pulse
   C. Open the patient's airway
   D. Check for a medical alert bracelet

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Use this scenario to answer the next 6 questions:

A 45-year-old man had coronary artery stents placed 2 days ago. Today, he is in severe distress and is reporting “crushing” chest discomfort. He is pale, diaphoretic, and cool to the touch. His radial pulse is very weak, blood pressure is 64/40 mm Hg, respiratory rate is 28 breaths per minute, and oxygen saturation is 89% on room air. When applied, the cardiac monitor initially showed ventricular tachycardia, which then quickly changed to ventricular fibrillation.

11. On the basis of this patient’s initial presentation, which condition do you suspect led to the cardiac arrest?

    A. Acute coronary syndrome
    B. Acute heart failure
    C. Acute ischemic stroke
    D. Supraventricular tachycardia with ischemic chest pain

12. In addition to defibrillation, which intervention should be performed immediately?

    A. Advanced airway insertion
    B. Vasoactive medication administration
    C. Chest compressions
    D. Vascular access

13. Despite 2 defibrillation attempts, the patient remains in ventricular fibrillation. Which drug and dose should you administer first to this patient?

    A. Epinephrine 1 mg
    B. Amiodarone 300 mg
    C. Lidocaine 1 mg/kg
    D. Atropine 1 mg

14. Despite the drug provided above and continued CPR, the patient remains in ventricular fibrillation. Which other drug should be administered next?

    A. Epinephrine 1 mg
    B. Atropine 1 mg
    C. Magnesium sulfate 1 g
    D. Lidocaine 1 to 1.5 mg/kg

15. The patient has return of spontaneous circulation and is not able to follow commands. Which immediate post–cardiac arrest care intervention do you choose for this patient?

    A. Initiate targeted temperature management
    B. Check the glucose level
    C. Administer epinephrine
    D. Extubate

16. Which would you have done first if the patient had not gone into ventricular fibrillation?

    A. Established IV access
    B. Obtained a 12-lead ECG
    C. Given atropine 1 mg
    D. Performed synchronized cardioversion

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17. How can you increase chest compression fraction during a code?

    A. Charge the defibrillator 15 seconds before conducting a rhythm check
    B. Interchange the Ventilator and Compressor during a rhythm check
    C. Administer epinephrine during the 2-minute cycle
    D. Initiate intravenous or intraosseous access during the 2-minute cycle

18. A team member is unable to perform an assigned task because it is beyond the team member's scope of practice. Which action should the team member take?

    A. Ask for a new task or role
    B. Assign it to another team member
    C. Do it anyway
    D. Seek expert advice

19. In addition to clinical assessment, which is the most reliable method to confirm and monitor correct placement of an endotracheal tube?

    A. Arterial blood gases
    B. Chest radiography
    C. Continuous waveform capnography
    D. Hemoglobin levels

20. Your patient is in cardiac arrest and has been intubated. To assess CPR quality, which should you do?

    A. Monitor the patient's P_{ETCO_2}
    B. Obtain a 12-lead ECG
    C. Check the patient's pulse
    D. Obtain a chest x-ray

21. Three minutes into a cardiac arrest resuscitation attempt, one member of your team inserts an endotracheal tube while another performs chest compressions. Capnography shows a persistent waveform and a P_{ETCO_2} of 8 mm Hg. What is the significance of this finding?

    A. Chest compressions may not be effective
    B. The endotracheal tube is in the esophagus
    C. The patient meets the criteria for termination of efforts
    D. The team is ventilating the patient too often (hyperventilation)

22. Which best describes this rhythm?

    A. First-degree atrioventricular block
    B. Second-degree atrioventricular block type I
    C. Second-degree atrioventricular block type II
    D. Third-degree atrioventricular block

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23. If a team member is about to make a mistake during a resuscitation attempt, which best describes the action that the Team Leader or other team members should take?

    A. Conduct a debriefing after the resuscitation attempt
    B. Reassign the team tasks
    C. Address the team member immediately
    D. Remove the team member from the area

24. A patient in stable narrow-complex tachycardia with a peripheral IV in place is refractory to the first dose of adenosine. Which dose would you administer next?

    A. 3 mg
    B. 12 mg
    C. 20 mg
    D. 40 mg

25. Which type of atrioventricular block best describes this rhythm?

    A. First-degree
    B. Second-degree type I
    C. Second-degree type II
    D. Third-degree

26. Which is the primary purpose of a medical emergency team or rapid response team?

    A. Improving care for patients admitted to critical care units
    B. Improving patient outcomes by identifying and treating early clinical deterioration
    C. Providing diagnostic consultation to emergency department patients
    D. Providing online consultation to EMS personnel in the field

27. A patient is being resuscitated in a very noisy environment. A team member thinks he heard an order for 500 mg of amiodarone IV. Which is the best response from the team member?

    A. “OK.”
    B. “Are you sure?”
    C. “Amiodarone 500 mg IV has been given.”
    D. “I have an order to give 500 mg of amiodarone IV. Is this correct?”

28. Which is the recommended oral dose of aspirin for a patient with a suspected acute coronary syndrome?

    A. 40 mg
    B. 81 mg
    C. 162 to 325 mg
    D. 350 to 650 mg

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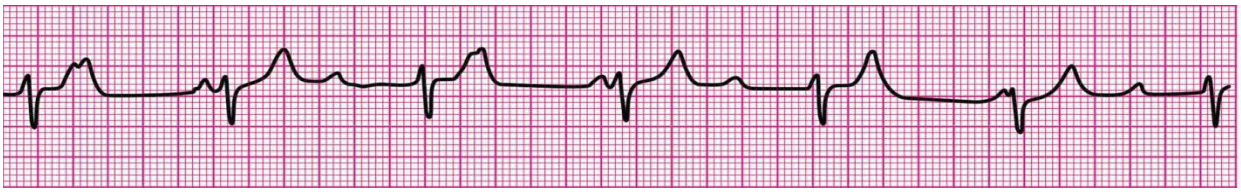
29. You have completed 2 minutes of CPR. The ECG monitor displays the lead II rhythm shown here, and the patient has no pulse. Another member of your team resumes chest compressions, and an IV is in place. Which do you do next?



A. Start a dopamine infusion
B. Give atropine 0.5 mg
C. Give epinephrine 1 mg IV
D. Insert an advanced airway

30. What is the minimum systolic blood pressure one should attempt to achieve with fluid administration or vasoactive agents in a hypotensive post–cardiac arrest patient who achieves return of spontaneous circulation?

A. 75 mm Hg
B. 80 mm Hg
C. 85 mm Hg
D. 90 mm Hg

31. What should be the primary focus of the CPR Coach on a resuscitation team?

A. To convey positive feedback
B. To ensure high-quality CPR
C. To resolve team arguments
D. To document CPR outcomes

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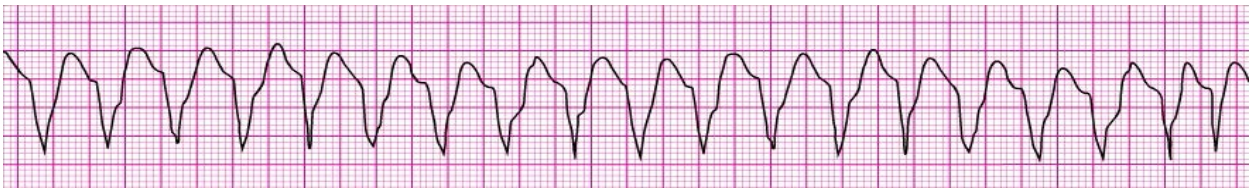
Use this scenario to answer the next 4 questions:

A 68-year-old woman presents with light-headedness, nausea, and chest discomfort. Your assessment finds her awake and responsive but appearing ill, pale, and grossly diaphoretic. Her radial pulse is weak, thready, and fast. You are unable to obtain a blood pressure. She has no obvious dependent edema, and her neck veins are flat. Her lung sounds are equal, with moderate rales present bilaterally. The cardiac monitor shows the rhythm seen here.



32. On the basis of this patient's initial assessment, which ACLS algorithm should you follow?

    A. Acute Coronary Syndromes
    B. Adult Tachycardia With a Pulse
    C. Adult Suspected Stroke
    D. Adult Cardiac Arrest

33. The patient's pulse oximeter shows a reading of 84% on room air. Which initial action do you take?

    A. Perform bag-mask ventilation
    B. Intubate the patient
    C. Apply oxygen
    D. Check the pulse oximeter probe

34. After your initial assessment of this patient, which intervention should be performed next?

    A. Synchronized cardioversion
    B. Administration of amiodarone 150 mg IM
    C. Immediate defibrillation
    D. Endotracheal intubation

35. If the patient became apneic and pulseless but the rhythm remained the same, which would take the highest priority?

    A. Administer amiodarone 300 mg
    B. Administer atropine 0.5 mg
    C. Insert an advanced airway
    D. Perform defibrillation

36. You instruct a team member to give 1 mg atropine IV. Which response is an example of closed-loop communication?

    A. "I'll give it in a few minutes."
    B. "OK."
    C. "I'll draw up 1 mg of atropine."
    D. "Are you sure that is what you want given?"

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37. Which best describes an action taken by the Team Leader to avoid inefficiencies during a resuscitation attempt?

    A. Assign most tasks to the more experienced team members
    B. Perform the most complicated tasks
    C. Clearly delegate tasks
    D. Assign the same tasks to more than one team member

38. What is an effect of excessive ventilation?

    A. Decreased cardiac output
    B. Decreased intrathoracic pressure
    C. Increased perfusion pressures
    D. Increased venous return

39. Which best describes the length of time it should take to perform a pulse check during the BLS Assessment?

    A. 1 to 4 seconds
    B. 5 to 10 seconds
    C. 11 to 15 seconds
    D. 16 to 20 seconds

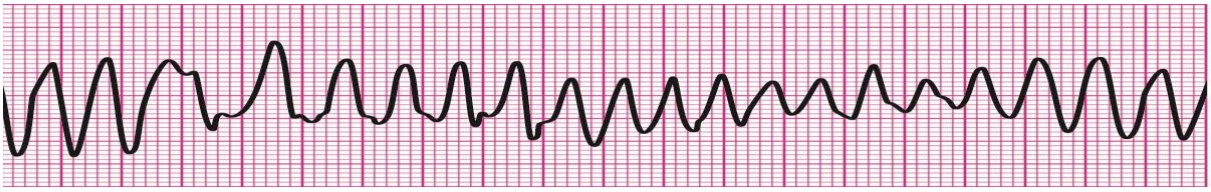
40. Which is the recommended first intravenous dose of amiodarone for a patient with refractory ventricular fibrillation?

    A. 100 mg
    B. 150 mg
    C. 250 mg
    D. 300 mg

41. Which facility is the most appropriate EMS destination for a patient with sudden cardiac arrest who achieved return of spontaneous circulation in the field?

    A. Comprehensive stroke care unit
    B. Acute rehabilitation care unit
    C. Acute long-term care unit
    D. Coronary reperfusion–capable medical center

42. A patient has a witnessed loss of consciousness. The lead II ECG reveals this rhythm. Which is the appropriate treatment?



    A. Administration of adenosine 6 mg IV push
    B. Administration of epinephrine 1 mg IV push
    C. Defibrillation
    D. Synchronized cardioversion

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43. For STEMI patients, which best describes the recommended maximum goal time for first medical contact–to–balloon inflation time for percutaneous coronary intervention?

    A. 180 minutes
    B. 150 minutes
    C. 120 minutes
    D. 90 minutes

44. You are performing chest compressions during an adult resuscitation attempt. Which rate should you use to perform the compressions?

    A. Less than 80/min
    B. 80 to 90/min
    C. 100 to 120/min
    D. More than 120/min

45. Which is the maximum interval you should allow for an interruption in chest compressions?

    A. 10 seconds
    B. 15 seconds
    C. 20 seconds
    D. 25 seconds

46. To properly ventilate a patient with a perfusing rhythm, how often do you squeeze the bag?

    A. Once every 3 seconds
    B. Once every 6 seconds
    C. Once every 10 seconds
    D. Once every 12 seconds

47. EMS providers are treating a patient with suspected stroke. According to the Adult Suspected Stroke Algorithm, which critical action performed by the EMS team will expedite this patient's care on arrival and reduce the time to treatment?

    A. Provide prehospital notification
    B. Establish IV access
    C. Review the patient's history
    D. Treat hypertension

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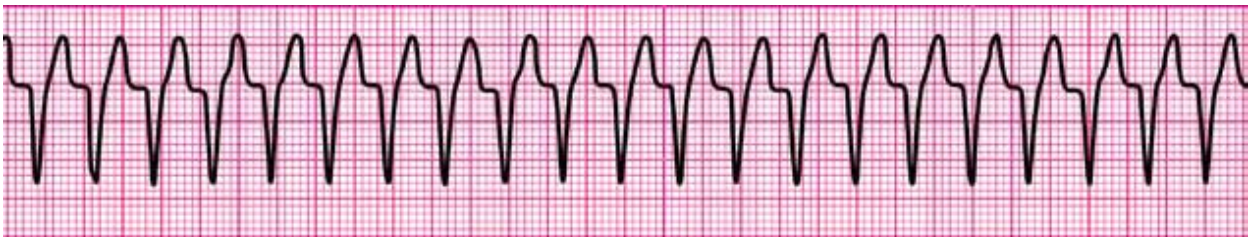
48. A patient in respiratory distress and with a blood pressure of 70/50 mm Hg presents with the lead II ECG rhythm shown here. Which is the appropriate treatment?

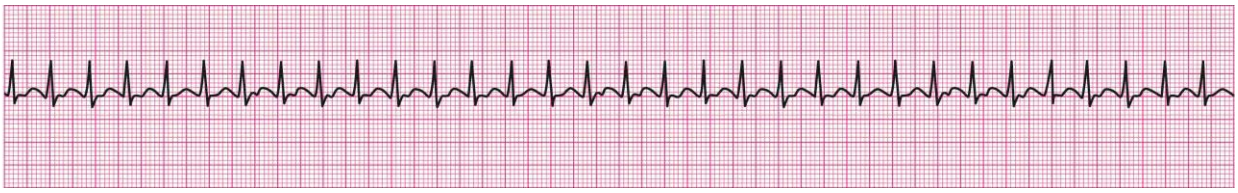


A. Administering adenosine 6 mg IV push
B. Performing synchronized cardioversion
C. Performing vagal maneuvers
D. Performing defibrillation

49. What is the recommended range from which a temperature should be selected and maintained constantly to achieve targeted temperature management after cardiac arrest?

A. 26°C to 28°C
B. 29°C to 31°C
C. 32°C to 36°C
D. 35°C to 37°C

50. A responder is caring for a patient with a history of congestive heart failure. The patient is experiencing shortness of breath, a blood pressure of 68/50 mm Hg, and a heart rate of 190/min. The patient's lead II ECG is displayed here. Which best characterizes this patient's rhythm?



A. Perfusing ventricular tachycardia
B. Sinus tachycardia
C. Stable supraventricular tachycardia
D. Unstable supraventricular tachycardia

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Answer Key
Advanced Cardiovascular Life Support Exam A

Question	Answer			
1.	A	B	C	•
2.	•	B	C	D
3.	•	B	C	D
4.	A	•	C	D
5.	A	B	C	•
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Question	Answer			
26.	A	●	C	D
27.	A	B	C	●
28.	A	B	●	D
29.	A	B	●	D
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32.	A	●	C	D
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34.	●	B	C	D
35.	A	B	C	●
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39.	A	●	C	D
40.	A	B	C	●
41.	A	B	C	●
42.	A	B	●	D
43.	A	B	C	●
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45.	●	B	C	D
46.	A	●	C	D
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48.	A	●	C	D
49.	A	B	●	D
50.	A	B	C	●

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Annotated Answer Key
Advanced Cardiovascular Life Support Exam A

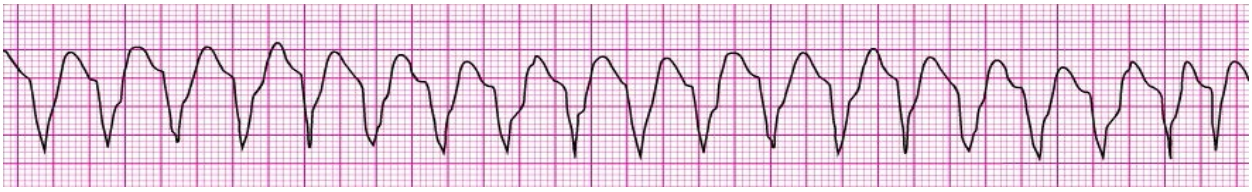
Provider manual page numbers below refer to the printed book and the eBook as viewed through the offline desktop/laptop reader, not the eBook as viewed through the mobile apps or ebooks.heart.org.

1. Which of these tests should be performed for a patient with suspected stroke as soon as possible but no more than 20 minutes after hospital arrival?

   A. 12-Lead ECG
   B. Cardiac enzymes
   C. Coagulation studies
   D. Noncontrast CT scan of the head

The correct answer is D. A critical decision point in the assessment of the patient with acute stroke is the performance and interpretation of a noncontrast CT scan to differentiate ischemic from hemorrhagic stroke. The CT scan should be completed within 20 minutes of the patient's arrival in the emergency department and should be read within 45 minutes from emergency department arrival. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Stroke > Immediate General and Neurologic Assessment > Decision Point: Hemorrhage or No Hemorrhage; page 57]

2. Which best describes this rhythm?



   A. Monomorphic ventricular tachycardia
   B. Polymorphic ventricular tachycardia
   C. Supraventricular tachycardia
   D. Ventricular fibrillation

The correct answer is A. This ECG rhythm strip shows a monomorphic ventricular tachycardia. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Rhythms for Unstable Tachycardia; pages 75-76]

3. Which is an acceptable method of selecting an appropriately sized oropharyngeal airway?

   A. Measure from the corner of the mouth to the angle of the mandible
   B. Measure from the thyroid cartilage to the bottom of the earlobe
   C. Estimate by using the formula weight (kg)/8 + 2
   D. Estimate by using the size of the patient's finger

The correct answer is A. To select the appropriate size for an oropharyngeal airway (OPA), place the OPA against the side of the face. When the flange of the OPA is at the corner of the mouth, the tip is at the angle of the mandible. A properly sized and inserted OPA results in proper alignment with the glottic opening. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Respiratory Arrest > Basic Airway Adjuncts: OPA > Technique of OPA Insertion; page 107]

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4. You are caring for a patient with a suspected stroke whose symptoms started 2 hours ago. The CT scan was normal, with no signs of hemorrhage. The patient does not have any contraindications to fibrinolytic therapy. Which treatment approach is best for this patient?

   A. Hold fibrinolytic therapy for 24 hours
   B. Give fibrinolytic therapy as soon as possible and consider endovascular therapy
   C. Order an echocardiogram before fibrinolytic administration
   D. Wait for the results of the MRI

The correct answer is B. Administer fibrinolytic therapy within 3 hours from onset of symptoms, or within 4.5 hours in selected patients. Consider endovascular therapy, which can be administered up to 24 hours from onset of symptoms for patients with large vessel occlusion. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Stroke > Approach to Stroke Care > Critical Time Periods; page 47]

5. Which is the recommended next step after a defibrillation attempt?

   A. Check the ECG for evidence of a rhythm
   B. Open the patient's airway
   C. Determine if a carotid pulse is present
   D. Resume CPR, starting with chest compressions

The correct answer is D. Follow each shock immediately with CPR, beginning with chest compressions. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment; page 18]

6. Which of the following signs is a likely indicator of cardiac arrest in an unresponsive patient?

   A. Slow, weak pulse rate
   B. Cyanosis
   C. Agonal gasps
   D. Irregular, weak pulse rate

The correct answer is C. Agonal gasps are not normal breathing. They are a sign of cardiac arrest. Agonal gasps may be present in the first minutes after sudden cardiac arrest. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Caution: Agonal Gasps; page 118]

7. You are evaluating a 58-year-old man with chest discomfort. His blood pressure is 92/50 mm Hg, his heart rate is 92/min, his nonlabored respiratory rate is 14 breaths per minute, and his pulse oximetry reading is 97%. Which assessment step is most important now?

   A. Evaluating the P_{ETCO_2} reading
   B. Requesting a chest x-ray
   C. Obtaining a 12-lead ECG
   D. Requesting laboratory testing

The correct answer is C. The 12-lead ECG is at the center of the decision pathway in the management of ischemic chest discomfort and is the only means of identifying STEMI. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > EMS Assessment, Care, and Hospital Preparation > Obtaining a 12-Lead ECG; page 37]

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8. During post–cardiac arrest care, which is the recommended duration of targeted temperature management after reaching the correct temperature range?

   A. At least 8 hours
   B. At least 24 hours
   C. At least 36 hours
   D. At least 48 hours

The correct answer is B. For targeted temperature management, healthcare providers should select and maintain a constant target temperature between 32°C and 36°C for a period of at least 24 hours. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Application of the Adult Post–Cardiac Arrest Care Algorithm > Targeted Temperature Management; page 157]

9. Which type of atrioventricular block best describes this rhythm?

   A. Third-degree atrioventricular block
   B. Second-degree atrioventricular block type I
   C. First-degree atrioventricular block
   D. Second-degree atrioventricular block type II

The correct answer is B. This ECG rhythm strip shows second-degree atrioventricular block type I. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Bradycardia > Rhythms for Bradycardia; pages 66-67]

10. Your rescue team arrives to find a 59-year-old man lying on the kitchen floor. You determine that he is unresponsive. Which is the next step in your assessment and management of this patient?

   A. Apply the AED
   B. Check the patient's breathing and pulse
   C. Open the patient's airway
   D. Check for a medical alert bracelet

The correct answer is B. After you determine that a patient is unresponsive and activate your emergency team, a breathing check and pulse check should be performed. Ideally, these checks are done simultaneously to minimize delay in detection of cardiac arrest and initiation of CPR. After determining that a patient is not breathing and has no pulse, start CPR, beginning with chest compressions. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Table 2: BLS Assessment; page 18]

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Use this scenario to answer the next 6 questions:

A 45-year-old man had coronary artery stents placed 2 days ago. Today, he is in severe distress and is reporting “crushing” chest discomfort. He is pale, diaphoretic, and cool to the touch. His radial pulse is very weak, blood pressure is 64/40 mm Hg, respiratory rate is 28 breaths per minute, and oxygen saturation is 89% on room air. When applied, the cardiac monitor initially showed ventricular tachycardia, which then quickly changed to ventricular fibrillation.

11. On the basis of this patient’s initial presentation, which condition do you suspect led to the cardiac arrest?

    A. Acute coronary syndrome
    B. Acute heart failure
    C. Acute ischemic stroke
    D. Supraventricular tachycardia with ischemic chest pain

The correct answer is A. Acute life-threatening complications of acute coronary syndromes include ventricular fibrillation, pulseless ventricular tachycardia, symptomatic bradycardias, and unstable tachycardias. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > Goals for ACS Patients; page 29]

12. In addition to defibrillation, which intervention should be performed immediately?

    A. Advanced airway insertion
    B. Vasoactive medication administration
    C. Chest compressions
    D. Vascular access

The correct answer is C. Ventricular fibrillation and pulseless ventricular tachycardia require CPR until a defibrillator is available. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Managing VF/pVT: The Adult Cardiac Arrest Algorithm > VF/pVT Path; page 116, and Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Defibrillate (Shockable Rhythm: VF/pVT); page 120]

13. Despite 2 defibrillation attempts, the patient remains in ventricular fibrillation. Which drug and dose should you administer first to this patient?

    A. Epinephrine 1 mg
    B. Amiodarone 300 mg
    C. Lidocaine 1 mg/kg
    D. Atropine 1 mg

The correct answer is A. For persistent ventricular fibrillation/pulseless ventricular tachycardia, give 1 shock and resume CPR immediately for 2 minutes after the shock. When IV/IO access is available, give epinephrine 1 mg IV/IO during CPR after the second shock and repeat epinephrine 1 mg IV/IO every 3 to 5 minutes. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Vasopressors; page 123]

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14. Despite the drug provided above and continued CPR, the patient remains in ventricular fibrillation. Which other drug should be administered next?

    A. Epinephrine 1 mg
    B. Atropine 1 mg
    C. Magnesium sulfate 1 g
    D. Lidocaine 1 to 1.5 mg/kg

The correct answer is D. Administer either lidocaine or amiodarone for treatment of ventricular fibrillation or pulseless ventricular tachycardia unresponsive to shock delivery, CPR, and a vasopressor. During cardiac arrest, consider amiodarone 300 mg IV/IO push for the first dose. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Antiarrhythmics > pages 123-124]

15. The patient has return of spontaneous circulation and is not able to follow commands. Which post–cardiac arrest care intervention do you choose for this patient?

    A. Initiate targeted temperature management
    B. Check the glucose level
    C. Administer epinephrine
    D. Extubate

The correct answer is A. To protect the brain and other organs, the high-performance team should start targeted temperature management in patients who remain comatose (lack of meaningful response to verbal commands) with return of spontaneous circulation after cardiac arrest. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Application of the Adult Post–Cardiac Arrest Care Algorithm > Targeted Temperature Management; page 157]

16. Which would you have done first if the patient had not gone into ventricular fibrillation?

    A. Established IV access
    B. Obtained a 12-lead ECG
    C. Given atropine 1 mg
    D. Performed synchronized cardioversion

The correct answer is D. Synchronized shocks are recommended for patients with unstable supraventricular tachycardia, unstable atrial fibrillation, unstable atrial flutter, and unstable regular monomorphic tachycardia with pulses. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Cardioversion > Recommendations; page 82]

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17. How can you increase chest compression fraction during a code?

    A. Charge the defibrillator 15 seconds before conducting a rhythm check
    B. Interchange the Ventilator and Compressor during a rhythm check
    C. Administer epinephrine during the 2-minute cycle
    D. Initiate intravenous or intraosseous access during the 2-minute cycle

The correct answer is A. Shortening the interval between the last compression and the shock by even a few seconds can improve shock success (defibrillation and return of spontaneous circulation). Thus, it is reasonable for healthcare providers to practice efficient coordination between CPR and defibrillation to minimize the hands-off interval between stopping compressions and administering the shock. For example, after verifying a shockable rhythm and initiating the charging sequence on the defibrillator, another provider should resume chest compressions and continue until the defibrillator is fully charged. The defibrillator operator should deliver the shock as soon as the compressor removes his or her hands from the patient's chest and all providers are "clear" of contact with the patient. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Critical Concepts: Ways to Increase Chest Compression Fraction; page 92]

18. A team member is unable to perform an assigned task because it is beyond the team member's scope of practice. Which action should the team member take?

    A. Ask for a new task or role
    B. Assign it to another team member
    C. Do it anyway
    D. Seek expert advice

The correct answer is A. Not only should everyone on the team know his or her own limitations and capabilities, but the Team Leader should also be aware of them. This allows the Team Leader to evaluate team resources and call for backup of team members when assistance is needed. High-performance team members should anticipate situations in which they might require assistance and inform the Team Leader. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > Role > Clear Roles and Responsibilities; pages 95-96]

19. In addition to clinical assessment, which is the most reliable method to confirm and monitor correct placement of an endotracheal tube?

    A. Arterial blood gases
    B. Chest radiography
    C. Continuous waveform capnography
    D. Hemoglobin levels

The correct answer is C. The AHA recommends continuous waveform capnography in addition to clinical assessment as the most reliable method of confirming and monitoring correct placement of an endotracheal tube. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Respiratory Arrest > Primary Assessment > Airway Management in Respiratory Arrest; page 102]

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20. Your patient is in cardiac arrest and has been intubated. To assess CPR quality, which should you do?

    A. Monitor the patient's P_{ETCO_2}
    B. Obtain a 12-lead ECG
    C. Check the patient's pulse
    D. Obtain a chest x-ray

The correct answer is A. The AHA recommends using quantitative waveform capnography in intubated patients to monitor CPR quality, optimize chest compressions, and detect return of spontaneous circulation during chest compressions. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Physiologic Monitoring During CPR > End-Tidal CO2; page 126]

21. Three minutes into a cardiac arrest resuscitation attempt, one member of your team inserts an endotracheal tube while another performs chest compressions. Capnography shows a persistent waveform and a P_{ETCO_2} of 8 mm Hg. What is the significance of this finding?

    A. Chest compressions may not be effective
    B. The endotracheal tube is in the esophagus
    C. The patient meets the criteria for termination of efforts
    D. The team is ventilating the patient too often (hyperventilation)

The correct answer is A. P_{ETCO_2} values less than 10 mm Hg in intubated patients indicate that cardiac output is inadequate to achieve return of spontaneous circulation. It is reasonable to consider trying to improve quality of CPR by optimizing chest compression parameters. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Physiologic Monitoring During CPR; page 125]

22. Which best describes this rhythm?

    A. First-degree atrioventricular block
    B. Second-degree atrioventricular block type I
    C. Second-degree atrioventricular block type II
    D. Third-degree atrioventricular block

The correct answer is D. This ECG rhythm strip shows third-degree atrioventricular block. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Bradycardia > Rhythms for Bradycardia; pages 66-67]

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23. If a team member is about to make a mistake during a resuscitation attempt, which best describes the action that the Team Leader or other team members should take?

A. Conduct a debriefing after the resuscitation attempt
B. Reassign the team tasks
C. Address the team member immediately
D. Remove the team member from the area

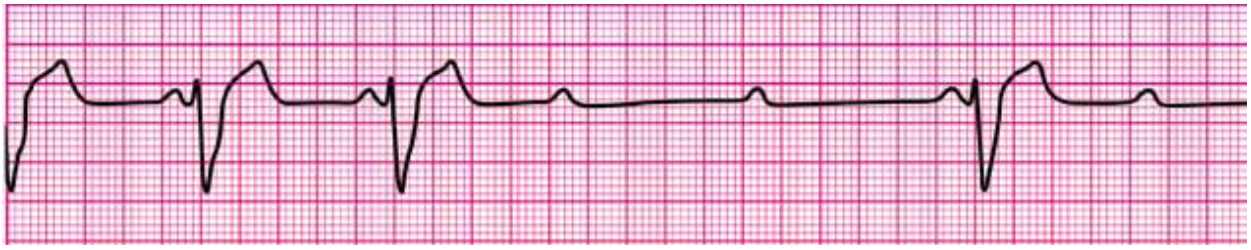
The correct answer is C. During a resuscitation attempt, the leader or a member of a high-performance team may need to intervene if an action that is about to occur may be inappropriate at the time. Team members should question a colleague who is about to make a mistake. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > Roles > Constructive Interventions; pages 96-97]

24. A patient in stable narrow-complex tachycardia with a peripheral IV in place is refractory to the first dose of adenosine. Which dose would you administer next?

A. 3 mg
B. 12 mg
C. 20 mg
D. 40 mg

The correct answer is B. Adenosine is indicated for most forms of stable narrow-complex supraventricular tachycardia. If the patient is not responsive to the first dose, a second dose of adenosine (12 mg rapid IV push) should be given. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Applying the Adult Tachycardia With a Pulse Algorithm to the Stable Patient > Narrow QRS, Regular Rhythm; page 88]

25. Which type of atrioventricular block best describes this rhythm?



A. First-degree
B. Second-degree type I
C. Second-degree type II
D. Third-degree

The correct answer is C. This ECG rhythm strip shows second-degree type II atrioventricular block. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Bradycardia> Rhythms for Bradycardia; pages 66-67]

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26. Which is the primary purpose of a medical emergency team or rapid response team?

    A. Improving care for patients admitted to critical care units
    B. Improving patient outcomes by identifying and treating early clinical deterioration
    C. Providing diagnostic consultation to emergency department patients
    D. Providing online consultation to EMS personnel in the field

The correct answer is B. Many hospitals have implemented the use of medical emergency teams or rapid response teams. The purpose of these teams is to improve patient outcomes by identifying and treating early clinical deterioration. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Recognition: Signs of Clinical Deterioration > Rapid Response > RRTs and METs; page 28]

27. A patient is being resuscitated in a very noisy environment. A team member thinks he heard an order for 500 mg of amiodarone IV. Which is the best response from the team member?

    A. "OK."
    B. "Are you sure?"
    C. "Amiodarone 500 mg IV has been given."
    D. "I have an order to give 500 mg of amiodarone IV. Is this correct?"

The correct answer is D. Unclear communication can lead to unnecessary delays in treatment or to medication errors. Team members should question an order if the slightest doubt exists. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > How to Communicate > Closed-Loop Communications; page 98]

28. Which is the recommended oral dose of aspirin for a patient with a suspected acute coronary syndrome?

    A. 40 mg
    B. 81 mg
    C. 162 to 325 mg
    D. 350 to 650 mg

The correct answer is C. If the patient has not taken aspirin and has no history of true aspirin allergy and no evidence of recent gastrointestinal bleeding, give the patient aspirin (162 to 325 mg) to chew. In the initial hours of an acute coronary syndrome, aspirin is absorbed better when chewed than when swallowed. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > EMS Assessment, Care, and Hospital Preparation > Administering Oxygen and Drugs > Aspirin (Acetylsalicylic Acid); page 35]

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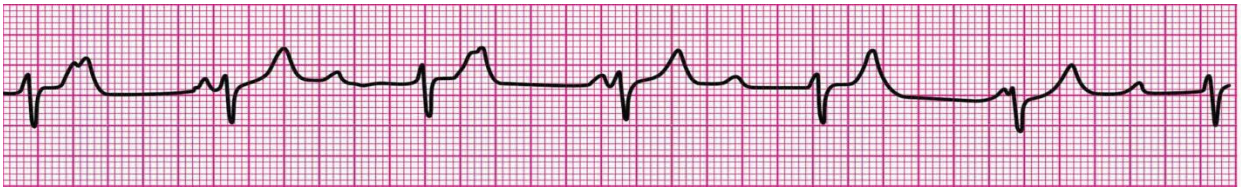
29. You have completed 2 minutes of CPR. The ECG monitor displays the lead II rhythm shown here, and the patient has no pulse. Another member of your team resumes chest compressions, and an IV is in place. Which do you do next?



A. Start a dopamine infusion
B. Give atropine 0.5 mg
C. Give epinephrine 1 mg IV
D. Insert an advanced airway

The correct answer is C. Give epinephrine as soon as IV/IO access become available. A dose of 1 mg IV/IO should be given and repeated every 3 to 5 minutes. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: PEA and Asystole > Managing Asystole/PEA: The Adult Cardiac Arrest Algorithm > The Asystole/PEA Pathway of the Cardiac Arrest Algorithm > Managing Asystole/PEA > Critical Concepts: Administer Epinephrine; page 133]

30. What is the minimum systolic blood pressure one should attempt to achieve with fluid administration or vasoactive agents in a hypotensive post–cardiac arrest patient who achieves return of spontaneous circulation?

A. 75 mm Hg
B. 80 mm Hg
C. 85 mm Hg
D. 90 mm Hg

The correct answer is D. If the patient's volume status is adequate, infusions of vasoactive agents may be initiated and titrated to achieve a minimum systolic blood pressure of 90 mm Hg or greater or a mean arterial pressure of 65 mm Hg or more. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Multiple System Approach to Post–Cardiac Arrest Care; page 152]

31. What should be the primary focus of the CPR Coach on a resuscitation team?

A. To convey positive feedback
B. To ensure high-quality CPR
C. To resolve team arguments
D. To document CPR outcomes

The correct answer is B. The goal of the CPR Coach to ensure high-quality CPR by providing feedback about the rate, depth, and recoil of chest compressions, delivery of ventilations (rate and volume), and compression pauses. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Roles in a High-Performance Team > Team Member Role: CPR Coach > Critical Concepts: CPR Coach Role; page 95]

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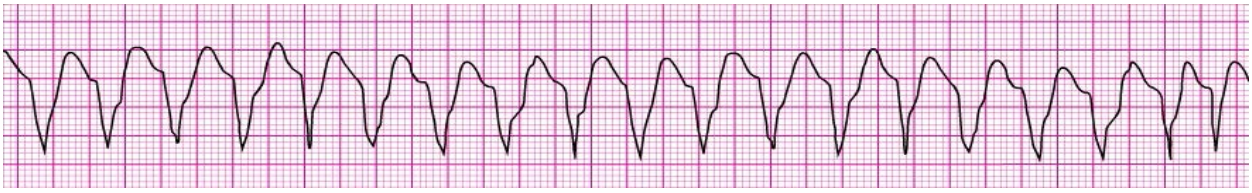
Use this scenario to answer the next 4 questions:

A 68-year-old woman presents with light-headedness, nausea, and chest discomfort. Your assessment finds her awake and responsive but appearing ill, pale, and grossly diaphoretic. Her radial pulse is weak, thready, and fast. You are unable to obtain a blood pressure. She has no obvious dependent edema, and her neck veins are flat. Her lung sounds are equal, with moderate rales present bilaterally. The cardiac monitor shows the rhythm seen here.



32. On the basis of this patient's initial assessment, which ACLS algorithm should you follow?

    A. Acute Coronary Syndromes
    B. Adult Tachycardia With a Pulse
    C. Adult Suspected Stroke
    D. Adult Cardiac Arrest

The correct answer is B. This ECG rhythm strip shows ventricular tachycardia. The Adult Tachycardia With a Pulse Algorithm outlines the steps for assessment and management of a patient presenting with symptomatic tachycardia with pulses. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Managing Unstable Tachycardia: The Adult Tachycardia With a Pulse Algorithm; page 79]

33. The patient's pulse oximeter shows a reading of 84% on room air. Which initial action do you take?

    A. Perform bag-mask ventilation
    B. Intubate the patient
    C. Give oxygen
    D. Check the pulse oximeter probe

The correct answer is C. In the application of the Tachycardia Algorithm to an unstable patient, identify and treat the underlying cause. Give oxygen, if indicated, and monitor oxygen saturation. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Applying the Adult Tachycardia With a Pulse Algorithm > Identify and Treat Underlying Cause; page 80]

34. After your initial assessment of this patient, which intervention should be performed next?

    A. Synchronized cardioversion
    B. Administration of amiodarone 150 mg IM
    C. Immediate defibrillation
    D. Endotracheal intubation

The correct answer is A. Synchronized shocks are recommended for patients with unstable supraventricular tachycardia, unstable atrial fibrillation, unstable atrial flutter, and unstable regular monomorphic tachycardia with pulses. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Cardioversion > Recommendations; page 82]

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35. If the patient became apneic and pulseless but the rhythm remained the same, which would take the highest priority?

    A. Administer amiodarone 300 mg
    B. Administer atropine 0.5 mg
    C. Insert an advanced airway
    D. Perform defibrillation

The correct answer is D. Pulseless ventricular tachycardia is included in the algorithm because it is treated as ventricular fibrillation. Ventricular fibrillation and pulseless ventricular tachycardia require CPR until a defibrillator is available. Both are treated with high-energy unsynchronized shocks. The interval from collapse to defibrillation is one of the most important determinants of survival from cardiac arrest. Early defibrillation is critical for patients with sudden cardiac arrest. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Managing VF/Pulseless VT: The Adult Cardiac Arrest Algorithm > VF/pVT Path; page 116]

36. You instruct a team member to give 1 mg atropine IV. Which response is an example of closed-loop communication?

    A. "I'll give it in a few minutes."
    B. "OK."
    C. "I'll draw up 1 mg of atropine."
    D. "Are you sure that is what you want given?"

The correct answer is C. When communicating with high-performance team members, the Team Leader should use closed-loop communication. By receiving a clear response and eye contact, the Team Leader confirms that the team member heard and understood the message. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > How to Communicate > Closed-Loop Communications; page 98]

37. Which best describes an action taken by the Team Leader to avoid inefficiencies during a resuscitation attempt?

    A. Assign most tasks to the more experienced team members
    B. Perform the most complicated tasks
    C. Clearly delegate tasks
    D. Assign the same tasks to more than one team member

The correct answer is C. To avoid inefficiencies, the Team Leader must clearly delegate tasks. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > Roles > Clear Roles and Responsibilities; page 95]

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38. What is an effect of excessive ventilation?

    A. Decreased cardiac output
    B. Decreased intrathoracic pressure
    C. Increased perfusion pressures
    D. Increased venous return

The correct answer is A. Excessive ventilation can be harmful because it increases intrathoracic pressure, decreases venous return to the heart, and diminishes cardiac output and survival. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Identifying Respiratory Problems by Severity > Respiratory Arrest > Critical Concepts: Avoiding Excessive Ventilation; page 102]

39. Which best describes the length of time it should take to perform a pulse check during the BLS Assessment?

    A. 1 to 4 seconds
    B. 5 to 10 seconds
    C. 11 to 15 seconds
    D. 16 to 20 seconds

The correct answer is B. Check the pulse for 5 to 10 seconds. If there is no pulse within 10 seconds, start CPR, beginning with chest compressions. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Table 2: BLS Assessment; page 18]

40. Which is the recommended first intravenous dose of amiodarone for a patient with refractory ventricular fibrillation?

    A. 100 mg
    B. 150 mg
    C. 250 mg
    D. 300 mg

The correct answer is D. Consider amiodarone for treatment of ventricular fibrillation or pulseless ventricular tachycardia unresponsive to shock delivery, CPR, and a vasopressor. During cardiac arrest, consider amiodarone 300 mg IV/IO push for the first dose. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Antiarrhythmics; page 124]

41. Which facility is the most appropriate EMS destination for a patient with sudden cardiac arrest who achieved return of spontaneous circulation in the field?

    A. Comprehensive stroke care unit
    B. Acute rehabilitation care unit
    C. Acute long-term care unit
    D. Coronary reperfusion–capable medical center

The correct answer is D. After return of spontaneous circulation in patients in whom coronary artery occlusion is suspected, providers should transport the patient to a facility capable of reliably providing coronary reperfusion (eg, percutaneous coronary intervention) and other goal-directed post–cardiac arrest care therapies. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Multiple System Approach to Post–Cardiac Arrest Care; pages 151-152]

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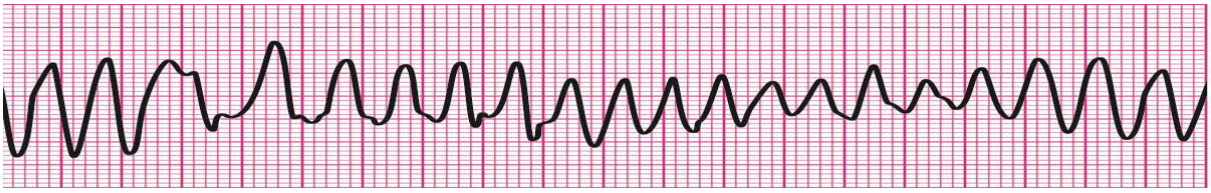
42. A patient has a witnessed loss of consciousness. The lead II ECG reveals this rhythm. Which is the appropriate treatment?



A. Administration of adenosine 6 mg IV push
B. Administration of epinephrine 1 mg IV push
C. Defibrillation
D. Synchronized cardioversion

The correct answer is C. Ventricular fibrillation and pulseless ventricular tachycardia require CPR until a defibrillator is available. Both are treated with high-energy unsynchronized shocks. The interval from collapse to defibrillation is one of the most important determinants of survival from cardiac arrest. Early defibrillation is critical for patients with sudden cardiac arrest (ventricular fibrillation/pulseless ventricular tachycardia). [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Defibrillate (Shockable Rhythm: VF/pVT); page 120]

43. For STEMI patients, which best describes the recommended maximum goal time for first medical contact–to–balloon inflation time for percutaneous coronary intervention?

A. 180 minutes
B. 150 minutes
C. 120 minutes
D. 90 minutes

The correct answer is D. For the patient with STEMI, the goals of reperfusion are to give fibrinolytics within 30 minutes of arrival or perform percutaneous coronary intervention within 90 minutes of arrival. The goal for first medical contact–to–balloon inflation time is 90 minutes. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > Immediate ED Assessment and Treatment; page 37]

44. You are performing chest compressions during an adult resuscitation attempt. Which rate should you use to perform the compressions?

A. Less than 80/min
B. 80 to 90/min
C. 100 to 120/min
D. More than 120/min

The correct answer is C. When performing chest compressions, you should compress at a rate of 100 to 120/min. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Critical Concepts: High-Quality CPR; page 17]

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45. Which is the maximum interval you should allow for an interruption in chest compressions?

    A. 10 seconds
    B. 15 seconds
    C. 20 seconds
    D. 25 seconds

The correct answer is A. ACLS providers must make every effort to minimize any interruptions in chest compressions. Try to limit interruptions in chest compressions (eg, defibrillation and rhythm analysis) to no longer than 10 seconds. When you stop chest compressions, blood flow to the brain and heart stops. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Critical Concepts: Minimizing Interruptions in Chest Compressions; page 19]

46. To properly ventilate a patient with a perfusing rhythm, how often do you squeeze the bag?

    A. Once every 3 seconds
    B. Once every 6 seconds
    C. Once every 10 seconds
    D. Once every 12 seconds

The correct answer is B. For a patient in respiratory arrest with a pulse, deliver ventilations once every 6 seconds with a bag-mask device or any advanced airway. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Respiratory Arrest > BLS Assessment > Ventilation and Pulse Check; page 102]

47. EMS providers are treating a patient with suspected stroke. According to the Adult Suspected Stroke Algorithm, which critical action performed by the EMS team will expedite this patient's care on arrival and reduce the time to treatment?

    A. Provide prehospital notification
    B. Establish IV access
    C. Review the patient's history
    D. Treat hypertension

The correct answer is A. Prearrival notification allows the hospital to prepare to evaluate and manage the patient effectively. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Stroke > Identification of Signs of Possible Stroke and Activate Emergency Response > Activate EMS System Immediately; page 50]

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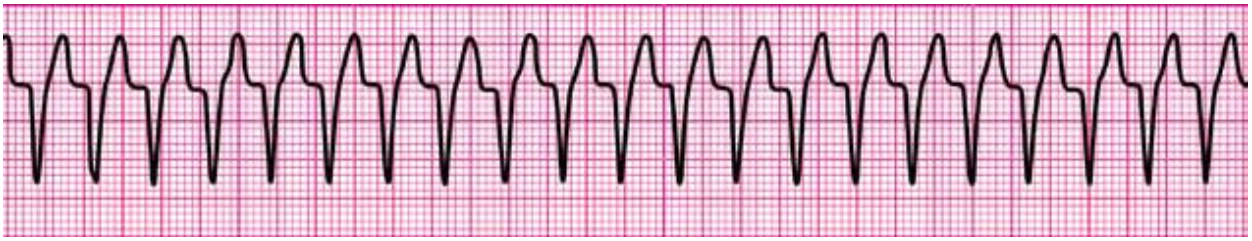
48. A patient in respiratory distress and with a blood pressure of 70/50 mm Hg presents with the lead II ECG rhythm shown here. Which is the appropriate treatment?



A. Administering adenosine 6 mg IV push
B. Performing synchronized cardioversion
C. Performing vagal maneuvers
D. Performing defibrillation

The correct answer is B. Synchronized shocks are recommended for patients with unstable supraventricular tachycardia, unstable atrial fibrillation, unstable atrial flutter, and unstable regular monomorphic tachycardia with pulses. Synchronized cardioversion uses a lower energy level than attempted defibrillation. Low-energy shocks should always be delivered as synchronized shocks to avoid precipitating ventricular fibrillation. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Cardioversion > Recommendations; page 82]

49. What is the recommended range from which a temperature should be selected and maintained constantly to achieve targeted temperature management after cardiac arrest?

A. 26°C to 28°C
B. 29°C to 31°C
C. 32°C to 36°C
D. 35°C to 37°C

The correct answer is C. For targeted temperature management, healthcare providers should select and maintain a constant target temperature between 32°C and 36°C for a period of at least 24 hours. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Application of the Adult Post–Cardiac Arrest Care Algorithm > Targeted Temperature Management; page 157]

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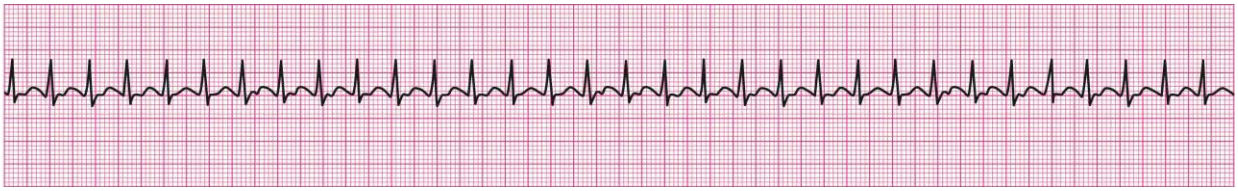
50. A responder is caring for a patient with a history of congestive heart failure. The patient is experiencing shortness of breath, a blood pressure of 68/50 mm Hg, and a heart rate of 190/min. The patient's lead II ECG is displayed here. Which best characterizes this patient's rhythm?



A. Perfusing ventricular tachycardia
B. Sinus tachycardia
C. Stable supraventricular tachycardia
D. Unstable supraventricular tachycardia

The correct answer is D. This ECG rhythm strip shows supraventricular tachycardia, and the patient is showing signs and symptoms of unstable tachycardia. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable; pages 75-77]

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Advanced Cardiovascular Life Support Exam B

November 9, 2020

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Advanced Cardiovascular Life Support Exam B

(50 questions)

Please do not mark on this exam. Record the best answer on the separate answer sheet.

1. To properly ventilate a patient with a perfusing rhythm, how often do you squeeze the bag?

   A. Once every 10 seconds
   B. Once every 12 seconds
   C. Once every 6 seconds
   D. Once every 3 seconds

2. Which of the following signs is a likely indicator of cardiac arrest in an unresponsive patient?

   A. Agonal gasps
   B. Cyanosis
   C. Slow, weak pulse rate
   D. Irregular, weak pulse rate

3. Which is the recommended first intravenous dose of amiodarone for a patient with refractory ventricular fibrillation?

   A. 250 mg
   B. 150 mg
   C. 300 mg
   D. 100 mg

4. Three minutes into a cardiac arrest resuscitation attempt, one member of your team inserts an endotracheal tube while another performs chest compressions. Capnography shows a persistent waveform and a P_{ETCO_2} of 8 mm Hg. What is the significance of this finding?

   A. The team is ventilating the patient too often (hyperventilation)
   B. Chest compressions may not be effective
   C. The endotracheal tube is in the esophagus
   D. The patient meets the criteria for termination of efforts

5. A patient in stable narrow-complex tachycardia with a peripheral IV in place is refractory to the first dose of adenosine. Which dose would you administer next?

   A. 20 mg
   B. 3 mg
   C. 40 mg
   D. 12 mg

6. Which is an acceptable method of selecting an appropriately sized oropharyngeal airway?

   A. Measure from the thyroid cartilage to the bottom of the earlobe
   B. Estimate by using the formula weight (kg)/8 + 2
   C. Measure from the corner of the mouth to the angle of the mandible
   D. Estimate by using the size of the patient's finger

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7. You are evaluating a 58-year-old man with chest discomfort. His blood pressure is 92/50 mm Hg, his heart rate is 92/min, his nonlabored respiratory rate is 14 breaths per minute, and his pulse oximetry reading is 97%. Which assessment step is most important now?

   A. Obtaining a 12-lead ECG
   B. Requesting laboratory testing
   C. Evaluating the P_{ETCO_2} reading
   D. Requesting a chest x-ray

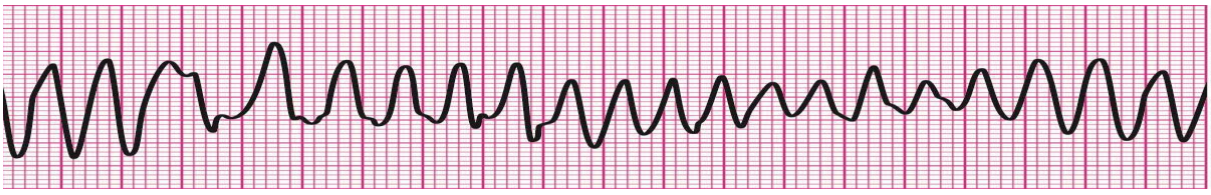
8. Which is the recommended oral dose of aspirin for a patient with a suspected acute coronary syndrome?

   A. 162 to 325 mg
   B. 81 mg
   C. 350 to 650 mg
   D. 40 mg

9. You instruct a team member to give 1 mg atropine IV. Which response is an example of closed-loop communication?

   A. "OK."
   B. "Are you sure that is what you want given?"
   C. "I'll give it in a few minutes."
   D. "I'll draw up 1 mg of atropine."

10. A patient has a witnessed loss of consciousness. The lead II ECG reveals this rhythm. Which is the appropriate treatment?



   A. Defibrillation
   B. Synchronized cardioversion
   C. Administration of adenosine 6 mg IV push
   D. Administration of epinephrine 1 mg IV push

11. In addition to clinical assessment, which is the most reliable method to confirm and monitor correct placement of an endotracheal tube?

   A. Hemoglobin levels
   B. Continuous waveform capnography
   C. Arterial blood gases
   D. Chest radiography

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12. What is an effect of excessive ventilation?

    A. Increased venous return
    B. Decreased cardiac output
    C. Decreased intrathoracic pressure
    D. Increased perfusion pressures

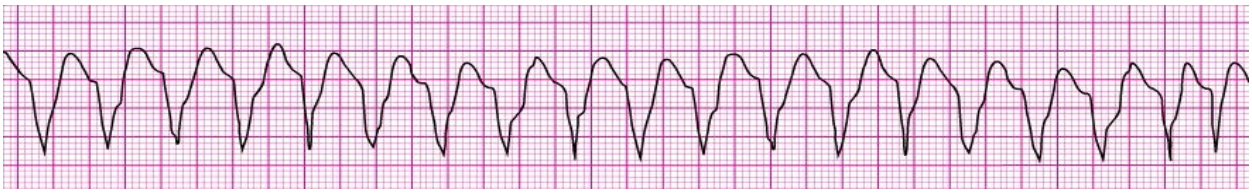
13. Which best describes an action taken by the Team Leader to avoid inefficiencies during a resuscitation attempt?

    A. Perform the most complicated tasks
    B. Assign most tasks to the more experienced team members
    C. Assign the same tasks to more than one team member
    D. Clearly delegate tasks

14. You are caring for a patient with a suspected stroke whose symptoms started 2 hours ago. The CT scan was normal, with no signs of hemorrhage. The patient does not have any contraindications to fibrinolytic therapy. Which treatment approach is best for this patient?

    A. Wait for the results of the MRI
    B. Hold fibrinolytic therapy for 24 hours
    C. Order an echocardiogram before fibrinolytic administration
    D. Give fibrinolytic therapy as soon as possible and consider endovascular therapy

15. Which best describes this rhythm?



    A. Supraventricular tachycardia
    B. Ventricular fibrillation
    C. Monomorphic ventricular tachycardia
    D. Polymorphic ventricular tachycardia

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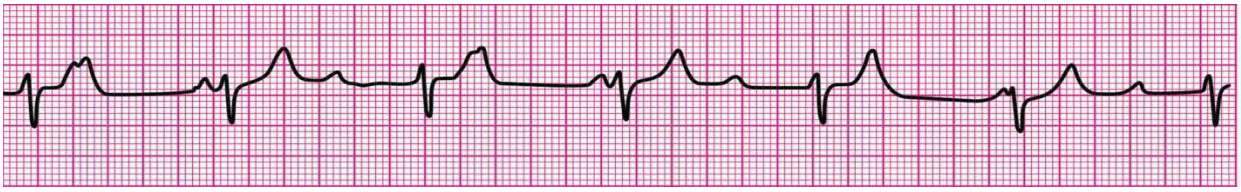
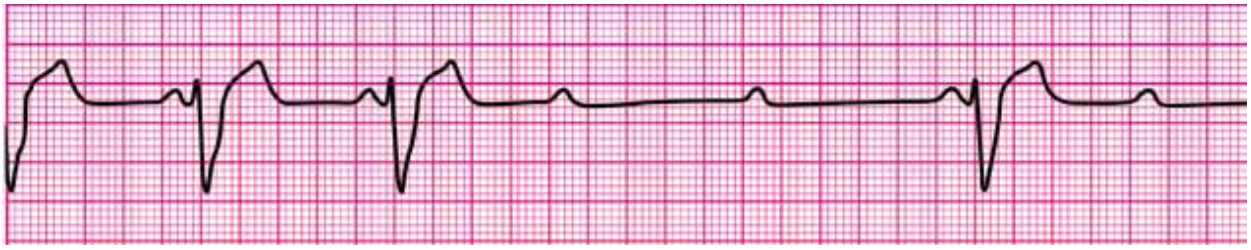
16. You have completed 2 minutes of CPR. The ECG monitor displays the lead II rhythm shown here, and the patient has no pulse. Another member of your team resumes chest compressions, and an IV is in place. Which do you do next?



A. Insert an advanced airway
B. Give epinephrine 1 mg IV
C. Start a dopamine infusion
D. Give atropine 0.5 mg

17. Which type of atrioventricular block best describes this rhythm?



A. Second-degree type I
B. Third-degree
C. First-degree
D. Second-degree type II

18. For STEMI patients, which best describes the recommended maximum goal time for first medical contact–to–balloon inflation time for percutaneous coronary intervention?

A. 90 minutes
B. 150 minutes
C. 180 minutes
D. 120 minutes

19. A patient is being resuscitated in a very noisy environment. A team member thinks he heard an order for 500 mg of amiodarone IV. Which is the best response from the team member?

A. “Amiodarone 500 mg IV has been given.”
B. “OK.”
C. “I have an order to give 500 mg of amiodarone IV. Is this correct?”
D. “Are you sure?”

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20. A team member is unable to perform an assigned task because it is beyond the team member's scope of practice. Which action should the team member take?

    A. Seek expert advice
    B. Do it anyway
    C. Assign it to another team member
    D. Ask for a new task or role

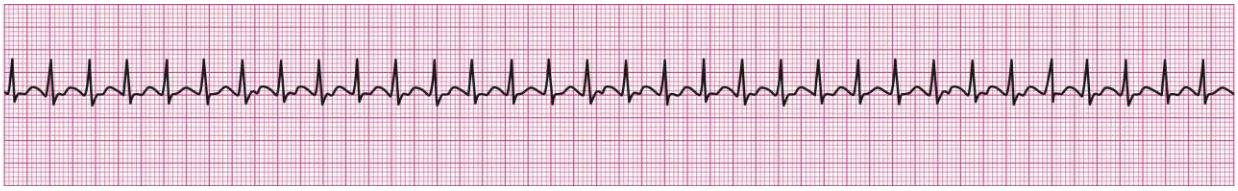
21. Your patient is in cardiac arrest and has been intubated. To assess CPR quality, which should you do?

    A. Obtain a chest x-ray
    B. Check the patient's pulse
    C. Monitor the patient's P_{ETCO_2}
    D. Obtain a 12-lead ECG

22. Which best describes this rhythm?

    A. Third-degree atrioventricular block
    B. First-degree atrioventricular block
    C. Second-degree atrioventricular block type I
    D. Second-degree atrioventricular block type II

23. A responder is caring for a patient with a history of congestive heart failure. The patient is experiencing shortness of breath, a blood pressure of 68/50 mm Hg, and a heart rate of 190/min. The patient's lead II ECG is displayed here. Which best characterizes this patient's rhythm?



    A. Sinus tachycardia
    B. Unstable supraventricular tachycardia
    C. Stable supraventricular tachycardia
    D. Perfusing ventricular tachycardia

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24. What is the recommended range from which a temperature should be selected and maintained constantly to achieve targeted temperature management after cardiac arrest?

    A. 35°C to 37°C
    B. 32°C to 36°C
    C. 26°C to 28°C
    D. 29°C to 31°C

25. What is the minimum systolic blood pressure one should attempt to achieve with fluid administration or vasoactive agents in a hypotensive post–cardiac arrest patient who achieves return of spontaneous circulation?

    A. 85 mm Hg
    B. 90 mm Hg
    C. 75 mm Hg
    D. 80 mm Hg

Use this scenario to answer the next 6 questions:

A 45-year-old man had coronary artery stents placed 2 days ago. Today, he is in severe distress and is reporting “crushing” chest discomfort. He is pale, diaphoretic, and cool to the touch. His radial pulse is very weak, blood pressure is 64/40 mm Hg, respiratory rate is 28 breaths per minute, and oxygen saturation is 89% on room air. When applied, the cardiac monitor initially showed ventricular tachycardia, which then quickly changed to ventricular fibrillation.

26. On the basis of this patient’s initial presentation, which condition do you suspect led to the cardiac arrest?

    A. Acute heart failure
    B. Supraventricular tachycardia with ischemic chest pain
    C. Acute ischemic stroke
    D. Acute coronary syndrome

27. In addition to defibrillation, which intervention should be performed immediately?

    A. Vasoactive medication administration
    B. Chest compressions
    C. Vascular access
    D. Advanced airway insertion

28. Despite 2 defibrillation attempts, the patient remains in ventricular fibrillation. Which drug and dose should you administer first to this patient?

    A. Amiodarone 300 mg
    B. Lidocaine 1 mg/kg
    C. Atropine 1 mg
    D. Epinephrine 1 mg

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29. Despite the drug provided above and continued CPR, the patient remains in ventricular fibrillation. Which other drug should be administered next?

    A. Magnesium sulfate 1 g
    B. Atropine 1 mg
    C. Lidocaine 1 to 1.5 mg/kg
    D. Epinephrine 1 mg

30. The patient has return of spontaneous circulation and is not able to follow commands. Which immediate post–cardiac arrest care intervention do you choose for this patient?

    A. Administer epinephrine
    B. Initiate targeted temperature management
    C. Extubate
    D. Check the glucose level

31. Which would you have done first if the patient had not gone into ventricular fibrillation?

    A. Established IV access
    B. Performed synchronized cardioversion
    C. Obtained a 12-lead ECG
    D. Given atropine 1 mg

32. Your rescue team arrives to find a 59-year-old man lying on the kitchen floor. You determine that he is unresponsive. Which is the next step in your assessment and management of this patient?

    A. Check the patient's breathing and pulse
    B. Open the patient's airway
    C. Check for a medical alert bracelet
    D. Apply the AED

33. You are performing chest compressions during an adult resuscitation attempt. Which rate should you use to perform the compressions?

    A. 100 to 120/min
    B. Less than 80/min
    C. 80 to 90/min
    D. More than 120/min

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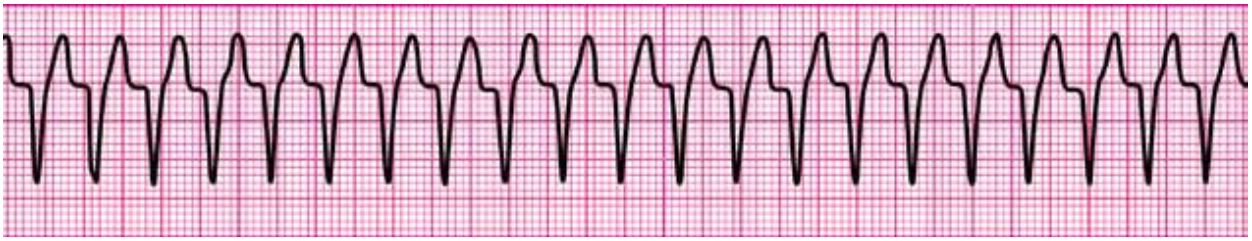
34. A patient in respiratory distress and with a blood pressure of 70/50 mm Hg presents with the lead II ECG rhythm shown here. Which is the appropriate treatment?



A. Performing defibrillation
B. Administering adenosine 6 mg IV push
C. Performing synchronized cardioversion
D. Performing vagal maneuvers

35. Which of these tests should be performed for a patient with suspected stroke as early as possible but no more than 20 minutes after hospital arrival?

A. Coagulation studies
B. Cardiac enzymes
C. Noncontrast CT scan of the head
D. 12-Lead ECG

36. Which best describes the length of time it should take to perform a pulse check during the BLS Assessment?

A. 5 to 10 seconds
B. 16 to 20 seconds
C. 11 to 15 seconds
D. 1 to 4 seconds

37. Which is the recommended next step after a defibrillation attempt?

A. Resume CPR, starting with chest compressions
B. Check the ECG for evidence of a rhythm
C. Open the patient's airway
D. Determine if a carotid pulse is present

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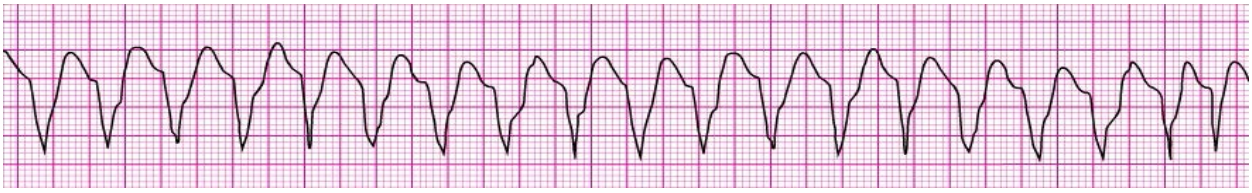
Use this scenario to answer the next 4 questions:

A 68-year-old woman presents with light-headedness, nausea, and chest discomfort. Your assessment finds her awake and responsive but appearing ill, pale, and grossly diaphoretic. Her radial pulse is weak, thready, and fast. You are unable to obtain a blood pressure. She has no obvious dependent edema, and her neck veins are flat. Her lung sounds are equal, with moderate rales present bilaterally. The cardiac monitor shows the rhythm seen here.



38. On the basis of this patient's initial assessment, which ACLS algorithm should you follow?

    A. Adult Suspected Stroke
    B. Adult Cardiac Arrest
    C. Acute Coronary Syndromes
    D. Adult Tachycardia With a Pulse

39. The patient's pulse oximeter shows a reading of 84% on room air. Which initial action do you take?

    A. Intubate the patient
    B. Check the pulse oximeter probe
    C. Perform bag-mask ventilation
    D. Apply oxygen

40. After your initial assessment of this patient, which intervention should be performed next?

    A. Endotracheal intubation
    B. Synchronized cardioversion
    C. Administration of amiodarone 150 mg IM
    D. Immediate defibrillation

41. If the patient became apneic and pulseless but the rhythm remained the same, which would take the highest priority?

    A. Perform defibrillation
    B. Administer amiodarone 300 mg
    C. Administer atropine 0.5 mg
    D. Insert an advanced airway

42. If a team member is about to make a mistake during a resuscitation attempt, which best describes the action that the Team Leader or other team members should take?

    A. Address the team member immediately
    B. Remove the team member from the area
    C. Conduct a debriefing after the resuscitation attempt
    D. Reassign the team tasks

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43. Which facility is the most appropriate EMS destination for a patient with sudden cardiac arrest who achieved return of spontaneous circulation in the field?

    A. Acute long-term care unit
    B. Coronary reperfusion–capable medical center
    C. Acute rehabilitation care unit
    D. Comprehensive stroke care unit

44. What should be the primary focus of the CPR Coach on a resuscitation team?

    A. To document CPR outcomes
    B. To resolve team arguments
    C. To ensure high-quality CPR
    D. To convey positive feedback

45. Which is the primary purpose of a medical emergency team or rapid response team?

    A. Providing diagnostic consultation to emergency department patients
    B. Improving care for patients admitted to critical care units
    C. Improving patient outcomes by identifying and treating early clinical deterioration
    D. Providing online consultation to EMS personnel in the field

46. During post–cardiac arrest care, which is the recommended duration of targeted temperature management after reaching the correct temperature range?

    A. At least 24 hours
    B. At least 36 hours
    C. At least 48 hours
    D. At least 8 hours

47. EMS providers are treating a patient with suspected stroke. According to the Adult Suspected Stroke Algorithm, which critical action performed by the EMS team will expedite this patient's care on arrival and reduce the time to treatment?

    A. Establish IV access
    B. Treat hypertension
    C. Review the patient's history
    D. Provide prehospital notification

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48. Which type of atrioventricular block best describes this rhythm?

A. Second-degree atrioventricular block type II
B. Third-degree atrioventricular block
C. First-degree atrioventricular block
D. Second-degree atrioventricular block type I

49. Which is the maximum interval you should allow for an interruption in chest compressions?

A. 15 seconds
B. 20 seconds
C. 25 seconds
D. 10 seconds

50. How can you increase chest compression fraction during a code?

A. Administer epinephrine during the 2-minute cycle
B. Initiate intravenous or intraosseous access during the 2-minute cycle
C. Charge the defibrillator 15 seconds before conducting a rhythm check
D. Interchange the Ventilator and Compressor during a rhythm check

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Answer Key
Advanced Cardiovascular Life Support Exam B

Question	Answer			
1.	A	B	•	D
2.	•	B	C	D
3.	A	B	•	D
4.	A	•	C	D
5.	A	B	C	•
6.	A	B	•	D
7.	•	B	C	D
8.	•	B	C	D
9.	A	B	C	•
10.	•	B	C	D
11.	A	•	C	D
12.	A	•	C	D
13.	A	B	C	•
14.	A	B	C	•
15.	A	B	•	D
16.	A	•	C	D
17.	A	B	C	•
18.	•	B	C	D
19.	A	B	•	D
20.	A	B	C	•
21.	A	B	•	D
22.	•	B	C	D
23.	A	•	C	D
24.	A	•	C	D
25.	A	•	C	D

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Question	Answer			
26.	A	B	C	•
27.	A	•	C	D
28.	A	B	C	•
29.	A	B	•	D
30.	A	•	C	D
31.	A	•	C	D
32.	•	B	C	D
33.	•	B	C	D
34.	A	B	•	D
35.	A	B	•	D
36.	•	B	C	D
37.	•	B	C	D
38.	A	B	C	•
39.	A	B	C	•
40.	A	•	C	D
41.	•	B	C	D
42.	•	B	C	D
43.	A	•	C	D
44.	A	B	•	D
45.	A	B	•	D
46.	•	B	C	D
47.	A	B	C	•
48.	A	B	C	•
49.	A	B	C	•
50.	A	B	•	D

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Annotated Answer Key
Advanced Cardiovascular Life Support Exam B

Provider manual page numbers below refer to the printed book and the eBook as viewed through the offline desktop/laptop reader, not the eBook as viewed through the mobile apps or ebooks.heart.org.

1. To properly ventilate a patient with a perfusing rhythm, how often do you squeeze the bag?

   A. Once every 10 seconds
   B. Once every 12 seconds
   C. Once every 6 seconds
   D. Once every 3 seconds

The correct answer is C. For a patient in respiratory arrest with a pulse, deliver ventilations once every 6 seconds with a bag-mask device or any advanced airway. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Respiratory Arrest > BLS Assessment > Ventilation and Pulse Check; page 102]

2. Which of the following signs is a likely indicator of cardiac arrest in an unresponsive patient?

   A. Agonal gasps
   B. Cyanosis
   C. Slow, weak pulse rate
   D. Irregular, weak pulse rate

The correct answer is A. Agonal gasps are not normal breathing. They are a sign of cardiac arrest. Agonal gasps may be present in the first minutes after sudden cardiac arrest. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Caution: Agonal Gasps; page 118]

3. Which is the recommended first intravenous dose of amiodarone for a patient with refractory ventricular fibrillation?

   A. 250 mg
   B. 150 mg
   C. 300 mg
   D. 100 mg

The correct answer is C. Consider amiodarone for treatment of ventricular fibrillation or pulseless ventricular tachycardia unresponsive to shock delivery, CPR, and a vasopressor. During cardiac arrest, consider amiodarone 300 mg IV/IO push for the first dose. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Antiarrhythmics; page 124]

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4. Three minutes into a cardiac arrest resuscitation attempt, one member of your team inserts an endotracheal tube while another performs chest compressions. Capnography shows a persistent waveform and a P_{ETCO_2} of 8 mm Hg. What is the significance of this finding?

   A. The team is ventilating the patient too often (hyperventilation)
   B. Chest compressions may not be effective
   C. The endotracheal tube is in the esophagus
   D. The patient meets the criteria for termination of efforts

The correct answer is B. P_{ETCO_2} values less than 10 mm Hg in intubated patients indicate that cardiac output is inadequate to achieve return of spontaneous circulation. It is reasonable to consider trying to improve quality of CPR by optimizing chest compression parameters. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Physiologic Monitoring During CPR; page 125]

5. A patient in stable narrow-complex tachycardia with a peripheral IV in place is refractory to the first dose of adenosine. Which dose would you administer next?

   A. 20 mg
   B. 3 mg
   C. 40 mg
   D. 12 mg

The correct answer is D. Adenosine is indicated for most forms of stable narrow-complex supraventricular tachycardia. If the patient is not responsive to the first dose, a second dose of adenosine (12 mg rapid IV push) should be given. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Applying the Adult Tachycardia With a Pulse Algorithm to the Stable Patient > Narrow QRS, Regular Rhythm; page 88]

6. Which is an acceptable method of selecting an appropriately sized oropharyngeal airway?

   A. Measure from the thyroid cartilage to the bottom of the earlobe
   B. Estimate by using the formula weight (kg)/8 + 2
   C. Measure from the corner of the mouth to the angle of the mandible
   D. Estimate by using the size of the patient's finger

The correct answer is C. To select the appropriate size for an oropharyngeal airway (OPA), place the OPA against the side of the face. When the flange of the OPA is at the corner of the mouth, the tip is at the angle of the mandible. A properly sized and inserted OPA results in proper alignment with the glottic opening. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Respiratory Arrest > Basic Airway Adjuncts: OPA > Technique of OPA Insertion; page 107]

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7. You are evaluating a 58-year-old man with chest discomfort. His blood pressure is 92/50 mm Hg, his heart rate is 92/min, his nonlabored respiratory rate is 14 breaths per minute, and his pulse oximetry reading is 97%. Which assessment step is most important now?

   A. Obtaining a 12-lead ECG
   B. Requesting laboratory testing
   C. Evaluating the P_{ETCO_2} reading
   D. Requesting a chest x-ray

The correct answer is A. The 12-lead ECG is at the center of the decision pathway in the management of ischemic chest discomfort and is the only means of identifying STEMI. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > EMS Assessment, Care, and Hospital Preparation > Obtaining a 12-Lead ECG; page 37]

8. Which is the recommended oral dose of aspirin for a patient with a suspected acute coronary syndrome?

   A. 162 to 325 mg
   B. 81 mg
   C. 350 to 650 mg
   D. 40 mg

The correct answer is A. If the patient has not taken aspirin and has no history of true aspirin allergy and no evidence of recent gastrointestinal bleeding, give the patient aspirin (162 to 325 mg) to chew. In the initial hours of an acute coronary syndrome, aspirin is absorbed better when chewed than when swallowed. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > EMS Assessment, Care, and Hospital Preparation > Administering Oxygen and Drugs > Aspirin (Acetylsalicylic Acid); page 35]

9. You instruct a team member to give 1 mg atropine IV. Which response is an example of closed-loop communication?

   A. “OK.”
   B. “Are you sure that is what you want given?”
   C. “I’ll give it in a few minutes.”
   D. “I’ll draw up 1 mg of atropine.”

The correct answer is D. When communicating with high-performance team members, the Team Leader should use closed-loop communication. By receiving a clear response and eye contact, the Team Leader confirms that the team member heard and understood the message. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > How to Communicate > Closed-Loop Communications; page 98]

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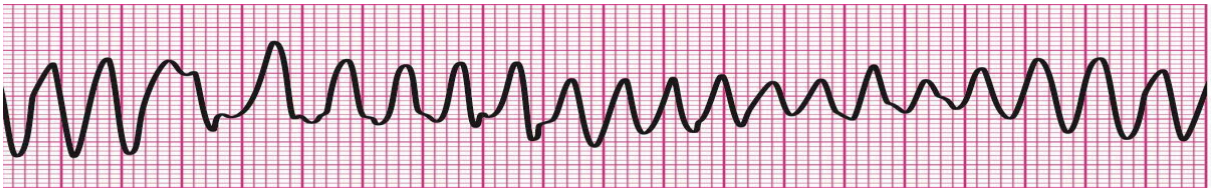
10. A patient has a witnessed loss of consciousness. The lead II ECG reveals this rhythm. Which is the appropriate treatment?



A. Defibrillation
B. Synchronized cardioversion
C. Administration of adenosine 6 mg IV push
D. Administration of epinephrine 1 mg IV push

The correct answer is A. Ventricular fibrillation and pulseless ventricular tachycardia require CPR until a defibrillator is available. Both are treated with high-energy unsynchronized shocks. The interval from collapse to defibrillation is one of the most important determinants of survival from cardiac arrest. Early defibrillation is critical for patients with sudden cardiac arrest (ventricular fibrillation/pulseless ventricular tachycardia). [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Defibrillate (Shockable Rhythm: VF/pVT); page 120]

11. In addition to clinical assessment, which is the most reliable method to confirm and monitor correct placement of an endotracheal tube?

A. Hemoglobin levels
B. Continuous waveform capnography
C. Arterial blood gases
D. Chest radiography

The correct answer is B. The AHA recommends continuous waveform capnography in addition to clinical assessment as the most reliable method of confirming and monitoring correct placement of an endotracheal tube. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Respiratory Arrest > Primary Assessment > Airway Management in Respiratory Arrest; page 102]

12. What is an effect of excessive ventilation?

A. Increased venous return
B. Decreased cardiac output
C. Decreased intrathoracic pressure
D. Increased perfusion pressures

The correct answer is B. Excessive ventilation can be harmful because it increases intrathoracic pressure, decreases venous return to the heart, and diminishes cardiac output and survival. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Identifying Respiratory Problems by Severity > Respiratory Arrest > Critical Concepts: Avoiding Excessive Ventilation; page 102]

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13. Which best describes an action taken by the Team Leader to avoid inefficiencies during a resuscitation attempt?

    A. Perform the most complicated tasks
    B. Assign most tasks to the more experienced team members
    C. Assign the same tasks to more than one team member
    D. Clearly delegate tasks

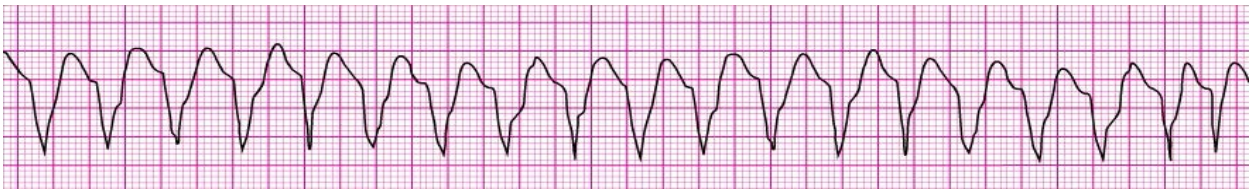
The correct answer is D. To avoid inefficiencies, the Team Leader must clearly delegate tasks. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > Roles > Clear Roles and Responsibilities; page 95]

14. You are caring for a patient with a suspected stroke whose symptoms started 2 hours ago. The CT scan was normal, with no signs of hemorrhage. The patient does not have any contraindications to fibrinolytic therapy. Which treatment approach is best for this patient?

    A. Wait for the results of the MRI
    B. Hold fibrinolytic therapy for 24 hours
    C. Order an echocardiogram before fibrinolytic administration
    D. Give fibrinolytic therapy as soon as possible and consider endovascular therapy

The correct answer is D. Administer fibrinolytic therapy within 3 hours from onset of symptoms, or within 4.5 hours in selected patients. Consider endovascular therapy, which can be administered up to 24 hours from onset of symptoms for patients with large vessel occlusion. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Stroke > Approach to Stroke Care > Critical Time Periods; page 47]

15. Which best describes this rhythm?



    A. Supraventricular tachycardia
    B. Ventricular fibrillation
    C. Monomorphic ventricular tachycardia
    D. Polymorphic ventricular tachycardia

The correct answer is C. This ECG rhythm strip shows a monomorphic ventricular tachycardia. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Rhythms for Unstable Tachycardia; pages 75-76]

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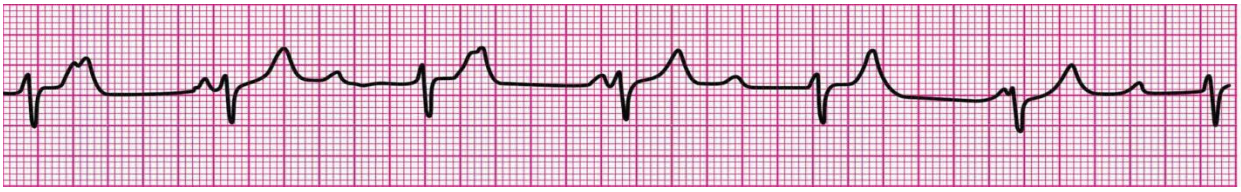
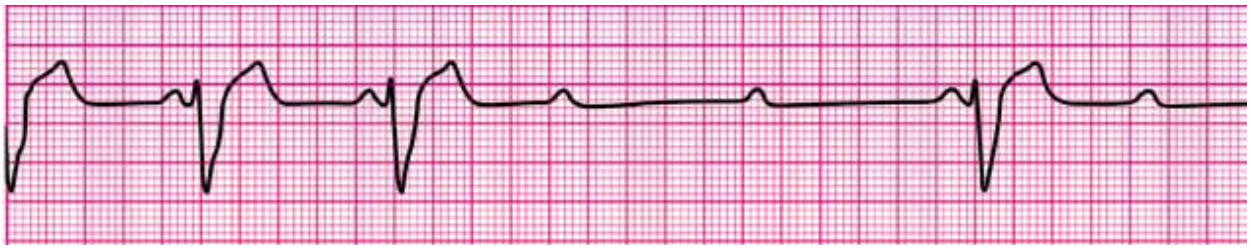
16. You have completed 2 minutes of CPR. The ECG monitor displays the lead II rhythm shown here, and the patient has no pulse. Another member of your team resumes chest compressions, and an IV is in place. Which do you do next?



A. Insert an advanced airway
B. Give epinephrine 1 mg IV
C. Start a dopamine infusion
D. Give atropine 0.5 mg

The correct answer is B. Give epinephrine as soon as IV/IO access become available. A dose of 1 mg IV/IO should be given and repeated every 3 to 5 minutes. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: PEA and Asystole > Managing Asystole/PEA: The Adult Cardiac Arrest Algorithm > The Asystole/PEA Pathway of the Cardiac Arrest Algorithm > Managing Asystole/PEA > Critical Concepts: Administer Epinephrine; page 133]

17. Which type of atrioventricular block best describes this rhythm?



A. Second-degree type I
B. Third-degree
C. First-degree
D. Second-degree type II

The correct answer is D. This ECG rhythm strip shows second-degree type II atrioventricular block. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Bradycardia> Rhythms for Bradycardia; pages 66-67]

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18. For STEMI patients, which best describes the recommended maximum goal time for first medical contact–to–balloon inflation time for percutaneous coronary intervention?

    A. 90 minutes
    B. 150 minutes
    C. 180 minutes
    D. 120 minutes

The correct answer is A. For the patient with STEMI, the goals of reperfusion are to give fibrinolytics within 30 minutes of arrival or perform percutaneous coronary intervention within 90 minutes of arrival. The goal for first medical contact–to–balloon inflation time is 90 minutes. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > Immediate ED Assessment and Treatment; page 37]

19. A patient is being resuscitated in a very noisy environment. A team member thinks he heard an order for 500 mg of amiodarone IV. Which is the best response from the team member?

    A. "Amiodarone 500 mg IV has been given."
    B. "OK."
    C. "I have an order to give 500 mg of amiodarone IV. Is this correct?"
    D. "Are you sure?"

The correct answer is C. Unclear communication can lead to unnecessary delays in treatment or to medication errors. Team members should question an order if the slightest doubt exists. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > How to Communicate > Closed-Loop Communications; page 98]

20. A team member is unable to perform an assigned task because it is beyond the team member's scope of practice. Which action should the team member take?

    A. Seek expert advice
    B. Do it anyway
    C. Assign it to another team member
    D. Ask for a new task or role

The correct answer is D. Not only should everyone on the team know his or her own limitations and capabilities, but the Team Leader should also be aware of them. This allows the Team Leader to evaluate team resources and call for backup of team members when assistance is needed. High-performance team members should anticipate situations in which they might require assistance and inform the Team Leader. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > Role > Clear Roles and Responsibilities; pages 95-96]

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21. Your patient is in cardiac arrest and has been intubated. To assess CPR quality, which should you do?

A. Obtain a chest x-ray
B. Check the patient's pulse
C. Monitor the patient's P_{ETCO_2}
D. Obtain a 12-lead ECG

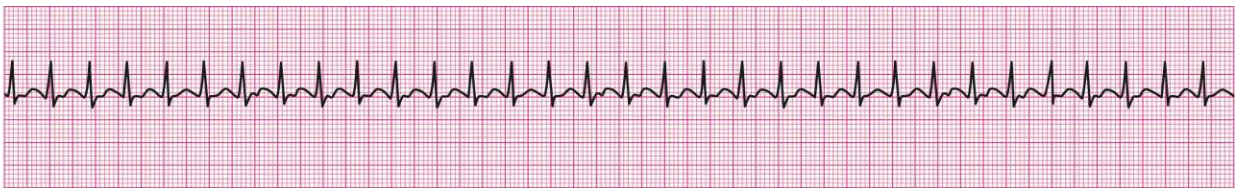
The correct answer is C. The AHA recommends using quantitative waveform capnography in intubated patients to monitor CPR quality, optimize chest compressions, and detect return of spontaneous circulation during chest compressions. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Physiologic Monitoring During CPR > End-Tidal CO2; page 126]

22. Which best describes this rhythm?

A. Third-degree atrioventricular block
B. First-degree atrioventricular block
C. Second-degree atrioventricular block type I
D. Second-degree atrioventricular block type II

The correct answer is A. This ECG rhythm strip shows third-degree atrioventricular block. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Bradycardia > Rhythms for Bradycardia; pages 66-67]

23. A responder is caring for a patient with a history of congestive heart failure. The patient is experiencing shortness of breath, a blood pressure of 68/50 mm Hg, and a heart rate of 190/min. The patient's lead II ECG is displayed here. Which best characterizes this patient's rhythm?



A. Sinus tachycardia
B. Unstable supraventricular tachycardia
C. Stable supraventricular tachycardia
D. Perfusing ventricular tachycardia

The correct answer is B. This ECG rhythm strip shows supraventricular tachycardia, and the patient is showing signs and symptoms of unstable tachycardia. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable; pages 75-77]

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24. What is the recommended range from which a temperature should be selected and maintained constantly to achieve targeted temperature management after cardiac arrest?

    A. 35°C to 37°C
    B. 32°C to 36°C
    C. 26°C to 28°C
    D. 29°C to 31°C

The correct answer is B. For targeted temperature management, healthcare providers should select and maintain a constant target temperature between 32°C and 36°C for a period of at least 24 hours. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Application of the Adult Post–Cardiac Arrest Care Algorithm > Targeted Temperature Management; page 157]

25. What is the minimum systolic blood pressure one should attempt to achieve with fluid administration or vasoactive agents in a hypotensive post–cardiac arrest patient who achieves return of spontaneous circulation?

    A. 85 mm Hg
    B. 90 mm Hg
    C. 75 mm Hg
    D. 80 mm Hg

The correct answer is B. If the patient's volume status is adequate, infusions of vasoactive agents may be initiated and titrated to achieve a minimum systolic blood pressure of 90 mm Hg or greater or a mean arterial pressure of 65 mm Hg or more. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Multiple System Approach to Post–Cardiac Arrest Care; page 152]

Use this scenario to answer the next 6 questions:

A 45-year-old man had coronary artery stents placed 2 days ago. Today, he is in severe distress and is reporting "crushing" chest discomfort. He is pale, diaphoretic, and cool to the touch. His radial pulse is very weak, blood pressure is 64/40 mm Hg, respiratory rate is 28 breaths per minute, and oxygen saturation is 89% on room air. When applied, the cardiac monitor initially showed ventricular tachycardia, which then quickly changed to ventricular fibrillation.

26. On the basis of this patient's initial presentation, which condition do you suspect led to the cardiac arrest?

    A. Acute heart failure
    B. Supraventricular tachycardia with ischemic chest pain
    C. Acute ischemic stroke
    D. Acute coronary syndrome

The correct answer is D. Acute life-threatening complications of acute coronary syndromes include ventricular fibrillation, pulseless ventricular tachycardia, symptomatic bradycardias, and unstable tachycardias. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Coronary Syndromes > Goals for ACS Patients; page 29]

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27. In addition to defibrillation, which intervention should be performed immediately?

    A. Vasoactive medication administration
    B. Chest compressions
    C. Vascular access
    D. Advanced airway insertion

The correct answer is B. Ventricular fibrillation and pulseless ventricular tachycardia require CPR until a defibrillator is available. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Managing VF/pVT: The Adult Cardiac Arrest Algorithm > VF/pVT Path; page 116, and Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Defibrillate (Shockable Rhythm: VF/pVT); page 120]

28. Despite 2 defibrillation attempts, the patient remains in ventricular fibrillation. Which drug and dose should you administer first to this patient?

    A. Amiodarone 300 mg
    B. Lidocaine 1 mg/kg
    C. Atropine 1 mg
    D. Epinephrine 1 mg

The correct answer is D. For persistent ventricular fibrillation/pulseless ventricular tachycardia, give 1 shock and resume CPR immediately for 2 minutes after the shock. When IV/IO access is available, give epinephrine 1 mg IV/IO during CPR after the second shock and repeat epinephrine 1 mg IV/IO every 3 to 5 minutes. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Vasopressors; page 123]

29. Despite the drug provided above and continued CPR, the patient remains in ventricular fibrillation. Which other drug should be administered next?

    A. Magnesium sulfate 1 g
    B. Atropine 1 mg
    C. Lidocaine 1 to 1.5 mg/kg
    D. Epinephrine 1 mg

The correct answer is C. Administer either lidocaine or amiodarone for treatment of ventricular fibrillation or pulseless ventricular tachycardia unresponsive to shock delivery, CPR, and a vasopressor. During cardiac arrest, consider amiodarone 300 mg IV/IO push for the first dose. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Applying the Adult Cardiac Arrest Algorithm: VF/pVT Pathway > Antiarrhythmics > pages 123-124]

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30. The patient has return of spontaneous circulation and is not able to follow commands. Which immediate post–cardiac arrest care intervention do you choose for this patient?

    A. Administer epinephrine
    B. Initiate targeted temperature management
    C. Extubate
    D. Check the glucose level

The correct answer is B. To protect the brain and other organs, the high-performance team should start targeted temperature management in patients who remain comatose (lack of meaningful response to verbal commands) with return of spontaneous circulation after cardiac arrest. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Application of the Adult Post–Cardiac Arrest Care Algorithm > Targeted Temperature Management; page 157]

31. Which would you have done first if the patient had not gone into ventricular fibrillation?

    A. Established IV access
    B. Performed synchronized cardioversion
    C. Obtained a 12-lead ECG
    D. Given atropine 1 mg

The correct answer is B. Synchronized shocks are recommended for patients with unstable supraventricular tachycardia, unstable atrial fibrillation, unstable atrial flutter, and unstable regular monomorphic tachycardia with pulses. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Cardioversion > Recommendations; page 82]

32. Your rescue team arrives to find a 59-year-old man lying on the kitchen floor. You determine that he is unresponsive. Which is the next step in your assessment and management of this patient?

    A. Check the patient's breathing and pulse
    B. Open the patient's airway
    C. Check for a medical alert bracelet
    D. Apply the AED

The correct answer is A. After you determine that a patient is unresponsive and activate your emergency team, a breathing check and pulse check should be performed. Ideally, these checks are done simultaneously to minimize delay in detection of cardiac arrest and initiation of CPR. After determining that a patient is not breathing and has no pulse, start CPR, beginning with chest compressions. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Table 2: BLS Assessment; page 18]

33. You are performing chest compressions during an adult resuscitation attempt. Which rate should you use to perform the compressions?

    A. 100 to 120/min
    B. Less than 80/min
    C. 80 to 90/min
    D. More than 120/min

The correct answer is A. When performing chest compressions, you should compress at a rate of 100 to 120/min. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Critical Concepts: High-Quality CPR; page 17]

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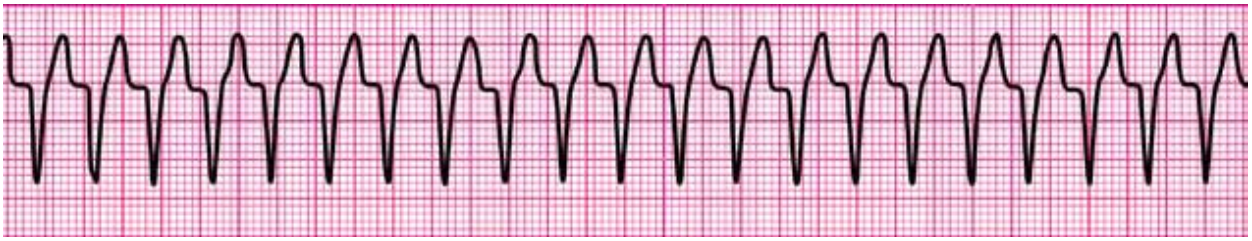
34. A patient in respiratory distress and with a blood pressure of 70/50 mm Hg presents with the lead II ECG rhythm shown here. Which is the appropriate treatment?



A. Performing defibrillation
B. Administering adenosine 6 mg IV push
C. Performing synchronized cardioversion
D. Performing vagal maneuvers

The correct answer is C. Synchronized shocks are recommended for patients with unstable supraventricular tachycardia, unstable atrial fibrillation, unstable atrial flutter, and unstable regular monomorphic tachycardia with pulses. Synchronized cardioversion uses a lower energy level than attempted defibrillation. Low-energy shocks should always be delivered as synchronized shocks to avoid precipitating ventricular fibrillation. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Cardioversion > Recommendations; page 82]

35. Which of these tests should be performed for a patient with suspected stroke as early as possible but no more than 20 minutes after hospital arrival?

A. Coagulation studies
B. Cardiac enzymes
C. Noncontrast CT scan of the head
D. 12-Lead ECG

The correct answer is C. A critical decision point in the assessment of the patient with acute stroke is the performance and interpretation of a noncontrast CT scan to differentiate ischemic from hemorrhagic stroke. The CT scan should be completed within 20 minutes of the patient's arrival in the emergency department and should be read within 45 minutes from emergency department arrival. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Stroke > Immediate General and Neurologic Assessment > Decision Point: Hemorrhage or No Hemorrhage; page 57]

36. Which best describes the length of time it should take to perform a pulse check during the BLS Assessment?

A. 5 to 10 seconds
B. 16 to 20 seconds
C. 11 to 15 seconds
D. 1 to 4 seconds

The correct answer is A. Check the pulse for 5 to 10 seconds. If there is no pulse within 10 seconds, start CPR, beginning with chest compressions. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Table 2: BLS Assessment; page 18]

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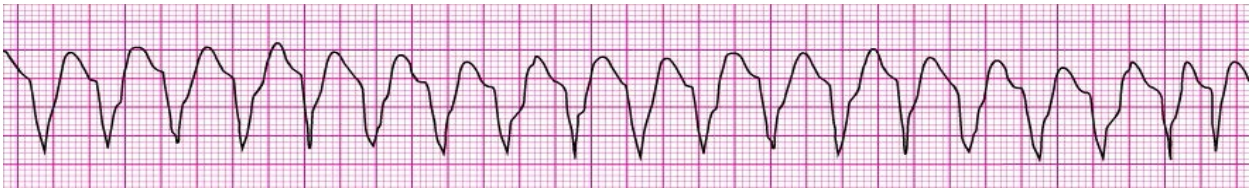
37. Which is the recommended next step after a defibrillation attempt?

A. Resume CPR, starting with chest compressions
B. Check the ECG for evidence of a rhythm
C. Open the patient's airway
D. Determine if a carotid pulse is present

The correct answer is A. Follow each shock immediately with CPR, beginning with chest compressions. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment; page 18]

Use this scenario to answer the next 4 questions:

A 68-year-old woman presents with light-headedness, nausea, and chest discomfort. Your assessment finds her awake and responsive but appearing ill, pale, and grossly diaphoretic. Her radial pulse is weak, thready, and fast. You are unable to obtain a blood pressure. She has no obvious dependent edema, and her neck veins are flat. Her lung sounds are equal, with moderate rales present bilaterally. The cardiac monitor shows the rhythm seen here.



38. On the basis of this patient's initial assessment, which ACLS algorithm should you follow?

A. Adult Suspected Stroke
B. Adult Cardiac Arrest
C. Acute Coronary Syndromes
D. Adult Tachycardia With a Pulse

The correct answer is D. This ECG rhythm strip shows ventricular tachycardia. The Adult Tachycardia With a Pulse Algorithm outlines the steps for assessment and management of a patient presenting with symptomatic tachycardia with pulses. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Managing Unstable Tachycardia: The Adult Tachycardia With a Pulse Algorithm; page 79]

39. The patient's pulse oximeter shows a reading of 84% on room air. Which initial action do you take?

A. Intubate the patient
B. Check the pulse oximeter probe
C. Perform bag-mask ventilation
D. Apply oxygen

The correct answer is D. In the application of the Tachycardia Algorithm to an unstable patient, identify and treat the underlying cause. Give oxygen, if indicated, and monitor oxygen saturation. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Applying the Adult Tachycardia With a Pulse Algorithm > Identify and Treat Underlying Cause; page 80]

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40. After your initial assessment of this patient, which intervention should be performed next?

    A. Endotracheal intubation
    B. Synchronized cardioversion
    C. Administration of amiodarone 150 mg IM
    D. Immediate defibrillation

The correct answer is B. Synchronized shocks are recommended for patients with unstable supraventricular tachycardia, unstable atrial fibrillation, unstable atrial flutter, and unstable regular monomorphic tachycardia with pulses. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Tachycardia: Stable and Unstable > Cardioversion > Recommendations; page 82]

41. If the patient became apneic and pulseless but the rhythm remained the same, which would take the highest priority?

    A. Perform defibrillation
    B. Administer amiodarone 300 mg
    C. Administer atropine 0.5 mg
    D. Insert an advanced airway

The correct answer is A. Pulseless ventricular tachycardia is included in the algorithm because it is treated as ventricular fibrillation. Ventricular fibrillation and pulseless ventricular tachycardia require CPR until a defibrillator is available. Both are treated with high-energy unsynchronized shocks. The interval from collapse to defibrillation is one of the most important determinants of survival from cardiac arrest. Early defibrillation is critical for patients with sudden cardiac arrest. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Cardiac Arrest: VF/pVT > Managing VF/Pulseless VT: The Adult Cardiac Arrest Algorithm > VF/pVT Path; page 116]

42. If a team member is about to make a mistake during a resuscitation attempt, which best describes the action that the Team Leader or other team members should take?

    A. Address the team member immediately
    B. Remove the team member from the area
    C. Conduct a debriefing after the resuscitation attempt
    D. Reassign the team tasks

The correct answer is A. During a resuscitation attempt, the leader or a member of a high-performance team may need to intervene if an action that is about to occur may be inappropriate at the time. Team members should question a colleague who is about to make a mistake. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Elements of Effective Team Dynamics as Part of a High-Performance Team > Roles > Constructive Interventions; pages 96-97]

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43. Which facility is the most appropriate EMS destination for a patient with sudden cardiac arrest who achieved return of spontaneous circulation in the field?

    A. Acute long-term care unit
    B. Coronary reperfusion–capable medical center
    C. Acute rehabilitation care unit
    D. Comprehensive stroke care unit

The correct answer is B. After return of spontaneous circulation in patients in whom coronary artery occlusion is suspected, providers should transport the patient to a facility capable of reliably providing coronary reperfusion (eg, percutaneous coronary intervention) and other goal-directed post–cardiac arrest care therapies. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Multiple System Approach to Post–Cardiac Arrest Care; pages 151-152]

44. What should be the primary focus of the CPR Coach on a resuscitation team?

    A. To document CPR outcomes
    B. To resolve team arguments
    C. To ensure high-quality CPR
    D. To convey positive feedback

The correct answer is C. The goal of the CPR Coach to ensure high-quality CPR by providing feedback about the rate, depth, and recoil of chest compressions, delivery of ventilations (rate and volume), and compression pauses. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Roles in a High-Performance Team > Team Member Role: CPR Coach > Critical Concepts: CPR Coach Role; page 95]

45. Which is the primary purpose of a medical emergency team or rapid response team?

    A. Providing diagnostic consultation to emergency department patients
    B. Improving care for patients admitted to critical care units
    C. Improving patient outcomes by identifying and treating early clinical deterioration
    D. Providing online consultation to EMS personnel in the field

The correct answer is C. Many hospitals have implemented the use of medical emergency teams or rapid response teams. The purpose of these teams is to improve patient outcomes by identifying and treating early clinical deterioration. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Recognition: Signs of Clinical Deterioration > Rapid Response > RRTs and METs; page 28]

46. During post–cardiac arrest care, which is the recommended duration of targeted temperature management after reaching the correct temperature range?

    A. At least 24 hours
    B. At least 36 hours
    C. At least 48 hours
    D. At least 8 hours

The correct answer is A. For targeted temperature management, healthcare providers should select and maintain a constant target temperature between 32°C and 36°C for a period of at least 24 hours. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Post–Cardiac Arrest Care > Application of the Adult Post–Cardiac Arrest Care Algorithm > Targeted Temperature Management; page 157]

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47. EMS providers are treating a patient with suspected stroke. According to the Adult Suspected Stroke Algorithm, which critical action performed by the EMS team will expedite this patient's care on arrival and reduce the time to treatment?

A. Establish IV access
B. Treat hypertension
C. Review the patient's history
D. Provide prehospital notification

The correct answer is D. Prearrival notification allows the hospital to prepare to evaluate and manage the patient effectively. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Acute Stroke > Identification of Signs of Possible Stroke and Activate Emergency Response > Activate EMS System Immediately; page 50]

48. Which type of atrioventricular block best describes this rhythm?

A. Second-degree atrioventricular block type II
B. Third-degree atrioventricular block
C. First-degree atrioventricular block
D. Second-degree atrioventricular block type I

The correct answer is D. This ECG rhythm strip shows second-degree atrioventricular block type I. [*ACLS Provider Manual*, Part 2: Preventing Arrest > Bradycardia > Rhythms for Bradycardia; pages 66-67]

49. Which is the maximum interval you should allow for an interruption in chest compressions?

A. 15 seconds
B. 20 seconds
C. 25 seconds
D. 10 seconds

The correct answer is D. ACLS providers must make every effort to minimize any interruptions in chest compressions. Try to limit interruptions in chest compressions (eg, defibrillation and rhythm analysis) to no longer than 10 seconds. When you stop chest compressions, blood flow to the brain and heart stops. [*ACLS Provider Manual*, Part 1: Overview of ACLS > Systematic Approach > BLS Assessment > Critical Concepts: Minimizing Interruptions in Chest Compressions; page 19]

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50. How can you increase chest compression fraction during a code?

A. Administer epinephrine during the 2-minute cycle
B. Initiate intravenous or intraosseous access during the 2-minute cycle
C. Charge the defibrillator 15 seconds before conducting a rhythm check
D. Interchange the Ventilator and Compressor during a rhythm check

The correct answer is C. Shortening the interval between the last compression and the shock by even a few seconds can improve shock success (defibrillation and return of spontaneous circulation). Thus, it is reasonable for healthcare providers to practice efficient coordination between CPR and defibrillation to minimize the hands-off interval between stopping compressions and administering the shock. For example, after verifying a shockable rhythm and initiating the charging sequence on the defibrillator, another provider should resume chest compressions and continue until the defibrillator is fully charged. The defibrillator operator should deliver the shock as soon as the compressor removes his or her hands from the patient's chest and all providers are "clear" of contact with the patient. [*ACLS Provider Manual*, Part 3: High-Performance Teams > Critical Concepts: Ways to Increase Chest Compression Fraction; page 92]

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