

ABPM MAINTENANCE OF CERTIFICATION (MOC) – QUESTIONS

**\*\*\* Your answers must be written on the Attendance Verification form\*\*\***

**The Attendance Verification Form must be submitted at the end of your conference stay or sent to [necoem@comcast.net](mailto:necoem@comcast.net).**

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**Wednesday, November 28**

**Upper Extremity Exam Course, Huyck, Li, Stein, Timmons**

True or False

1. Horn blower is a sign that you see in patients with large rotator cuff tears.
2. Patients with impingement signs typically have pain between 140 to 170 degrees of forward flexion on clinical exam.
3. What are the key clinical findings in patients that present with shoulder instability?
  - A. Weakness in forward flexion
  - B. Weakness in external rotation
  - C. Positive Apprehension test
  - D. Positive Relocation test
  - E. C and D.

4. True or False

The definition of shoulder multidirectional instability is that the patient will present with inferior instability and either anterior or posterior instability or instability in all three directions.

5. List physical exam findings associated with lateral epicondylitis.
  - A. Tenderness at the common extensor origin
  - B. Increased pain with resisted wrist extension
  - C. Increased pain with resisted supination
  - D. Increased pain gripping or hand shaking
  - E. All of the above.
6. With any orthopedic complaint you should always examine the joint above and below the affected joint? TRUE/FALSE
7. A patient with numbness and tingling into the medial fingers with percussion of the cubital tunnel may have entrapment of what nerve?
  - A. Median nerve
  - B. Ulnar nerve
  - C. Radial nerve
  - D. C8
8. A day care worker who repetitively lifts babies and has a positive Finkelstein test and tenderness in the first dorsal compartment on exam most likely has:
  - A. Carpal tunnel syndrome
  - B. DeQuervain tenosynovitis
  - C. CMC arthritis
  - D. Cubital tunnel syndrome
9. A test that may help distinguish peripheral upper extremity neuropathy from cervical radiculopathy on exam is:
  - A. Spurling maneuver
  - B. Hoffman sign
  - C. Clonus
  - D. Lhermitte's sign

# New England College of Occupational and Environmental Medicine Conference 2018

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### **Thursday, November 29**

#### **Timmons, Nuclear Radiation Safety**

True or False

10. The biologic damage caused by ionizing radiation is due to high speed particles (usually electrons) traveling through cells and depositing concentrated energy, knocking out electrons from biomolecules, breaking chemical bonds, and causing other biochemical damage.

11. The use of potassium iodide as a blocker of thyroid radioiodine uptake to prevent thyroid cancer in radiation exposed individuals is safe for adults, but not for children under 15 or women who are pregnant or breastfeeding.

12. A traveler on an airplane gets more radiation exposure from cosmic background radiation in 15 seconds while sitting on a flight, than from the whole body “x-ray” screener machine they walk through in airport security.

13. Radioactive material from a “dirty bomb” would likely be deposited within a few blocks or less from the site of the explosion but could cause widespread public fear and panic—which is what terrorists seek.

14. It is nearly impossible to survive a “dirty bomb” or radiation exposure attack, so workplaces and individual citizens should not waste time educating and preparing for such an event and focus efforts instead on other event and exposure scenarios that are survivable.

#### **Tomassoni, Introduction to Chemical and Biological Terrorism**

True or False

15. In an organized approach to toxidrome recognition for a patient exposed to a chemical agent one should gather vital signs, assess the patient’s mental status and other autonomic signs like pupillary size and skin color/moisture/temperature.

16. An important difference between intoxication and infection is that lack of volatility of many toxins makes person to person inhalational transmission unlikely.

**Multiple choice: Choose all the correct answers.**

17. Which of the following antidotes are contained in the CDC’s CHEMPACK program for the treatment of organophosphate poisoning?

- a. atropine
- b. hydroxocobalamin
- c. pralidoxime
- d. sodium thiosulfate

#### **Goldman, Acute Poisoning Emergencies and Responses**

18. True or False: Small pupils, fasciculations and increased secretions is characteristic of cyanide poisoning.

19. The medical department is called because several people in the offices within a warehouse building have developed headache and nausea in the afternoon—they are worried about the diesel exhaust from the new forklifts brought in to move the heavier boxes. The best response in this situation:

- a. Because of concern about exposures to polycyclic hydrocarbons in diesel, and future risk of cancer, you advise increasing the ventilation in the warehouse and putting air purifiers in each of the offices.
- b. Because of concern about possible carbon monoxide exposure, you advise immediately stopping use of diesel forklifts, evacuating employees, and sending symptomatic employees to a nearby hospital for evaluation and treatment if necessary.
- c. You suspect employees are suffering headaches and tension from the increased noise generated by these forklifts. You call engineering to check the noise levels and provide employees with ear plugs.

20. One afternoon, a supervisor sends a depressed hospital pharmacist to Employee Health because he does not look well at work and appears unable to focus. The pharmacist tells you that he has stomach pains and very watery stools. He denies any recent travel, or unusual eating patterns. You observe that he looks depressed, ill and weak. His pupils are mid point. His blood pressure is low, and he has an irregular pulse. You check an EKG and see that he has a prolonged QT interval, and some ventricular premature contractions. Although you think this could be viral gastroenteritis, with dehydration with electrolyte imbalance, you are concerned he may have overdosed on a medication he had access to in the pharmacy. You plan to send him to the ED immediately, for assessment and treatment, but you also plan to get additional information, because you are concerned he may have overdosed on which of the following

- a. Oxycodone (opioid)
- b. Amitriptyline (anti-depressant)
- c. Arsenic Trioxide (Trisenox) (cancer medication-treats acute promyelocytic leukemia)

### **Howard, Technology and Occupational Health**

True or False

21. Technology is having no discernable effect on manufacturing employment?
22. Sensor technology involves the Internet of Things.
23. Nonstandard work arrangements like temporary work are only seen in the services industry.

### **Wuerz, Evaluation and Treatment of Hip Impairment**

True or False

24. Hip arthroscopy is indicated for the treatment of hip osteoarthritis.
25. The rehabilitation and recovery after hip arthroscopy is longer than after a hip replacement.
26. Intra-articular hip injections are an important diagnostic tool.

### **Ross, Shoulder Impairment**

27. The shoulder consists of the articulation of \_\_\_\_ bones

- a. 1
- b. 2
- c. 3
- d. 4

28. The 3 synovial joints of the shoulder girdle are:

- a. sternohumeral, glenohumeral, acromioclavicular
- b. sternoclavicular, glenoclavicular, acromioclavicular
- c. sternoclavicular, glenohumeral, acromiosternal
- d. sternoclavicular, glenohumeral, acromioclavicular

29. Early surgery intervention is the initial treatment of choice for most rotator cuff injuries, including partial thickness tears

- a. True
- b. False

### **Sevarino, The Opioid Crisis: Lessons from the Tranches**

30. Approximately what percentage of people obtaining pain pills illicitly get them prescribed by their doctor or given to them by friends or family:

- a. 10%
- b. 25%
- c. 35%
- d. 50%
- e. 75%
- e. 90%

31. Evidence-based treatment of opioid use disorders include:
- office-based methadone-maintenance
  - office-based buprenorphine maintenance
  - opioid detoxification
  - abstinence-based relapse prevention
  - oral naltrexone
32. The rank order of substances attributed to annual rates of death in the U.S. in 2016, from most to least, was:
- alcohol, opioids, tobacco
  - heroin, alcohol, tobacco
  - tobacco, pain pills, alcohol
  - tobacco, alcohol, opioids
  - opioids, alcohol, pain pills

### **Sighinolfi, Saito, Drugs of Impairment: A look at Opioids (and a brief look at Medical Marijuana) in Workers' Compensation**

True or False

33. In Maine, Employers/Insurers are required to pay for Medical Marijuana.
34. The prescription patterns for Opioids in Workers Compensation in New England has been impacted by State regulatory actions.
35. Injured workers using opioids were often using other drugs like benzodiazepines and muscle relaxants.

### **Friday, November 30**

#### **Doorly, Spine Surgery for Occupational Injuries**

True or False

36. Only 50-60% of injured workers with disabling low back pain return to work after spinal fusion.
37. Similar outcomes have been reported after cervical disc arthroplasty in worker's compensation and non-workers' compensation patients.
38. PROMs are completed by the provider at every visit.

#### **Bernard, Physiatry-Return to Work for Spine Disorders**

True or False

39. The patient's comfort level should determine when they are ready to return to work.
40. The patient should expect to work through the pain and an exercise-based program.
41. The patient's work status should only be discussed with case manager and not discussed during the clinical visit.
42. The patient should be pain free when they return to work.

#### **DeMaria, Public Health, Occupational Health and Infectious Disease**

43. Among the following, which is the least likely to present a threat of infection to an international business traveler who is not a healthcare worker in areas where these occur?

- Middle East respiratory syndrome (MERS)
- Malaria
- Tuberculosis
- Ebola
- Non-tuberculous mycobacteria

44. True or False. Antimicrobial resistance is primarily a problem of the developed world.

45. Among the following statements, which best apply to a response to a confirmed case of active, infectious tuberculosis in the workplace?

- An exposure evaluation should be done to assess degree of airspace sharing of other employees with the case
- All employees in the same building should be considered exposed
- All exposed employees should have a skin test for tuberculosis or an interferon gamma release assay
- All exposed employees should have a chest x-ray
- All exposed employees should have a symptom check

- a) 3 only
- b) 1, 3 and 5
- c) 2 and 4
- d) 4 and 5

46. Which of the following statements about Legionnaires disease is TRUE?

- a) Most cases of Legionnaires disease are associated with the workplace
- b) Most cases of Legionnaires disease occur as part of an outbreak
- c) Virtually all sporadic cases of Legionnaires disease have no source of infection established
- d) Cases of Legionnaires disease are rare and are becoming less frequent

### **Pollack, Figueroa, Telemedicine: What is the Future**

True or False

47. Telemedicine was introduced to workers' comp in 2000.

48. Remote triage nurses should refer every call to a telemedicine physician in order to reduce liability on the part of the triage company.

49. One of the benefits of telemedicine for workplace injuries is expedited care for major injuries.

### **Holihan, Smith, Telemedicine: How It's Delivered Today**

50. Can a health care practitioner practice telemedicine in a state they are not licensed to practice in? Yes or No

51. The percentage of large employers expected to offer telemedicine in 2019 is:

- a. 48%
- b. 55%
- c. 74%
- d. 97%

52. True or False. The standard for care for telemedicine is different from the standard for medicine delivered in person.

53. What is the most common technical problem users have with telemedicine today?

- A. Insufficient bandwidth for streaming video.
- B. Cannot verify security of connection.
- C. Cannot remember password to download app.
- D. Poor video and/or audio quality.

### **Ferreira, Workplace Behavior Management-Clinical**

True or False

54. "Reasonable Suspicion" must be addressed only for employees subject to the requirements of the Department of Transportation regulations.

55. What is a best first question when meeting an employee sent to the Health Office for poor performance and behavior?

- A "I heard you were drunk at work again, how many drinks have you had today and when?"
- B "What seems to be the trouble between you and your supervisor?"
- C "Tell me what brings you to the Health Office today?"

56. An employee is sent to the Health Center for sleeping on the job and getting lost in the building frequently. What possibilities can the clinician consider?

- A The employee is distraught over an impending divorce with his wife
- B The employee has thyroid disease or hormonal imbalances
- C The employee may be a drug abuser
- D All of the above are possibilities

### **Dyleski-Najjar, Mental Health Disabilities in the Workplace: Worker and Employer Rights**

True or False

57. An employer can never request that an employee have a mental health evaluation?

58. A Health Care Provider can never provide an employer with information about their patient's mental health, including with information about the nature of the patient's condition, functional limitations in the absence of treatment, the need for reasonable accommodation, and suggested accommodations?

59. A Mental Health Care Provider can provide the employer with all of the patient's medical records to allow the employer to make its own assessment about the patient's fitness for duty and ability to perform essential job functions?

### **Dyleski-Najjar, Protecting Confidentiality in OM**

True or False

60. An employer is never a Covered Entity under HIPAA, even if it has an occupational health clinic for employees?
61. A covered health care provider who provides a health care service to an individual at the request of the individual's employer, or provides the service in the capacity of a member of the employer's workforce, may disclose the individual's protected health information to the employer for the purposes of workplace medical surveillance or the evaluation of work-related illness and injuries to the extent the employer needs that information to comply with OSHA, the Mine Safety and Health Administration (MSHA), or the requirements of State laws having a similar purpose?

### **Schwartz, Back Pain and MRI: The When's, Why's and What's**

True or False

62. In a patient with low back pain and suspected cauda equina syndrome, MRI is the most appropriate imaging study to be obtained.
63. In an elderly patient with acute, uncomplicated back pain, x-rays would be appropriate to be obtained as a first imaging study

### **Blum, Poliner, DOT/NRCME Update**

True or False

64. Regulatory requirements for acceptable blood pressure measurements can be found on the reverse of the current FMCSA Medical Examination Report form.
65. A Medical Examiner cannot qualify a commercial driver for less than one year after a prior qualification period of three months.
66. The legalization of the use and possession of marijuana by a state does not change the treatment of marijuana use under federal regulations applicable to commercial motor vehicle drivers operating a vehicle in interstate commerce.

### **Yang, Survival Mediterranean Style-Update on Firefighter Nutrition Interventions**

67. Which of the following nutritional interventions have been shown to reduce the risk of cardiovascular disease, cancer, dementia and all-cause mortality:
- Gluten-free diet
  - Mediterranean diet
  - Western Diet
  - Atkins Diet
68. True or False: The firefighters included in the current Mediterranean Diet intervention studies have expressed an increase understanding of nutritional knowledge after online platform learning.

### **Pensa, Lindt, Training the Primary Care Pipeline in OEM**

True or False

69. OEM providers see an estimated 80% of occupational and environmentally-related illnesses.
70. While most residents acknowledge that they lack skills in the recognition of occupational and environmental medicine, they believe that OEM skills are not important.

### **Cadet, Pilot Performance Under Varying Carbon Dioxide Concentrations in a Flight Simulator**

True or False

71. Heart rate variability is a measure of the autonomic nervous system's effect on heart rate and is a good measure for assessing the physiological effects of stress.
72. Indoor CO<sub>2</sub> concentrations are not an indicator of exposure to air pollutants and ventilation efficiency.

NECOEM Annual Conference 2018 ABPM Maintenance of Certification -ANSWERS

1. True
2. False. It is typically from 80 to 120.
3. E.
4. True
5. E.
6. True
7. B.
8. B.
9. A.
10. True
11. False
12. True
13. True
14. False
15. True
16. True
17. a and c are correct, Hydroxocobalamin and sodium thiosulfate are useful in the treatment of cyanide poisoning but are not included in the CHEMPACK program.
18. False
19. B
20. C
21. False, technology (automation) is considered a cause of job loss in manufacturing along with trade issues involving China.
22. True, sensors in the workplace are an example of the Internet of Things.
23. False, they are seen across all industrial sectors.
24. False
25. True
26. True
27. C.
28. D.
29. B.
30. C: Approximately 35% of those misusing prescription pain medications are prescribed them by their doctor, and another 40% get them for free from family or friends. Source: NSDUH 2016.
31. B: methadone maintenance must occur within a federally regulated opioid treatment program. Opioid detoxification alone leads to e=very high rates of relapse soon after detoxification. Abstinence-based programs have failed to achieve the efficacy demonstrated by MAT treatments (methadone, buprenorphine or IM naltrexone). Intramuscular, not oral, naltrexone, is FDA-approved for the treatment of opioid use disorders. See: The American Society of Addiction Medicine: National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use, 2017.
32. D: While the opioid crisis has focused attention on the devastating impact of opioid addiction, annually some 480,000 deaths a year are attributed to the effects of tobacco, then 88,000 to alcohol, and then 42,000 to opioids. Sources: Tobacco: CDC 2018, see [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/health\\_effects/tobacco\\_related\\_mortality/index.htm](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/index.htm); Alcohol: Centers for Disease Control and Prevention (CDC). Alcohol and Public Health: Alcohol-Related Disease Impact (ARDI). Average for United States 2006–2010 Alcohol-Attributable Deaths Due to Excessive Alcohol Use. Available at: [https://nccd.cdc.gov/DPH\\_ARDI/Default/Report.aspx?T=AAM&P=f6d7eda7-036e-4553-9968-9b17ffad620e&R=d7a9b303-48e9-4440-bf47-070a4827e1fd&M=8E1C5233-5640-4EE8-9247-1ECA7DA325B9&F=&D=](https://nccd.cdc.gov/DPH_ARDI/Default/Report.aspx?T=AAM&P=f6d7eda7-036e-4553-9968-9b17ffad620e&R=d7a9b303-48e9-4440-bf47-070a4827e1fd&M=8E1C5233-5640-4EE8-9247-1ECA7DA325B9&F=&D=;); Opioids: NIDA 2017, <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>
33. False. In June 2018, The Law Court in Maine under *Bourgoin v. Twin Rivers Paper Company*, vacated the decision of the Appellate Division and ruling that the federal Controlled Substances Act (CSA) preempts the Maine Medical Use of Marijuana Act (MMUMA) when the MMUMA is used as a basis for requiring an employer to reimburse an employee for the cost of medical marijuana. Consequently, the Maine Workers' Compensation Board cannot order Maine employers and their Workers' Compensation insurers to pay for medical marijuana.
34. True. Prescribing patterns for workers compensation claims reflect concerted efforts by the various stakeholders to respond to the opioid crisis, be it through rules employed by regulatory agencies, guidelines for prescribing opioids, or greater attention paid by the prescribing physicians and employers to the injured workers who are being prescribed and are taking the drugs. The share of Rx claims that are also opioid claims has decreased nationally from 55% in Service Year 2012 to 44% in Service Year 2016, in New England, a 52% to 39% drop was seen respectively.
35. True. Injured workers using opioids were often using other drugs like benzodiazepines and muscle relaxants, an inherently dangerous practice as all three classes have a sedating effect and when combined are "associated with a heightened risk of respiratory depression and death." For example, for the 2013 claims year period, concomitant use (within one week) of opioids and other central nervous system depressants was found in about 30 to 45% of opioid-using claims in all but one of the study states, with Louisiana coming in higher at about 51%. Florida and Georgia were next highest at about 43%, while Missouri and New Jersey were at the low end at 30%. California was also near the top of that list at about 42%. Compared to the numbers for the 2010 claims year, most states showed a decrease in concomitant use of opioids and other central nervous system depressants for 2013 claims, with Kentucky (-7%) and Texas (-5%) showing the most improvement, although three states, Nevada (7%), Indiana (2%), and Louisiana (2%) showed increases during that period and six other states showed no appreciable change. The authors also found substantial variation in the mix of opioids being prescribed, with stronger opioids such as oxycodone being favored in some states and comparatively weaker opioids such as hydrocodone getting greater use in others. For example, oxycodone was prescribed in only 1 to 2% of claims in California, Illinois, and Texas, while it was prescribed in 30% of claims in Massachusetts, although that high Massachusetts prescription rate in 2015 still constituted a 5% reduction from 2012. Connecticut, Minnesota, Pennsylvania, New York, and Wisconsin were in the 17-20% range for oxycodone prescriptions in 2015. According to NCCI's study, "Workers Compensation and Prescription Drugs: 2016 Update"

(Annual Issues Symposium, May 2016), the narcotics Oxycontin® and Oxycodone-Acetaminophen (commonly known as Percocet®) were among the most widely prescribed drugs in workers compensation for Service Year (SY) 2014.

- 36. False
- 37. True
- 38. False
- 39. False
- 40. True
- 41. False
- 42. False
- 43. D. Ebola
- 44. False
- 45. B 1,2,5
- 46. C. Virtually all sporadic cases of Legionnaires disease have no source of infection established
- 47. False
- 48. False
- 49. False
- 50. No
- 51. D. 97%
- 52. False
- 53. C.
- 54. False.
- 55. C.
- 56. D.
- 57. False
- 58. False
- 59. False
- 60. False
- 61. True
- 62. True
- 63. True
- 64. FALSE: This information is no longer printed on the reverse side of the form. Medical Examiners can refer to 49 CFR 391.432(f) and 49 CFR 391.41(b)(6) for recommendations concerning qualification criteria and duration related to hypertension.
- 65. FALSE - The Medical Examiner can qualify a driver for whatever period (two years or less) the examiner believes to be appropriate.
- 66. TRUE – Marijuana, including a mixture or preparation containing marijuana, continues to be classified as a Schedule I controlled substance by the DEA. FMCSRs state that a person is not qualified to drive a CMV if using, being in the possession of, or under the influence of any Schedule I controlled substance while on duty.
- 67. B. Mediterranean Diet
- 68. True

- 69. False. Primary care providers see the majority of OEM-related illnesses.
- 70. False
- 71. True
- 72. False