USMLE-STEP-2 Q&As

United States Medical Licensing Step 2

Pass USMLE USMLE-STEP-2 Exam with 100% Guarantee

Free Download Real Questions & Answers **PDF** and **VCE** file from:

https://www.leads4pass.com/usmle-step-2.html

100% Passing Guarantee
100% Money Back Assurance

Following Questions and Answers are all new published by USMLE Official Exam Center

- **Instant Download** After Purchase
- **100% Money Back** Guarantee
- **365 Days** Free Update
- **800,000+** Satisfied Customers

QUESTION 1

You have decided to survey the population to establish a health risk profile for the population. Due to budget constraints, you must gather data using a stratified random sample. This approach is correctly described as which of the following?

A. based on selecting individuals from a list at predetermined intervals (every ith individual)

B. random sampling of separate segments of a population

C. randomly grouping the population

D. sampling a cluster of individuals

E. removing outliers and sampling from remainder of group

Correct Answer: B

Sometimes it is possible to identify subgroups or strata of a population. Randomly sampling these segments, called strata, may reduce sampling error. Systematic sampling, selecting every "ith" individual, is not necessarily random, depending on how lists are constructed. Random groups would presumably be based on random selection of individuals, and little benefit would derive from studying such groups. Random groups produce more hazards statistically than randomized strata. Clusters are somewhat different; they may be small groups of the population occurring in specific areas, such as families, villages, or wards. The characteristics of clusters are not necessarily those of the population, but more those of location. Cluster sampling may be useful but does not have the same outcome as a stratified sample.

QUESTION 2

A5-year-old boy is reported by his kindergarten teacher to be easily distracted, impulsive, in need of continual supervision, but not hyperactive Select the diagnosis with which it is most likely to be associated.

A. childhood depression

B. childhood schizophrenia

C. conduct disorder

D. ADHD

E. infantile autism

Correct Answer: D

Infantile autism, called a pervasive developmental disorder in DSM-IV, typically is diagnosed when children do not demonstrate the acquisition of communication skills. Ability to form interpersonal relationships also is grossly impaired. Other behavioral manifestations of infantile autism include unusual repetitive mannerisms (e.g., spinning), marked anxiety during environmental changes, and high pain threshold. As to be expected, school performance is poor, though autistic children may display isolated areas (islands) of normal or superior intellectual functioning. Behavioral manipulation is useful in trying to contain the behavior of autistic children. Unlike infantile autism, childhood schizophrenia usually develops later in childhood and follows an intermittent course. Deterioration in social or school functioning is a characteristic presenting feature, along with hallucinations, delusions, and other manifestations of psychosis. Phenothiazine drugs offer effective treatment. Symptoms and signs of depression in children are similar to those in adults. However, children may not be able to recognize depressed feelings. Persistence of puzzling physical

problems in association with apathetic, withdrawn behavior is a common presentation. The use of antidepressants is controversial; family and individual counseling often can be quite helpful. ADHD once was called hyperactivity and minimal brain dysfunction. Characteristic signs include impulsivity, distractibility, inattention in school, and (usually but not universally) hyperactivity. A variety of pharmacologic agents, including imipramine, dextroamphetamine, and methylphenidate (Ritalin), have been recommended for treatment of ADHD.

QUESTION 3

A 35-year-old man presents with acute low back pain after lifting a couch in his home. Pain is in the lumbosacral area and increases with walking and bending. Examination reveals paraspinal muscle spasm and tenderness and negative straight leg raise bilaterally. Lower extremity strength is intact. Which of the following is the best next step in managing this patient?

A. bed rest for 1 week

B. referral to an orthopedic specialist

C. x-ray of lumbosacral spine

D. treatment with anti-inflammatory medication and gradual return to normal activity

E. referral to a pain clinic

Correct Answer: D

In younger patients, low back pain tends to be mild and self-limited, typically resolving in 46 weeks. Patients should be encouraged to remain active and symptom control can be achieved with pain medications. Low back pain is the leading cause of work-related disability in the United States. The absence of alarm symptoms such as unilateral or bilateral leg weakness and bladder, bowel or sexual dysfunction makes a cauda equine syndrome or other spinal cord injury unlikely. Age >50, constant pain at night, history of cancer, unexplained weight loss, and lack of response to conservative therapy make further investigation including radiologic evaluation appropriate.

QUESTION 4

Select the organism associated with the following clinical findings:

A male student returns from traveling to a developing country, with a complaint of eructation, abdominal cramps, and diarrhea for the past 2 weeks, and has lost 10 lbs.

A. aureus

B. beta-hemolytic Streptococcus

C. respiratory syncytial virus (RSV)

D. Mycoplasma pneumoniae

E. Haemophilus pertussis

F. Helicobacter pylori

G. Escherichia coli

H. Rickettsia prowazekii

I. Giardia lamblia

J. C. perfringens

Correct Answer: I

Giardiasis may cause cramping and a chronic diarrheal syndrome, with malabsorption and weight loss. Its distribution is worldwide, particularly where hygienic standards are not high. It also occurs sporadically in high-risk individuals. Streptococcal pyoderma, including erysipelas and impetigo, has been demonstrated to precede acute glomerulonephritis. Even when appropriate antibiotics are given in adequate dosage and duration for these conditions, renal damage may still result. Prevention thus consists of wound care, including cleaning wounds well and removal of crust. Mycoplasma infections are particularly common in families with younger children. They are frequently imported to the family by school-aged children, leading to a low-grade fever and persisting tracheobronchitis in the parents, or more acutely, an atypical pneumonia. G. lamblia is found in up to 20% of homosexual males, and may cause chronic diarrhea, although in these patients it tends to be asymptomatic. E. coli was first reported as a cause of watery diarrhea in nurseries in the 1940s. Although nursery epidemics with enteropathogenic serotypes had decreased in recent years in the United States, the increase of infant- child day care centers has resulted in their relatively frequent occurrence. Furunculosis is most frequently caused by coagulase-positive staphylococcal infections. The public health significance of this largely relates to the hazards of skin infections in food handlers and subsequent staphylococcal toxin in the food, leading to staphylococcal intoxication food-borne disease. H. pylori has been associated with gastric ulcers, but not with duodenal ulcers. Otitis media, whether acute or with effusion, commonly results from viral infection, such as by RSV. Various other organisms may be responsible including Streptococcu pneumoniae, H. influenzae, and others. C. perfringens, with rare exceptions, is transmitted in a meat dish prepared in bulk. Under propitious circumstances for the organism, especially on cooling of the food, bacterial multiplication can be very rapid. Symptoms begin to occur in the affected population in about 12 hours. Epidemic typhus is a rickettsial illness. Man is the host and long-term reservoir. The vectors are body lice (P. humanus corporis). The rickettsia are not present in human excretions and cannot be transmitted by person-toperson contact.

QUESTION 5

A31-year-old pregnant woman 67 weeks from her last menses comes to the emergency department of your hospital complaining of lower abdominal pain for 3 hours. The pain is diffused in the lower abdomen but worse on the right side. Her serum human chorionic gonadotropin (hCG) concentration is 9600 mIU/ mL.

Which of the following is the strongest evidence that she has a tubal ectopic pregnancy?

A. absence of an extrauterine sac on ultrasonography

B. absence of blood on culdocentesis

C. absence of a mass on bimanual examination

D. absence of an intrauterine sac on ultrasonography

E. her hCG concentration

Correct Answer: D

At serum hCG concentrations above the discriminatory zone (usually about 4000 mIU/mL), transvaginal sonography should reveal an intrauterine pregnancy. The absence of such a finding suggests either an extrauterine pregnancy or a spontaneous abortion. Higher levels of hCG are necessary before an extrauterine gestational sac may be seen by sonography. At each week of gestation, hCG concentrations normally vary by a large amount. For this reason, a single measurement is not helpful, although serial measurements to determine whether the hCG fails to double in 48 hours is

helpful to suggest a failing pregnancy (ectopic or intrauterine). Nonclotting blood obtained from the cul-de-sac by a culdocentesis may be the result of a ruptured ectopic pregnancy or a ruptured ovarian cyst. An adnexal mass is palpated in only 50% of women with an ectopic pregnancy.

QUESTION 6

A10-year-old boy presents with a 3- to 4-day history of left ear pain. He is afebrile; he has had no symptoms of cold or cough. He has been swimming daily. On physical examination, there is pain on moving the pinna and the tragus. There is erythema and swelling of the ear canal; the tympanic membrane is obscured by thick white discharge

Which of the following is the most likely organism involved in this case?

A. aureus

B. Proteus mirabilis

C. Candida

D. Pseudomonas aeruginosa

E. Streptococci

Correct Answer: D

P. aeruginosa is the most common agent involved in external otitis. The other organisms listed may also be isolated.

QUESTION 7

A 43-year-old prison cook becomes ill with jaundice, malaise, and fever. Shortly thereafter, multiple prison

inmates develop similar symptoms.

According to the above symptoms, select the most likely type of viral hepatitis.

A. hepatitis A

B. hepatitis B

C. hepatitis C

Correct Answer: A

Hepatitis A is transmitted almost exclusively by the fecal-oral route. Large outbreaks have been linked to contaminated food products. Intrafamily and intrainstitutional spread also is common. Clinical severity usually is mild, and hepatitis A does not progress to chronicity. Hepatitis C more commonly progresses to chronicity (5070% develop chronic hepatitis and 8090% of these patients have evidence for chronic infection). Hepatitis C can lead to cirrhosis and hepatocellular carcinoma. Chronicity occurs in only 110% of patients with hepatitis B

QUESTION 8

A 3-year-old child recovers from a severe episode of bloody diarrhea, hemolysis, and uremia. The child\\'s case is linked

to other cases across the country by statistical association with consumption of hamburgers obtained from a nationwide supplier of ground beef. Which of the following is the best method for preventing this illness in the general population?

A. cooking ground beef to be well done, and thoroughly washing fruits and vegetables

B. regulations enforcing worker hygiene in the workplace

C. a testing program for enteric disease in Livestock

D. regulations enforcing sanitary conditions in slaughterhouses

E. a ban on imported meats and produce

Correct Answer: A

The illness described is consistent with hemolytic uremic syndrome associated with E. coli 0157:H7 infection. E. coli 0157:H7 is the most common strain found of the enterohemorrhagic E. coli (EHEC) group. Although its most common reservoir is thought to be in cattle, it has been found in other livestock. The usual mode of exposure is contamination of beef. The problem is compounded significantly when beef is ground and mixed in bulk. Testing and elimination programs do not appear sensitive enough to eliminate exposure, although active research in the area continues. In addition, there are many other outbreaks associated with fresh vegetables, bean sprouts, and unpasteurized juices. It is hypothesized that these are due to contamination with human or animal waste. Since the organism is killed by heating, thorough cooking of ground beef products, avoidance of contamination of fresh foods with raw meat, and washing of produce intended to be served fresh is the most practical intervention. Currently, this remains the most practical advice to give the public.

QUESTION 9

A 40-year-old man has been unsuccessfully treated for depression with two different medications for the past 3 months. He has a number of medical problems, and he recently was hospitalized after threatening suicide. His psychiatrist is considering the use of ECT for the patient.

The patient has consented to ECT, and the pre ECT workup has been completed. Which of the following medications could routinely be continued through a course of ECT?

A. lithium

B. divalproex

C. bupropion

D. clonazepam

E. risperdal

Correct Answer: E

Risperdal and high potency neuroleptics slightly decrease the seizure threshold and would enhance the seizure and can typically be continued through a course of ECT. Lithium can result in increased postictal delirium, divalproex and clonazepam would typically be withdrawn due to their anticonvulsant effect. If a benzodiazepine is required a short-acting medication should be used. Bupropion has been associated with late appearing seizures.

QUESTION 10

A 30-year-old asymptomatic male presents to your office because his father just had a heart attack. He is concerned that he may have inherited his father\\'s condition because a cholesterol level test done at his work site last year was 220 mg/dL. You review his history and find that he smokes 25 cigarettes a day, eats mostly at fast food restaurants, sits at a desk job, and has no regular moderate intensity physical activities. His blood pressure is 130/85 mmHg and his body mass index (BMI) is 26.

Which of the following is the best first recommendation?

A. electrocardiography (ECG)

B. ECG and an exercise treadmill test (ETT)

C. a diet for weight loss

D. commencement of a daily exercise routine

E. antihypertensive medication

Correct Answer: D

The USPSTF does not recommend ECG or ETT in asymptomatic patients. A BMI greater than 27 is associated with increased mortality. The U.S. Surgeon General recommends a program of moderate exercise most days of the week.

QUESTION 11

Identify the defense mechanisms of a person accusing another of being angry and jealous when the feelings belong to oneself

A. acting out

B. altruism

C. displacement

D. intellectualization

E. passive-aggressive behavior

F. projection

G. rationalization

H. reaction formation

I. sublimation

J. suppression

Correct Answer: F

Defense mechanisms provide a means for dealing with anxiety and affect. The mechanisms chosen range from the very narcissistic and immature to mature. In suppression, a person makes a conscious decision to put the conflict aside until it can be dealt with more appropriately. On the other hand, in acting out, there is little or no attempt to contain the affect, and it is directly expressed, as in name calling. Sublimation provides a channel for the indirect expression of a need or affect. Its use is positive and socially acceptable. In reaction formation, the person acts as if the strong need or affect did

not exist and acts out the opposing feeling. In projection, unacceptable feelings and thoughts are denied as part of the self and instead are "put on" the other person.

QUESTION 12

An 18-month-old girl is brought to the hospital with a history of 6 days of bloody diarrhea. She has been drinking well but has not been wetting her diaper. She has been irritable. On physical examination, she has periorbital edema. She appears pale and is tachycardic. Her CBC shows a hemoglobin of 6 g/dL and a platelet count of 100,000/mm3. Her blood urea nitrogen (BUN) is 50 mg/dL and creatinine is 5.5 mg/dL. Her urinalysis shows gross hematuria. Which of the following is the most likely causative organism for her clinical problem?

A. E. coli 0157:H7

B. group A Streptococci

C. group B Streptococci (GBS)

D. S. aureus

E. the cause of this illness is not known

Correct Answer: A

The child most likely has hemolytic-uremic syndrome. This illness is most common in children under 2

years old. They present with a prodromal illness, bloody diarrhea, and then a sudden onset of lethargy and

pallor when the hemolytic anemia occurs. Coincident with this is the development of acute renal failure,

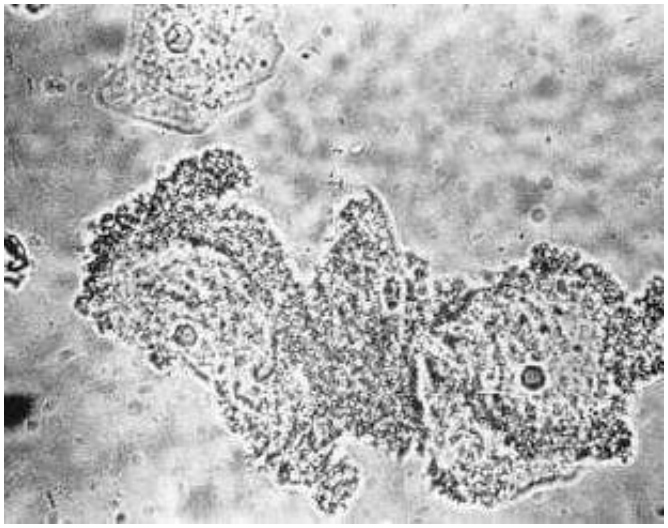
often with low urine output. E. coli 0157:H7 is the most common organism in the United States. Group A

Streptococci are associated with poststreptococcal acute glomerulonephritis.

Thrombocytopenia and anemia are not seen in this disease.

QUESTION 13

A wet smear of a vaginal discharge is illustrated in Figure.Which of the following is the most likely cause of the discharge?



Which of the following is the most appropriate treatment for the discharge illustrated in Figure?

A. clindamycin

B. erythromycin

C. metronidazole

D. miconazole

E. doxycycline

Correct Answer: C

The treatment of choice for bacterial vaginosis is metronidazole, also an effective treatment for trichomonas vaginitis. The dose is 375500 mg orally twice daily for 1 week. A single daily dose of 750 mg was recently approved. Vaginal metronidazole gel or clindamycin cream are also approved forms of treatment. Concurrent therapy of the male partner is controversial. Treatment in pregnancy is recommended, because there is a potential association of bacterial vaginosis and preterm labor and delivery.

QUESTION 14

A 58-year-old woman with a history of chronic paranoid schizophrenia, who has been continuously treated with antipsychotics for the past 20 years, lives in a community-based residential facility. She has recently suffered an increase in auditory hallucinations, and her haloperidol dose has been increased from 2.5 to 10 mg/day. Four days later, she is brought by a visiting nurse to the emergency room, where she presents with confusion, marked flexor and extensor rigidity in her legs and arms, and a temperature of 103.5°F. Her blood pressure is160/120 mmHg, her pulse is 120/min and irregular. Which of the following is most likely to be an effective treatment for this condition?

A. intramuscular haloperidol

B. oral bromocriptine

C. intramuscular lorazepam

D. intramuscular benztropine

E. oral propranolol

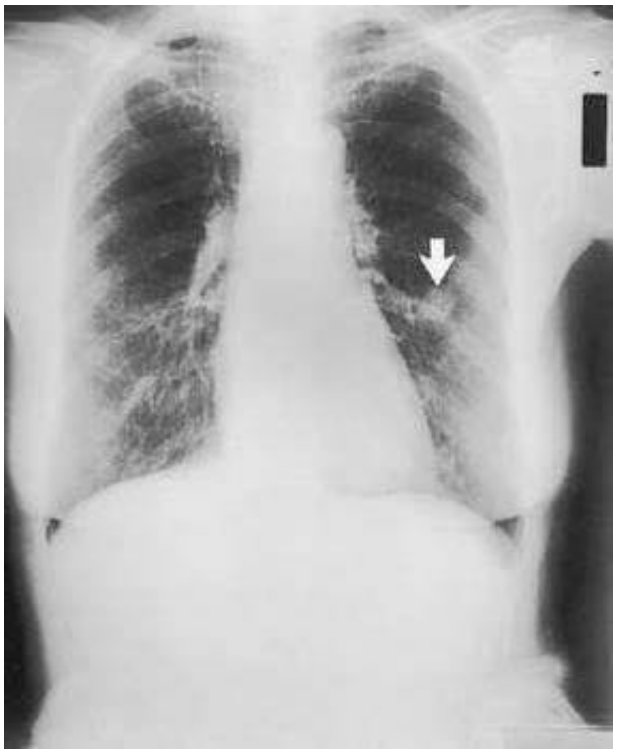
Correct Answer: B

The most effective treatments for the extremely serious, potentially fatal complication of antipsychotic treatment called NMS are oral bromocriptine, a dopaminergic agonist, and intravenous or oral dantrolene, a skeletal muscle relaxant. Afurther increase in the patient\\'s haloperidol dose would likely worsen her NMS. While the anticholinergic effects benztropine may alleviate some of the neuroleptic- induced muscular dystonia associated with the syndrome, and lorazepam may help relax the muscle rigidity, they are not likely to be life saving, and propranolol is not an effective medication in the treatment of NMS.

QUESTION 15

A 65-year-old woman presents to the physician\\'s office for her yearly physical examination. She has no complaints except for a recent 10-lb weight loss. Past history is pertinent for a 40 pack-year smoking history, hypertension, asthma, and hypothyroidism. Examination reveals a thin woman with normal vital signs and unremarkable heart and abdominal examinations. Lung examination reveals mild wheezing and a few bibasilar rales. A chest x-ray is obtained and is shown in Figure. Achest x-ray obtained 3 years ago was normal. Yearly laboratory tests including a CBC, electrolytes, and lipid panels are normal.

Which of the following is the most likely diagnosis?



A. small cell lung cancer

B. tuberculosis

C. nonsmall cell lung cancer

D. hamartoma

E. abscess

Correct Answer: C

The finding of a new, irregular lesion in a patient with a long smoking history must be considered a lung carcinoma and should be managed accordingly. Nonsmall cell carcinoma is the most common lung neoplasm. Small cell carcinomas usually grow rapidly and disseminate widely by the time of diagnosis. Tuberculosis would present with systemic symptoms and apical disease on chest x-ray. Likewise, a lung abscess would be accompanied by systemic symptoms and may show air-fluid levels in the abscess cavity. A hamartoma presents as an extremely slowly growing nodule that may contain popcorn calcifications. The most appropriate test following suspicious findings on a chest x-ray would be a CT scan to evaluate further the nodule, evaluate the lymph node status, and triage subsequent diagnostic tests. If enlarged mediastinal nodes are seen, then mediastinoscopy may be indicated. Bronchoscopy may be helpful to assess for endobronchial lesions and to obtain tissue for diagnosis. Pulmonary function tests are necessary once a decision is made to consider operation. Percutaneous needle biopsy may be required to obtain tissue once CT scanning is performed.