

TestBuilder: ME715.J - 2/2/2012 (Spring12)

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Clinical Topics in Global Health Knowledge Assessment**Course directors:**

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Instructions

When completing the following knowledge check, please don't refer to any references or colleagues – simply answer the questions using your own current knowledge.

*Our objective with this assessment is to evaluate the effectiveness of this elective in increasing our students' understanding of clinical topics in global health. We kindly ask that you complete this knowledge assessment **BEFORE THE START OF THE COURSE**. Please know that your results on any of these knowledge assessments will have absolutely **NO** impact on your evaluation/grade in this elective.*

REV: June 2012

Knowledge Check**1. Although Africa has 24% of the global burden of disease, it has:**

20% of the global health workforce

15% of the global health workforce

3% of the global health workforce

0.5% of the global health workforce

2. The five leading causes of under-five mortality DO NOT include:

Malaria

Diarrheal illness

Acute respiratory infections (ARIs)

Tuberculosis

Neonatal deaths

3. Children with any general danger sign, or who have lower chest in-drawing, require immediate referral to a health facility.

- True
- False

4. Which of these is NOT a characteristic of measles?

- Light sensitivity and conjunctivitis
- Red blotchy skin rash
- Koplik spots in mouth
- Vesicular lesions
- Cough

5. To prevent loss of heat and hypothermia in a newborn:

- Wait thirty minutes before bathing
- Bundle baby immediately in warm clothes or blankets and place in cot
- Dry the baby immediately and put in immediate skin-to-skin contact with mother
- All of the above

6. All of the following are danger signs of major newborn infection, EXCEPT:

- Poor sucking
- Sneezing
- Limp limbs
- Rapid breathing
- Low body temperature
- Fever

7. Immunizations that newborns should receive at birth or while the skilled birth attendant is still present include all of the following EXCEPT:

- BCG (vaccine against TB)
- OPV (oral polio vaccine)
- Tetanus toxoid
- None of the above are given at birth

8. After the first 30 seconds of initial resuscitation efforts, if a baby is NOT breathing or the heart rate is less than 100bpm, the next step is to:

- Clear the airway by suction deep in the baby's throat
- Administer sodium bicarbonate and/or glucose through the umbilicus
- Ventilate the baby with a bag and mask at 40 breaths per minute
- All of the above

9. With regard to HIV infection in pregnancy:

The rate of mother-to-child transmission (MTCT) of HIV is greater than 50%
Although single-dose nevirapine reduces MTCT to some degree, the lowest rates of MTCT are associated with longer and more complex regimens of anti-retrovirals

Exclusive breastfeeding does not increase MTCT of HIV

Transmission of HIV to the neonate is confirmed if the neonate is HIV-antibody positive

10. When counseling the mother who is infected with HIV about feeding her infant:

Provide information about bottle feeding only in order to discourage breastfeeding

Tell her that she should refrain from using antiretrovirals (ARVs) while breastfeeding because many of these drugs pass through the breastmilk

Tell her that she can make a safe compromise for her baby by bottle feeding but giving occasional supplements from the breast

Tell her she should exclusively breastfeed (unless replacement feeding is acceptable, feasible, affordable, safe, and sustainable)

11. The WHO recommends essential antenatal care for women including which of the following:

Tetanus toxoid administration with at least two doses of tetanus toxoid-containing vaccine

Screening and treatment of maternal syphilis

Intermittent preventive treatment for malaria with sulfadoxine-pyrimethamine (SP)

Iron and folate supplementation

All of the above

12. The World Health Organization now recommends that all countries experiencing resistance to their current first-line malaria treatment change to:

Choroquine

Artemisinin-based combination therapy

Quinine plus tetracycline

Primaquine

13. The consequences of malaria during pregnancy include:

Maternal anemia
Miscarriage
Low birth weight
Maternal death
All of the above

14. Which of the following approaches have been shown to reduce or prevent the consequences of malaria during pregnancy?:

- (a) Insecticide-treated bed nets
- (b) Intermittent preventive treatment
- (c) Periodic examination of peripheral blood for parasites
- (d) All of the above
- (e) a and b only

15. Malaria is easily distinguished from other illnesses based on clinical signs and symptoms alone:

True
False

16. Which tropical disease is NOT correctly paired with its usual vector?

Plasmodium falciparum | anopheles mosquito
Strongyloidiasis | triatomine bug
Leishmaniasis | sandfly
Dengue | aedes mosquito

17. The bacterium that causes typhoid fever (*Salmonella typhi*) can be transmitted in which of the following ways?

Consuming contaminated food or water
Getting bitten by a disease-carrying mosquito
During sexual contact
Breathing in the bacteria through the respiratory system
All of the above

18. Which of the following is NOT true about schistosomiasis?

It can cause hepatomegaly and bladder granulomas
It involves freshwater snails as a vector for transmission
It is a self-limited disease caused by a liver fluke
It is the world's second most socioeconomically devastating parasitic disease after malaria

19. Which of the following tropical diseases CANNOT be treated with antibiotics?

- Cholera
- Typhoid
- Dysentery
- Dengue

20. Protein energy malnutrition plays a role in more than 50% of the deaths of children under 5 worldwide.

- True
- False

21. Which statement is most accurate about malnutrition and nutrient deficiency?

- Marasmus is characterized by generalized, pitting edema
- Height-for-age measurements can be used to assess acute malnutrition
- Mid-upper arm circumference (MUAC) is a simple tool that can be used to rapidly diagnose kwashiorkor malnutrition
- Vitamin A deficiency is associated with xerophthalmia, increased severity of measles, and increased overall child mortality

22. Failing to breastfeed a child exclusively for the first six months of life increases the risk of diarrhea.

- True
- False

23. Treatment of diarrheal diseases includes:

- Oral rehydration solutions (ORS) to replace fluids and electrolytes
- Continued feeding and zinc supplementation
- Antibiotics for intestinal infections of presumed bacterial etiology
- All of the above

24. Oral rehydration solutions (ORS):

- Stops diarrhea and keeps the body hydrated
- Does NOT stop diarrhea, but keeps the body hydrated
- Fights the bacterial infection causing diarrhea
- Prevents diarrhea

25. Challenges to implementing health systems in rural Africa include all of the following EXCEPT:

Limited resources
Dispersed rural populations
No evidence-based strategies to address the deficit of trained health workers
Low worker morale
Health worker migration away from remote sites

26. In 2008, the World Health Organization issued a report with the following recommendations to strengthen primary health care:

Leadership reforms
Service delivery reforms
Policy reforms
Universal coverage reforms
All of the above

27. Sensory problems (e.g., blindness, hearing loss) and mental disorders are the most common causes of disability worldwide:

True
False

28. All of the following statements about global blindness are true, EXCEPT:

90% of blind people live in low-income countries
80% of blindness is readily treatable and/or preventable
50% of global blindness is due to cataracts
Cataract repair is expensive due to the high cost of intraocular lenses

29. In 2005, what percentage of all deaths were caused by chronic diseases?

20%
40%
60%
80%

30. The chronic diseases targeted by the 2011 United Nations General Assembly Special Session on Non-Communicable Diseases included all of the following EXCEPT:

Cardiovascular disease
Chronic respiratory disease
Cancer
Mental health
Diabetes

31. Chronic disease care is different from acute episodic care in the following important ways:

- (a) It requires longitudinal patient engagement in care, even during periods with no or minimal symptoms
- (b) It is less amenable to task-shifting strategies that aim to make optimal use of limited human resources for health
- (c) Health systems set up for acute episodic care often lack necessary components needed for effective delivery of chronic care
- (d) All of the above
- (e) a and c only

32. In rural African populations, all of the following are important causes of congestive heart failure EXCEPT:

- Coronary artery disease
- Pregnancy
- Valvular disease
- Alcohol
- Hypertension

33. Important interventions to manage asthma in poor, rural populations include all of the following EXCEPT:

- Inhaled beta-agonists
- Leukotriene inhibitors
- Inhaled corticosteroids
- Properly ventilating cooking areas
- Stepped care for mild, moderate, and severe disease

34. Insulin generally requires refrigeration. Surprisingly, studies in African populations note little decrease in efficacy when insulin is kept in a shaded indoor area and used within several weeks:

- True
- False

35. The treatment gap for mental health and epilepsy exceeds 90% in poor, rural settings around the world. Furthermore, recent studies reveal that there has been no improvement in this enormous shortfall over the past 30 years:

- True
- False

36. All of the following are components of the basic package of HIV care recommended by the World Health Organization EXCEPT:

Screening and treatment for opportunistic infections

Routine viral load testing

Co-trimoxazole prophylaxis for patients with CD4 count <200 in general or <350 in malaria-endemic areas (or WHO Clinical Stage III or IV where CD4 count is unavailable)

Fixed-dose combination antiretroviral therapy

Prevention of mother-to-child transmission of HIV

37. At the bedside of an ill patient when no reliable clinical history is available, the following clinical signs and symptoms may be used as a proxy for advanced HIV/AIDS (given high background HIV prevalence):

- (a) Oral thrush on exam with painful swallowing
- (b) Severe weight loss with chronic diarrhea
- (c) Clinical signs / symptoms consistent with extrapulmonary tuberculosis
- (d) All of the above
- (e) b and c only

38. In a rural African setting, a patient with known HIV who appears ill and presents with cough and fever should receive all of the following EXCEPT:

Testing for tuberculosis followed by retesting and/or empiric treatment for TB if there is no improvement following initial antibiotic therapy

Admission to the hospital for intravenous antibiotics

Further screening for and possible treatment for Pneumocystis pneumonia

Empiric anti-fungal therapy

Referral for antiretroviral therapy and adherence support

39. Currently, the World Health Organization recommends starting antiretroviral therapy for patients with HIV when the CD4 count falls below:

1000 cells/mm³

500 cells/mm³

350 cells/mm³

200 cells/mm³

40. What fraction of the world's population is infected with TB?:

1/5

1/4

1/3

1/2

41. HIV is the strongest risk factor for progression from latent to active TB:

True
False

42. Which ONE of the following statements is TRUE? Effectively implemented DOTS (Directly-Observed Therapy, Short-course):

- Does NOT decrease the risk of multidrug resistance
- Prevents further transmission by curing infectious patients
- Has been launched in nearly all of the world's high TB burden countries
- Is expensive (a full course of drugs to treat a standard TB case costs a minimum of US \$200)

43. TB is considered “cured” when:

- The patient's sputum test reverts to negative during treatment
- The patient is no longer coughing and spitting up blood
- The patient's sputum test reverts to negative at least once during treatment and then remains negative in the last month of treatment
- The patient completes the course of treatment

44. All of the following are CORRECT EXCEPT:

- TB is harder to diagnose in HIV-positive people
- TB progresses faster in HIV-infected people
- TB always occurs late in the course of HIV infection
- TB in HIV-positive people is almost certain to be rapidly fatal if undiagnosed or left untreated

45. Of those listed, which is the LEAST COMMON cause of mortality among populations in conflict areas?

- Febrile illnesses
- Violent deaths (e.g., due to guns and other weapons)
- Respiratory illnesses
- Malnutrition

46. All of the following about conflict- and disaster-affected populations are true, EXCEPT:

- Mortality increases with increased population displacement
- Quantity of water is more important than quality (i.e. cleanliness) of water
- Internally displaced persons (IDPs) have all of the same protections as refugees
- The populations and locations most affected by disasters are often predictable

47. Which of the following is NOT true about travellers' diarrhea?

It is most commonly caused by *Escherichia coli*
It is the most common cause of morbidity in travellers to developing countries
Its onset is usually in the second or third week of travel
In most cases, it can be effectively treated with fluoroquinolones (e.g., ciprofloxacin)

48. Which of the following is NOT true about drugs for malarial chemoprophylaxis:

Mefloquine (Larium) can cause nightmares
Doxycycline is associated with skin sensitivity to sunlight
Malarone (atorvaquone/proguanil) is a relatively expensive, daily medication
There is widespread resistance of *Plasmodium vivax* to chloroquine

49. What should you do when faced with a clinical scenario during an overseas rotation that you feel is beyond your level of training?:

(a) Go ahead and try to handle the situation yourself
(b) First do no harm — even if the patient is critically ill, explain that you are not qualified to manage the situation and do all you can to get the patient the help they need
(c) This is a complex and sometimes agonizing decision. In general, “b” is correct, but if no other help is available, you may need to assess if you stand a greater chance of helping than harming the patient with your care. In these cases, you are not ethically obligated to act, but similarly an extension of the “Good Samaritan” principle would apply to your best efforts to save the patient.

50. Medical research is only justified if there is reasonable likelihood that populations in which research is carried out stand to benefit from the results of the research:

True
False

*To protect it's utility for future classes, we ask that you **please do not copy or distribute this exam.***

References: A number of the above questions were adapted from public domain resources such as a) USAID Global Health Learning curriculum (www.globalhealthlearning.org), b) UMN pediatric global health quiz, c) Rob Skelly's MCQs in Tropical Medicine, d) iVillage tropical diseases quiz (yourtotalhealth.ivillage.com/tropical-diseases-quiz.html).

CANCEL

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