

## 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/mm<sup>3</sup>
- 500 cells/mm<sup>3</sup>
- 350 cells/mm<sup>3</sup>
- 200 cells/mm<sup>3</sup>

**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

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*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](http://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](http://yourtotalhealth.ivillage.com/tropical-diseases-quiz.html)).*

CANCEL

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