ASSESSMENT OF 15 MCQS

FPSC NO : 110
MCQS ON THE EVOLUTION OF PNEUMOCOCCAL VACCINES
SUBMISSION DEADLINE: 29 AUGUST 2023, 12 NOON

INSTRUCTIONS

- **To submit answers to the following multiple choice questions, you are required to log on to the College Online Portal (https://lms.wizlearn.com/cfps/)**
- **Please contact sfp@cfps.org.sg if you have not received an email on the new LMS account.**
- **Attempt ALL the following multiple-choice questions.**
- **There is only ONE correct answer for each question.**
- **The answers should be submitted to the College of Family Physicians Singapore via the College Online Portal before the submission deadline stated above.**
- **There will be NO further extension of the submission deadline**

1. Which of the following correctly describes the microbiology of streptococcus pneumoniae?

A. Gram positive, catalase positive, alpha haemolytic
B. Gram positive, catalase negative, alpha haemolytic
C. Gram positive, catalase negative, beta haemolytic
D. Gram negative, catalase negative, alpha haemolytic
E. Gram negative, catalase positive, beta haemolytic

2. How does Streptococcus pneumoniae cause disease in the body?

A. By releasing toxins that directly damage host cells
B. By invading and replicating within host cells
C. By inducing an exaggerated immune response leading to inflammation
D. By forming biofilms on host tissues
E. By blocking the production of antibodies

3. Which of the following is a major public health concern associated with Streptococcus pneumoniae infections?

A. Increased incidence of atypical clinical presentations
B. Rapid evolution of strain virulence
C. Emergence of new serotypes with high transmissibility
D. Limited potential for antibiotic resistance development
E. High rates of asymptomatic carriage among the population

4. Which of the following factors contributes to the severity of Streptococcus pneumoniae infections?

A. Low bacterial colonization in the respiratory tract
B. Rapid clearance of the bacteria by the immune system
C. Production of toxins that cause tissue damage
D. Mild inflammation and immune response
E. Presence of underlying medical conditions or immunocompromised state

5. Which of the following underlying medical conditions significantly increases the risk of developing invasive pneumococcal disease?

A. Seasonal allergies
B. Hypothyroidism
C. Type 2 diabetes mellitus
D. Migraine headaches
E. Mild asthma

6. Which of the following is not an example of invasive pneumococcal disease?

A. Cerebrospinal fluid culture positive pneumococcal meningitis
B. Sputum culture positive pneumococcal pneumonia
C. Joint fluid culture positive pneumococcal septic arthritis
D. Pleural fluid culture positive pneumococcal empyema
E. Blood culture positive pneumococcal endocarditis

7. Which of the following statements regarding pneumococcal resistance is false?

A. In Singapore, pneumococcal resistance has been found to be more common in adults than children
B. Pneumococcal resistance is a rising problem worldwide
C. Improving pneumococcal vaccination uptake is one of the strategies where we can try to reduce the prevalence of pneumococcal resistance
D. One of the huge contribution factors towards pneumococcal resistance includes widespread use of penicillins in the outpatient setting
E. The concern for pneumococcal resistance is the reason why parenteral vancomycin is often recommended for use, together with a third-generation cephalosporin, in the initial antimicrobial management of a patient with suspected bacterial meningitis

8. Which of the following is not a routine indication for pneumococcal vaccination?

A. Previous cochlear implant
B. Hypertension
C. Ischaemic cardiomyopathy
D. Chronic obstructive pulmonary disease
E. Previous splenectomy

9. Which of the following vaccine has safety and efficacy data with regards to co-administration with PCV-20?

F. Quadrivalent influenza vaccine
G. PPSV-23
H. Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis
I. COVID-19 mRNA vaccine
J. Conventional recombinant hepatitis B vaccine

10. A 70-year-old man with a history of diabetes mellitus complicated by retinopathy and nephropathy is seeing you in your clinic for follow-up. Two years ago, he had received a dose of PCV-13. He asks about further pneumococcal vaccination in your clinic. Which of the following pneumococcal vaccine is the best available option, if available, to offer to this patient?

A. Repeat dose of PCV-13 now
B. One dose of PPSV-23 three years later
C. One dose of PPSV-23 now and repeat again three years later
D. One dose of PCV-20
E. He does not require further pneumococcal vaccination

11. A 72-year-old woman with known hypertension is seen in your clinic for routine hypertension follow-up. She sees a flyer displayed at your clinic regarding pneumococcal pneumonia prevention, and she is keen to find out more. Two years prior, she was treated for community-acquired pneumonia at a hospital. Based on her electronic health records, she had a positive pneumococcal urinary antigen then. She had no prior pneumococcal vaccination. Which of the following pneumococcal vaccine is the best available option, if available, to offer to this patient?

A. One dose of PCV-20 now
B. One dose of PPSV-23 now
C. One dose of PCV-13 now followed by a dose of PCV-20 one year later
D. One dose of PCV-20 now followed by a dose of PPSV-23 one year later
E. She does not require further pneumococcal vaccination given prior infection with lifelong immunity

12. A 35-year-old man with well-controlled uncomplicated type 1 diabetes mellitus and stable HIV is seeing you for review after being treated for an episode of cellulitis. He does not have a history of prior pneumococcal vaccination and is keen to consider. Which of the following pneumococcal vaccine is the best available option, if available, to offer to this patient?

A. One dose of PCV-20 now
B. One dose of PPSV-23 now
C. One dose of PCV-13 now followed by a dose of PCV-20 one year later
D. One dose of PCV-13 now followed by a dose of PPSV-23 one year later and another dose of PPSV-23 at age 65
E. One dose of PCV-13 now, followed by a dose of PCV-20 five years later

13. A 64-year-old healthy non-smoker, non-drinker, without any medical comorbidities is seeing you in clinic is seen in your clinic for review of his recent health screening results in your clinic. All his results have been unremarkable so far. He has heard about the new PCV-20 vaccine and wants to know when he will be recommended to receive this vaccine. When is the most opportune time to vaccinate him?

A. Now
B. At age 65
C. At age 70
D. At age 75
E. At age 80

14. A 64-year-old woman with known history of chronic obstructive pulmonary disease is seen in your clinic for routine follow-up care. She has previously been vaccinated with PCV-13 at age 60 and PPSV-23 at age 63. She is keen to consider the use of PCV-20 after appropriate counselling. When is the most opportune time to vaccinate her?

A. Not recommended at all
B. Now
C. At age 65
D. Five years from the last PCV-13 dose
E. Five years from the last PPSV-23 dose

15. A 71-year-old woman with known history of breast cancer on hormonal therapy and chronic renal impairment is seen in your clinic for health screening. She has previously been vaccinated with PCV-13 at age 64 and PPSV-23 at age 65. She is very keen to consider the use of PCV-20 after appropriate counselling. When is the most opportune time to vaccinate her?

A. Not recommended at all
B. Now
C. At age 75
D. At age 80
E. After she develops another risk factor for invasive pneumococcal disease

FPSC108 "Geriatric Care 2023" Answers to 30 MCQs Assessment					
1.	D	11.	B	21.	C
2.	B	12.	E	22.	E
3.	D	13.	D	23.	A
4.	E	14.	D	24.	A
5.	A	15.	E	25.	D
6.	A	16.	C	26.	B
7.	B	17.	D	27.	C
8.	C	18.	B	28.	D
9.	D	19.	E	29.	C
10.	E	20.	E	30.	A