

Annex (I)

Adopted from literature review

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Evaluation questionnaire concerning intensive care nurses' knowledge regarding prevention of Ventilator-Associated Pneumonia (VAP)

SECTION I-- DEMOGRAPHIC DATA

This questionnaire is anonymous. Please do not write your name.

Please indicate the following:

1. Age in years:

2. Sex:
a) Male
b) Female

3. Total clinical experience in years
a) < 1 years
b) 1-5 years
c) 6-10 years
d) > 10 years

4. Professional educational qualification in nursing
a) Diploma
b) Bachelor
c) Master
d) PHD

5. Do you have a Degree or Diploma in Intensive Care Nursing?
a) Yes
b) No

6. Do you have education attending infection control workshops or conference?
a) Yes
b) No

7. Do you have attending training programs on prevention of VAP?
a) Yes
b) No

SECTION- II- Structured knowledge questionnaire

Instructions:-

- Answer all questions
- Every question has 4 alternative responses. **Select the best answer** among the options provided by placing correct option in the **BOX** provided.
- Each question carries 1 mark

PART A: General

1. VAP stands for

- Ventilator acquired pneumonia
- Ventilator associated pneumonia
- Ventilator assisted pneumonia
- Ventilator affected pneumonia

2. Among the nosocomial infections, VAP is

- First common nosocomial infection
- Second common nosocomial infection
- Third common nosocomial infection
- Fourth common nosocomial infection

3. VAP occurs after the following hours of intubation

- 12 hours
- 24 hours
- 48 hours
- 72 hours

4. VAP is characterized by

- Hypothermia
- Thrombocytopenia
- Purulent tracheobronchial secretion
- Convulsions

5. Mechanism of developing VAP are, the following EXCEPT,

- Aspiration of secretions
- Colonization of aero digestive tract
- Use of contaminated equipment
- Use of sterile equipment

6. Which of the following patient findings increases the risk of microorganisms entering the lower respiratory tract?

- An increased gag reflex
- Increased pooling of secretions in the oropharynx
- Increased mucociliary clearance of secretions
- Increased cough

PART B: Anatomy of lungs

7. The number of lobes in Right lung and left lung are

- 2 and 4 respectively
- 2 and 3 respectively
- 3 and 2 respectively
- 4 and 2 respectively

8. The conducting zone of respiratory system include, EXCEPT;

- a) Trachea.
- b) Bronchi.
- c) Nasal cavity.
- d) Alveolar ducts.

9. The sympathetic nervous system via noradrenaline acts on the following receptor to cause bronchodilation

- a) Alpha Receptors
- b) BetaReceptors
- c) Muscarnic Receptors
- d) Nicotinic Receptors

PART C: Mechanical ventilation

10. Mechanical ventilation can be provided through following route

- a) Oral intubation
- b) Nasal intubation
- c) Tracheostomy
- d) All the above

11. The main indication for mechanical ventilator support is

- a) Congestive heart failure.
- b) Hepatic failure.
- c) Respiratory failure.
- d) Renal failure.

12. Mechanical ventilation is:

- a) Life support system.
- b) Life measuring system.
- c) Life threatening system.
- d) Life prolonging system.

13. CPAP stands for

- a) Continuous peak airway pressure
- b) Combined peak airway pressure
- c) Continuous positive airway pressure
- d) Combined positive airway pressure

14. SIMV stands for

- a) Synchronized Intermittent Mandatory Ventilation
- b) Standardized Intermittent Mandatory Ventilation
- c) Systematic Intermittent Mandatory Ventilation
- d) Spontaneous Intermittent Mandatory Ventilation

PART D: Diagnosis and Treatment

15. The most common pathogen responsible to develop VAP:

- a) Gram positive bacilli
- b) Gram negative bacilli
- c) Viral agents
- d) Fungal agents

16. CPIS stands for

- a) Critical pulmonary inflammation score
- b) Clinical pulmonary inflammation score
- c) Clinical pulmonary infection score
- d) Clinical pulmonary infiltration score

17. CPIS consists of

- a) Clinical criteria
- b) Radiologic criteria
- c) Microbiologic criteria
- d) All the above

18. Following score on CPIS is an indication of VAP

- a) 2
- b) 4
- c) 6
- d) 8

19. Emperic therapy is started

- a) Before getting culture report
- b) After getting culture report
- c) Any time as per physicians order
- d) Before discharging the client from hospital

20. Drug of choice for VAP is the following drug EXCEPT

- a) Cefepime and gentamicin/amikacin/tobramycin
- b) Vancomycin/linezolid and ceftazidime
- c) A carbapenem
- d) Fluoroquinones

PART E: Prevention of VAP

21. The following route is recommended to prevent VAP

- a) Oral
- b) Nasal
- c) Tracheostomy
- d) Any of the above

22. Frequency of ventilator circuits changes recommended

- a) change the circuits every 48 hrs.
- b) change the circuits every week.
- c) change the circuits for every new patient
- d) change the circuits as per physicians order.

23. Suction systems recommended to prevent VAP is

- a) Open suction systems
- b) Closed suction systems
- c) As per doctors order
- d) As per hospital policy

24. Endotracheal tubes with extra lumen for drainage of subglottic secretions

will help to prevent VAP

- a) Agree
- b) Disagree
- c) Does not influence the risk of VAP
- d) Depends on the duration of ventilation

25. Rotate Kinetic beds will

- a) Increase the risk of VAP
- b) Reduce the risk of VAP
- c) Does not influence the risk of VAP
- d) Depends on patient's weight

26. Preferred Position for patients on ventilator to prevent VAP

- a) Supine
- b) Prone
- c) Semi fowlers
- d) Lateral

27. Oral suction catheter should be stored between uses

- a) On the Ventilator
- b) In a clean plastic bag
- c) On the suction apparatus
- d) At the patient's bed side

28. Use of multiple antibiotics will increase the risk of patient to develop VAP

- a) True
- b) False
- c) Sometimes
- d) Depends on patient's age

29. Fluid that should be used in humidifier

- a) Sterile water
- b) Dextrose water
- c) Tap water
- d) Normal saline

30. Frequency of suctioning recommended is

- a) Every 2 hours
- b) As per hospital protocol
- c) Whenever necessary
- d) After feeds

31. The procedure that should be done before suctioning is

- a) NG aspiration
- b) Chest physiotherapy
- c) Back care
- d) NG feeding

32. Sedation protocol is necessary to

- a) Prevent infection
- b) Increase the sedation
- c) Plan early weaning
- d) Plan late weaning

33. Which of the following are the best two prevention strategies for VAP

- a) Prevent colonization and aggressive antibiotic use
- b) Prevent aspiration and use non-invasive ventilation
- c) Hand washing and glove usage
- d) Prevent or reduce colonization and prevent or reduce aspiration.

34. What are ways the critical care nurse can decrease the chance of VAP frequencies with oral care?

- a) Daily oral assessment, oral care with antiseptic solution and continuous oral suctioning.
- b) Use of oral swabs, suctioning of oral mucosa every 6 hours and weekly oral assessment.
- c) Brushing patient's teeth with antimicrobial toothpaste and frequent rinsing
- d) Allowing patient's family to suction when needed and to report the number of times the patient was suctioned

35. Endotracheal and gastric tubes should be placed orally to prevent

- a) Sinusitis
- b) Meningitis
- c) Pharyngitis
- d) Laryngitis

36. Which of the following is true according to the hand hygiene;

- a) Use of alcohol rub was associated with higher hand contamination.
- b) Hand washing is not necessary if gloves are changed frequently.
- c) Hand washing should be done before and after any contact with patients.
- d) Hand washing need just before the wearing gloves.

37. Selective decontamination of tracheostomy site can be done using

- a) Topical antibiotic
- b) Intravenous antibiotic
- c) Intramuscular antibiotic
- d) Intrathecal antibiotic

38. Which of the following is NOT a recommendation from the CDC for decreasing

VAP rates in hospitals?

- a) Continue current practices in VAP prevent.
- b) Institute educational training programs for staff to heighten awareness of VAP prevention.
- c) Implement protocols for preventing VAP that include practices recommended by the CDC.
- d) Develop and implement comprehensive oral hygiene programs to provide oropharyngeal cleansing and decontamination with or without antiseptic agents.

39. Following Vaccination helps to prevent VAP EXCEPT;

- a) Influenza
- b) Pneumococci
- c) Haemophilus B
- d) Rubella

40. Gastric over distension can be prevented by the use of

- a) Anticholinergic agents
- b) Narcotics
- c) Metoclopramide
- d) Proton pump inhibitors