Date: 30th November 2020   Time: 1.45 p.m. – 2.45 p.m.   Duration: 01 hour

Answer all questions   **Index Number:** ....

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1. Explain briefly the following terms

1.1. Case-control studies   (25 marks)

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1.2. Screening tests   (25 marks)

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1.3. Descriptive Epidemiology (25 marks)

1.4. Disease surveillance (25 marks)

2. Read the following abstract and answer the questions

Prevalence and associated factors of wheezing illnesses of children aged three to five years living in under-served settlements of the Colombo Municipal Council in Sri Lanka: a cross-sectional study

Abstract

Background: A rising trend in Sri Lanka for asthma and wheezing illness is observed with higher morbidity in younger children and a paucity of related research. 'Under-served' settlements' (USS) of Colombo Municipal Council (CMC) have poor living environments conducive to childhood wheezing. The objective was to describe the prevalence and associated factors of wheezing illnesses of three- to five-year-old children living in low-income settlements in CMC.

Methods: A cross-sectional study was conducted on 460 three- to five-year-old children and their caregivers using cluster sampling among residents of two randomly selected USSs of CMC. An interviewer-administered questionnaire, observation checklist and data extraction form were used in data collection. A physician's diagnosis of wheezing/whistling of the chest in their lifetime and a physician's diagnosis of wheezing/whistling within the past twelve months were considered as 'ever-wheezing illness' and 'current-wheezing illness' respectively.

Results: Mean age was 3.98 years (SD = ±0.64 years). A majority were males (51.3%) and Tamils (39.8%). Prevalence of 'ever wheezing illness' and 'current wheezing illness' were 38% (95% confidence interval (CI); 33.6%-42.5%) and 21.3% (95%CI; 17.6%-25.0%), respectively.

Maternal ($p < 0.001$) and paternal ($p < 0.001$) histories of wheezing, playing with soft toys in the sleeping area ($p = 0.004$), place of cooking combined with the living area ($p = 0.03$), unsatisfactory ventilation in the sleeping area ($p < 0.001$) were found to be significantly associated with increased 'current wheezing' through multi........ analysis in this study. Use of .... mula milk before six months of age ($p = 0.014$) .... to be protective through multivariate analysis.

Conclusions: The magnitude of wheezing illnesses among three- to five-year-old children residing in urban low-income settlements was found to be .... Children with a history of maternal and/or paternal wheezing should be targeted for .... interventions to prevent wheezing illnesses. Interventions to avoid exacerbations should focus on the indoor environmental factors that were found to be associated with wheezing illnesses.

2.1. What is the purpose of this epidemiological investigation? (40 marks)

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2.2. Prevalence of 'ever wheezing illness' and 'current wheezing illness' were 38% (95% confidence interval (CI) (95%CI: 33.6%-42.5%) and 21.3% (95%CI; 17.6%-25.0%), respectively
Briefly explain this statement. (30 marks)

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2.3. Place of cooking combined with the living area ($p = 0.03$), unsatisfactory ventilation in the sleeping area ($p < 0.001$) were found to be significantly associated with increased 'current wheezing'

Briefly explain this statement.

(30 marks)

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