Towards a breathable future: Managing Threats to Respiratory Health in Urban Slums

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Why care?
Respiratory health in urban slums

• >50% of world lives in urban areas, ~863 million live in slums

• Slum living is linked to poverty and multiple risk factors:
  • Poor housing quality and overcrowding
  • Ambient, traffic-related, and household air pollution
  • Tobacco and secondhand smoke
  • Allergenic sensitization
  • Micronutrient deficiencies
  • Poor and inadequate diet and sedentary lifestyle
Evidence supported risk factors:
- Micronutrient deficiencies
- Malnutrition
- Smoking during pregnancy

Hypothetical risk factors:
- Biomass fuel smoke

Childhood and adolescence

Hypothetical risk factors:
- Respiratory infections
- Poorly controlled Asthma
- Tobacco smoking

Evidence supported risk factors:
- Tobacco smoking
- Biomass fuel smoke
- Occupational exposures
- Comorbid medical conditions

Adult loss of lung function due to normal aging

Evidence supported risk factors:
- Tobacco smoking
- Biomass fuel smoke

Checkley et al. Lancet Respir Med 2017
FEV$_1$ decline in smokers vs. non-smokers

Adapted from Fletcher et al BMJ 1977
Panelists

Lee Riley, MD
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Asthma,
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