

Singapore's Experience in Using Methodologies and Metrics for Public Health Policy

Presentation by Communicable Diseases Agency (Singapore)
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The Communicable Diseases Agency's integrated approach against disease threats

Prepare, Prevent, Protect

Global
Engagements

Research

Policy &
Operations

Outbreak
Management
& Control

Whole-of-Gov
PH Coordination

Integrated Surveillance System



Indicator- based

- Mandatory notifications
- Sentinel & syndromic surveillance



Event-based

- 24/7 hotline
- Epidemiological investigations



Sero-epidemiology

- National seroprevalence surveys on herd immunity



Lab-based

- Virological surveillance



Wastewater

- Complementing clinical testing



External

- Horizon scanning and risk assessment
- Global networks







National capacities for EIDs

Clinical guidance




Disease control programmes

Case Study: Dengue – From Surveillance to Policy Development



Integrated Surveillance Methodologies for Dengue

 Mandatory disease notifications	 Epidemiological investigations to identify potential clusters	 Serotyping and genotyping	 Mosquito population monitoring thru Gravitrapp surveillance	 Insecticide resistance monitoring in collab with global networks	 Weather parameters for outbreak prediction
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Development of Dengue Control Policies and Initiatives

<p>Project Wolbachia to suppress Aedes populations</p>  	<p>Community Engagement</p> 
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Measuring Effectiveness with Key Metrics

<p>Dengue incidence rates</p>  <p>75% at Wolbachia sites</p>	<p>Mosquito population</p>  <p>80 – 90% reduction at Wolbachia sites</p>	<p>Mortality rates</p> <p>~0.1% mostly 65 y/o and above with co-morbidities</p>
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