Surveillance in Kenya: Past, Present and Future

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Outline of Presentation

• Background on surveillance

• Past surveillance

• Present surveillance

• Challenges facing surveillance

• Future of surveillance
Public Health Surveillance

• Ongoing, systematic collection, analysis, and interpretation of health-related data essential to the planning, implementation, and evaluation of public health practice (WHO)

• Closely linked with the timely dissemination of the data to those responsible for prevention and control

• Information for action

Uses of Public Health Surveillance

• Detect changes in disease occurrence and distribution

• Monitor trends and patterns

• Monitor changes in infectious agents

• Evaluate control measures

• Facilitate planning and resource mobilization
**Link to Action**

- Outbreak investigation
- Disease control interventions
- Targeting of interventions
- Development of policies and regulations

**Past Surveillance**
Past Surveillance

- Health information system
  - Data collected to inform resource allocation

- Vertical surveillance
  - Program based

Present Surveillance
Integrated Disease Surveillance

- Resolution of World Health Assembly in 1998

- The goal of IDSR is to improve the ability of all levels of health care system to detect and respond to diseases and conditions that cause high morbidity and mortality

IDSR Strategy - Objectives

- Strengthen capacity
- Integrate disease surveillance systems
- Use data for decision making
- Involve laboratory, clinicians and communities
- Improve data flow
**IDSR Core Functions**

- Case detection
- Case registration and reporting
- Lab Confirmation
- Data analysis and interpretation
- Response
- Provide feedback
- Evaluate and improve the system

**IDSR Supportive Functions**

- Communication
- Training
- Supervision
- Resource management and mobilization
**IDSR Priority Diseases In Kenya**

**Epidemic Prone Diseases**
- Cholera
- Typhoid Fever
- Dysentery
- Meningococcal Meningitis
- Plague
- Measles
- Yellow Fever
- Other VHF

**Diseases earmarked for Eradication/elimination**
- Leprosy
- Dracunculiosis
- Poliomyelitis
- Neonatal Tetanus

**Diseases of Public Health Importance**
- Malaria
- Childhood Pneumonia
- New AIDS Cases
- Childhood Diarrhoea
- Tuberculosis
- STIs
- Other emerging infections

**IDSR implementation in Kenya**

- WHO-RC Resolution
- Adaptation of tools & guides
- IDSR Training launched
- IDSR Scaling up
- Feedback system established
- IHR core capacity assessment
- Capacity assessment done in Kenya
- Dev. of a 5yrs IDSR strategic plan & Launch of the strategy in Kenya by DMS
Monitoring of Surveillance Indicators

- A total of 128 districts of the initial 149 districts are submitting weekly reports to DDSR currently

  - **Timeliness:** 100%
  - **Intradistrict reporting average:** 64%
  - **Complete reports:** 100%
  - **Surveillance Performance Index:** 81%
National Weekly Reporting Rate 2007-2010

Source: Weekly epidemiological bulletin

Challenges facing IDSR in Kenya

- Communication from health facilities
- Inadequate analysis at the peripheral level
- Weak laboratory capacity and network
- Inadequate involvement of clinicians in surveillance
- Limited resources to carry out support supervision
- Feedback to lower levels poor, usually internet based
Future Surveillance

- Flexible system
  - New reporting sources
  - IHR 2005- Reporting of PHEIC
  - New disease priorities
  - Non communicable diseases
  - Nosocomial infections
  - Changes in case definitions
- Simplicity of the system
  - Methods of transmitting data
  - Time spent collecting, maintaining, analyzing and transmitting information
Future Surveillance

- Acceptability
  - Willingness of individuals and organizations to participate

- Timeliness
  - Timely reports and response

- Representativeness
  - Data quality
  - Proportion of health facilities reporting

- Decentralized analysis, interpretation and use of data

Future Surveillance

- Structured M & E framework

- Cost of the surveillance system
  - Direct and indirect costs
  - Cost effective surveillance system

- Linkage to other surveillance systems
  - Community based surveillance
  - Laboratory based surveillance
  - Behavioral surveillance systems
  - Sentinel surveillance systems
**IDSR Linked to Community**

- National
- DDSC
- PDSC
- Health Facility
- CHEW
- CHW
- HH

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**Laboratory Tasks in Surveillance and Response**

- Collect
- Simple Tests
- Process + Transport

**Collect**
- Confirmatory Tests
- Report Results
- Process + Transport
- Join Investigations

**Specialised Tests**
- Transport to International Labs
- Report Results
- Join Investigations
- Training

**Highly specialised tests**
- Report Results
- Join Investigations
- Training

- Health Centre
- District/provincial
- National
- International Laboratories
Resistant Salmonella Typhi in a Catchment of Health Facility XXX

![Graph showing percentage of resistance to various antibiotics in different areas.]

THANK YOU
Approaches to surveillance

- Active Vs Passive
  (Health-agency solicited or Provider-initiated)

- Categorical Vs Integrated
  (One disease or Many)

- Syndromic Vs Laboratory-based
  (Case definition or laboratory confirmation)

- Population Based vs Sentinel surveillance

IDSR Progress

- Capacity building
  - Trained 124 districts (80.5%) of the initial 149 districts since 2005
  - Trained over 8,000 Health Care Workers since 2005

- Operational databases

- IDSR focal officers at National, Provincial and District level

- Feedback: Weekly bulletin

- Timely detection and response to outbreaks (80%)
National and provincial surveillance indicators for the week ending 2nd May 2010

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Suggested Tests to be Performed at Different levels

- **Dispensary**
  - Use rapid test kits for priority diseases

- **Health centre lab**
  - Rapid test kits for some diseases and Test for all priority disease

- **District Hospital lab**
  - Test for all priority diseases
  - Quality assurance for health centre and disp labs
Strengthening Multi-Disease Public Health Laboratory Surveillance

- Improvement in diagnostic capacity
- Shortening of interval from sample collection to test completion
- Provision of reagents
- Ensuring QA and QC
- Dissemination of lab findings
- Identifying opportunities for global laboratory networks