Gaps, priorities and challenges in health information systems research

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Health information systems

• Key component of health systems, one of the building blocks
• Also a cross cutting component, each building block requires sound information
• Dual role, multiple responsibilities on health information systems
What data should the health information system generate?

- Health system responsiveness, fairness
- Mortality, Morbidity, Wellbeing
- Use of services
- Health system outputs & service availability
- Health system inputs & processes
- Determinants of ill-health

Service accessibility, safety, quality, efficiency
Governance, human resources, medical products, information
Which data sources are used?

- Health research
- Resource, admin records
- Service records
- Facility surveys
- Individual records
- Household surveys:
- Civil or sample registration, DSS
- Censuses

Service-based

Population-based
Global monitoring and reporting

Research

Analysis of health situation and trends

Programme planning, management & evaluation

Facility management

Patient management

Support health decision-making

What are the data needed for?
From data production ………………………..to data use

Health system responsiveness, fairness

Mortality
Morbidity, ……
Wellbeing

Use of services

Health system outputs & service availability

Health system inputs & processes

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Health research

Resource, admin records

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Research and health information systems: a multifaceted relationship

• Research is one of the sources of data the health information uses

• Contributing to research is one of the functions of the health information system

• The health information itself deserves to be an object of research
Health information systems today: Never mind the quality, feel the width
Demand-supply imbalances

- Demand for health statistics growing
- Supply fragmented by disease-specific data collection
- Health workers overburdened by reporting requirements
- Data collected but not analysed and used
- Disease-specific data collection poorly integrated into national health information systems
- Coordination difficult; financial, administrative constraints.
- Need R&D on new tools and methods
Why the neglect?

- Underinvestment in health information systems.
- Systematic data collection recent phenomenon even in developed countries.
- Lack of standardization in terminology, methodologies, presentation.
- Need for human and financial resources, organizational, analytical and statistical skills.
- Information not seen as outcome but as by-product of activities to improve health.
- Few incentives to focus on underlying statistics: instrumental to M&E; demonstrating impact.
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<th>Range of research needs</th>
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<th>Methodological tools development and testing</th>
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<td>Some work required</td>
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Health information systems

• Assessing cost and economic value of better health statistics
• Experiences with closer integration between ministries of health and national statistics offices
• Documentation of policy, legislative and regulatory strategies need to overcome fragmentation
• Documentation of costs, benefits and risks of introducing ICT
Specific data sources: tools and methods

• Statistical techniques for adjusting incomplete and biased data such as hospital records, incomplete civil registration records, etc.
• Innovative approaches to estimate numbers, age-distribution and causes of deaths in settings without death registration and medical certification
• Validating sentinel methods of vital-events monitoring and cause-of-death attribution.
• Validating verbal-autopsy tools
• Sampling techniques to permit generation of population-based data at district level.
Specific data sources: Implementation research

- Cost-effective ways of enhancing monitoring of vital events, including training in certification and coding causes of death.
- Best practices in ensuring the integration of data from the private health care sector into the health information system.
- Documentation of experiences in the use of field-appropriate and cost-effective diagnostic technologies to obtain biomarkers in household surveys.
Data analysis and use

• Improving data quality by enhancing health personnel skills to generate, interpret, disseminate, use and value health information.
• Effectiveness of interventions (training, supervision, feedback and incentives) for improving data quality.
• Effectiveness of dissemination methods for different audiences (health managers, policy makers, community groups)
• Sociocultural factors and constraints affecting information use
• Measuring the health impact of sharing information with citizens
“Tonight, we’re going to let the statistics speak for themselves.”
Redressing the neglect

• Increase funding
• Stimulate the interest of researchers
• Increase demand for evidence-based approaches to health information system strengthening by policy-makers, development agencies and donors
• Embed research as integral part of health systems research, not assumed to be confined to the monitoring and evaluation component.