

# Gaps, priorities and challenges in health information systems research

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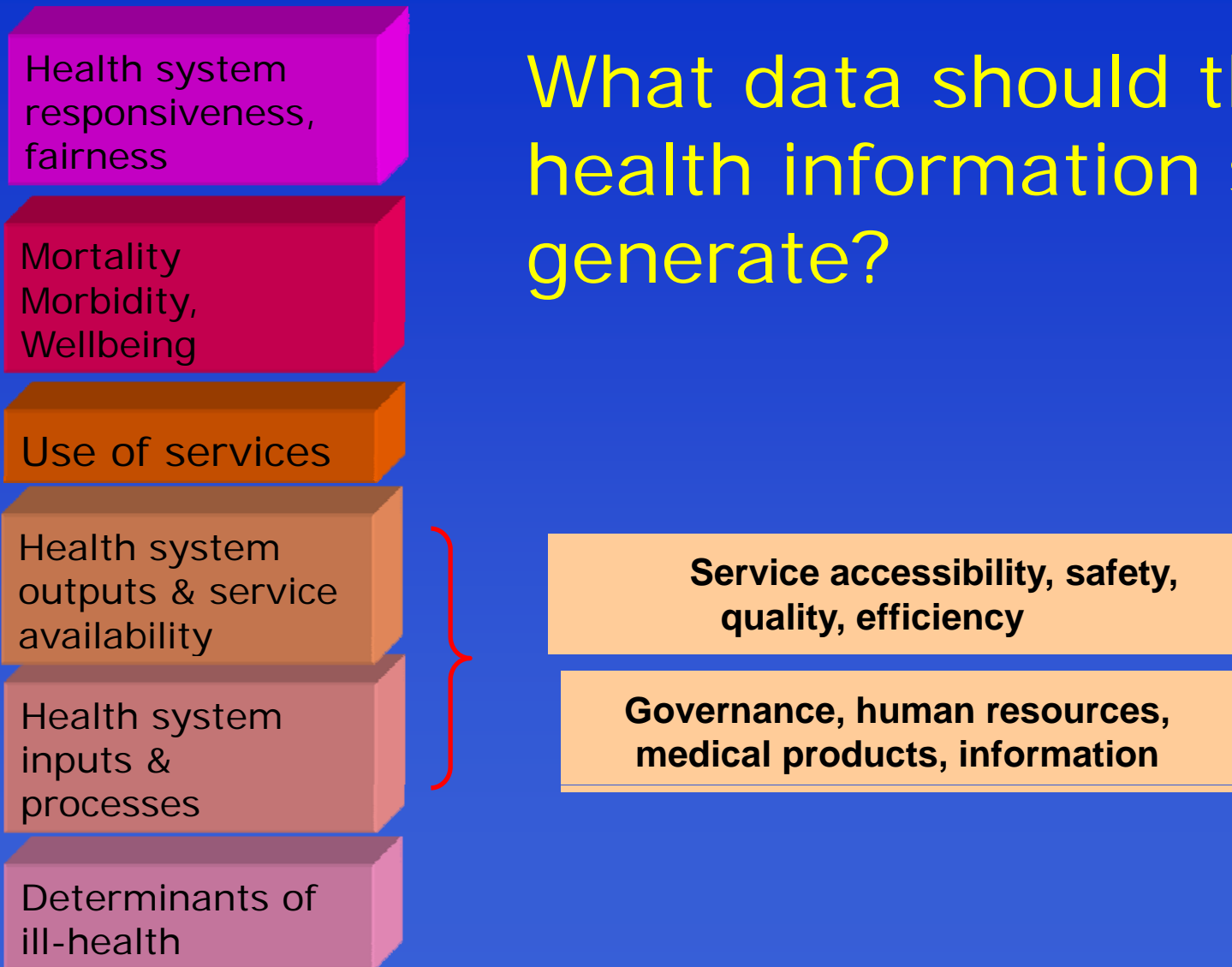


# Health information systems

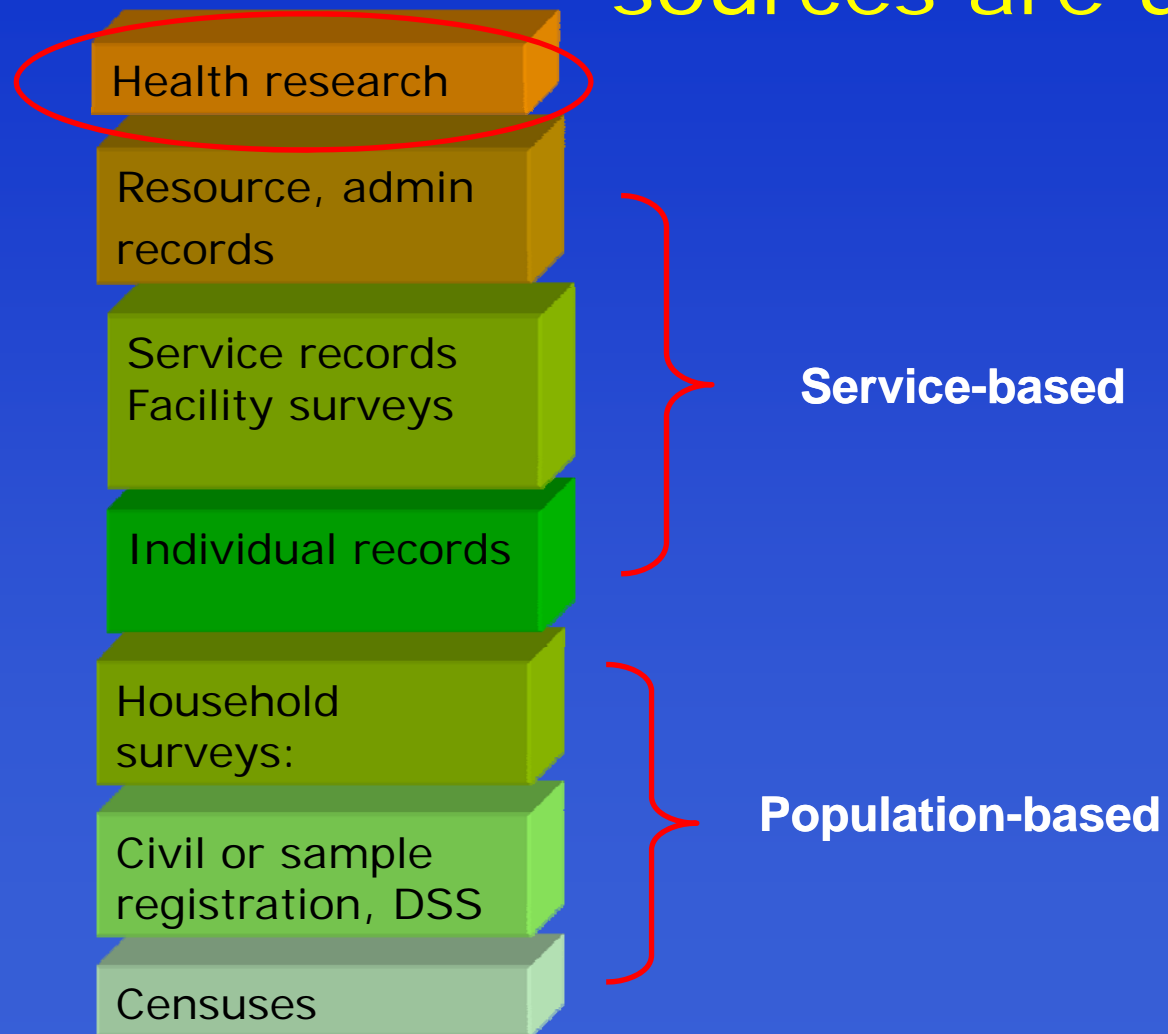
- Key component of health systems, one of the building blocks
- Also a cross cutting component, each building block requires sound information
- Dual role, multiple responsibilities on health information systems



# What data should the health information system generate?



# Which data sources are used?



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

Determinants of ill-health

Health research

Resource, admin records

Service records  
Facility surveys

Individual records

Household surveys:

Civil or sample registration, DSS

Censuses

Global monitoring and reporting

Research

Analysis of health situation and trends

Programme planning, management & evaluation

Facility management

Patient management

Support health decision-making

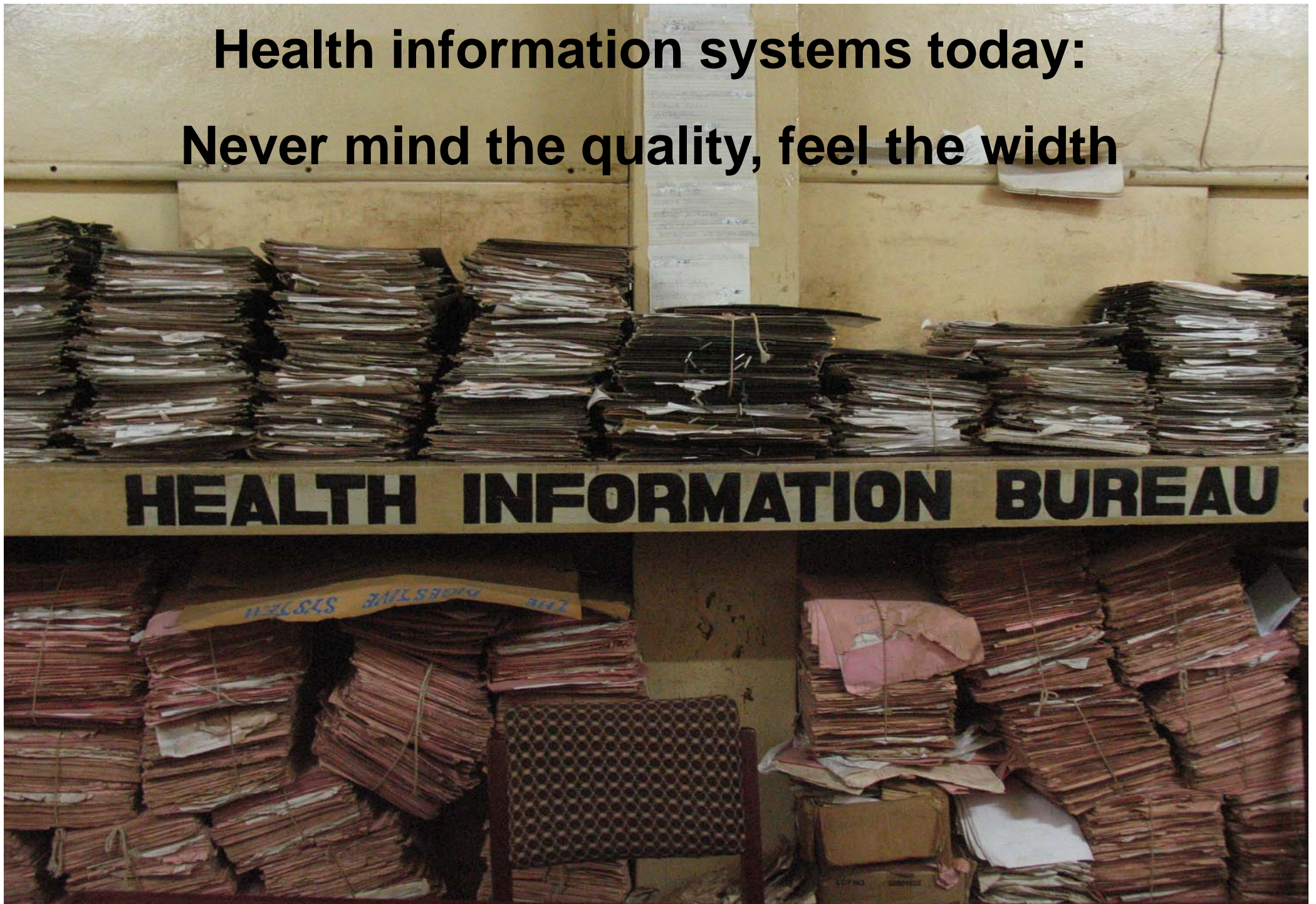


# Research and health information systems: a multifaceted relationship

- 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



Range of research needs	Type of research needed		
	Conceptual development	Methodological tools development and testing	Field work; implementation research
<b>Systems building for health information</b>	Some work required	Some work required	Major efforts needed
<b>Enhancing demand for data</b>	Some work required	Some work required	Moderate effort required
<b>Strengthening specific data sources</b>	Some work required	Major effort needed	Major efforts needed
<b>Strengthening data analysis, and use</b>	Some work required	Moderate effort needed	Major efforts needed



# 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.

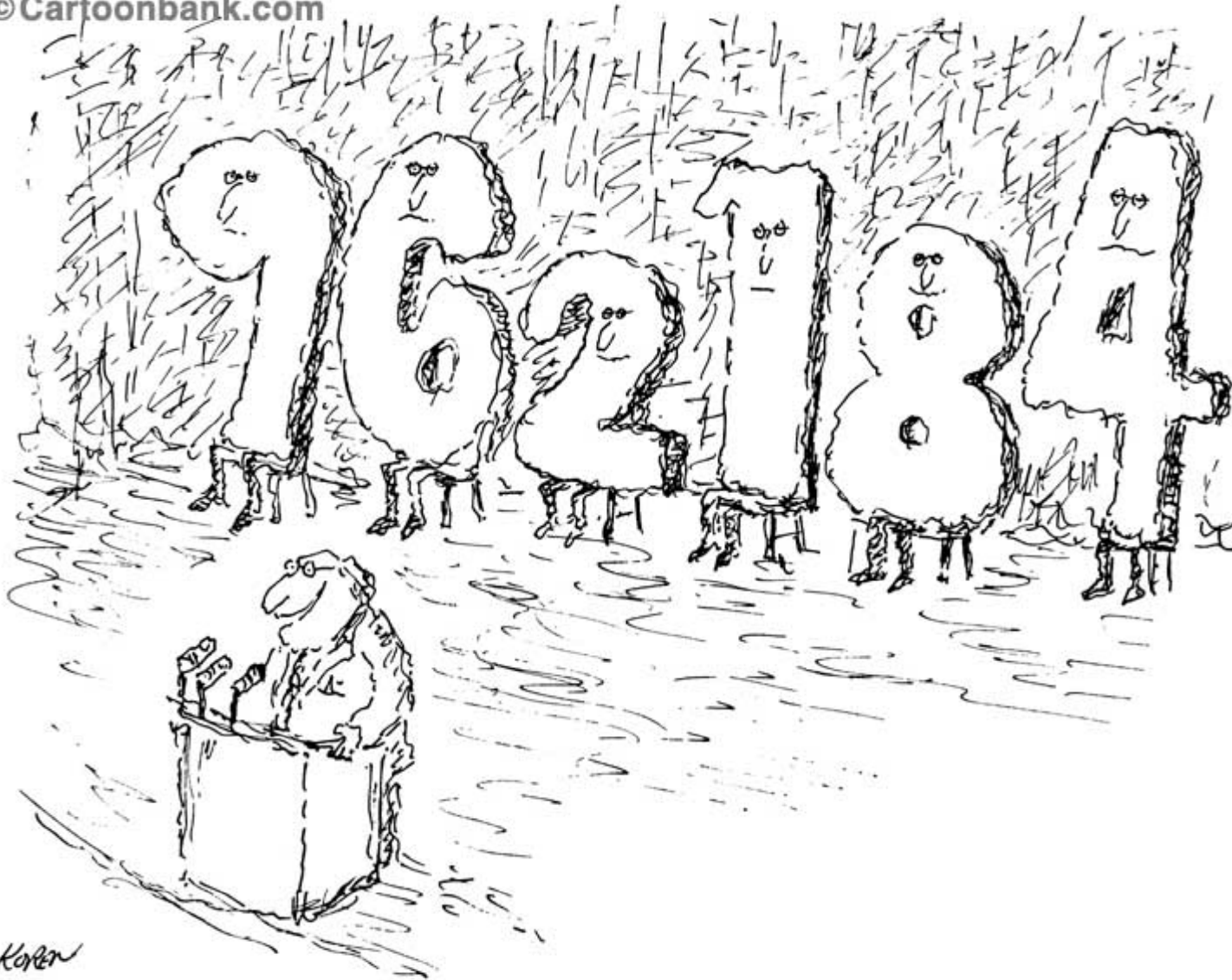


# Data analysis and use

- 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



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Keren

*"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.
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