



# Routine health information system: the glue of a unified health system

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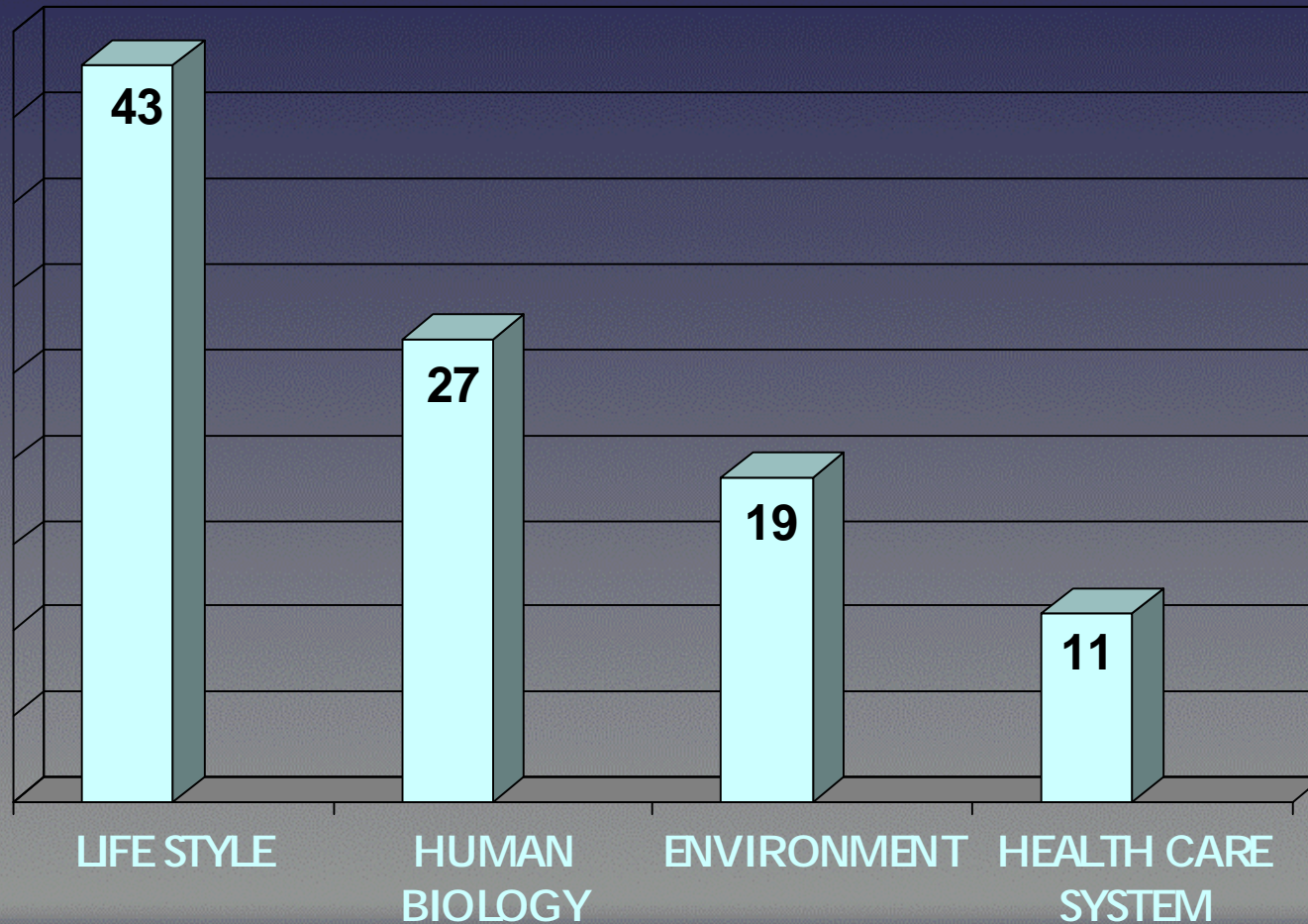
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## MAIN HEALTH DETERMINANTS

Potential contribution of interventions towards reducing mortality in the United States (in %)



*Adapted from Devers G.E.A. An Epidemiological Model for Health Policy Analysis Soc. Ind. Res., 1976 Vol.2 P 465*





# Fragmentation of the health system

individual health  $\leftrightarrow$  public health

curative  $\leftrightarrow$  preventive

generalist  $\leftrightarrow$  specialist

public  $\leftrightarrow$  private

provider  $\leftrightarrow$  user

economic  $\leftrightarrow$  social





## Towards Unity for Health (TUFH)

### ⌘ How to better integrate individual and public health interventions?

- ⌘ Focus on a reference population and a defined geographical area in the context of a decentralized health services system
- ⌘ Organizational models for supporting coordination and integration processes
- ⌘ Use of a comprehensive health information system

[Phuket, 1999]





## Presentation Outline

- \\ Conceptual link between the routine health information system (RHIS) and the health system
- \\ What is wrong with the existing routine health information system?
- \\ Proposed mechanisms to improve the RHIS as a tool to unify the health system
- \\ Future perspectives and research agenda





# HEALTH INFORMATION SYSTEM = MANAGEMENT INFORMATION SYSTEM

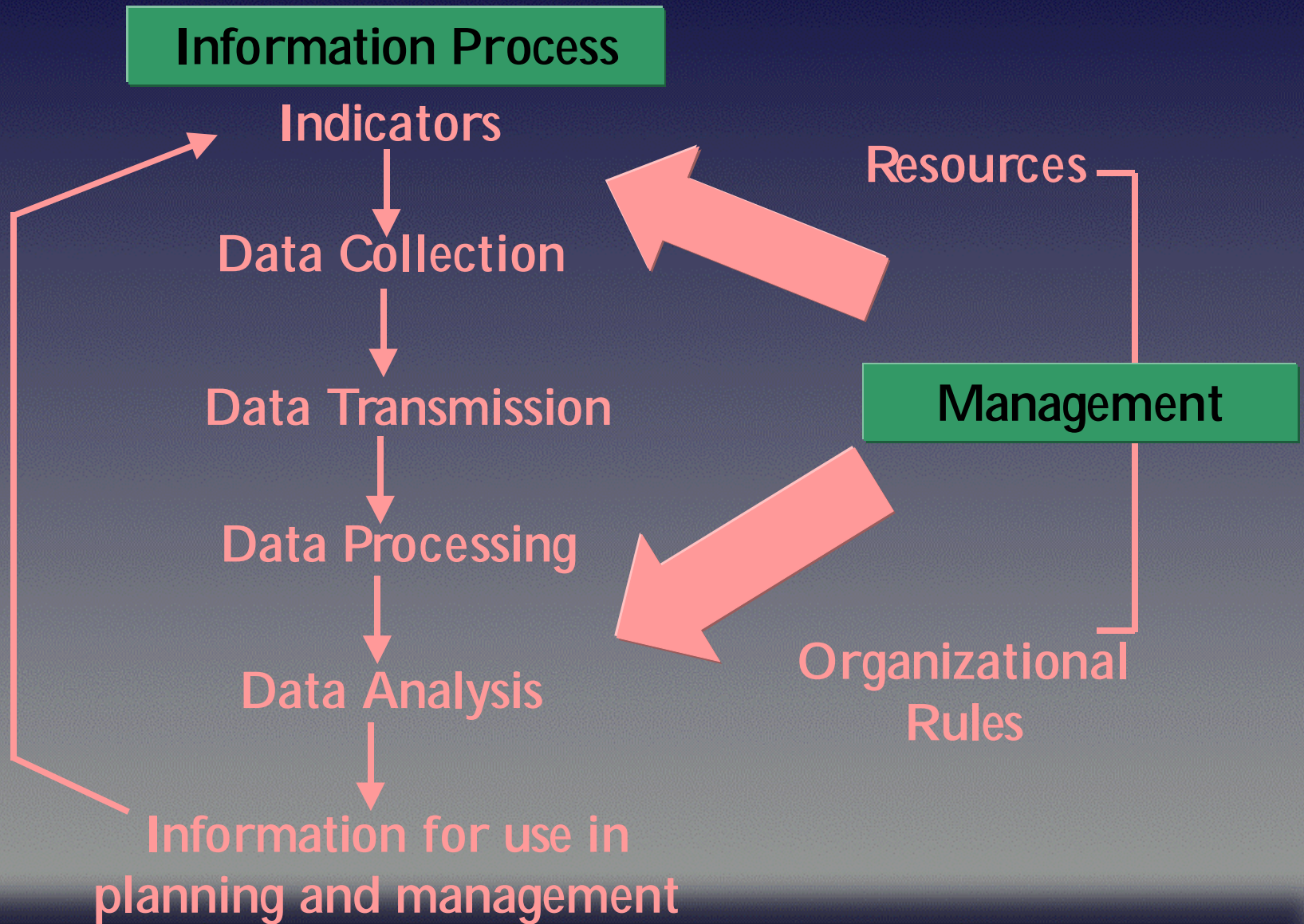
« ... a system that provides specific  
information support to the decision-making  
process at each level of an organization »

(Hurtubise, 1984)





# Components of a Health Information System







# DATA COLLECTION METHODS

## ROUTINE DATA COLLECTION

- Health unit based
- Community based
- Civil registration

## NON-ROUTINE DATA COLLECTION

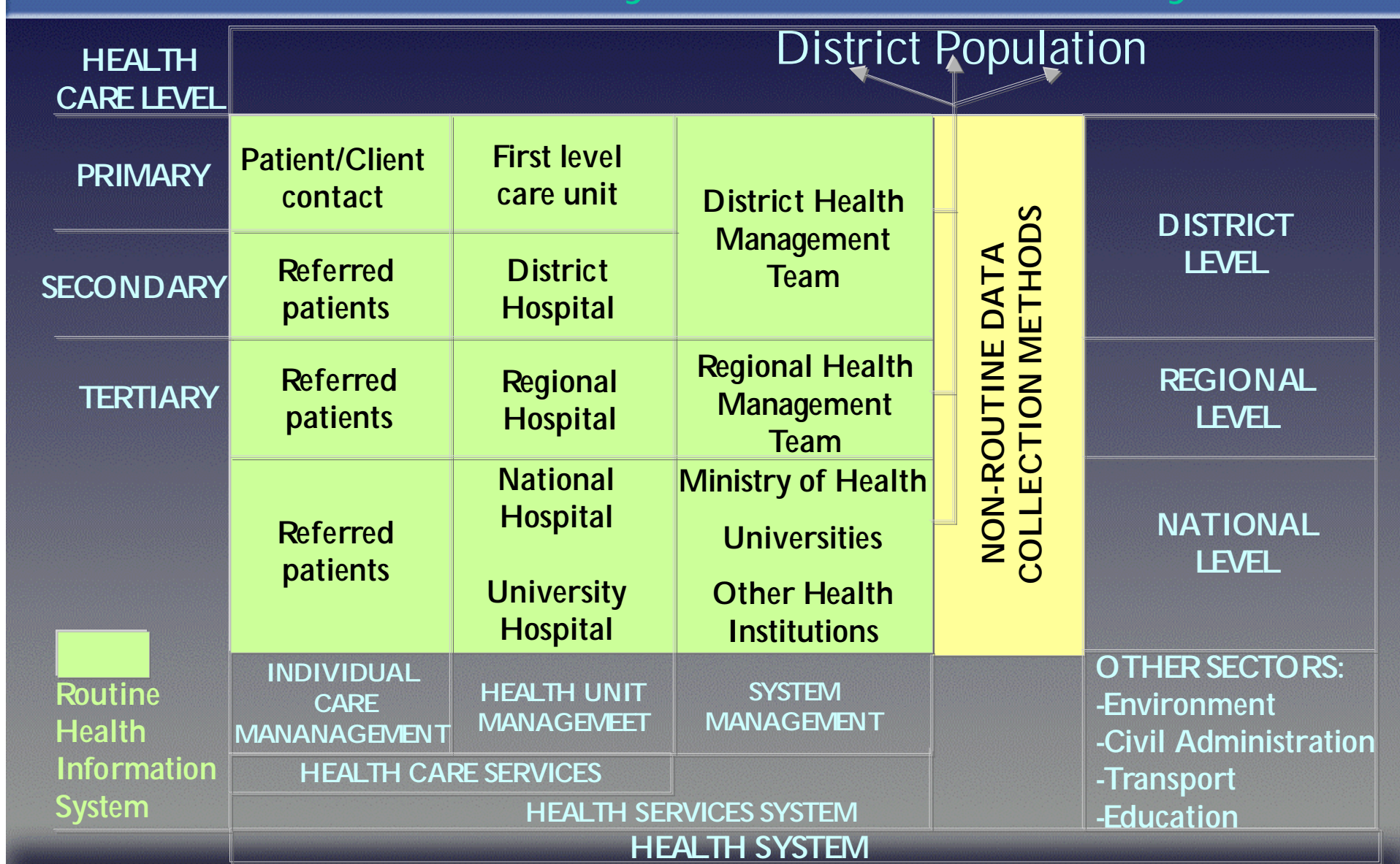
- Population-based or health unit-based surveys
- Population census
- Rapid assessment procedures (RAP)

## INFORMAL DATA COLLECTION





# Relationship between the Routine Health Information System and the Health System







## What is wrong with existing routine health information systems?

- ❖ Irrelevant and poor quality data, leading to poor use of information on individual care services
- ❖ Individual care services are not linked to a reference population
- ❖ Centralization of information management
- ❖ Poor and inadequately used health information system infrastructure





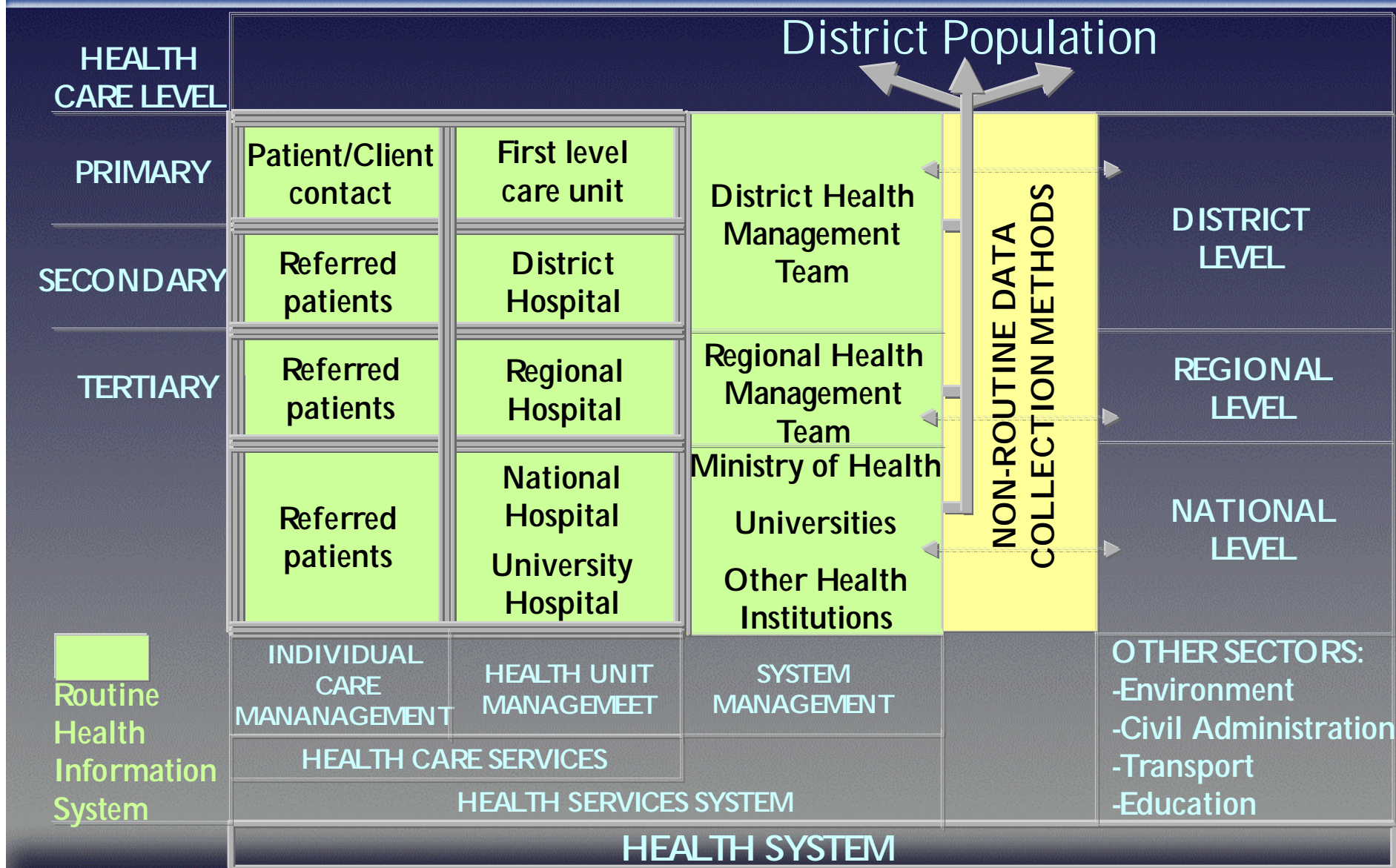
As a result...

- ⌘ “Block” between individual care and public health information systems
- ⌘ Fragmentation of health information system management into “program- oriented” information systems.





# What is wrong with existing Routine Health Information Systems?







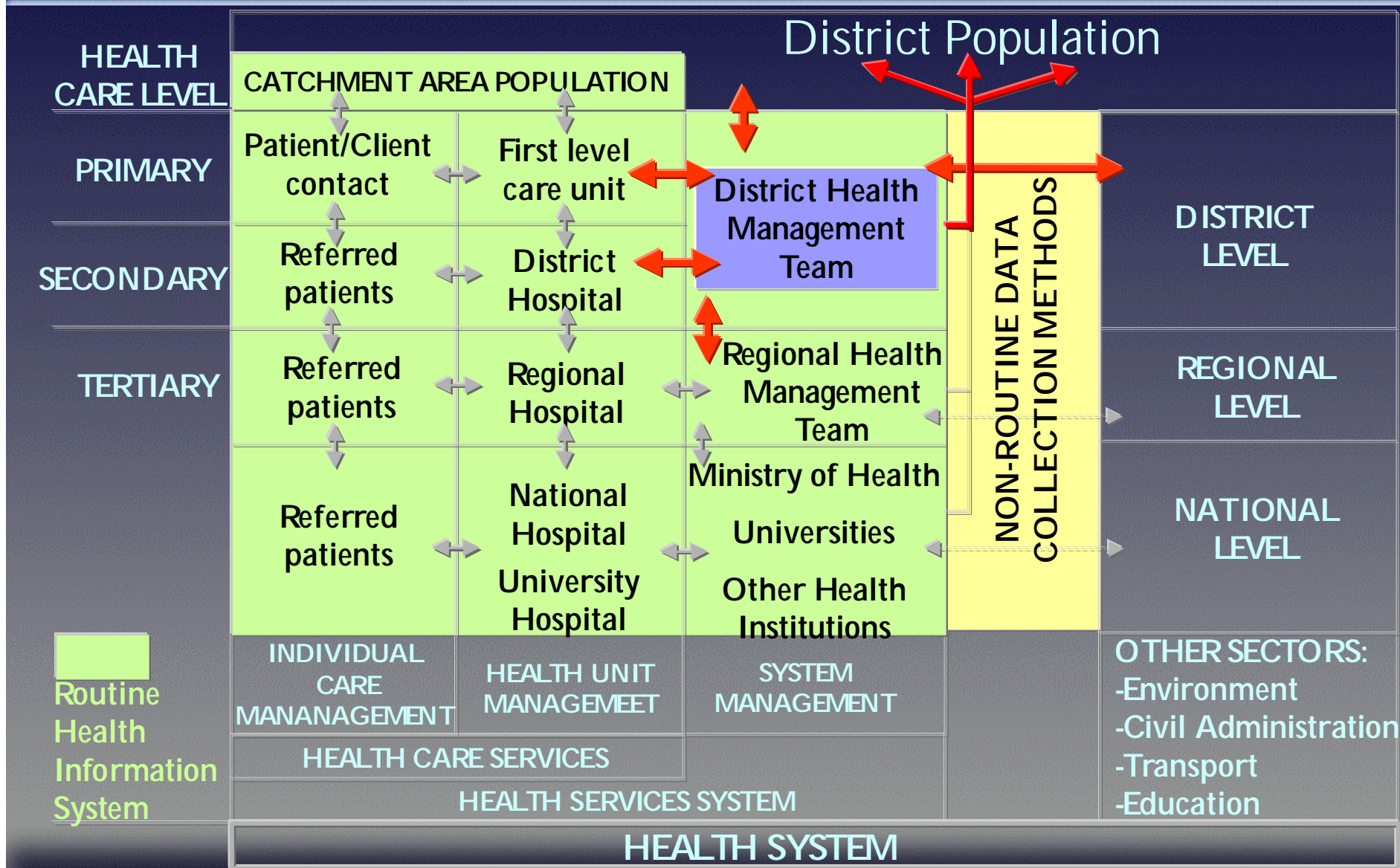
## Proposed strategies to improve integration of individual and public health information systems

- ⌘ District managed and population-based routine information systems
- ⌘ Carefully managed HIS restructuring process





# District Managed Routine Health Information Systems







## How to implement health information system reform?

- ⇒ Adapt information needs to management functions of health system
- ⇒ Restructure the information generating process
- ⇒ Provide sufficient and appropriate resources
- ⇒ Changing the “information culture”





## Restructure the information generating process

- Transform care providers into effective data collectors and users
- Improve information flows and use appropriate communication technology
- Computerize data processing at appropriate levels
- Adapt data presentation to each level so as to ensure use of information





## Changing the “information culture”

⇒ Successful HIS reform requires:

- ⇒ Preliminary policy analysis
- ⇒ High level leadership: find a “saint”
- ⇒ Broad consensus-building of users in the design stage
- ⇒ Useful information products early in the process





## Future perspectives

- Development of population based community health and information systems
- Research agenda on routine health information systems





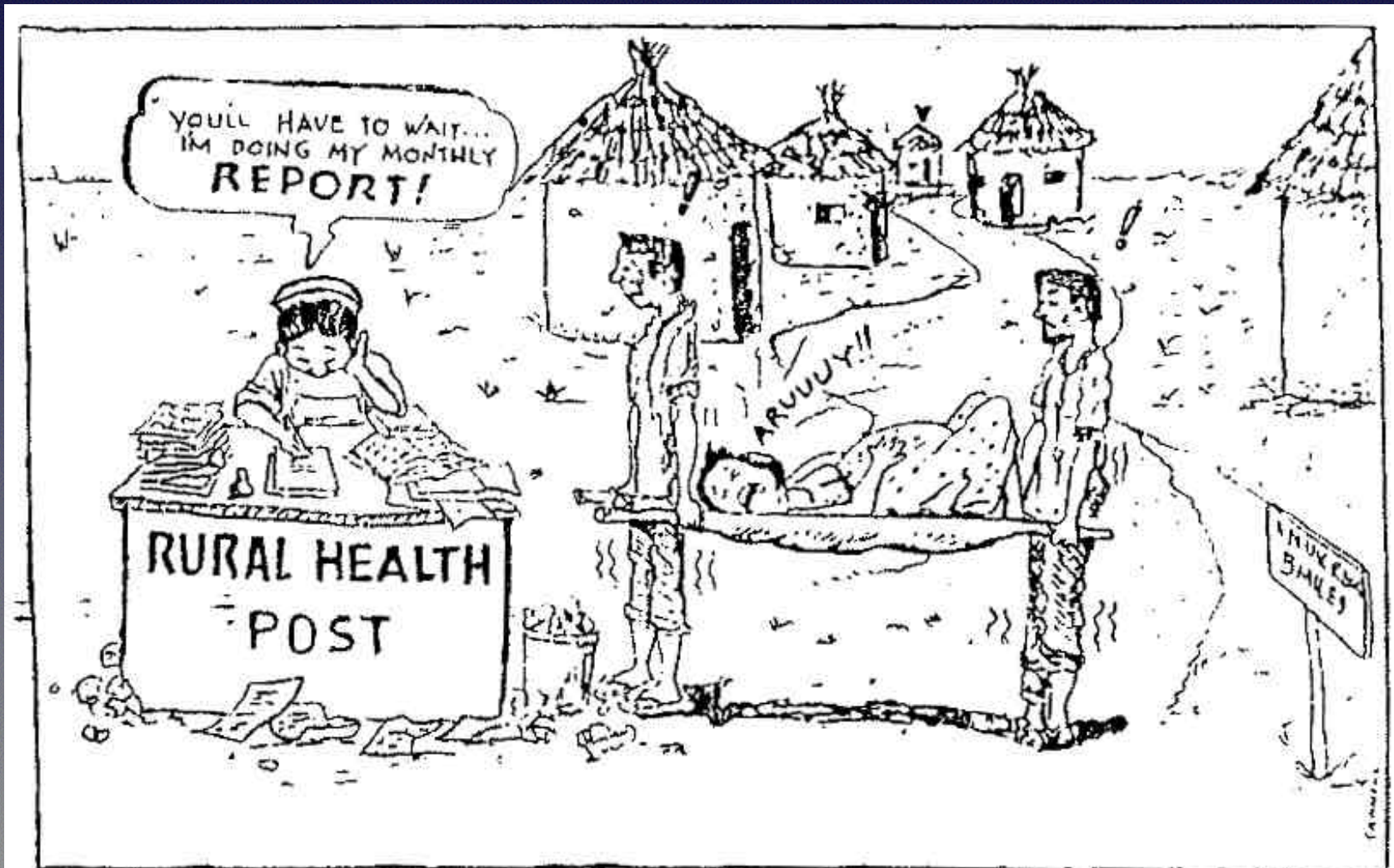
## Research Agenda on Comprehensive Health Information Management

- ⌘ Do decentralized district-managed HIS really contribute towards Unity for Health?
- ⌘ How to involve key users in HIS development efforts?
- ⌘ How to better link routine service statistics to non-routine data collection?
- ⌘ What is the relationship between information presentation and use?
- ⌘ How to develop large-scale community managed health information systems?





## Communication problem between health services and the community



Adapted from Feuerstein (1993)