

Workshop on Issues and Innovation In Routine Health Information in Developing Countries  
March 14-16, 2001, Potomac, Maryland USA

---



# **Demographic Surveillance Systems in Burkina Faso: The Case of Nouna Health Research Center (CRSN)**

Yazoumé Yé, Uwe Wahser

# Content



- Introduction to the CRSN
- Demographic Surveillance System (DSS)
- Research Linked to the DSS
- Opportunities for Linking DSS and HMIS
- DSS Time Line

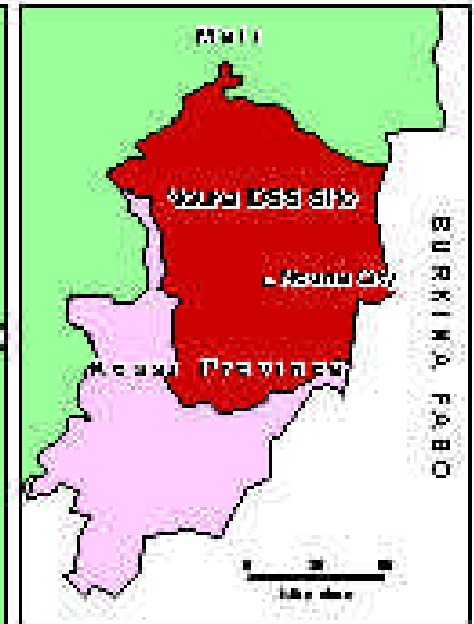
# Location of the CRSN



Burkina Faso:  
Pop.: 11,000,000  
11 Health Regions  
53 Health Districts



Nouna Health District:  
Pop.: 240,000  
1 District Hospital  
1 Medical Center, 17 CSPPS



# Mission of the CRSN



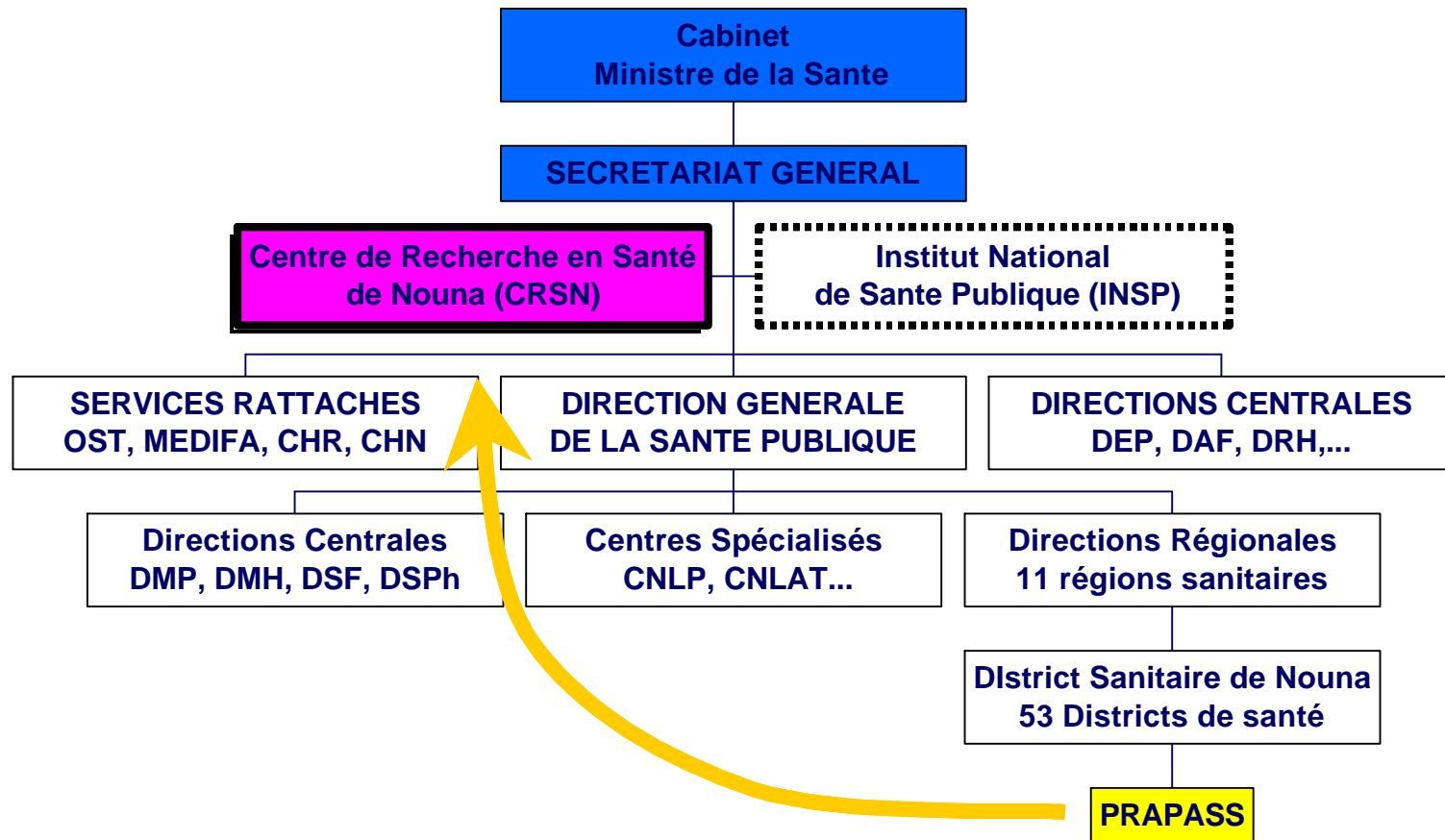
- Conceptualize and conduct multidisciplinary health research projects in the field according to the national health policy.
- Disseminate research results to sustain health sector reforms.
- Contribute to capacity building in health research.
- Provide data to the MOH for health policy and planning.

# Institutional Transformation to CRSN



- 1992-1999: PRAPASS (Action Research)
- Since October 1999: CRSN (Health Research Center)
- Reasons for the transformation:
  - Insufficient recognition by Ministry of Health.
  - The concept of action research was not mastered.
  - Insufficient collaboration of the reserach projects and programs.
  - No clear strategy for capacity building.
  - Little and irregular financial resources.

# Institutional Transformation to CRSN



# Objectives of the DSS



- Identify health problems and help to formulate innovation interventions to solve them.
- Provide information to health planners and policy makers.
- Follow and evaluate health interventions.
- Give a platform for multidisciplinary health research projects.
- Monitor the population over time in a geographically delimited area.

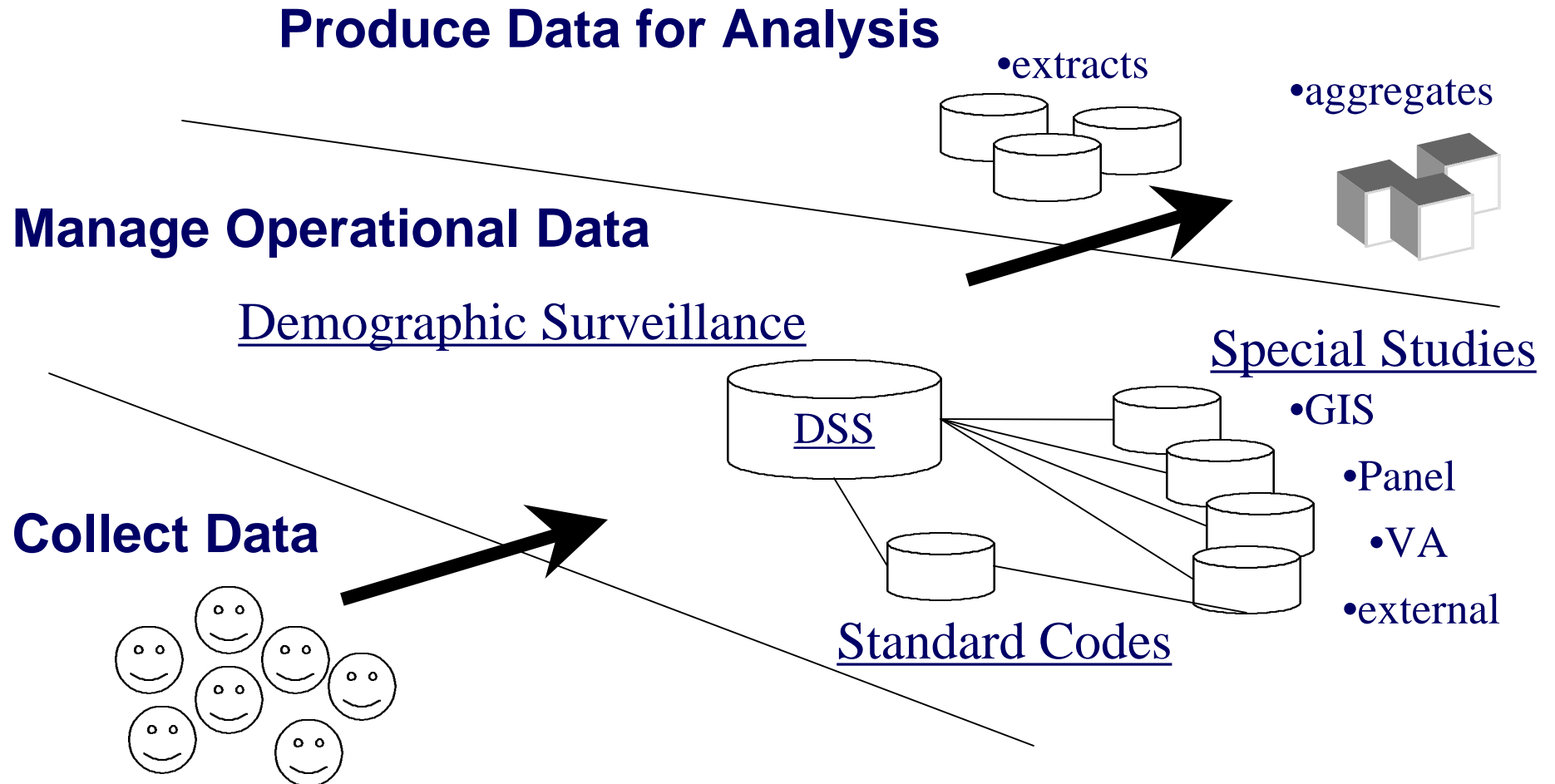
# DSS Activities of the CRSN



- Base line censi: 1992 (semi-urban center: 2000)
- Control censi: 1994 and 1998
- Vital events registration: every 3 months in each household  
(Events: births, deaths, pregnancies and migration in/out)
- 7 Interviewers and 3 supervisors
- Strong emphasis on quality assurance during collection and entry of data.

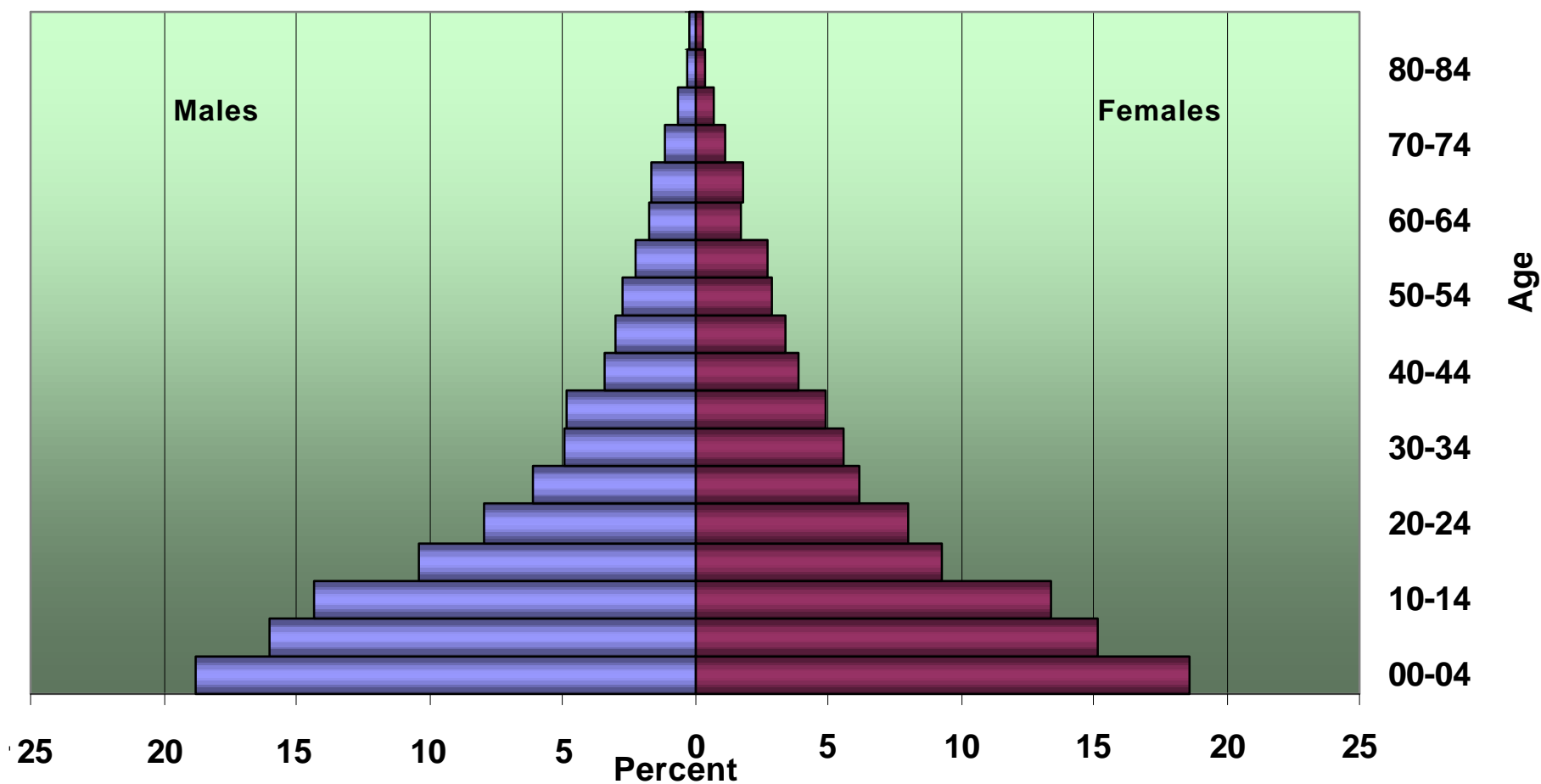


# Data Flow in the DSS



CRSN, Burkina Faso

# Population Pyramid for 1998



# Research Agenda Related to the DSS



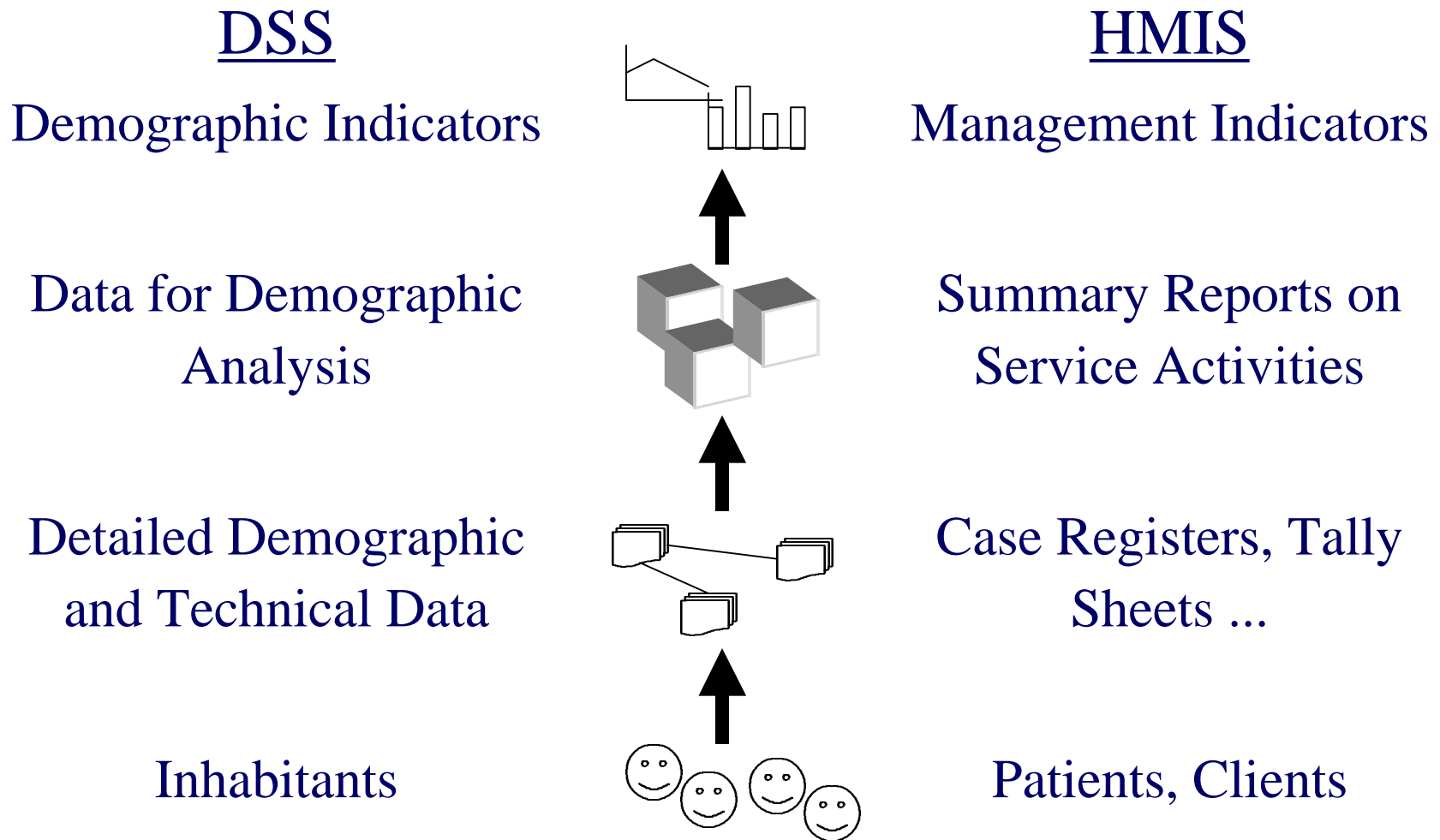
- Health system research
- Health outcome measures
- Malaria intervention trials
- Molecular Malaria parasitology and entomology

# Linking DSS and HMIS

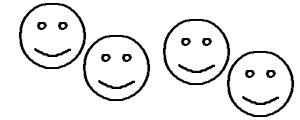


- Two information systems are observing closely related topics.
  - ➔ Verify results.
  - ➔ Complement missing results.
  - ➔ Gain new insights by merging results.
- ➔ The two systems should deliver corresponding answers to corresponding questions.
- ? Do they ? If not, why not ?

# Corresponding Data Processing Stages

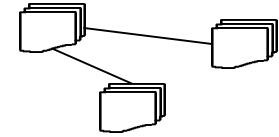


# Linking Individuals and Patients

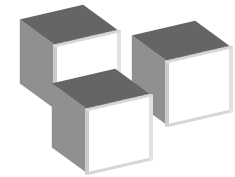


<b>Example...</b>	<b>DSS</b>	<b>HMIS</b>
<b>Objects</b>	Individual who lives in the area and the illness episodes he reports	Patient who came for treatment of an illness to a CSPS
<b>Procedures</b>	Trained interviewer goes to the individual, identifies and asks for illness.	Health worker identifies patient and diagnoses illness.
<b>Validity</b>	Identification: Better Diagnosis: Worse	Identification: Worse Diagnosis: Better
<b>Link</b>	The real individual is already linking the two systems on this level. The problem is to know who he is.	

# Linking Operational Data



<b>Example...</b>	<b>DSS</b>	<b>HMIS</b>
<b>Objects</b>	Datasets on individuals in a specially designed database system.	Documented cases in the patient register book.
<b>Procedures</b>	Validated data entry of data recorded in the field.	Pen and paper documentation in the CSPA
<b>Validity</b>	Increased validity by evolution of processes and experienced 'data' workers.	Low validity of low priority task by <u>health</u> workers.
<b>Link</b>	Try to find all treated cases of Malaria from the case registry book in the DSS database (and vice versa).	

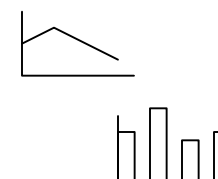


# Linking Analysis Data

<b>Example...</b>	<b>DSS</b>	<b>HMIS</b>
<b>Objects</b>	Selected and/or aggregated extracts - granularity and volume on demand.	Aggregated service data in summary reports per month   service   CSPA.
<b>Procedures</b>	Summary queries on the operational database with automated computations.	Manual tallying of cases and calculations into CSPA summary reports.
<b>Validity</b>	High validity due to automated processes.	Low validity of manual, low priority task by health workers.
<b>Link</b>	The CSPA Koro saw 25 cases of Malaria in February. how many cases of malaria were registered in the people living in the catchment area of Koro?	



# Linking Results



<b>Example...</b>	<b>DSS</b>	<b>HMIS</b>
<b>Objects</b>	Demographic and health indicators in presentations and publications.	Compiled service indicators in health reports of the services.
<b>Procedures</b>	Calculations, comparisons with external indicators.	Calculations, discussion in management teams.
<b>Validity</b>	Value added through validation and comparison.	Validity is being discussed in team, General hospital bias.
<b>Link</b>	In the DSS we have seen an increase in deaths due to Malaria - can this trend be found in the service data as well? The links on this level are already common.	

# DSS Time Line

