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RESEARCH BRIEF
JANUARY 2014

A content analysis of district level health data in Uttar Pradesh, India

Key findings

- The public health system collects a large volume of health data:
  Total forms: 197(including Department of Women and Child Development)
  Total data elements: 15,983
- Data exist for all of WHO's health system building blocks, but it is unevenly distributed. There are fewer data on contextual information, e.g. village infrastructure and demographic profile, compared to service delivery.
- There is little formal or institutional routine data sharing between the public and private health sectors, and between the health department and other related departments such as Women and Child Development.

Emerging issues

Several issues related to data quality and use emerge from this content analysis. These need to be better understood and addressed in the future.

Issue 1. Data gaps and inadequacies: Gaps in data such as missing or inadequate data elements need to be identified.
Issue 2. Data duplication: Redundant and non-critical forms and data elements need to be differentiated from the critical ones, and prioritized.
Issue 3. Data flow blockages: Blocks in the flow of data need to be identified to ensure that important information collected at lower levels is passed upwards and used in planning and decision making.
Issue 4. Data sharing: A mechanism needs to be developed for routine sharing of essential data by the private health sector and by other non-health government departments at the district level.

About this study

Aim: To conduct a content analysis of the different types of public health data maintained by the Health Department, the Department of Women and Child Development, and the private for profit and not for profit health sectors and the links that exist between them in terms of data sharing.

Method: In two districts, Sitapur and Unnao, an IDEAS/PHFI study team visited district, sub-district and village level health facilities (public and private) as well as NRHM programme management units, and Women and Child Development offices. The team collected all available forms and interviewed facility staff and programme managers to understand the types of data collected, their flow and data sharing. Case studies of three not-for-profit non-governmental organisations were developed to understand how they maintain and share data with the public health system.

Photo right: Auxiliary Nurse Midwife filling out her register, Uttar Pradesh, India. © Dr Meenakshi Gautham

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The Public Health System collects a large volume of data

At the district level the public health system maintains a total of 197 forms from the village level up to the level of primary and secondary health facilities and district headquarters. Out of these 197 forms, 29 are part of the online Financial Management Report, one is part of the online Mother and Child Tracking system (which is compiled at the district/block level) and three are part of the online reporting which captures NRHM activities at different levels of the health system. The remaining forms belong to an older paper-based architecture that still continues in the system.

These 197 forms include more than 15,000 data elements (Figures 1 and 2).

This multitude of forms and data elements increase the likelihood of data duplication and limit data use. For instance, tetanus immunization and Iron Folic Acid tablet distribution is captured in 2 forms by community health workers (ASHAs), 4 forms by the ANMs and 4 forms at the PHC and CHC level. Similarly, immunisation is captured in 2 forms by ASHAs, 5 forms by ANMs and 6 forms at the PHC/CHC level. Almost identical data (e.g. number of children immunised, total population of the village) is collected by two community level workers (ASHAs in the health system and AWWs in the Integrated Child Development Services Scheme).

Further analysis is required to pick out redundancies and blocks in the data flow, and find ways to streamline the existing data overload.

Key district level findings

A. Data generation

Department of Health

- Total data forms: 178
- Total data elements: 15,180.
- An online and paper based data collection system is in operation.
- Focus is on service delivery with little on contextual information, e.g. information about facility, village and household infrastructure and demography.

Department of Women & Child Development

- Total relevant data forms: 19
- Total data elements : 60

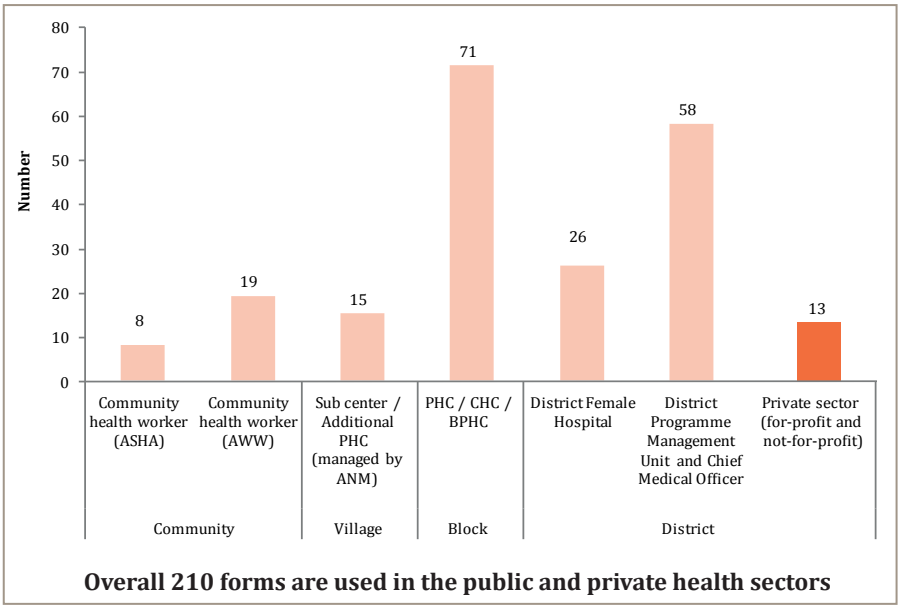
Private sector (for-profit and not-for-profit)

- Total relevant data forms: 13
- Total data elements: 745

B. Data sharing

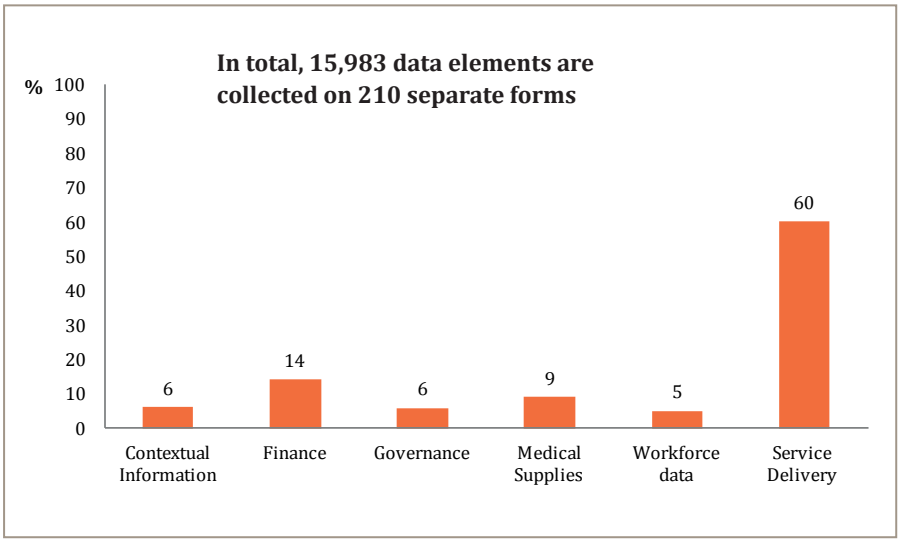
- Data not adequately shared among public sector health departments and the private health sector.
- Informal sharing happens. A potential avenue for sharing information between the public and private sector is the District Health Society meeting, chaired by District Magistrate

Figure 1 – Number of forms used for data collection at community, village, block and district levels



Overall 210 forms are used in the public and private health sectors

Figure 2 – How the 16,000 data elements balance by health system building blocks



District level health data cover all of WHO's 6 health system building blocks but are unevenly distributed

Public health data are distributed over the 6 WHO categories in different proportions: contextual information (3.6 %), finance (13.5%), governance (5.7%), medical supplies (9.3%), workforce (4.9%), and service delivery (59.4%). The rationale for this distribution is not clear, but the greatest volume of data is generated under the service delivery category.

Further analysis may point out the exact nature of inadequacies in the distribution of data across the different categories and strategies for rationalising this distribution.

There is limited data sharing between the private and public health sector as well as different public sector departments

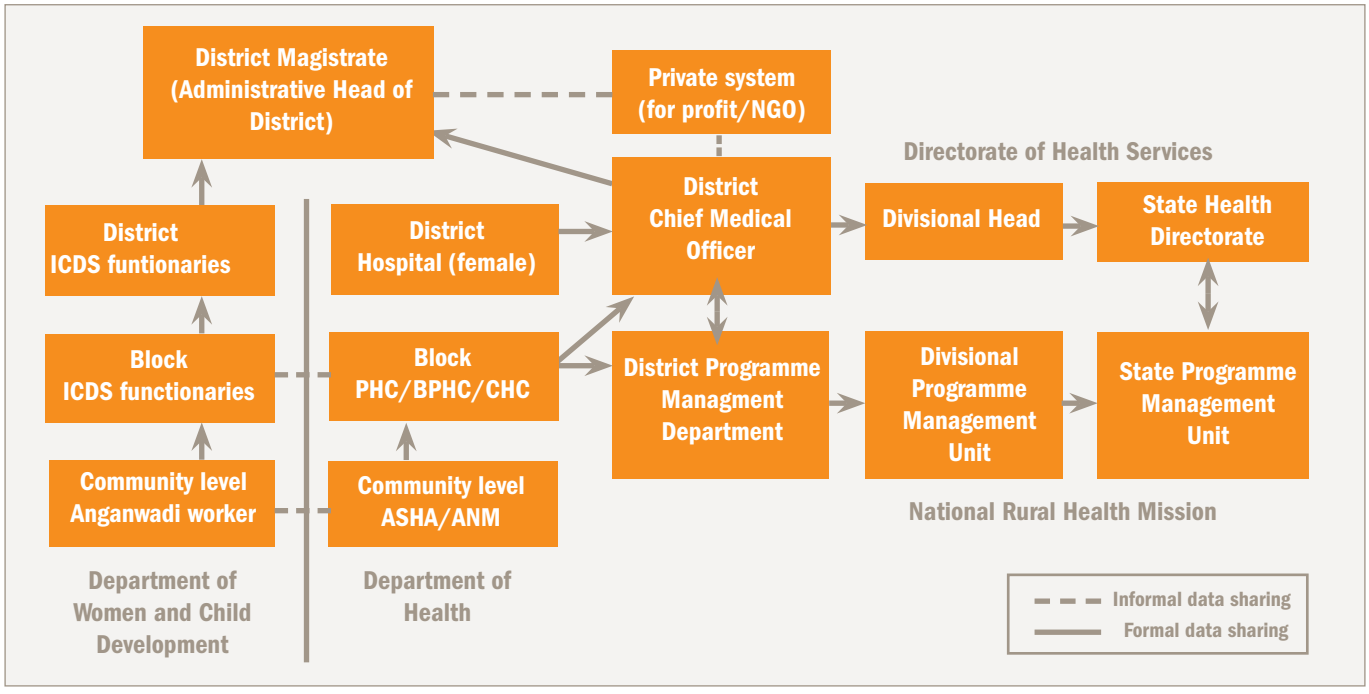
The Department of Women and Child Development and the private health sector (for-profit as well as not-for-profit) also collect public health data, but there is limited data sharing with the public health system.

The Department of Women and Child Development also collects 19 forms and 60 data elements pertaining to public health.

The not for profit and for profit private sectors also collect their own data (Box 1). The Department of Women and Child Development data are not shared through a formal mechanism with the district health system. However some of these data do go to the District Magistrate's office (Figure 3).

> Information from good-quality data play a major role in programme monitoring, review, planning, advocacy and policy development. Information shared across public and private health sectors can catalyse local decision-making, so that health service delivery is in line with community needs and available resources.

Figure 3 – Health service data and flow



What is needed?

A mechanism for regular data sharing

Information from good quality data is central to good quality programme monitoring, review, planning, advocacy, and policy development. Information shared across public and private health sectors can significantly enhance local decision making, so that health service delivery is in line with community needs and available resources.

Our preliminary analysis of public health data suggests that a lot more needs to be done:

- Further analysis is needed to understand the duplication of data at different health system levels, the blocks in data flow, and the redundancy of some elements.
- Timely sharing of information across other governmental and private sector service providers could further reduce the duplication of effort and ensure optimum use of resources through joint decision making and planning. There is a need to use innovative ways to engage the private sector in data sharing.
- There is need for a mechanism to bring governmental and non-governmental service providers to a common forum on a regular basis, to share data in a systematic manner, and use information as a tool in priority setting for planning and resource allocation.

Photo above: Record of women who have received cash incentives for delivery at a health facility © Bilal Avan

Table 1 – Data elements collected in a district

Health System Categories	Thematic Areas
Contextual Information	Infrastructure of facilities, village and household infrastructure, demography
Finance	Expenditure, financial incentive, insurance scheme
Governance	Management (supervision), grievance redress, utilization data
Medical Supplies	Resources/supplies
Workforce	Human resources, training
Service Delivery	Antenatal care, delivery, post-natal care, newborn care, immunisation of infants and children, childhood care, abortion, family planning, adolescent health, nutrition, water and sanitation, non-communicable disease, TB, malaria, HIV, mortality.

Acronym	Definition
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi worker
BPHC	Block Primary Healthcare Centre
CHC	Community Health Centre
ICDS	Integrated Child Development Services
NRHM	National Rural Health Mission
PHC	Primary Health Centre

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