



Data-Informed Platform for Health

Structured district decision-making
using local data

Prototype Phase, West Bengal, India



This external evaluation report was prepared for the Informed Decisions for Actions in Maternal and Newborn Health (IDEAS) project, London School of Hygiene & Tropical Medicine.

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Acronyms

ADM	Additional District Magistrate
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ARI	Acute Respiratory Infections
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
BDO	Block Development Officer
CDPO	Child Development Project Officer
CINI	Child In Need Institute
CMOH	Chief Medical Officer of Health
DCP	District Convergence Platform
DHFW	Departments of Health & Family Welfare
DHHD	Diamond Harbour Health District
DHS	District Health & Family Welfare Society
DHS	District Health Society
DIPH	Data Informed Platform for Health
DM	District Magistrate
DP&RD	Department of Panchayat & Rural Development
DPO	District Project Officer
DSW	Department of Women and Child Development and Social Welfare
HMIS	Health Management Information System
ICDS	Integrated Child Development Services
IDEAS	Informed Decision for Actions in Maternal and Newborn Health
IDI	In-Depth Interview
LSHTM	London School of Hygiene & Tropical Medicine
MIS	Monitoring and Information System
MNCH	Maternal, Newborn and Child Health
NGO	Non-Profit Making Organisation
NHM	Indian National Health Mission
ODF	Open Defecation Free Programme
PHFI	Public Health Foundation of India
RCH	Reproductive Child Health programme
SHIS	Southern Health Improvement Society
SPECT	Society for Promotion of Ethical Clinical Trials
SSDC	Sundarban Social Development Committee
WHO	World Health Organization

Contents

Executive Summary	04
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Part I: Background

1. Introduction	06
1.1. Background	06
1.2. The DIPH prototype phase: context, strategy and implementation	07
1.3. Structure of the report	08
2. Objectives and methods of the evaluation	09
2.1. Objectives	09
2.2. Evaluation methodology	09
2.3. Data collection methods	10
2.4. Ethical considerations	10
2.5. Limitations	10

Part II: Findings of the DIPH evaluation

3. Data use and data sharing for decision-making	12
3.1. Overall findings	12
3.2. Data use in health decision-making, planning and progress monitoring after the introduction of the DIPH	12
3.3. Multi-sectoral engagement and data sharing for health decision-making	15
4. Role and use of the DIPH strategy and job-aids	18
4.1. Overall findings	18
4.2. Role and use of the DIPH strategy	18
4.3. Role and use of the job-aids	19
4.4. Role of the DIPH monitoring framework during and after the prototype phase	20
4.5. Factors affecting sustainability and scalability of the job-aids	20
5. Role of DIPH implementation support	21
5.1. Overall findings	21
5.2. Role and use of the DIPH implementation Support	21
6. Contextual factors and other determinants of data sharing and use	23
6.1. Contextual factors determining uptake and use of the DIPH	23
6.2. Key conditions that are a pre-requisite for introducing the DIPH	24

Part III: Conclusions

7. Discussion	26
8. Recommendations for scale-up and sustainability	27

Part IV: Appendices

Appendix 1. Data collection guides	30
Appendix 2. Consent form	41
Appendix 3. Illustrative list of monitoring indicators for DIPH scale-up phase	42

Executive summary

This report presents findings and recommendations from an evaluation of the Data Informed Platform for Health (DIPH), a structured decision-support strategy to promote the use of local data for health decision-making. The DIPH was developed and pilot-tested in India by the IDEAS project of the London School of Hygiene & Tropical Medicine (LSHTM) from December 2015 to March 2017.

Background

In low resource settings, the use of local data for health system planning and decision-making is often limited. To address this issue, the IDEAS project at LSHTM developed and implemented a prototype of the DIPH, aimed at promoting data sharing and local data use for health decision-making at the district level.

The prototype phase pilot-tested the DIPH strategy and job-aids by bringing together key district-level data on inputs and processes from multiple programmatic activities at the district health administration level in two districts of West Bengal, India. The state level collaborators were the Department of Health & Family Welfare, Government of West Bengal and the West Bengal University of Health Sciences. Key district level stakeholders were the Departments of Health & Family Welfare (DHFV), Women and Child Development (DSW), Panchayat & Rural Development (DP&RD); non-government organisations and private providers, as well as the Public Health Foundation of India (PHFI).

The DIPH comprises a structured set of processes involving five pre-defined steps with standardized job-aids for each step to facilitate the linking of input and process data from health and other sectors. The DIPH job-aids were designed to help organise and interpret data from multiple sectors involved in the delivery of services around a particular health issue, so that district leadership and management teams could make systematic use of these data for health decision-making.

Evaluation objectives

The evaluation aimed to understand the mechanisms and processes of the DIPH strategy for inter-sectoral data sharing and data-informed decision-making, and to provide recommendations for scale-up in other districts of West Bengal. The independent evaluation team used a process evaluation approach employing multiple qualitative methods.

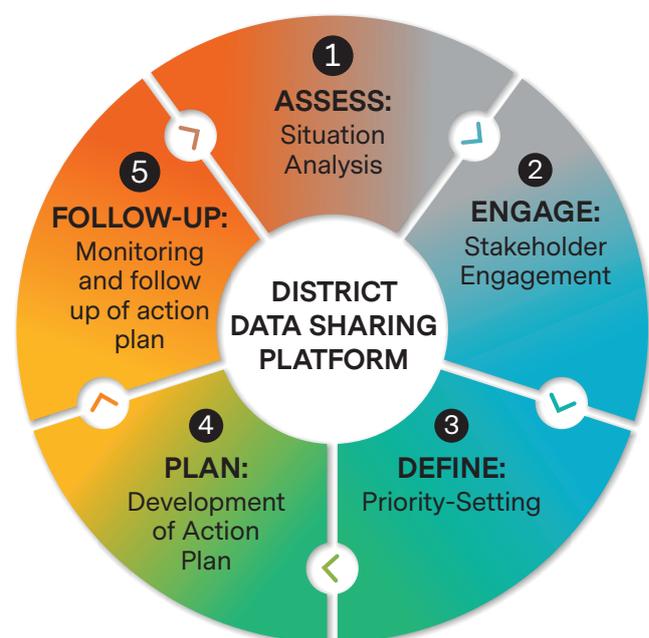
Key findings

DIPH strategy

The introduction of the DIPH five-step strategy (assess, engage, define, plan, follow-up) has facilitated the use of local level programme management and service data for targeted district-level decision-making across multiple health domains by:

- Providing a mechanism for rapid data analysis and presentation using novel automated software
- Facilitating the use of data by the district administrative and programme leadership for health programme prioritization and planning, progress monitoring and follow-up across diverse health themes, including maternal, newborn and child health, and other public health issues.

Figure 1. a typical five-step DIPH cycle



- Offering a system for engaging multiple stakeholders in structured health decision-making embedded in existing district level meetings.

DIPH job-aids and implementation support

- The job-aids played a critical role in health system planning and progress monitoring across DIPH cycles in each of the districts of the prototype phase.
- The job-aids were organized and used according to the sequence of the DIPH steps, and were perceived as much-needed “automated software¹”, integrating the steps as well as the tools for data presentation and analysis.
- The web-based interface was found to be more user-friendly than a paper-based version due to (1) an automated feature capturing data from preceding steps, thereby avoiding repeated entry by the district team and saving time and effort, and (2) superior analytics and visual data presentation features.
- The implementation support was key for successful implementation of the prototype across all cycles. Transfer of ownership from the implementation support team to the district administration will ensure the long-term sustainability at scale.

Mechanisms, context, and determinants

- **At the macro level**, socio-cultural factors such as the hierarchical decision-making culture prevalent in India and in other low-income settings, where actions tend to be driven by top-down directives, influence the degree of ownership and use of the DIPH to a large extent.
- **At the meso level**, health system organizational factors such as the capacity and skills of the district team in data understanding and use, and availability of technology infrastructure, particularly internet connectivity, determined the ease of collating data in the DIPH job-aids as well as use of the web-based interface during DIPH meetings.
- **At the micro level**, individual factors such as the attitude of the district stakeholders towards change and new innovations influence the uptake and use of the DIPH.
- Certain key pre-requisites are essential for the successful uptake, use and sustainability of the DIPH. Notable among these are the existence of a decentralized health system where districts have a reasonable level of autonomy for local level health decision-making; the availability of local level programme input and process data; and the existence of a legal framework and political will to engage with multi-sectoral public and private health stakeholders.

Conclusion and recommendations

The prototype phase successfully demonstrated the DIPH to be a structured mechanism for multi-sectoral data sharing and data-based decision making using local programme and service data at district level. Based on the evaluation findings, the team makes the following recommendations:

- 1 The DIPH should be scaled up at state or regional level so as to improve local health decision-making as well as to contribute to the evidence-base in this field.
- 2 For improved uptake and use of the DIPH, it should be kept generic and flexible to allow for context-specific adaptation. Job-aids could be streamlined to make them more contextual and user-friendly.
- 3 Embedding the DIPH in existing high-level district level planning and review platforms will increase its uptake, use and sustainability.
- 4 Wherever possible, a digital interface should be chosen over paper-based formats as this allows for better data presentation, interpretation and analysis. However, paper forms offer a viable option for settings with limited digital infrastructure and internet connectivity.
- 5 A well-defined capacity building and technical assistance plan is needed for scale up.
- 6 To facilitate introduction and uptake, there is need for sustained communication using advocacy and learning materials drawing on the experience of the prototype phase.
- 7 Creation of a DIPH implementation and review committee at national and regional level involving key multisector stakeholders will add to rapid and effective integration and use. ■

1. The DIPH web-based interface organised the job-aids so that completion of each step led automatically to the next.

1: Introduction

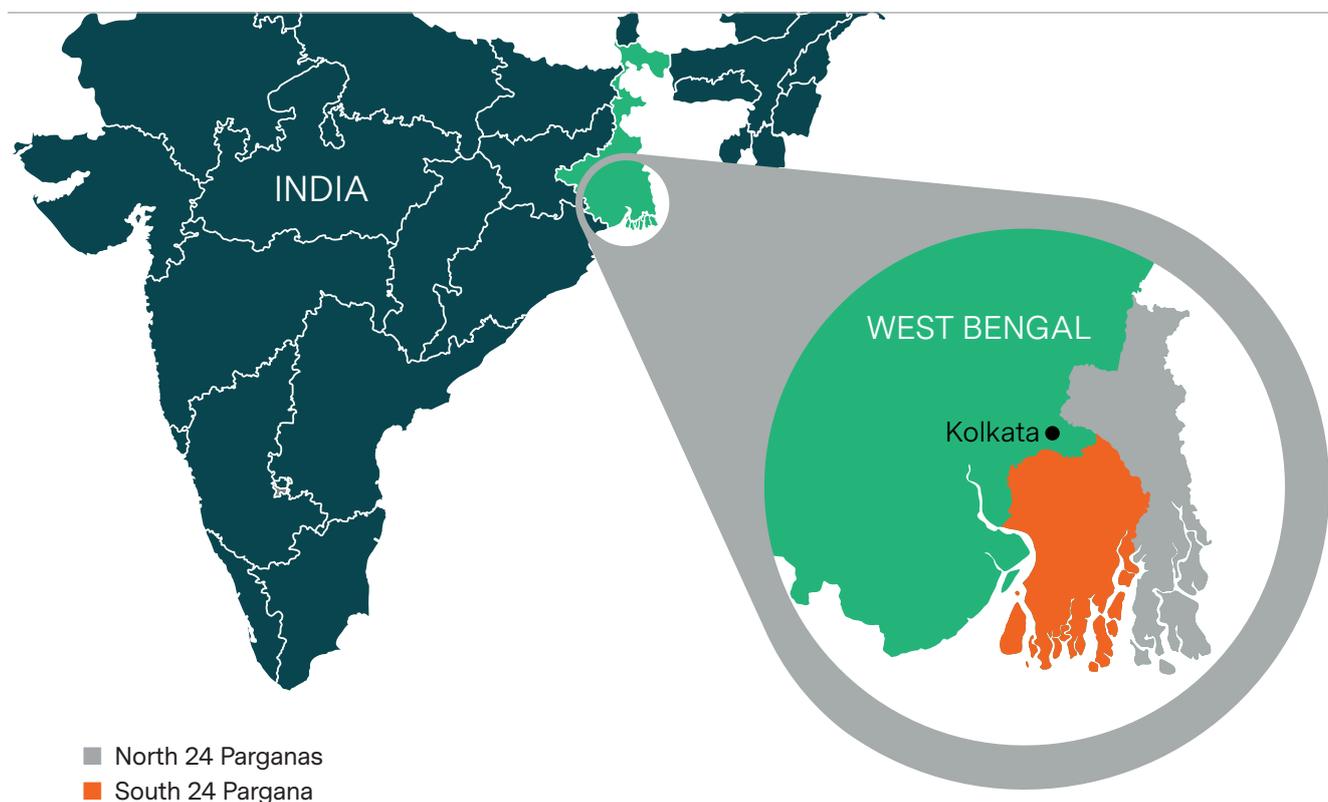
1.1. Background

In low and middle-income countries, the use of local data for health system planning and decision-making is often limited. District health systems usually lack structured processes for using data in their decision-making, and data sharing is a challenge for the multiple direct and indirect health service providers, resulting in duplication and sub-optimal use of resources, and potentially also low and inequitable coverage of health services. Health administrators and managers often have limited capacity to analyse and use data for decision-making. To address these issues, the IDEAS (Informed Decisions for Actions in Maternal and Newborn Health) project of the London School of Hygiene and Tropical Medicine (LSHTM) developed and tested **the Data-Informed Platform for Health (DIPH)**, a decision-support strategy for district level health systems.

The DIPH aims to support district level data sharing between stakeholders from multiple sectors responsible for the delivery of health services, and to facilitate data use in health planning, review and decision-making for better services related to Maternal, Newborn and Child Health (MNCH).

The primary objective of the DIPH is to promote sharing and use of local data for health decision-making by bringing together key district-level data on inputs and processes from multiple programmatic activities at the district health administration level. The DIPH prototype phase was implemented in partnership with Public Health Foundation of India (PHFI), in West Bengal, India. Key collaborators were the Department of Health and Family Welfare, Government of West Bengal and the West Bengal University of Health Sciences. The prototype phase aimed to pilot-test structured and collaborative decision-making processes based on data sharing and data use among health stakeholders, embedded in a local context.

Figure 2. The DIPH Prototype phase was implemented in West Bengal, India



This report presents findings and recommendations from an evaluation of the DIPH prototype phase, implemented between December 2015 and March 2017.

1.2. The DIPH prototype phase: context, strategy and implementation

The design of the prototype was informed by an earlier feasibility study by IDEAS in 2013.² This earlier study found that although responsibility for local planning and delivery of health services was devolved to the district level under the Indian National Health Mission, the health planning and review platforms at district level lacked structured decision-making processes which might facilitate the use of local programme and service input and process data to inform decisions. Most often, districts only used data from the Health Management Information System (HMIS) that primarily focuses on coverage and outcomes, and which were not appropriate for local priority setting and planning. Although large quantities of input and service data were collected by departments of health and other sectors involved in health care delivery, such as the departments of Social Welfare, and of Panchayat and Rural Development, these data often remained unutilised.

The prototype phase was implemented in two districts of West Bengal, namely South and North 24 Parganas, covering three health districts³: (1) Diamond Harbour, (2) South 24 Parganas, and (3) North 24 Parganas (Fig.1). In consultation with the Government of West Bengal, the Department of Health & Family Welfare (DHFV) was chosen as the nodal department, and the DIPH was embedded in the District Health & Family Welfare Society (DHS), the apex health related decision-making structure and common data sharing platform at the district level under the NHM. Apart from the DHFV, other key stakeholders were the Department of Women and Child Development (DSW), the Department of Panchayat & Rural Development (DP&RD), non-government organisations and private providers who were also involved in health service delivery.

The DIPH strategy used a structured set of processes involving five pre-defined steps and standardized job-aids corresponding to each step to facilitate linking data from health and associated departments and stakeholders with the DHS. A typical DIPH cycle had five steps around a theme, which took about three to four months to complete (Fig 1). “Assess”, the first step of structured decision-making, entailed understanding the existing situation of MNCH in the district through the systematic collection and analysis

of MNCH data using the WHO health systems framework⁴ to identify specific issues to be addressed. This process established a detailed and realistic picture of the service coverage in the district, and allowed participants to identify a DIPH theme. The second step, “Engage”, aimed at enhancing collaboration and engagement between MNCH stakeholders through their participation in structured discussions around the theme. This step also led to the identification of the primary and secondary stakeholders based on their role in services related to the chosen theme.

The objective of the third step – “Define” – was to list out possible theme-specific action points, aiming to build consensus, based on feasibility and resource requirements to address the issue. This was followed by step 4 – “Plan” – which led to the development of an action plan on the prioritised points agreed upon by all stakeholders. The final step, “Follow-up”, focused on review and progress tracking of the action plan. If the strategy was not on track, alternate action plans could be developed to achieve desired results⁵.

The DIPH job-aids were designed to help organise and interpret data from multiple sectors involved in the delivery of services around the chosen theme using a common data sharing platform. This made it easier for district leadership and management teams to use input and process data systematically for decision-making, planning and progress monitoring of the theme.

2 Avan BI, Berhanu D, Umar N, Wickremasinghe D, Schellenberg J. **District decision-making for health in low-income settings: a feasibility study of a data-informed platform for health in India, Nigeria and Ethiopia.** Health Policy Plan. 2016 Sep;31 Suppl 2:ii3-ii11.

Bhattacharyya S, Berhanu D, Tadesse N, Srivastava A, Wickremasinghe D, Schellenberg J, Avan BI. **District decision-making for health in low-income settings: a case study of the potential of public and private sector data in India and Ethiopia.** Health Policy Plan. 2016 Sep;31

Wickremasinghe D, Hashmi IE, Schellenberg J, Avan BI. **District decision-making for health in low-income settings: a systematic literature review.** Health Policy Plan. 2016 Sep;31 Suppl 2:ii12-ii24.

Gautham M, Spicer N, Subharwal M, Gupta S, Srivastava A, Bhattacharyya S, Avan BI, Schellenberg J. **District decision-making for health in low-income settings: a qualitative study in Uttar Pradesh, India, on engaging the private health sector in sharing health-related data.** Health Policy Plan. 2016 Sep;31 Suppl 2:ii35-ii46.

3 In West Bengal, large administrative districts are divided into smaller health districts for better management and service delivery. Overall, the district administration is responsible for all the health districts within the administrative district.

4 The WHO “Health Systems Framework” (2007) focuses on six building blocks of health systems, which are pre-requisites for health system functioning. These are service delivery; workforce; information systems; access to medicines and technology; financing; and leadership and governance.

5 Source: DIPH Concept Brief. IDEAS. 2016

Table 1. District wise DIPH cycles over the prototype phase (Jan 2016 – Jan 2017)

Health district	Cycle/Months	Theme
North 24 Parganas	C-1 (Jan—May 16)	Initiation of breastfeeding within one hour of birth and promotion of exclusive breastfeeding
	C-2 (May-Sept 16)	100% coverage for 3 antenatal care (ANC) and improvement in tracking of 4th ANC check-up
	C-3 (Sep16-Jan 17)	Strengthen Open Defecation Free Programme (ODF)*
South 24 Parganas	C-1 (Feb – July16)	Improve the coverage of institutional delivery
	C-2 (July – Sept 16)	Improve the coverage of 4th ANC
	C-3 (Sep16-Jan 17)	Diagnosis and management of Dengue cases*
Diamond Harbour	C-1 (Mar-June16)	Improve the coverage of institutional delivery
	C-2 (Jun-Sept 16)	Improve the quality of ANC
	C-3 (Sep16-Jan 17)	Prevention and treatment of acute respiratory infections (ARI)

*Although MNCH was the primary focus, health districts chose other public health issues based on the local need. Making India ODF by constructing toilets and behavior change to use them is a national programme by the Union Government of India. Diagnosis and management of dengue is part of the National Vector Borne Disease Control Programme (NVBDCP) by the Union Ministry of Health & Family Welfare.

Source: DIPH Concept Brief. IDEAS. 2016

In each of the three implementation districts, a district coordinator from the DIPH implementation team was responsible for introducing the DIPH strategy and job-aids to the state and district stakeholders, as well as capacity building and provision of handholding support. During the prototype phase, three DIPH cycles were implemented in each of the health districts. Table 1 provides a list of primary themes and cycle timings.

“It is a powerful and flexible tool that could be used for diverse health themes, and not limited to maternal child health.”

Panchayat & Rural Development Officer,
Theme Leader for ODF

1.3. Structure of the Report

This report is divided into seven sections. Section 1 provides the background, concept and implementation details of the DIPH prototype phase. Section 2 focuses on the evaluation objectives and methods. Sections 3 to 7 present findings corresponding to the evaluation objectives.

Section 3 presents the major findings related to data sharing and data use in the pilot districts after introduction of the DIPH (*objective 1*); Sections 4 and 5 provide findings related to the role, usefulness, scalability and sustainability of job-aids and implementation support (*objective 2*); and Section 6 examines the mechanism and context of the change in data sharing and data use for health decision-making after the introduction of the DIPH, including factors associated with successful implementation. Also included is a consideration of the impact of the facilitators (DIPH implementation support team). Section 7 includes a discussion of the findings and recommendations (*objective 4*). Data collection instruments, ethical approval letters and consent forms are included as appendices. ■

2: Objectives and methods of the evaluation

2.1. Objectives

The overall aim of the evaluation was to understand the mechanism and processes of the DIPH strategy for inter-sectoral data sharing and data-informed decision-making and provide recommendations for the scale-up of the DIPH strategy to other districts of West Bengal. The **specific objectives** of the evaluation were to:

1. Determine if the **DIPH strategy** facilitated improved use of data and multi-sectoral data sharing in health decision-making, planning, progress monitoring and follow up in the pilot districts.
2. Assess the role and usefulness of the **DIPH job-aids** and **DIPH implementation support** in district level health system planning and monitoring progress.
3. Develop a detailed understanding of the **mechanisms, context, and determinants of data sharing and data use** for decision making, planning, progress monitoring and follow-up among inter-sectoral stakeholders using DIPH.

Box 1. Core concepts for the DIPH mechanism and processes

DIPH strategy	Structured set of processes involving five pre-defined steps (assess, engage, define, plan, follow-up) used for data sharing and data-informed decisions suited to the local context
DIPH job-aids	Set of standardized job-aids (paper forms or web-based interface) corresponding to each of the steps defined above
DIPH implementation support	Technical assistance provided by the DIPH country team (from PHFI) in introduction, orientation and handholding of the district stakeholders
DIPH scalability	Expansion of the DIPH strategy to broader geographical areas or other health issues in similar context
DIPH sustainability	The likelihood that the DIPH will continue to function without support from IDEAS

4. Develop recommendations for **DIPH scalability** and **sustainability**.

2.2. Evaluation methodology

The evaluation team used a process evaluation⁶ approach using multiple qualitative methods, with the aim of generating a programme theory to explain the mechanisms through which the DIPH strategy led to multi-sectoral data sharing and improved use of local data for planning and decision-making.

The evaluation was carried out in three stages. In stage 1, the team generated an initial programme theory linking intervention inputs to improvement in sharing and use of data in health decision making based on content analysis of project documents and discussions with the DIPH-India implementation team (Fig 3). At this stage, data collection instruments were also drafted and field-tested. In stage 2, the team tested, refined and validated the initial programme theory by collecting data to document and understand changes in data sharing and data use practices upon introduction of the DIPH. Data collection also aimed at gaining an understanding of the multiple factors that influence and determine these changes. In stage 3, the team analysed, triangulated and interpreted the data collected to present the major findings, refine the programme theory, and develop recommendations for sustainability and scalability of the DIPH.

“ I think the process works really well, all the steps are critical... there is a logical flow to DIPH that I really think is necessary for us to be able to understand gaps and plan effectively.”

MIS officer

6 Moore et al. Process evaluation of complex interventions: Medical Research Council guidance. *BMJ* 2015;350:h125

Table 2. Data collection details

A. In-depth Interview		N=21
District stakeholders		14
(i) Administrative leaders (District Magistrate and Additional District Magistrate in charge of health)		2
(ii) Programme leaders from the Department of Health & Family Welfare (Chief Medical Officer and Additional Chief Medical Officers); Woman & Child Development, Panchayat & Rural Development		6
(iii) Programme managers and other key functionaries at the district level, such as the District Maternal & Child Health Project Officer, District Monitoring Officer		6
Non-Government or Private sector representatives		4
Non-Government Organization		3
Private Nursing Home (Private sector representative)		1
DIPH India implementation team		3
Implementation Team Lead		1
Implementation Team Member		2
B. Direct observation of DIPH meetings		N=2
Follow-up meeting for Cycle 3 of Diamond Harbour		
Theme: Prevention and treatment of Acute Respiratory Infections (ARI)		1
Follow-up meeting for Cycle 3 of North 24 Parganas		
Theme: Strengthen Open Defecation Free Programme		1
C. Review and content analysis		N=16
DIPH Cycle Monitoring Report (Cycle 1 -3, all districts)		9
DIPH job-aids (Guidelines, DIPH web-interface and paper-based formats)		7

2.3. Data collection methods

Data was collected by the evaluation team members in March and April 2017 through (1) in-depth interviews (IDIs) with district stakeholders and the DIPH country support team, (2) direct observation of DIPH meetings to understand use of the job-aids and strategy; and (3) review and content analysis of job-aids and monitoring reports. Open-ended semi-structured interview guides were used.

IDIs were conducted in Bangla (the local language in West Bengal) or English, based on the preference of the participant. Respondents were selected in such a way that all the three health districts were represented. For direct observations, the evaluators developed and used a structured checklist to record the findings. Extensive field notes were taken to document the interview and observation process. Data collection guides are attached as Appendix 1.

The evaluation team undertook a detailed review of the DIPH job-aids (paper and web-based) to understand how useful, appropriate, and easy to use they were, as well as other aspects determining the extent of use and to identify areas for improvement. They also reviewed the paper forms and data collection formats. The contents of all monitoring reports for each cycle in all three health districts, i.e. the total for nine cycles, were also reviewed to understand the progress of the DIPH across cycles and districts.

2.4. Ethical considerations

Ethical approval was obtained in India from the Independent Review Board SPECT (Society for Promotion of Ethical Clinical Trials) <http://spect.in/> (Appendix 2). Written informed consent was obtained from study participants and they were free to refuse participation at any point of the interview. All interviews were recorded with the permission of participants, and the resulting recordings and transcripts were given to the IDEAS team for storage according to the LSHTM policy for ensuring data protection and confidentiality. No personal data was used during analysis and reporting.

2.5. Limitations

To evaluate the use of the job-aids, observations of the use of the software might have been the best method. However, due to the busy schedules of the stakeholders, direct observation was not possible and the evaluation was based on interviews of stakeholders' experience using the job-aids. ■

Figure 3. DIPH Initial Programme Theory:

In the context of health systems in lower-and-middle-incomes countries, district-level decision-making is mostly ad hoc – lacking a defined process and participatory approach, and failing to optimize the use of available data. Integrating the DIPH in the district-level health decision-making process – within the framework of a decentralized health system – will lead to structured, collaborative decision-making, supported by multi-sectoral data sharing for priority health themes for programme planning and monitoring.



*Departments of Health, DSW, Panchayat, NGOs, private sector

3. Data use and data sharing for decision-making

3.1. Overall findings

Study findings indicate that the introduction of the DIPH has facilitated the use of local level programme management and service data for targeted district-level decision-making across multiple health domains by:

- 1 Providing a mechanism for rapid data analysis and presentation using novel automated software.
- 2 Facilitating the use of data by the district administrative and programme leadership for health programme prioritization and planning, progress monitoring and follow-up across diverse health themes, including maternal, newborn and child health, and other public health issues.
- 3 Offering a system for engaging multiple stakeholders in structured health decision-making embedded in existing district level meetings.

In all three health districts, the DIPH was consistently perceived by study participants as a useful and much-needed decision-making tool that facilitated data sharing and engagement between stakeholders from multiple sectors and provided a structure and mechanism for planning, monitoring and follow-up in a systematic way using real data. The study found that placing the DIPH in existing decision level platforms, such as the DHS, the District Convergence platform (DCP) and Reproductive Child Health programme (RCH) meetings⁷, proved to be a successful strategy as this meant a natural and seamless plug-in to existing district health planning and monitoring systems. Previously, these decisions were made based on anecdotal evidence or instinct, rather than hard data.

The study found that in all nine thematic cycles across the three health districts, the DIPH successfully managed to bring together associated departments into its common data sharing platform, and facilitated the use of data in collective gap-analysis; priority action selection and time-bound target-based action planning; and data-based monitoring and follow-up of the agreed action plan using the structure laid out by the DIPH. In the absence of any pre-determined programme priority by the state or district, the DIPH can also be used in priority theme

selection. The study found that in their endeavour to provide data, the district leadership allowed for revision of district programme data elements or collection of new data where existing data was not available, thereby strengthening health system data-capture and quality in the long run. A summary of the use of the DIPH strategy in planning, monitoring and follow-up across cycles found by the study is presented in Table 3.

3.2. Data use in health decision-making, planning and progress monitoring after the introduction of the DIPH

The DIPH facilitated data presentation, analytics and interpretation for structured and collaborative health decision-making: According to the study participants who were involved in the DIPH process as leaders and managers, it has provided a useful and much-needed data-presentation, data analytics framework and tool. This includes automated software for prioritization, planning and monitoring health activities at the district level for collaborative and structured decision-making. All study participants across sectors and levels unanimously found the DIPH processes and tools to be useful in health data analytics, data presentation and interpretation for practical use in planning and monitoring. They emphasized that such a platform for data sharing and analytics was not available prior to the DIPH.

Further, the five step-DIPH strategy also helped understanding of gaps and making decisions in a more systematic way.

“It is not that we did not have data before, but DIPH made it possible to use it in a way that really helped us to understand issues and problems at the implementation level involving the departments and community. It is really systematic in its approach and allows all stakeholders to understand their roles and responsibilities...The analytics is its most powerful feature...DIPH has allowed to cull out intelligent insights from dumb data.” (ADM, who used DIPH for ODF)

The DIPH led to better utilization of available data: It was observed that through the DIPH process there was a use of some otherwise un-used data which was

Table 3. Use of DIPH strategy (5 steps) in planning, monitoring and follow-up across health themes

Theme	Use of DIPH				
	ASSESS: Situation analysis	ENGAGE: Stakeholder engagement (Multiple government departments present in the meetings)	DEFINE: Priority setting (Gap analysis; Priority setting based on discussions and consensus)	PLAN: Development of time-bound action plan	FOLLOW-UP: Monitoring and follow up of action plan
Promotion of exclusive breast feeding and early initiation of breastfeeding*	✓	✓	✓	✓	✓ Data-sharing limited by departments other than health limited to Steps Assess and Engage
Increase in coverage and quality of antenatal visits	✓	✓	✓	✓	✓ Data-sharing by DSW limited
Increase institutional deliveries	✓	✓	✓	✓	✓
Prevention and treatment of acute respiratory infections (ARI)	✓	✓	✓	✓	✓
Strengthen Open Defecation Free Programme (ODF)*	✓	✓	✓	✓	✓
Diagnosis and management of Dengue cases*	✓	✓	✓	✓	✓

Source: DIPH cycle monitoring reports, IDEAS; Field notes during data collection

* Themes selected by programme directive by government, or based on district needs

✓ "Yes" denotes following the steps as per DIPH guidelines for each step

brought up through the discussions and meetings between health officials at block and district levels. For example, in the case of prevention of acute respiratory infections (ARI), there were several data points which were getting captured by the Accredited Social Health Activist (ASHA) or Auxiliary Nurse Midwife (ANM)⁸ in their registers but not getting captured in the Health Management Information System (HMIS) and therefore not getting analyzed or used. The DIPH provided the necessary scope to look at these unused data.

"Previously, I had great difficulty in finding out training performance across districts as HMIS did not capture these data and these data were kept at the block level... After the introduction of DIPH, we can determine planned vs. actual coverage of training programme for all districts. We can also understand and discuss why performance is not up to the mark in certain districts as district status is derived from block-level service data, and this has really helped in pin-pointing the problem or

understanding the gap and making targeted time-bound action plans." (Deputy CMOH III, Theme Leader for ANC)

The DIPH helped improve understanding of programme data and indicators by district level stakeholders:

The DIPH process introduced a culture and practice of scrutinizing data to understand programme progress and gaps, and using this understanding to develop action plans or decide follow-up plans. Observation of DIPH meetings elucidated how data sharing and automated analytics facilitated "gap identification" and

- District level planning and review meetings for the national Reproductive and Child Health Programme. The majority of the MNCH activities take place under the aegis of the RCH programme. The RCH meetings are chaired by the CMOH and attended by all district level officials of the health sector. Officials from other sectors join in upon invitation.
- Auxiliary Nurse Midwives (ANM) are multi-purpose female health workers responsible for managing a health sub-centre, the first-level primary health care service centre.

“time-based action planning and target-setting” by making data meaningful for the programme team as a collective. Interviews with theme leaders⁹ revealed that prior to the introduction of the DIPH, they had viewed data as inert numbers collected for reporting and often could not understand how to interpret and use data. That changed with the introduction of the DIPH, which helped them understand data in a more systematic way using the health systems framework and enabled a quick identification of the problems at hand and possible solutions. The repeated use of the DIPH process across cycles led to an **enhanced capacity for better understanding and interpretation of data among the district programme team who reported or used such data.**

“Normally, we find it difficult to analyse and interpret data (from HMIS and other sources). But DIPH does that in a very systematic and user-friendly way – particularly the web-based interface has simplified data entry and analysis.” (Deputy CMOH III, Theme Leader ANC and Institutional Delivery)

The use of the DIPH in the monthly Reproductive Child Health programme (RCH) meetings was not planned but the district programme leadership themselves felt that in the case of MNCH related themes, RCH monthly meetings would be a good forum to follow up on the DIPH action plans. This demonstrated the flexibility of the DIPH strategy as being independent of any specific forum, but that could be used in any appropriate district forum.

A majority of the stakeholders regarded the DIPH highly in terms of creating a systematic way to present data that is usable for programme planning and monitoring. This also helped address the problem of multiplicity of data collected by different departments by bringing them onto a common platform. For example, both the DHFW and the DSW have a mandate to ensure ante-natal care (ANC) and both reported the same ANC data, which however at times did not match, leading to confusion.

According to district leadership, the DIPH has the potential to serve as a local data repository that the district leadership and stakeholders can easily refer to and use, something that is generally not available. Interviews with district administration leaders highlighted that workers from multiple departments, for example ANMs from DHFW and Anganwadi Workers¹⁰ (AWW) from DSW, were going separately to the same beneficiaries to collect the same data. The DIPH helped to understand this issue and showed the potential for reducing this duplication.

“...the main thing in government system is that, there is no dearth of data. Rather there is multiplicity of data.

But how to interpret is the concern. Workers from different departments keep going to the same mother or household multiple times to collect the same child data multiple times. There are several common areas. In fact, the same person is asked same thing by different people belonging to different departments... DIPH has a role here.” (ADM)

The use of the WHO health systems framework in the DIPH provides flexibility for its use in public health themes other than MNCH: As described earlier, the DIPH used the WHO ‘Health Systems Framework’ to categorise inputs and processes identified for each of the health themes based on which priority actions are identified and planned. Although the DIPH was originally designed for use in the MNCH domain, observations of two DIPH process meetings in two health districts (with dengue and ODF as themes) and analysis of the DIPH cycle reports showed that the **DIPH is flexible in its applicability across multiple public health domains as it uses the WHO health systems framework for data presentation and analysis** which is broad enough to accommodate any public health issue.

“It is a powerful and flexible tool that could be used for diverse health themes, and not limited to maternal child health. It was really helpful and helped in understanding and planning for ODF in a very systematic way, involving many people, including community, at different levels.” (Panchayat & Rural Development Officer, Theme Leader for ODF)

The DIPH could potentially lead to an improvement in programme input and process data quality and accuracy: The DIPH brought out the inconsistencies in input and process data resulting in discussions among district and block officials responsible for reporting and collating data. Thus although not planned, the introduction and regular use of the DIPH led to a review and analysis of input and process data by the district stakeholders, potentially helping to improve health management and services data quality, particularly in terms of accuracy and completeness.

The DIPH also led to critical decisions regarding data availability and quality by the district administration and programme leadership team, as they saw the value for improved decision-making, such as collection of new programme data or validation of existing data.

“In some cases, we did not have data that we could rely on, for example, in case of ARI, health workers’ registers were re-visited to generate the data as relevant parameter was not tracked in general...in case of ODF, the district decided to collect fresh data... independent extensive house to house survey was conducted.” (DIPH implementation support team member)

Table 4. Government stakeholder participation in DIPH meetings (Step 1 – 5)

Health District	Cycle	Theme	Stakeholders present			
			District Admin	DHFW	DSW	DP&RD ¹¹
North 24 Parganas	1	Promote breast feeding	✓	✓	✗	✓
	2	Increase ANC visits	✓	✓	✓	✓
	3	Strengthen ODF Programme	✓	✓	✗	✓
South 24 Parganas	1	Increase institutional deliveries	✓	✓	✓	✓
	2	Improve the coverage of 4th ANC	✓	✓	✓	✓
	3	Diagnosis and management of Dengue	✗	✓	✗	✓
Diamond Harbour	1	Improve the coverage of institutional delivery	✓	✓	✗	✓
	2	Improving the quality of ANC	✓	✓	✓	✓
	3	Prevention and treatment of ARI	✗	✓	✗	✗

Source: DIPH cycle monitoring reports, IDEAS

3.3. Multi-sectoral engagement and data sharing for health decision-making

High levels of multi-sectoral representation in the DIPH:

This evaluation gained its insights not only through discussions with stakeholders from multiple sectors and observations during DIPH meetings, but also through a close review of DIPH cycle monitoring reports. The monitoring reports give an indication of representation from various departments apart from health during the DIPH meetings, which was considered as an indicator of engagement. Inference was also drawn by looking at the extent of action points with responsibilities of non-health departments and non-government or private players. Across all of the cycles, a high level of stakeholder presence from health and allied government departments was noted as the DIPH strategy provided a structured format that helped to bring out the role of various sectors in specific themes (Table 4). The evaluation team found this to be encouraging given the short period of implementation (one year) and felt that with continued use and increased buy-in and leadership involvement from the district administration, the DIPH would lead to more “active” participation and stakeholder engagement from non-health sectors, particularly for core health themes such as MNCH or management and control of dengue.

“We have a monthly development planning meeting with the District Magistrate. After DIPH, we have seen that general administration could help us in many ways in improving institutional services. The planning format reveals that we are not getting satisfactory help by

Block Development Officers (BDO), we have submitted report to DM that BDO should help us in minimum ways to improve the institutional delivery in district.”
(Dy. CMOH II)

DIPH’s positioning within the existing district platforms helped its establishment as a value-addition for collective planning:

The DIPH was designed in such a way that it could be seamlessly integrated within existing district review and decision-making processes operating at the DHS, DCP¹² or the Reproductive & Child Health Programme (RCH) platform. This helped establish the DIPH as an important value-addition for collective planning and review of priority themes in the districts. Interviews with the DIPH prototype stakeholders revealed that although existing mechanisms for multi-sectoral meetings existed at the district level, these

9 Nodal official responsible for steering DIPH for each specific theme. Theme Leaders were decided by the district leadership at the time themes were selected. They represent the primary department and change with the themes.

10 Community Nutrition Worker from the Department of Social Welfare (ICDS, DSW) known as Anganwadi Worker (AWW) who are the frontline workers for the ICDS programme

11 Admin: Administration, DHFW: Department of Health & Family Welfare, DSW: Department of Social Welfare responsible for Integrated Child Development Services (ICDS), DP&RD: Department of Panchayat & Rural Development

12 District Health & Family Welfare Society (DHS) is the apex health planning and decision-making platform at the district level under NRHM, District Convergence Platform (DCP) is the district-level convergence platform under the chairmanship of the District Magistrate for all collaborative planning and review of development programme where all departments mandatorily participate in West Bengal.

were largely unused for data-based decision-making, and nor was there any structured mechanism that could facilitate multi-sectoral participation for data-based health decision-making prior to the DIPH. The DIPH has provided a framework, structure and tools that can be embedded within existing district planning and review platforms for data-based decisions.

“I found the (DIPH) process to be really helpful in systematically organizing data and facilitating interaction between stakeholders from health, DSW and Panchayat departments in gap identification and action planning. The stakeholder analysis exercise under DIPH has supported in establishing that DSW and DP&RD have roles in achieving health targets. For example, after discussion on breast-feeding data under DIPH, we decided that we needed to focus on establishment of breast feeding corners in delivery centres and sensitization of ASHAs¹³, AWWs and community on this issue will be key action points.” (CMOH)

The DIPH initiated data sharing by non-health departments but more time is needed for consistent data sharing:

Across all three health districts and themes, while data sharing by non-health departments was common during the initial assessment and planning phases (DIPH Steps 1 and 2), it was not consistent across each cycle (DIPH Steps 1-5). Content analysis of DIPH process monitoring reports showed that for all three cycles and themes across districts, the extent of data sharing diminished from DIPH Step 3 onwards (action planning to follow-up) for all non-health sectors for all themes except ODF in Cycle 3 in North 24 Parganas. In some cases, this happened because the concerned department never collected relevant data or had a role in carrying out the agreed action plan.

“Though Panchayat and Rural Development (a non-health department responsible for governance of all development activities) participated in the discussion, they could not provide any data as they do not collect data on institutional delivery....” (DHHD, Cycle 1)

Interviews with stakeholders revealed this to be due to common practices which take time to change, citing a consistent use of the DIPH as one key for this to happen.

“Health has always been the responsibility of the Department of Health & Family Welfare, and other departments have a supportive role. As a result, majority of health data is collected by the health department, and although we (ICDS, DSW) collect data for antenatal care and child health and nutrition, we normally do not share these with the Health Department. It will take time for this to change...we have made a beginning and now regularly attending the meetings and working as per action plans. With time, surely data sharing will also improve.” (DPO, ICDS)

Considering this, it is not surprising, that for a majority of the themes chosen where the DHFW was the nodal department, the other departments did not take any responsibility for any action point explicitly, although in many cases they agreed to cooperate. For example, in Cycle 2 in South 24 Parganas district, the health department took responsibility for all 15 action points for the theme institutional delivery, despite the participation of officials from Panchayat and Rural Development in all DIPH meetings and commitments by them to play a supportive role through a strengthening of community mobilization to improve institutional delivery. Similarly, although the Integrated Child Development Services (ICDS) of the DSW was present in the meetings, an interview with the District Project Office (DPO) revealed that they hardly ever shared any data, nor took part in any decision-making, as they perceived the DIPH as a health department initiative. As the DIPH strategy provided a structured framework to establish roles and responsibilities of the different department stakeholders, a consistent use of the DIPH by the district leadership can help in instructing relevant departments for more effective engagement in addressing this issue.

NGO involvement in the DIPH was limited as NGOs are not perceived as stakeholders for district health decision-making by the government:

Interviews with government officials revealed that NGOs are generally not involved in district planning or review processes, primarily due to the perception of the role of NGOs as working with specific populations covering small geographical areas. Interviews with district officials revealed that NGOs were perceived to be doing sporadic work covering small populations or not having any major public health impact which would merit their being part of the planning or review process.

“Apart from UNICEF in the entire State, there is no other NGO who plays any role... there are limited organizations who are working on health in general. Majority of them are supporting us in one or two issues.... I am not sure how to involve these NGOs or what will be the value addition especially to our selected DIPH themes... If you want to involve them at the planning level to share their general experiences, then it is different. Again, if you say you will involve them for implementation then it is different. I do not know of any NGO who is available for large-scale (district level) service delivery...” (CMOH)

Interviews with NGOs highlighted that the government mainly perceived them as contracted service-providers for specific schemes, or for hard-to-reach communities where they had a presence. For this reason, they were mostly involved from the execution stage of specific programmes contracted out to them, with very limited participation in the planning stage. However, NGOs also

expressed that given their understanding of community issues, they should be involved in the planning and review process and their experience could enrich the health decision-making process.

“We work closely with the communities and understand the dynamics better. We could definitely contribute if we are involved in the planning stage of designing.”
(NGO representative)

The lack of an effective legal framework and institutional mechanism prevent data sharing and engagement with the private for-profit sector: Currently, private for-profit hospitals and other service delivery centres have no legal requirement to submit data. Interviews with officials from DHFW of the three pilot health districts revealed the difficulties in obtaining data from the private sector, as well as the larger issue of a lack of national institutional mechanisms to involve and engage with the private sector as a key stakeholder in health decision-making and delivery processes.

“Is there any role of Private sector?... Getting data is a big challenge. There are several issues, the law which regulates the private sector is not very stringent. It is outdated, only 6 pages Act passed in 1950. There is another rule which has been amended later which is 25-30 pages long. But there is not much scope to make them abide to any rule. Later another rule has been drafted but still not passed....Private sector is operating in a business model... ..they do not maintain (service delivery record) register, they take cash money. No matter how much you say they will not share the total data but not much credibility. There is a lot of scope to improve but I do not know how.” (CMOH)

The researchers found it difficult to interview private sector representatives: they were not available to share their views. According to one of the bigger private hospitals operating in Kolkata and catering to South 24 Parganas, they should be involved in health planning as they provide a considerable proportion of the services, at least in urban areas. More evidence is required to understand and ascertain the willingness of the private sector for data sharing.

“Considering the current service delivery situation private sectors especially in the urban areas play a substantial role in meeting the demand. However, involvement of private players in health planning is mainly at times of any epidemic or any outbreak for immediate action planning. We should have a role in overall planning and decision-making.” (Representative of Zenith Super-Specialty Hospital, Kolkata) ■

“We find it difficult to analyse and interpret data (from HMIS and other sources). But DIPH does that in a very systematic and user-friendly way – particularly the web-based interface has simplified data entry and analysis.”

(Deputy CMOH)

4. Role and use of the DIPH strategy and job-aids

The evaluators reviewed the DIPH strategy, – i.e. the five pre-defined steps involving a structured set of processes and the DIPH job-aids – comprising five standardized forms (available either in paper formats or as part of the DIPH web-based interface) corresponding to each of these steps – to understand their role, usefulness, scalability and sustainability in promoting district level data sharing and health decision-making. The team also reviewed the existing DIPH monitoring framework to suggest how this could be re-tooled for the scale-up phase.

The DIPH job-aids underwent a few version changes during the implementation process based on feedback from users. During the first two cycles, job-aids consisted of paper-based forms. During the third cycle, the web-interface, an interactive digital platform, was introduced to replace the paper forms whilst retaining the same content as the paper forms. The evaluation team focused on the content of this latest standardised package as well as functioning of the web-interface.

4.1. Overall findings

Overall, the standardized DIPH job-aids played a critical role in district level health system planning and progress monitoring across DIPH cycles in each of the pilot health districts. The study also found that the job-aids are essential for implementation and inseparable from the DIPH strategy.

The job-aids were organized and used according to the sequence of the DIPH steps, and were perceived as “automated” software¹⁴ integrating the steps as well as the tools for data presentation and analysis vital for planning and monitoring. The DIPH web-based interface was found to be more user-friendly than the earlier paper-based package due to: (1) its automated data capturing feature from preceding steps, avoiding repeated data entry by the district team, saving time and effort; and (2) superior analytics and visual data presentation features. The evaluation findings also highlighted that for effective scale-up, the detailed monitoring framework used for the prototype phase could be shortened, focusing on a few **essential key performance indicators** (quantitative and qualitative) to track priority action planning and follow-up using the DIPH.

4.2. Role and use of the DIPH strategy

Overall, the five-step DIPH strategy provided a well-structured process to enable district level stakeholders to collectively recognise and prioritise problems, analyse gaps and build consensus towards a solution around a specific health theme. Interviews with key stakeholders highlighted that they felt the five steps were well thought out, logical and well suited to the Indian context.

“I think the DIPH 5-steps are designed really well, from the beginning it helped us in bringing all the concerned departments, and making each of us understand our role clearly. The second step (Engage) really helped me to understand role of each of the departments. We had a long discussion about primary and secondary stakeholders.” (DPO, ICDS, DSW)

“I think the process works really well, all the steps are critical,..there is a logical flow to DIPH that I really think is necessary for us to be able to understand gaps and plan effectively.” (MIS officer)

Overall, the evaluation team found the progression of the steps to be logical and working well.

- **Step 1 (“Assess”)** helped establish a theme-specific detailed and realistic picture of the service coverage with respect to the human, material and financial resources available in the concerned district.
- **Step 2 (“Engage”)** was successful in establishing the extent of stakeholder presence. In a few instances, this also allowed for the identification of a lack of stakeholder participation and subsequent action by district authorities to address this issue in later steps.
- **Step 3 (“Define”)** helped with the “priority setting” step involving the “six building blocks” of a health system and is instrumental for strategizing in terms of reaching the target population, service provision, need for staff and supervision. This was particularly useful in building consensus regarding priority action areas based on an analysis of what is feasible and critical for the district.

¹⁴ The DIPH web-based interface was designed to be “automated” software wherein completion of each step led to the subsequent step

- **Step 4 (“Plan”)** helped in developing mutually agreeable and realistic action plans.
- **Step 5 (“Follow up”)** provided the scope to review the progress made on action plans in a collective forum. The online job-aid gave a visual presentation of the extent of achievement or failure. This further aided in re-evaluating a given action plan.

4.3. Role and use of the job-aids

The job-aids were perceived as powerful “data visualization tools” for sharing status and progress across a district and helped with gap-analysis, planning and follow-up: Overall, a majority of study participants described the job-aids as the most useful part of the DIPH, making “data visualisation” easy compared to what was referred to as “dead data” in pre-DIPH days. This in turn helped facilitate data-based discussions and analysis, leading to activity prioritization, planning and progress monitoring and follow up. Participants also described the “visualisation” feature as helpful for teams collecting and entering data, as well as teams using data for decision-making to understand the meaning of data and how it could potentially serve programmes. This also supported the comparison between sub-districts in terms of performance on agreed action items (for example, training of ANMs). For example, in Cycle 3 during a follow-up meeting on the ARI theme in Diamond Harbour where the evaluation team was present, over-reporting of ARI cases due to a lack of technical skills of ANMs to correctly categorise ARI was discussed and noted for a future training agenda.

“DIPH has a strong plus point – give it back to those who are collecting the data and make them see (and understand) the data. ...For effective community health care management (involving multiple stakeholders), this ‘participatory visualization is important’. Together you can sit and see what is coming up from the data. You can discuss and take the decision.” (ADM)

Most of the participants felt that each DIPH cycle should be for a six-month period as this is the time usually taken for the action plans to be completed and the DIPH loop to close.

The use of the health systems framework in the job-aids facilitated the categorisation of previously unutilised programme input and process data and mapping of these data onto district planning and review platforms such as DHS or DCP through the web-interface. The automated analytics of DIPH Steps 3-5 (Define, Plan, Follow-up) facilitated the

use of these data for priority setting, target-based action planning and follow-up of the plans, thus leading to achievement of targets in the thematic area prioritised in a specific district.

“After introduction of DIPH web-interface, data analysis became really easy... the automated analytics helped in pushing data from one step to the next without any effort. For example, once data on progress of each action item was put into the software, it automatically generated area-wise graphs that everyone could easily understand. This really helped in identifying gap areas and pushing for target achievement.”

(DIPH Implementation Team member)

The content of the job-aids was found to be appropriate, however a reduction of redundant data could make it more sustainable in the long run:

The DIPH job-aids, specifically forms used in Steps 1 and 2, could be streamlined by reducing items that were little used in the decision-making process, but nevertheless time-consuming to fill in. For example, in DIPH Step 1, although considerable time was used to complete data on infrastructure, general resources (finance) and human resources (Form I Part B: Health System Capacity Assessments), these had limited use for later stages, as they were generally beyond the control of the districts. In addition, data filled in for finance was approximate, as districts often did not have access to full information. Again, in Step 2, the evaluators believed a simpler form could have been used to summarise the roles of stakeholders. Making the DIPH available in local languages would also help increase its use by district programme teams and the use of drop down options, where possible without losing the thematic flexibility of the DIPH, might also increase the ease of use.

“... Overall the formats need to be shortened if we think of scale up, (In Step 1), Form IA is not used at all, also contains same information for all cycles... Form1B to is used to some extent, but there is information overload. Stakeholder engagement form is not used at all. In meeting, they are just seeing it. ...Action plan and follow up – Form 3, 4 and 5 – are needed.” (DIPH Implementation Team member)

The evaluation team felt that not all the data presented in the forms for Steps 3, 4 and 5 were used fully, not because of usability issues, but rather due to a lack of proper understanding among many of the programme team members who were responsible for populating these forms. The data could be of more use if the capacity of district teams to understand data could be strengthened. A majority of the stakeholders at the leadership level, in fact, mentioned that the DIPH steps and package were well thought out and did not require any major change, other than some streamlining.

Adding data validation checks in the web-based interface, where possible, may aid the use of job-aids:

Although improving data quality is not the remit of DIPH, enhancing the in-built data validation mechanism in DIPH to reduce false reporting or the tendency to over-report could help with the use of the DIPH. For example, setting limits or ranges for each parameter to avoid input of spurious data. More thought needs to be given to this issue, as this might be a complex undertaking given the very large number of potential themes for the DIPH.

4.4. Role of the DIPH monitoring framework during and after the prototype phase

The DIPH India country team used a detailed monitoring framework and tools to review the DIPH prototype implementation for each of the DIPH cycles, focusing on use and adherence to the DIPH process and package in district planning, action prioritization, and follow up. The evaluation found that the framework and tools generally worked well for monitoring of the prototype phase, and provided rich information to make course corrections, as needed, such as a reduction in the number of forms from Cycle 1 through Cycle 3; and changes in the number of parameters in some of the forms. The framework also allowed for process documentation for each cycle, which also provided rich qualitative information vital for understanding the uptake and use of the DIPH in each cycle.

The evaluation team felt that the addition of a few ‘qualitative indicators’ along with the existing quantitative ones, instead of relying on process documentation, would have worked even better as that would have allowed tracking of a few key processes. For example, in DIPH Step 2, the addition of an indicator “extent of stakeholder participation for each stakeholder category” with response “high, medium, low” might have captured the level of participation along with the current indicator that captured presence of each category of stakeholder in meetings.

The detailed monitoring framework and tools that were developed for use by the DIPH India country team during the prototype testing phase need to be shortened focusing on a few **essential key performance indicators** (quantitative and qualitative) for use by district leadership, covering stakeholder engagement, priority action planning and follow-up. An illustrative list of key performance indicators that could be considered is provided in Appendix 3.

4.5. Factors affecting sustainability and scalability of the job-aids

Although the job-aids were well received in all three health districts, the evaluation found that the sustainability and scalability of the package will depend on few key factors.

Availability of infrastructure to use the online version of the package: The ability to visualize data collectively is perhaps the most exciting and useful feature of the DIPH. The package is currently available online and can be projected on a large screen for use in meetings. Thus, access to the internet and a setup with a projector are critical. However, in many districts, these cannot be ensured at all times, which could reduce the usability in the long run. In such contexts, paper-based DIPH formats could be used.

Capacity of the district level team to use the job-aids: During the prototype phase there was a lot of handholding support from the DIPH implementation support team for using the job-aids. However, for sustainable use of the package, a strategic capacity building plan needs to be in-built so that a critical mass of managers at the district level is trained and well conversant with the job-aids. The next section focuses on this important aspect. ■

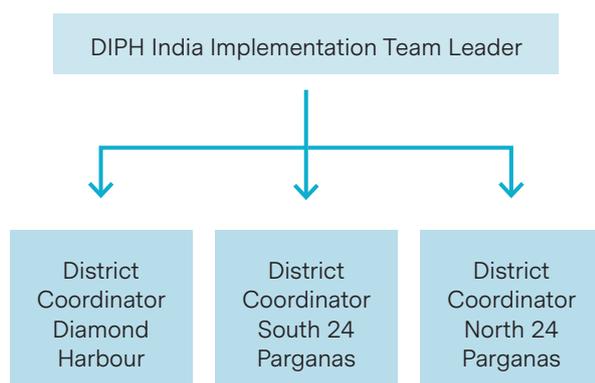
5. Role of DIPH implementation support

The evaluation team sought to understand the role, usefulness and lessons learned from the technical assistance provided by the DIPH country team in introducing, orientating and providing technical support to the district stakeholders during the implementation of the DIPH.

In each of the three implementation districts, DIPH implementation support ('DIPH support' henceforth) was provided by one district coordinator under the overall leadership of the DIPH India Implementation Team Leader (Fig. 4). The DIPH district coordinators were responsible for: (1) field-testing the DIPH job-aids; (2) introducing the DIPH strategy and package to the district stakeholders; and (3) capacity building and provision of handholding support in rolling out the DIPH.

The DIPH support was designed to be transitional support required for the pilot phase only, giving way to more systematic capacity building at a later scale-up stage. Thus, this was loosely defined as a "support and handholding" strategy and kept flexible and needs-based, depending on the actual situation in each of the health districts. Overall, the DIPH support team was responsible for ensuring implementation of the strategy and package in the health district during the prototype phase. The DIPH support team generally conducted informal one-on-one individual meetings to orient district leadership and other key stakeholders on the purpose and use of the DIPH. Below we present the key findings related to the DIPH support.

Figure 4. DIPH Implementation Support Structure for prototype phase



5.1. Overall findings

The evaluation findings indicate that the DIPH implementation support was a key input for the successful implementation of the DIPH prototype in the pilot districts across all cycles. However, as the DIPH prototype phase uniquely combined development as well as testing of the package, the DIPH support evolved in its nature and was provided in an unstructured manner, ranging from hand-holding support to taking full responsibility, based on the on-the ground situation in the concerned health district. This sometimes gave rise to a high degree of dependency by all stakeholders. However, transfer of complete ownership of the DIPH from the implementation support team to the district administration will ensure the long-term sustainability of the DIPH at scale.

The findings suggest that, given the criticality of the DIPH support in implementation, the support needs to be documented, essential elements identified and designed as a structured capacity building and technical assistance component integral to the job-aids for sustainability and scalability.

5.2. Role and use of the DIPH implementation support

The DIPH support was a key component for the successful implementation of the DIPH prototype in the pilot districts across all cycles. A summary of the analysis of DIPH support over the implementation period is provided overleaf (Table 5).

Interviews with stakeholders from multiple sectors including theme leaders bore testimony to the key role the DIPH support played in implementation throughout the project period. The interviews also highlighted how they had come to depend on the DIPH support for smooth implementation.

"Follow-up is quite good from the DIPH team member... they individually contact CDPO¹⁵ (for data collection) ...if they do not get back... he contacts me... His follow up is effective. But if he is not there this will be hampered. There is no body to replace him." (DPO)

15. Block level "Child Development Project Officer" in charge of DSW

Table 5. Summary of DIPH support in health districts over the prototype phase

Health District	Cycle	DIPH Support					
		Full support: ✓✓✓	Partial support: ✓✓	Minimum support: ✓	No support x		
		Orientation on DIPH strategy and job-aids (unstructured and informal) ¹⁶	Identify theme and coordinate DIPH meetings	Follow-up with stakeholders to attend DIPH meetings	Handholding/ capacity building of district functionaries in identifying data source, data validation, data collection and collation	Handholding of Theme Leader and other key functionaries to fill up DIPH forms	Handholding of Theme Leader and other key functionaries in conducting DIPH meetings
Diamond Harbour	1	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
	2	✓✓	✓✓	✓✓	✓✓✓	✓✓	✓✓
	3	✓	x	✓	✓✓	✓	✓
South 24 Parganas	1	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
	2	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓
	3	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓
North 24 Parganas	1	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
	2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	3	✓	x	✓	✓	✓	✓

Source: Interviews with stakeholders, DIPH implementation team members, direct observation of DIPH meetings

Although such a level of support to the implementation was not intended to be a part of the DIPH strategy, it seems needed for the in-depth understanding of the context in the DIPH development phase.

The close engagement by the DIPH support team was also sometimes used to relegate the ownership of the DIPH from the district to the DIPH support team.

“...they were working on how to use data and interpret it for effective monitoring. They were doing it in South and North 24 Parganas.” (ADM)

Informal, one-on-one orientation of key programme leaders and managers did not always lead to uniform and collective understanding or capacity building on the DIPH among district programme teams: The evaluation findings suggest that the strategy of targeting key programme leaders and managers through informal one-on-one orientation meetings did not result in the desired level of collective ownership and understanding of the DIPH in the context of the culture of hierarchy and “top-down” approach that prevailed in India. The very nature of the DIPH, where each level of stakeholder has a specific role to play in making it successful, needed a team orientation approach so that understanding and

capacity of teams are built collectively rather than an individual approach that focused on sharing the DIPH strategy and role of stakeholders in a general way. Thus, for a majority of the district data managers and MIS officers, who were responsible for populating the forms, their role in DIPH as a critical stakeholder was poorly understood, and the DIPH was perceived as an “additional task” given by their line managers.

District ownership and the role of stakeholders in the DIPH are not uniform across districts:

In the absence of any structured programme, the orientation for district level stakeholders to a large extent was determined by the capacity, skill and attitude of the District Coordinator. As shown in Table 5, while in Diamond Harbour and North 24 Parganas, hand-holding support could be gradually reduced for the DIPH steps, with districts taking more ownership and responsibility over cycles, it had to be continued throughout all cycles for South 24 Parganas. A structured orientation approach with a DIPH implementation toolkit could largely mitigate this issue, which is critical for the long-term sustainability of the DIPH. ■

16. Orientation continued till the third cycle as the Package was revised several times based on feedback from the preceding cycle

6. Contextual factors and other determinants of data sharing and use

6.1. Contextual factors determining uptake and use of the DIPH

One of the key objectives of the evaluation was to gain insights into the mechanism and determinants of data sharing and data use in health planning and decision-making upon introduction of the DIPH. Based on the evaluation findings, the evaluation team refined the initial programme theory (Fig 3) to factor in an understanding of the contextual factors and key assumptions that were critical for use and uptake of the DIPH in a district (Fig 5).

Evaluation findings suggest that the DIPH, like most health system innovations, is embedded in its context, and the pathways of change are mediated through several contextual factors operating at the macro (socio-cultural), meso (organisational) and micro (individual) level. Often, factors operating at the macro level influence and interact with those at meso and micro levels, resulting in a clustering of several contextual factors operating together to influence the uptake and use of the DIPH, either positively or negatively.

At the macro level, larger socio-cultural factors, such as the hierarchical decision-making culture prevalent in India and in many other similar low-income settings, where actions are mostly driven by top-down directives, influence the degree of ownership and use of the DIPH, to a large extent. This was reflected in interviews with district MIS officers, who were given responsibility to “populate the DIPH forms” by the senior programme leadership without acknowledging that they could also contribute in DIPH discussions focusing on planning and monitoring. As a result, almost all of them felt “the DIPH was an additional task” and lacked ownership, which is critical for sustained use. This was further compounded by changing programme priorities by the government which often required programme teams to prioritise other health issues as directed by the state rather than focusing on priority health themes identified by the district, leading to a delay in the DIPH process. On the other hand, when the DIPH theme matched government priorities, for example, ODF in cycle 3 in Diamond Harbour, the role of the DIPH process and package for district level gap analysis and planning was highly appreciated.

At the meso level, health system organizational factors, such as the capacity and skills of district teams in data understanding and use, and the availability of technology infrastructure, particularly internet connectivity, determine the ease of collating data in the DIPH job-aids, as well as the use of the web-based interface during DIPH meetings. The evaluation found that in all districts, internet connectivity was a major issue during DIPH meetings that undermined the usefulness of the DIPH for stakeholders. These contextual factors need to be understood and factored in for optimal use of the DIPH.

At the micro level, individual factors, such as the attitude of the district stakeholders towards change and new innovations, influence the uptake and use of the DIPH. For example, a positive attitude and interest of the District Magistrate and Additional District Magistrate led to the quick introduction and use of the DIPH in several priority MNCH and other health themes and encouraged ownership of the DIPH among the district programme leader and other stakeholders. Similarly, in Diamond Harbour, the positive attitude of the Theme Leader from the DHFW was reflected in their gradual reduction of the need for hand-holding support by the DIPH implementation support team over the cycles. On the other hand, it took much longer to promote the DIPH in South 24 Parganas where there was a lack of interest and resistance to change among key stakeholders from the DHFW and DSW.

6.2. Key conditions that are a pre-requisite for introducing the DIPH

Evaluation findings also point to several key assumptions that are pre-requisites for the success and sustainability of the DIPH in facilitating multi-sectoral data sharing and data use.

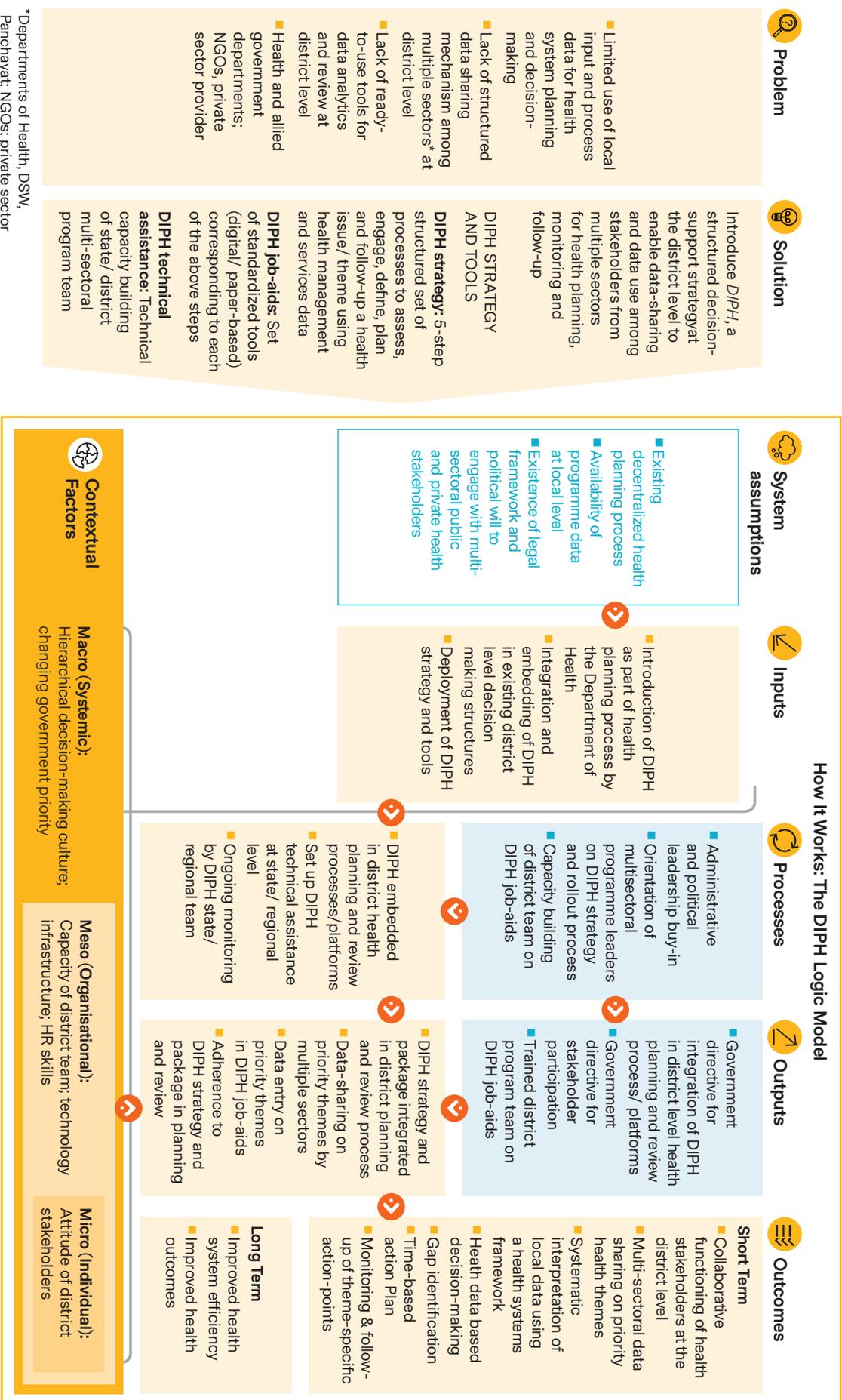
- A decentralized health system where districts have a reasonable level of autonomy for local level health decision-making is essential for situating and embedding the DIPH. District leaders and managers will understand and appreciate the benefits and usefulness of the DIPH in settings where they have autonomy and control of a majority of the health system building blocks, including finances, human resources, and service organisation.
- The availability of programme data at the local level, even if compromised in terms of accuracy and completeness, is another essential pre-requisite for introducing the DIPH in the district planning and decision-making process. As programme teams mature in understanding and interpreting data over time, data quality also improves. However, at a minimum, availability of local level programme input and process data is essential for initiation and use of the DIPH.
- The existence of a legal framework and political will to engage with multi-sectoral public and private health stakeholders is another essential pre-requisite for data sharing and engagement of stakeholders from different government departments as well as the private sector. For example, despite efforts by district programme leadership, data sharing and the involvement of the private sector were negligible across the districts due to the lack of a legal framework and institutional mechanisms to engage the private sector. ■

“It is not that we did not have data before, but DIPH made it possible to use it in a way that really helped us to understand issues and problems at the implementation level involving the departments and community.”

(ADM)

Figure 5. Data Informed Platform for Health: Revised Logic Model.

In the context of health systems in lower-and-middle-incomes countries, district-level decision-making is mostly ad hoc – lacking a defined process and participatory approach, and failing to optimize the use of available data. Integrating the DIPH in the district-level health decision-making process – within the framework of a decentralized health system – will lead to structured, collaborative decision-making, supported by multi-sectoral data sharing on priority health themes for programme planning and monitoring.



*Departments of Health, DSM, Panchayat; NGOs; private sector

7. Discussion

The evaluation found that the prototype phase successfully demonstrated the DIPH to be a structured mechanism for multi-sectoral data sharing and data-based decision making using local programme and service data at the district level, generally lacking in local level health system planning in India as well in other low-income settings¹⁷.

The role of the DIPH in structured and collaborative decision making and implementation

- The unique strength of the DIPH was that it brought together data from multiple departments on a common data-platform linked to existing district planning structures. This made a decision-support tool that could easily be used in existing district-level health decision-making and review. It is a true value-addition appreciated by all stakeholders and one that could be scaled up without creating additional systems or structures that would be difficult to sustain.
- The automatic analytics provided visual displays, for example, comparison graphs between sub-districts, facilitated identifying and grasping problem areas and gaps quickly and easily which earlier “dead data” did not allow. This enabled and empowered stakeholders to collectively discuss and prioritise action areas and set targets, including field-level health service providers collecting and reporting data and beneficiaries. Also, the DIPH led to the use of previously unused and under-used input and process data routinely captured by multiple systems. This in turn led to an improved understanding and interpretation of programme data and improvement in overall data quality in terms of accuracy and completeness. The implementation of the DIPH at scale over time could potentially improve data quality across the country.
- The use of a health systems framework approach renders an inherent flexibility to the DIPH that could be adopted in different contexts and themes. However, use and uptake of the DIPH will largely depend on how quickly the district leadership and programme team across various departments and sectors accept and become adept at using the DIPH. Contextual factors, such as a hierarchical work-culture and a resistance to change, that operate at a larger political and health system level, play an important role in the acceptance and use of the DIPH.

The role of the DIPH in multi-sectoral data sharing

- The structured process of stakeholder engagement and data sharing used in the DIPH successfully brought together associated departments into the common data sharing platform. The structure supported stakeholders in data sharing, facilitated use of data in collective gap-analysis, priority action selection and time-bound target-based action planning, and data-based monitoring and follow-up of the agreed action plan.
- In the Indian context, a lack of legislation or a national institutional mechanism for data sharing by the private sector did not facilitate engagement with the for-profit private sector. However, in countries where such a mechanism exists, introduction of the DIPH would allow for enhanced data sharing between the public and private sectors, leading to better health decision-making. For the not-for-profit sector, the West Bengal context did not allow for the fruitful involvement of NGOs, but in other contexts, for example in Uttar Pradesh, India, or in other low-income contexts where NGO partners are already part of the health and development planning and review process, the introduction of the DIPH might strengthen data sharing and data-based decision making.

17 D. Wickremasinghe et al. District decision-making for health in low income settings: a systematic literature review. *Health Policy and Planning*. 31, 2016, ii2-ii24.

8. Recommendations for scale-up and sustainability

A scale-up of the DIPH is warranted, as it has the potential to become an essential component of district health decision-making systems in India and other low-income countries that face similar challenges in the use of local programme and service data. A scaled-up DIPH would also offer major lessons contributing to the evidence base on structured decision-support tools in district health planning and review processes.

- 1 The DIPH should be kept generic and flexible for uptake, use and sustainability at scale:** The evaluation findings highlight the criticality of keeping the DIPH generic and flexible to allow for factoring of contextual dynamics operating at systemic, organizational and individual levels governing the acceptance and use of the DIPH involving stakeholders across sectors and levels. For example, in India, the prevalent hierarchical work culture and decision-making necessitates a balanced approach in implementing the DIPH, with state level buy-in along with a team-based capacity building strategy to break the hierarchy, instil ownership and facilitate homogenous participation of stakeholders from all levels.
- 2 The positioning of the DIPH in existing high level district level planning and review platforms will increase uptake, use and sustainability:** One of the key factors that contributed to the success of the DIPH in the pilot health districts was its positioning at the DHS, the highest level of health decision-making at the district, and responsible for review and planning of key programme activities. The use of other platforms, such as the DCP and RCH meetings also contributed to the quick uptake of the DIPH. For successful scale up and sustainability, situating the DIPH within an existing decision-making platform is critical.
- 3 Wherever possible, the digital interface should be chosen over paper-based formats to allow for better data presentation, interpretation and analysis:** The evaluation findings show that where possible technologically, the web-based interface would be preferable for quick uptake and implementation of the DIPH, as this provides superior graphics and analytics critical for data sharing and data use. Also, certain minor modifications, particularly streamlining the redundant data fields, will make the DIPH job-aids more user-friendly.
- 4 A well-defined capacity building and technical assistance plan will be critical for the successful scale up of the DIPH:** The evaluation findings indicate that for effective scale up and sustainability, the DIPH implementation support which was a key input for the successful implementation of the DIPH prototype must be replaced with a well thought-out structured capacity building strategy to orient and train district stakeholders to ensure ownership of DIPH and its integration in existing decision-making platforms. The evaluators felt that hand-holding support at an individual level for specific issues would not be feasible at scale and could be addressed through a virtual trouble-shooting service. Identification of one DIPH Nodal Officer from DHFW in each district to coordinate the DIPH in the district will also help in implementation of the package at scale when there is no external support. An illustrative capacity building and technical assistance strategy highlighting the “essential elements of the DIPH support” is provided in Box 2.
- 5 Communication and advocacy:** To facilitate the introduction and uptake of the DIPH, there is a need for sustained communication using advocacy and communication materials drawing on the experience of the prototype phase and highlighting the value-proposition of improved health planning and decision-making and ease of integration into existing district platforms.
- 6 Develop an institutional review mechanism at national or state level to monitor progress and value addition of the DIPH for district planning and review:** The creation of an institutional review mechanism, for example a DIPH implementation and review committee, at national, state, or regional levels involving key leadership and members from all sectors will add to rapid and effective integration and use. Such a committee could review implementation and value addition of the DIPH using select indicators focused on the use of DIPH processes and packages for specific health priorities.

Box 2. Suggested “essential elements” of DIPH support

Target group Indicator	Purpose	Essential element	Suggested DIPH support materials
1. State and District Admin and political Leadership	<ul style="list-style-type: none"> For buy-in implementation of DIPH as a key strategy for health system strengthening at the district level 	<ul style="list-style-type: none"> Structured orientation session for state and district leadership buy-in 	<ul style="list-style-type: none"> DIPH leadership package for pitching the key concept and value-proposition of DIPH for the district Brochure and Video on DIPH with testimonials and results from pilot
2. District Leadership and management team (Health & allied departments)	<ul style="list-style-type: none"> Understanding and ownership of DIPH Value addition of DIPH in existing district level decision-making Role of DHFW as nodal department and the district DIPH team Role of allied departments in data-sharing and decision-making DIPH strategy (steps) and job-aids Role of district programme team in using DIPH (aiding but not additional task) 	<ul style="list-style-type: none"> Structured periodic participatory DIPH phase-in programme involving key programme leaders and managers (with participation of district administrative leadership) 	<ul style="list-style-type: none"> DIPH 1-day orientation package for health programme leadership team Brochure and video on DIPH strategy and job-aids Hands on demonstration of DIPH experience from pilot Toolkit for DIPH rollout planning in district for Cycle 1 Periodic orientation and feedback focusing on experience sharing from implementation of preceding cycle
3. District DIPH team and DIPH Nodal Officer (multiple departments)	<ul style="list-style-type: none"> Role of district programme team in using DIPH (aiding but not additional task) Use of DIPH strategy and job-aids Data use and data validation using data from multiple departments Using troubleshooting platform DIPH Monitoring process 	<ul style="list-style-type: none"> Structured periodic capacity building training for DIPH programme team including data managers and MIS officers (from multiple departments). This should include DIPH job-aids use and capacity building of district teams on data validation and data use Ongoing limited technical support for monitoring and need-based troubleshooting support by a central DIPH technical team or 2-3 regional teams A virtual trouble-shooting platform comprising key users of the DIPH job-aids 	<ul style="list-style-type: none"> 2-3 phased training programme with hands-on practice (each phase should correspond to a cycle and build on practical experience) Toolkit for DIPH rollout planning in district DIPH troubleshooting platform

In conclusion, the DIPH prototype filled an important gap in district health decision-making, through a much-needed structured decision-support tool that could facilitate multi-sectoral data sharing and local data use for health decision-making at district level. Implemented over time, the DIPH has the potential to offer an ongoing discussion and data review forum

embedded in existing district review platforms, which district administration and programme leadership can use to formally share data across multiple public and private sectors, diagnose problems, develop solutions which are specific to local context, and mobilize local resources accordingly, ultimately leading to better health outcomes. ■

Appendices



APPENDIX 1:

Data collection guides

1. STAKEHOLDER – DISCUSSION GUIDE

Name of the Health District:

District:

Designation/ Position:

Place of discussion:

Date:

Guiding note for the facilitator: Start the discussion with background about the respondent; followed by general health planning and decision making in the area. Facilitators also need to note that not all questions are applicable for all respondents, and questions should be decided based on their role and position.

BACKGROUND & DISTRICT INFORMATION:

Please tell us about yourself and your experience in this role

- A** What is your qualification and since when you have been working in this district/block?
- B** How many years have you been working/ associated with the health sector/ allied sector overall?
- C** What has been your role in your current position? Since you are working here for some time, what, according to you, are the main challenges to improve the health indicators?

With regard to health-related decision-making in the district level

- A** What is the general process?
- B** How is the issue identified? Is it basis some indicators or some guideline or some observations from the blocks?
- C** How is the decision about addressing the issue undertaken?
- D** What factors are taken into consideration? Probe for data use, data source, resources, infrastructure etc.
- E** Who all are involved in the process of decision making? Departments involved in decision making – health and non-health?

Can you tell us an issue that had been given more focus in recent times? How was the issue identified?

Is there any action plan to address the issue?

SPECIFIC TO DIPH PROCESS

Guiding note for the facilitator: Check the knowledge and participation level of the respondent before starting the meeting and asking questions.

- (i)** Have you participated in the DIPH process? How recent or how old?
- (ii)** How many cycles have you undergone in the process?
- (iii)** Which were the steps in the cycle you participated in?
- (iv)** What was/is your role in the process?

Cycles participated	Steps undertaken		
	Cycle 1	Cycle 2	Cycle 3
1)	A. Assess	A. Assess	A. Assess
2)	B. Engage	B. Engage	B. Engage
3)	C. Define	C. Define	C. Define
	D. Plan	D. Plan	D. Plan
	E. Follow-up	E. Follow-up	E. Follow-up

1. Can you tell me how the DIPH has contributed in terms of health-related planning and decision-making process in the district level? Probe

- A** General impression
- B** What is your understanding of the DIPH process?
Probe for understanding of logic and steps, building blocks of health system, package
- C** If there is any difference observed how health related decision-making was done prior to DIPH and now? How it is being conducted through the DIPH – please cite some situations as examples
- D** What are the advantages of the process?
- E** What are the limitations of the process?
- F** How relevant is the process in your regular health planning process? Is it complementing the current process or is it an additional burden to implement this process?
- G** Already there are so many ways of planning and data sharing – what is the value addition by DIPH? Probe for perceived merits and challenges of DIPH vis-à-vis other current processes.

2. What are the progress through DIPH you have made to improve the health targets / status in your district?

Probe: Please elaborate how DIPH is useful in:

- A** Identifying the health issue to be focused
- B** Development of action plan
- C** Follow up of the plan

Ask following questions for cycles and steps participated only:

3. Are you finding the DIPH process useful? If yes, then which are the aspects you are finding particularly useful? Probe for each step

- A STEP I: Assess** – Conducting situation analysis for health system problems?
 - i) What are the good things about this step? (Check for appropriateness, fit, ease or difficulty, relevance across issues)
 - ii) What are the challenges in conducting this step?
 - iii) How do you think the challenges can be overcome?
 - iv) With regard to health-related decision making in the district was something like this done before the process started? If yes, do you think this process is repeating the same thing? If no, how is it aiding the planning?
 - v) Do you think there is need for more help/ support at this step?
- B STEP II: Define** – Prioritization of health-related problems at the district level
 - i) What are the good things about this step? (Check for appropriateness, fit, ease or difficulty, relevance across issues)
 - ii) What are the challenges in conducting this step?
 - iii) How do you think the challenges can be overcome?
 - iv) With regard to health-related decision making in the district was something like this done before the process started? If yes, do you think this process is repeating the same thing? If no, how is it aiding the planning?
 - v) Do you think there is need for more help/ support at this step?

C STEP III: Engage – Engagement of stakeholders

- i) What are the good things about this step?
- ii) What are the challenges in conducting this step?
- iii) How do you think the challenges can be overcome?
- iv) With regard to health-related decision making in the district was something like this done before the process started? If yes, do you think this process is repeating the same thing? If no, how is it aiding the planning?
- v) Do you think there is need for more help/support at this step?

D STEP IV: Plan – Development action plan

- i) What are the good things about this step?
- ii) What are the challenges in conducting this step?
- iii) How do you think the challenges can be overcome?
- iv) With regard to health-related decision making in the district was something like this done before the process started? If yes, do you think this process is repeating the same thing? If no, how is it aiding the planning?
- v) Do you think there is need for more help/support at this step?

E STEP V: Follow-up of action plan

- i) What are the good things about this step?
- ii) What are the challenges in conducting this step?
- iii) How do you think the challenges can be overcome?
- iv) With regard to health-related decision making in the district was something like this done before the process started? If yes, do you think this process is repeating the same thing? If no, how is it aiding the planning?
- v) Do you think there is need for more help/support at this step?
- vi) At what interval the follow-up needs to be done? Should it be in 3 months or 6 months or longer period? Why?

4. Whether data is used in monitoring the progress of the action plan in your district? Please give examples.**5. Did the DIPH process lead to any change in the working relationship and interaction between health department and government non-health department? (Ask for each cycle) Probe**

- A** Apart from health has any other department been included? Which all departments were part of the process? (*Probe for health, non-health, PRD, ICDS, administrative, NGO, private players*)
- B** Did the process help in joint participation in identifying priorities for the district, developing plan and joint monitoring of the plan? To what extent? What were the achievements and limitations?
- C** Did data sharing happen between the departments?
- D** Did frequency of interaction increase since the last DIPH? To what extent – cite few examples
- E** Is there any difference in decision-making based on data availability in DIPH as compared to prior to introduction of the DIPH? To what extent – cite few examples
- F** Has the DIPH strategy enabled participation of all stakeholders of a specific health theme (health, ICDS, PRD, Admin, NGO, private)?
- G** Did the DIPH process led to increased frequency of meeting/ interaction of health department with other stakeholders? If yes, what are the enabling factors? If no, what are the challenges that need to be considered for scaling up?
- H** Did the DIPH process facilitate in (A) joint priority setting, (B) developing action plan on a specific theme by health department in collaboration across line departments, and (C) joint progress review compared to pre-DIPH period? Probe for how, look for concrete examples.

6. Has NGOs participated in the DIPH process? Probe

- A** What do you think is the role of NGO sector in planning health issues?
- B** Which are the key NGOs in your area who are actively working in the area of health?
- C** Is there a need to bring the NGOs in joint planning for health issues? What are the challenges in bringing the NGO sector in joint planning for health issues in the district?
- D** How can the issue be solved?
- E** Examples of improved participation by the NGO sector in planning health issues (other than DIPH)

7. Did private sector (For Profit) involvement achieved through the DIPH process? Probe

- A What are the key private sector faculties in your district?
- B What do you think is the role of private sector (Private hospitals, doctors,) in planning health issues?
- C What are the challenges in bringing the private sector in joint planning for health issues in the district?
- D How can the issue be solved?
- E Examples of improved participation by the private sector in planning health issues

8. Any suggestion how the DIPH process can be better implemented in your district? Probe: BUT not limit to

- A What should be the duration of the cycle – in weeks or months or quarters? What should be the schedule for follow up?
- B How can better involvement of stakeholders ensured?
- C What kind of support would be needed to carry forward the process?

SPECIFIC TO DIPH PACKAGE

9. Have you used the DIPH package?

Ask specifically for each component –

- ASSESS – situational analysis
- ENGAGE – stakeholder engagement
- DEFINE – priority setting
- PLAN – development of action plan
- FOLLOW-UP – follow up of action plan

- A How useful is the package in the different stages of the DIPH process, namely, data sharing, planning and follow up
- B What do you think about the structure, flow, platform/medium (paper-based/computer based)
- C What do you think about the length of the package – time taken, broad headings, sub-headings
- D Do you think the language is appropriate considering the audience and users
- E How easy is it to use? Ask ease of use for different levels
- F Do you think there is need for support for understanding of the package? What kind of support will be needed – Probe for areas where capacity building is needed. Check if anything specific for any level

10. What do you think about the Transitional DIPH support process – do you think it has helped you in understanding and using DIPH? What do you think should change?

- A Orientation process – What was the process? Was this structured? Was this enough? What can be improved to make it better? What kind of aids can be used for better explaining the use of package?
- B Frequency of contact – is it just right, more, or less than necessary?
- C Handholding process – Has it changed over cycles?
- D How comfortable are you yourself now to use the package? Very easy, somewhat easy, little difficult, very difficult – why do you say so?
- E What if the team withdraws support – will you along with your team use the package with ease? Why? Why not? What kind of support you think is missing or would be required to continue using the process?
- F Do you feel confident about explaining the process to your colleagues? What additional inputs do you need?

11. What is the right forum where the DIPH process and package and who all should be responsible to take it forward?

- A** Where do you think the package should be placed – Do you think District Health Society would be the right forum for placing the package? Why? Why not?
- B** Who all should be involved in the process of implementing this package? Who should be the responsible person to take this forward?
- C** How should the theme leader chosen? What should be the role of the theme leader?

12. Perception and opinion about scalability and sustainability of DIPH – by scalability we mean use of the process for all health-related planning across districts; by sustainability we mean using the process without any external support.

- A** Would you recommend for scaling up of the DIPH across the state? What are the advantages in scaling this? What according to you are the elements within DIPH that will ensure scalability? For example How appropriate is the process for planning and monitoring? How easy is the package for use?
- B** What are the potential challenges to DIPH scale up? how can it be viewed as initiative to support existing district mandate?
- C** What would be recommendations to make DIPH more scalable at the state level?
- D** Do you think the DIPH process can be continued with any external support? Why? Why not? What should be the gradual process of handing over?

2. DIPH IMPLEMENTATION TEAM – DISCUSSION GUIDE

Name of the Health District:

District:

Designation/ Position:

Place of discussion:

Date:

Guiding note for the facilitator: Start the discussion with background about the respondent; experience in the health sector, specifically in working with the public health system; and role in DIPH project.

BACKGROUND & DISTRICT INFORMATION:

- I. Since when you have been working in this district? Overall for how many years you are working in the area of health?**
 - B** How is the issue identified? Is it basis some indicators or some guideline or some observations from the blocks?
 - C** How is the decision about addressing the issue undertaken?
 - D** What factors are taken into consideration? *Probe for data use, data source, resources, infrastructure etc.*
 - E** Who all are involved in the process of decision making? Departments involved in decision making – health and non-health?
- II. Since when have you been involved in the DIPH process (number of months)? Have you been involved since the very beginning of the process planning? Why? Why not?**
- III. What is your role in the implementation of the DIPH process?**
- IV. About health-related decision-making in the district**
 - A** What is the general process?
- V. What were the challenges that you faced? At the beginning of implementation, how willing or unwilling was the district stakeholders?**
- VI. What were the enabling factors?**

SPECIFIC TO DIPH PROCESS

1. **What were the challenges and scope in implementing each step of the process?** *Probe for each step*
 - A STEP I: ASSESS** – Conducting situation analysis for health system problems
 - i) What was generally achieved in this step?
 - ii) What were the challenges faced? How did you tackle the challenge?
 - iii) How do you think this step helped the planning?
 - iv) What kind of support was needed at this step?
 - v) Do you think after the initial support; the district officials can take up this step on their own in the long run? Why? Why not?
 - B STEP II: ENGAGE** – engagement of stakeholders
 - i) What was generally achieved in this step?
 - ii) What were the challenges faced? How did you tackle the challenge?
 - iii) How do you think this step help the planning?
 - iv) What kind of support was needed at this step?
 - v) Do you think after the initial support; the district officials can take up this step on their own in the long run? Why? Why not?
 - C STEP III: DEFINE** – Prioritization of health-related problems at the district level
 - i) What was generally achieved in this step?
 - ii) What were the challenges faced? How did you tackle the challenge?
 - iii) How do you think this step help the planning?
 - iv) What kind of support was needed at this step?
 - v) Do you think after the initial support; the district officials can take up this step on their own in the long run? Why? Why not?
 - D STEP IV: PLAN** – Development action plan
 - i) What was generally achieved in this step?
 - ii) What were the challenges faced? How did you tackle the challenge?
 - iii) How do you think this step help the planning?
 - iv) What kind of support was needed at this step?
 - v) Do you think after the initial support; the district officials can take up this step on their own in the long run? Why? Why not?
 - E STEP V: Follow-up of action plan**
 - i) What was generally achieved in this step?
 - ii) What were the challenges faced? How did you tackle the challenge?
 - iii) How do you think this step help the planning?
 - iv) What kind of support was needed at this step?
 - v) Do you think after the initial support; the district officials can take up this step on their own in the long run? Why? Why not?
2. **What were the key themes covered in the last DIPH cycle?**
 - A** How was the theme selected? What was the basis? Was the theme selected part of the regular planning process or was it selected specially for the process?
 - B** Do you think this process can be used for any relevant theme (Public health related) or is it limited to MNCH related themes only?
 - C** Do you think there is need for help/support in selecting the theme?
3. **Did the DIPH process lead to any change in the working relationship and interaction between health department and government non-health department?** *Probe*
 - A** Apart from health has any other department been included? Which all departments were part of the process? *Probe for health, non-health, PRD, ICDS, administrative, NGO, private players*
 - B** Did the process help in joint participation in identifying priorities for the district, developing plan and joint monitoring of the plan? To what extent? What were the achievements and limitations?
 - C** Did data sharing happen between the departments?
 - D** Did frequency of interaction increase since the last DIPH? To what extent – cite few examples
 - E** Is there any difference in decision-making based on data availability in DIPH as compared to prior to introduction of the DIPH? To what extent – cite few examples
 - F** Has the DIPH strategy enabled participation of all stakeholders of a specific health theme (health, ICDS, PRD, Admin, NGO, private)?
 - G** Did the DIPH process led to increased frequency of meeting/ interaction of health department with other stakeholders? If yes, what are the enabling factors? If no, what are the challenges that need to be considered for scaling up?
 - H** Did the DIPH process facilitate in (A) joint priority setting, (B) developing action plan on a specific theme by health department in collaboration across line departments, and (C) joint progress review compared to pre-DIPH period? Probe for how, look for concrete examples.

4. What are the challenges faced during implementation process of last DIPH cycle? *Probe: describe challenges in terms of (BUT not limit to)*

- A DIPH not felt important (by leadership/ self)
- B Dedicating time to conduct DIPH
- C Difficult to follow steps
- D Availability of data to monitor progress?
- E Active involvement of different government departments, district administration, NGO and private sector

5. Any suggestion how the DIPH process can be better implemented in your study district? *Probe: BUT not limit to*

- A What should be the duration of the cycle – in weeks or months or quarters? What should be the schedule for follow up?
- B How can better involvement of stakeholders ensured?
- C What kind of support would be needed to carry forward the process?

SPECIFIC TO DIPH PACKAGE

6. In terms of usage of the DIPH package

Ask specifically for each component –

- **ASSESS – situational analysis**
- **ENGAGE – stakeholder engagement**
- **DEFINE – priority setting**
- **PLAN – development of action plan**
- **FOLLOW-UP – follow up of action plan**

- A Considering the target audience, how easy or difficult is the package – please explain for paper version versus web version
- B How relevant is the structure, flow, platform/ medium (paper-based/computer based)
- C What do you think about the length of the package – time taken, broad headings, sub-headings
- D Do you think the language is appropriate considering the audience and users
- E How easy is it to use? Ask ease of use for different levels
- F Do you think there is need for support to use the package? What kind of support will be needed – Probe for areas where capacity building is needed. Check if anything specific for any level
- G Do you think the package can be used without support – why? Why not?

7. What do you think about the DIPH support process?

- A Orientation process – What was the process? What was the structure? Was this enough? What can be improved to make it better? What kind of aids can be used for better explaining the use of package?
- B Frequency of contact – what was the frequency? Why not less or more?
- C Handholding process – Has it changed over cycles? To what extent?
- D How comfortable do you think the users are in using the package at the end 2-3 DIPH cycles? Very easy, somewhat easy, little difficult, very difficult – why do you say so?
- E As the support team will gradually withdraw support over time – will the district level users be able to use the package with ease? Why? Why not? What kind of support you think is required to continue using the process?
- F Do you think the KEY district users are confident about explaining the process to their colleagues? What additional inputs do they need?

8. What is the right placement for the package and who all should be responsible to take it forward?

- A Where do you think the package should be placed – Do you think District Health Society would be the right place for placing the package? Why? Why not?
- B Who all should be involved in the process of implementing this package? Who should be the responsible person to take this forward?
- C How should the theme leader chosen? What should be the role of the theme leader?

9. Perception and opinion about scalability and sustainability of DIPH – by scalability we mean use of the process for all health-related planning across districts; by sustainability we mean using the process without any external support.

- A** Would you recommend for scaling up of the DIPH across the state? What are the advantages in scaling this? What according to you are the elements within DIPH that will ensure scalability? For example How appropriate is the process for planning and monitoring? How easy is the package for use?

- B** What are the potential challenges to DIPH scale up? how can it be viewed as initiative to support existing district mandate?
- C** What would be recommendations to make DIPH more scalable at the state level?
- D** Do you think the DIPH process can be continued with any external support? Why? Why not? What should be the gradual process of handing over?

3. NGO (NON-PROFIT) / PRIVATE SECTOR (FOR PROFIT)- DISCUSSION GUIDE

Name of NGO/Organization:

Designation:

Name of the Health District:

District:

Place of discussion:

Date:

Guiding note for the facilitator: Check the knowledge level of the participant(s) before starting the meeting of asking of questions. Example: Have you participated in the DIPH process? How many cycles and steps have you undergone in the process? What is your role in the process?

1. Are you aware of district level decision making process?

Probe: Who are the stakeholders? Is it issue or programme based?

2. Do you think NGO/Private sector has any role in the process of decision making?

Probe: Issue based or programme based involvement? Continuous or need based? Contribute in which step – assess, define, plan or follow-up

3. Currently what is the status of involvement – what are the reasons behind presence/lack of involvement?

Probe: Available platforms.

4. What are the possible suggestions and mechanisms to make the involvement of NGO/Private sector in district level health decision making?

4. OBSERVATION CHECKLIST : DIPH MEETINGS

Name of Health District:

Cycle:

Step:

Date:

Venue:

Meeting purpose:

Participants:

	Step details:	Observations	Remarks – general observation, number of participants (entry or exit of new members)		
1.	<ul style="list-style-type: none"> ▪ Situation analysis ▪ Stakeholder engagement ▪ Priority setting ▪ Development of action plan ▪ Monitoring and Follow up of action plan 				
2.	<table border="1"> <tr> <td>Start time:</td> <td>End time:</td> </tr> </table>	Start time:	End time:		
Start time:	End time:				
3.	Time taken for each step/ session planned	Timeliness of each activity (if delay/ re-schedule, then cite the reasons)			
4.	At the start of the meeting				
A.	Who circulated the agenda/ invitation for meeting?	Name and designation of the person			
B.	Who chaired the session	Name and designation of the person(s)			
C.	Recap on previous meetings/ proceedings	Yes/No			
D.	Orientation about the meeting	<ul style="list-style-type: none"> ▪ Agenda of meeting ▪ Target setting for the meeting ▪ Clarity on purpose of the meeting 			
E.	Note on participants' behaviour (ownership, body language – active participation/ inactive/ participation with support from DIPH team, level of interest etc.)				
5.	Extent of participation				
A.	Who all were invited	Refer to pre-meeting communication			
B.	Whether health, non-health and private stakeholders were represented in the participants	Refer to Participant list <ul style="list-style-type: none"> ▪ Health Department ▪ Woman and Child Development Department ▪ Panchayat and Rural Development Department ▪ Administration ▪ Private Profit Making Organisation ▪ Non-Profit Making Organisation (NGO) ▪ Other Departments 			
C.	How many attended from the invitee list	Refer to Participant list and pre-meeting communication			

	Step details:	Observations	Remarks – general observation, number of participants (entry or exit of new members)
6.	Level of participation		
A.	Who are the more active participants (examples)	Name and designation of the person(s) Observations on active participation	
B.	Which participants are inactive/ less participating (examples)	Name and designation of the person(s) Observations on not so active participation	
7.	Issues discussed		
A.	Issue discussed:	Persons participating in the discussion (record verbatim by participant) Identification of problems/challenges: Discussion on possible solution Note on participant behaviour (active)	
B.	Issue discussed:	Persons participating in the discussion (record verbatim by participant) Identification of problems/challenges: Discussion on possible solutions	
C.	Issue discussed:	Persons participating in the discussion (record verbatim by participant) Identification of problems/challenges: Discussion on possible solutions	
8.	Development of Action Plan Usage of Package		
A.	Issue discussed:	Persons participating in the discussion (record verbatim by participant) Identification of problems/challenges: Discussion on possible solutions	
B.	Issue discussed:	Persons participating in the discussion (record verbatim by participant) Identification of problems/challenges: Discussion on possible solutions	
9.	Use of package		
A.	Person initiating	Name and designation of the person(s) Method of selection	
B.	Package – steps	Understanding and clarity about the step and headings: Language – discussion/articulation: Translation/input in package – how much matching with discussion: (examples) Adherence to package for each step	
C.	Support	Support provided or not (specify kind of support – in articulating, or typing or any other support):	

	Step details:	Observations	Remarks – general observation, number of participants (entry or exit of new members)
10.	Concluding the meeting		
A.	Decisions taken	Persons participating in the discussion (record verbatim by participant) Decision taken (specify)	
B.	Summing up	Persons participating in the discussion (record verbatim by participant)	
C.	Next plan of action	Persons participating in the discussion (record verbatim by participant)	

Observation of behaviour	Observation/findings
Level of interest and engagement	
Process – participatory or hierarchal	
Communication – one way or two way	
Mutual respect (intersectoral participants)	
Concentration and attentiveness of audience	
Criticism (constructive or damaging)	
Contribution from participants	
Problem identification	
Problem resolution	
Evidence-based decisions	
Ambience and other logistics (acoustics, clear vision, document sharing etc.)	

Other observations: Ownership of DIPH – Who is leading? How much of dependence on DIPH support team?

Record any other observations

APPENDIX 2:

Consent form

CONSENT FORM FOR PARTICIPATION IN “EXTERNAL EVALUATION OF DIPH PROTOTYPE PHASE

Purpose of the study

We are conducting an external evaluation of the Data-Informed Platform for Health (DIPH), a decision-support strategy that the IDEAS (Informed Decisions for Actions in Maternal and Newborn Health) project of the London School of Hygiene and Tropical Medicine (LSHTM) is conducting in partnership with the Public Health Foundation of India (PHFI). The DIPH prototype phase (December 2015-March 2017) is being implemented in three health districts of West Bengal covering: (1) Diamond Harbour, (2) South 24 Parganas, and (3) North 24 Parganas Sadar in collaboration with the Department of Health & Family Welfare, Government of West Bengal and the West Bengal University of Health Sciences. Evaluation findings will be used to provide recommendations for scale-up of the DIPH strategy in other districts of West Bengal.

For the evaluation purpose, we would like to interview you in detail about your role; involvement and understanding of processes and mechanisms of DIPH; and recommendations related to DIPH.

The interview will take approximately 1 to 1.5 hours. We appreciate your participation in this study and for your time in answering our questions.

Confidentiality and anonymity

Your answers will not be shared with anyone outside the IDEAS research team in LSHTM. Although we will be noting down your name and other personal details (sex, age, educational qualifications), these will be kept strictly confidential within the IDEAS research team in LSHTM and will not be shared with anyone else. Also, all other information shared by you will be kept strictly confidential and not be shared with anyone else other than the research team. We would also be recording the interviews. At the end of the study, we will compile all the answers in such a manner that it will not permit to identify you.

Your responses will be kept strictly anonymous and all personal data shared by you will be coded and removed during analysis and reporting.

Risks and Discomforts

There are no risks to you in this study. If you feel uncomfortable about any of the questions, please feel free to talk to the investigators.

Your rights as Participant

Your participation in the interview is voluntary and you may withdraw at any time from the study.

CONSENT

I have read and understood the Participant Information Sheet and I have had the opportunity to ask the interviewer any questions. By signing below, I am consenting to (please tick):

- Participate in the interview and note-taking by investigator Yes No
- Audio-recording of the interview Yes No

Participant's signature

Date

APPENDIX 3:

Illustrative list of monitoring indicators for DIPH scale-up phase (Jan 2016 – Jan 2017)

Indicator	Calculation	Data Source
1. Percentage of priority action points initiated against planned	1. No. of DIPH theme-specific action-points initiated within the planned date) / (total no. of DIPH theme specific action-points planned within the specific DIPH cycle	Form 4: Development of an action plan
2. Percentage of priority action-points achieved against initiated (select only those relevant for specific cycle and theme)	2. No. of DIPH theme-specific action-points completed within the planned date) / (total no. of DIPH theme specific action-points planned within the specific DIPH cycle	Form 5: Follow-up of the action plan
	3. No. of written directives/letters issued by district/state health authority as per action plan)/ (total no. of written directives/letters by district/state health authority planned as per action points of the DIPH primary theme	
	4. Units of the specific medicine supplied for the theme-specific action-points)/ (Total units of specific medicine requested as per action points of the DIPH primary theme	
	5. Units of the specific equipment* provided for the theme-specific action-points)/(Units of the specific equipment requested as per action points of the DIPH primary theme	
	7. Units of the specific IEC material distributed for the DIPH theme specific action-points)/ (Total units of specific IEC material requested as per action points of the DIPH primary theme	
	9. No. of Human Resources trained for the DIPH theme specific action-points/total Human Resources training requested as per action points of the DIPH primary theme	

For more information on DIPH:
<http://www.diphonline.org/index.html>

Further reading and information:
<https://ideas.lshtm.ac.uk/>



District decision-making for health in low-income settings: a systematic literature review
https://academic.oup.com/heapol/article/31/suppl_2/ii12/2404380



Data Informed Platform for Health Feasibility Study Report, Uttar Pradesh, India
<https://ideas.lshtm.ac.uk/report/diph-feasibility-study-up-india/>



Data Informed Platform for Health Feasibility Study Report, Gombe State, Nigeria
<https://ideas.lshtm.ac.uk/report/diph-feasibility-study-gombe-state-nigeria/>



Data Informed Platform for Health Feasibility Study Report, Amhara and Oromia Regions, Ethiopia
<https://ideas.lshtm.ac.uk/report/diph-feasibility-study-ethiopia/>

IDEAS aims to improve the health and survival of mothers and babies through generating evidence to inform policy and practice. Working in Ethiopia, northeast Nigeria and India, IDEAS uses measurement, learning and evaluation to find out what works, why and how in maternal and newborn health programmes.

