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IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA 5033

ON A

CREDIT

IN THE AMOUNT OF SDR 95.90 MILLION

(US\$ 152 MILLION EQUIVALENT)

TO THE

Republic of India

FOR A

India: Uttar Pradesh Health Systems Strengthening Project (P100304)

March 30, 2020

CURRENCY EQUIVALENTS

(Exchange Rate Effective February 28, 2020)

Currency Unit = Indian Rupees
(INR)

INR =72.24 US\$1

US\$ =1.37 SDR 1

FISCAL YEAR

April 1 - March 31

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ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
BMWM	Bio-medical Waste Management
BMWMIS	Bio-Medical Waste Management Information System
CMSD	Central Medical Stores Department
DRC	Data Resource Center
DOHFW	Department of Health and Family Welfare
DM&HS	Directorate of Medical and Health
DLI	Disbursement Linked Indicators
EM	Environment Management
GAAP	Governance and Accountability Action Plan
GOI	Government of India
GoUP	Government of Uttar Pradesh
HRC	Health Report Card
IDA	International Development Association
IEC	Information, Education and Communication
IPF	Investment Project Financing
IR	Intermediate Results
ISR	Implementation Status and Results
JE-AES	Japanese Encephalitis and Acute Encephalitis Syndrome
NABH	National Accreditation Board of Hospitals
NHM	National Health Mission
NRHM	National Rural Health Mission
OOPS	Out of Pocket Spending
PIS	Personnel Information System
PHC	Primary Health Centers
PA	Procurement Agent
PAD	Project Appraisal Document
PDO	Project Development Objective
PSU	Project Support Unit
PPP	Public Private Partnership
QA	Quality Assurance
SA	Social Accountability
SIRD	State Institute of Rural Development
SPC	Strategic Planning Cell
SCM	Supply Chain Management
TAP	Technical Assistance Provider
UP	Uttar Pradesh
UPHMIS	Uttar Pradesh Health Management Information System
UPHSSP	Uttar Pradesh Health Systems Strengthening Project
VHSNC	Village Health Sanitation and Nutrition Committees

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P100304	India: Uttar Pradesh Health Systems Strengthening Project (UPHSSP)
Country	Financing Instrument
India	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
Republic of India	Uttar Pradesh Health Systems Strengthening Project (UPHSSP)

Project Development Objective (PDO)

Original PDO

The Project Development Objective of UPHSSP is to improve the efficiency, quality and accountability of health service delivery in Uttar Pradesh by strengthening the State Health Department's management and systems capacity.



FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing			
IDA-50330	152,000,000	145,787,709	129,320,207
Total	152,000,000	145,787,709	129,320,207
Non-World Bank Financing			
Borrower/Recipient	18,000,000	0	0
Total	18,000,000	0	0
Total Project Cost	170,000,000	145,787,709	129,320,207

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
20-Dec-2011	25-May-2012	13-Jun-2014	31-Mar-2017	30-Sep-2019

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
03-Jun-2016	32.36	Change in Results Framework Change in Loan Closing Date(s) Change in Disbursements Arrangements Change in Implementation Schedule
18-Mar-2019	104.16	Change in Loan Closing Date(s)
30-Sep-2019	123.23	Cancellation of Financing Reallocation between Disbursement Categories

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Satisfactory	Satisfactory	Substantial



RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	30-Jun-2012	Satisfactory	Satisfactory	10.00
02	23-Jan-2013	Satisfactory	Satisfactory	10.40
03	10-Sep-2013	Moderately Satisfactory	Moderately Satisfactory	10.71
04	15-Jan-2014	Moderately Satisfactory	Moderately Satisfactory	17.09
05	02-Aug-2014	Moderately Satisfactory	Moderately Unsatisfactory	17.49
06	03-Feb-2015	Moderately Unsatisfactory	Moderately Unsatisfactory	19.00
07	24-Jul-2015	Moderately Unsatisfactory	Moderately Unsatisfactory	23.24
08	24-Jan-2016	Moderately Unsatisfactory	Moderately Unsatisfactory	25.37
09	28-Jul-2016	Moderately Unsatisfactory	Moderately Unsatisfactory	32.36
10	21-Nov-2016	Moderately Satisfactory	Moderately Satisfactory	45.19
11	23-May-2017	Moderately Satisfactory	Moderately Satisfactory	56.79
12	19-Dec-2017	Satisfactory	Satisfactory	79.63
13	23-Jun-2018	Satisfactory	Satisfactory	96.02
14	11-Oct-2018	Satisfactory	Satisfactory	99.95
15	23-Apr-2019	Satisfactory	Satisfactory	106.92
16	30-Sep-2019	Satisfactory	Satisfactory	123.23

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Health	100
Public Administration - Health	67
Health	33



Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Private Sector Development	10
Public Private Partnerships	10
Human Development and Gender	100
Health Systems and Policies	100
Health System Strengthening	94
Reproductive and Maternal Health	3
Child Health	3

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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

1. Uttar Pradesh (UP) is India's most populous state with an estimated population of nearly 200 million (17 percent of the population of India)¹. At the time of project preparation, 85 percent of the population lived in rural areas and about 33 percent² lived below the poverty line. The per-capita income of UP was US\$522 relative to India's average of about US\$1,097 in 2010-11. Despite declines in maternal mortality, the state's average was the second highest in the country at 359 per 100,000 live births against a national average of 212³. Neonatal mortality (45 per 1,000 live births versus a national average of 35) and infant mortality (63 per 1000 live births versus a national average of 50 per 1000)⁴ were amongst the highest in the country. The total fertility rate of 3.8⁵ was the highest in India. Anemia (85 percent for children and 51 percent for women) and malnutrition were significant concerns with a high percentage of children underweight (42 percent), wasted (20 percent) and stunted (52 percent)⁶. Health seeking was among the lowest in the nation in rural UP for acute illnesses (7.7 percent)⁷, and institutional delivery (25 percent)⁸ and immunization rates (30 percent children are fully immunized by 12 months of age)⁹ had remained very low.

2. While considerable investment to upgrade health facilities had been provided through the state budget and the National Rural Health Mission (NRHM), the focus remained on vertical programs, and thus the total complement of services were generally unavailable¹⁰. The state also suffered from both high volume of vacancies in sanctioned positions of doctors and nurses in the public sector as well as an imbalanced allocation (in terms of quantity and required skill mix) of the existing workforce. This was further exacerbated by a lack of systematic and dynamic information systems for better human resource management. Similarly, the lack of adoption of a standard framework and clinical procedures, the absence of facility-based health managers, and Continuous Quality Improvement (CQI) programs, resulted in poor quality of services being produced from these investments. Private sector partnerships, which could have provided an impetus to expand quality of services, had not been fully exploited.

3. The institutional capacity and management systems of the Department of Health and Family Welfare (DOHFW) and its Directorates¹¹ were considered inadequate for strategic planning and comprehensive budgeting, monitoring and measuring performance, strategic purchasing, hospital management, health financing, human resource allocation and management, procurement and supply chain and financial management. Public health and regulatory functions such as health prevention, disease surveillance, vector control, vital statistics, quality assurance of service delivery, food and drug regulation and healthcare waste management were also weak.

¹ 2010; Population projections for India and States: 2001-2026, Registrar General of India

² 2004 based on a uniform recall period of 365 days; Poverty estimates for India 2004-05, Planning Commission

³ 2007-09; Sample Registration System, Registrar General of India

⁴ 2009; Sample Registration System, Registrar General of India

⁵ 2008; Sample Registration System, Registrar General of India

⁶ 2006; National Family Health Survey - 3

⁷ 2004 NSS; as measured by accessing a health care facility for treatment during an episode of acute illness

⁸ 2005-2010: NRHM bulletin; according to District Level Household Surveys (DLHS), institutional deliveries have increased from 21% to 25% between 2003-04 to 2007-08

⁹ 2007-08: District Level Household Survey - 3

¹⁰ USAID 2008: Rapid Assessment of the Functionality of FRUs and 24x7 PHCs in Uttar Pradesh (for the Reproductive and Child Health II program)

¹¹ Department of Health and Family Welfare includes three Directorates – Directorate of Medical and Health Services, Directorate of Medical Education and Directorate of Family Welfare



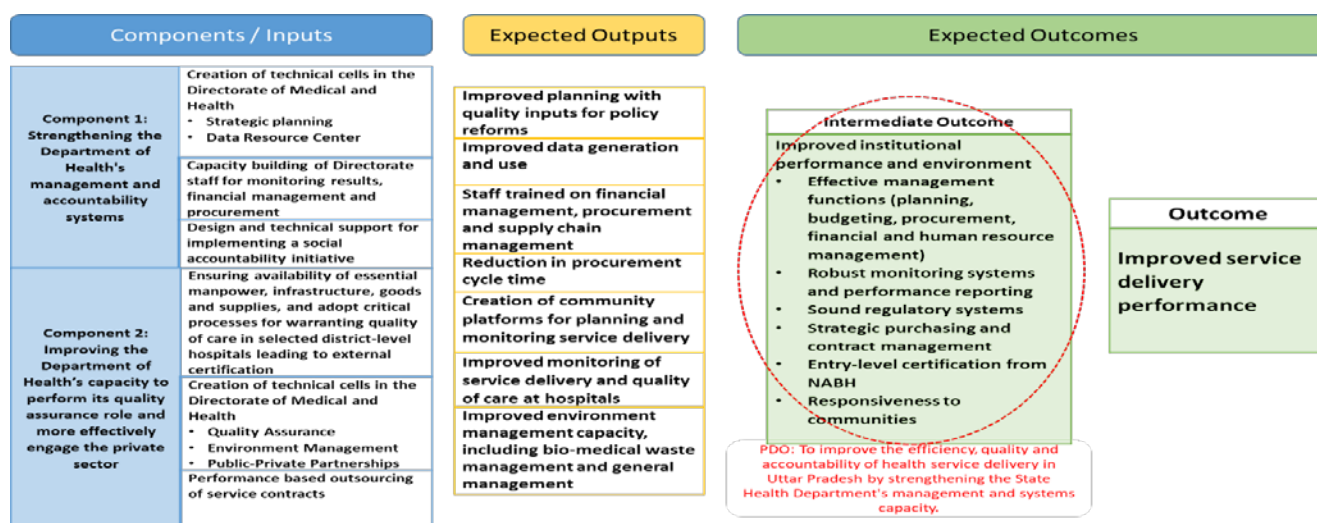
4. Weak governance and accountability mechanisms in UP represented major challenges to improve service delivery. A 2008 study¹² found that Panchayati Raj Institutions¹³ in UP had no formal role and little participation in health system functions. The Village Health and Sanitation Committees, which were the major social accountability mechanisms under NRHM, had been formed in less than 30 percent of villages¹⁴; and most of them were yet to be functional. Community driven accountability mechanisms for improved service delivery and approaches to improving health promoting and health seeking behavior were also limited across the state.

Theory of Change (Results Chain)

5. Given the context at appraisal, the Uttar Pradesh Health Systems Strengthening Project (UPHSSP) was designed to strengthen the institutional capacity and environment in order to improve service delivery performance. The results chain described in the Project Appraisal Document (PAD), explained that the project aimed to achieve intermediate institutional level outcomes which were assumed to directly affect service delivery performance. It also highlighted key milestones towards improving systems performance which were used as intermediate indicators to benchmark progress.

6. Figure 1 shows the theory of change (TOC), drawing from the results chain and the implicit theory of change embedded in the PAD. The TOC suggests that the proposed project activities provided the essential inputs for improving capacity of the Department of Health and Family Welfare (DOHFW), and particularly the Directorate of Medical and Health Services (DM&HS), for planning, data collection and use, financial management, procurement, creating community platforms for better accountability, monitoring for quality and environment management. These expected outputs, in turn, help the DOHFW to carry out effective management functions, ensure better monitoring and regulatory systems, achieve strategic purchasing and improve responsiveness to communities. The TOC assumes that this pathway leads to improved service delivery performance.

Figure 1: Uttar Pradesh Health Systems Strengthening Project Theory of Change



¹² Bossert, Dayal, and Sharma (2008)

¹³ Panchayati Raj Institutions are locally elected bodies mandated for decentralized governance at the village, block and district levels under the Constitution of India

¹⁴ 2009-10, Annual Report on NRHM, Comptroller and Auditor General of India



Project Development Objectives (PDOs)

7. The Project Development Objective (PDO) is to improve the efficiency, quality, and accountability of health services delivery in Uttar Pradesh by strengthening the State Health Department’s management and systems capacity.

Key Expected Outcomes and Outcome Indicators

8. The following table describes the key performance indicators used to measure the achievement of the relevant component of the project objective:

Table 1: Indicators to Measure Project Development Objective

No.	Indicators	Relevant component of the PDO
1.	Percentage of hospitals under the accreditation program that annually produce data and monitor: service productivity, efficiency, quality, patient satisfaction, and accountability	Improving <i>efficiency, quality and accountability</i> of service delivery
2.	Percentage of districts using the personnel information system for paying salaries of health workers	Improving <i>efficiency and accountability</i> of service delivery
3.	Percentage of districts with completed and published facility-based report cards detailing national health programs indicators and facility-level performance data	Improving <i>efficiency and accountability</i> of service delivery
4.	Percentage of Primary Health Centers participating in the social accountability pilots for which a service delivery assessment has been completed and at least one corrective action by government is verified by the community	Improving <i>accountability</i> of service delivery
5.	Number of facilities using performance-based contracts ¹⁵ for non-clinical services (outsourcing to the private sector for housekeeping and laboratory services)	Improving <i>efficiency and quality</i> of service delivery
6.	Percentage of hospitals under the accreditation program that have been certified for: (i) entry level pre-accreditation; (ii) progressive level pre-accreditation accreditation; and (iii) final accreditation	Improving <i>quality</i> of service delivery

9. In addition, a set of seven Intermediate Results (IR) indicators helped to monitor project performance on strengthening institutional systems and arrangements, essential for improving Department of Health and Family Welfare’s management capacity.

¹⁵ Performance based contract means that a portion of payments are linked to quantifiable performance indicators.



Components

10. The project included two components, namely strengthening the Department of Health and Family Welfare (DOHFW) management and accountability systems (US\$51 million) and improving its capacity to perform its quality assurance role and more effectively engage the private sector (US\$101 million). In addition to the World Bank funding of US\$152 million, the government committed to a counterpart funding of US\$ 18 million and project expenses were shared between the two sources of funds accordingly.

11. **Component 1:** aimed to achieve systems strengthening by establishing Technical Cells in the Directorate of Medical and Health Services (DM&HS), within the DOHFW, for Strategic Planning (SP) and Data Resource Centre (DRC). This component also focused on improving procurement and financial management systems through capacity building of staff and developing monitoring tools. It financed the services of a Procurement Agent (PA) and the Project Support Unit (PSU), to support institutional capacity building and project implementation. Additionally, it included piloting of social accountability interventions by involving local communities in the improvement of service delivery in 12 of the 75 districts of the state.

12. **Component 2:** aimed to enhance the quality of service delivery in 51 district-level public hospitals to enable them to be accredited from National Accreditation Board for Hospitals (NABH). The accreditation process was to ensure that hospitals were adhering to global standards for patient care and management systems for quality improvement, human resources, patient information and data use. The enhancement of service quality in 51 district-level public hospitals was to be supported by providing necessary equipment, technical support, and additional human resources, including hospital managers, required for the certification process and contracting the private sector for providing clinical and non-clinical services through performance-based contracts. In addition, it aimed to establish technical cells for Quality Assurance (QA), Environment Management (EM) and Public Private Partnerships (PPP) within the DM&HS to provide oversight and sustain the efforts for accreditation.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

13. The project was restructured twice to extend the closing date by 2.5 years. The main aim of the first restructuring was to allow the project to make-up for the initial delays, due to several problems described in Section III, to complete the implementation of planned activities and fully achieve its Project Development Objective (PDO). Specifically, the project was restructured to (i) extend the Closing Date from March 31, 2017 to March 30, 2019; (ii) amend the disbursement conditions for Category 2 in the Financing Agreement to remove the limitation to carryover of Disbursement Linked Indicators (DLIs) beyond one year; (iii) adjust the Results Framework to reflect the extended implementation period, recalibrate the targets for one PDO indicator to reflect what the project could realistically achieve based on the implementation experience and modify the text of three indicators to focus them on the actual result that they are aimed to measure rather than the name of the particular system or activity through which it was to be achieved and; (iv) adjust the disbursement estimates to reflect the extended implementation period.

14. The second restructuring allowed for the extension of the project Closing Date from March 31, 2019 to September 30, 2019. This aimed to complete implementation and support transition of activities initiated by the project such that funding for them could be sourced through the regular state revenue. It also facilitated the transfer of knowledge and documentation of best practices (high impact pilot interventions, such as the social accountability interventions, performance-based PPP contracts for clinical and non-clinical services and outcome-based bio-medical waste management system) such that these could be scaled up in the future.



15. Additionally, the project was restructured to cancel US\$ 3 million at the time of closing in order to return the unspent IDA funds.

Revised PDOs and Outcome Targets

16. No changes to the PDO or outcome targets were made.

Revised PDO Indicators

17. All PDO indicators remained the same. However, when the project was restructured in June 2016, minor adjustments were made to the Results Framework to reflect the extended implementation period, specifically the end of project targets for all indicators were shifted to the revised Closing Date of March 31, 2019.

18. The PDO indicator on hospitals under the NABH accreditation program pertaining to achieving different levels of certification was recalibrated to reflect what the project could realistically achieve based on implementation experience at the time. The indicator was modified from "percent of hospitals under the accreditation program that have been certified for: (i) entry level pre-accreditation); (ii) progressive level pre-accreditation accreditation & (iii) final accreditation (quality) (Percentage, Custom)" to "percent of hospitals under the accreditation program that have been certified for entry level pre-accreditation (Percentage, Custom)". Thus, henceforth, the project focused on achieving external certification for quality of care.

19. The wording of three indicators was modified to focus them on the actual result that they were aimed to measure rather than the name of the specific system or activity through which they were to be achieved. For example: "percentage of districts using the personnel information system for paying salaries of health workers" was revised as "percentage of districts using an electronic system for paying salaries of health workers". Similarly, "percentage of districts with completed and published facility-based report cards detailing national health programs indicators and facility- level performance data was revised as "percentage of districts with completed and published data on national health programs indicators and facility-level performance". Finally, "number of facilities using performance-based contracts for non-clinical services (outsourcing to the private sector for housekeeping and laboratory services) was revised as "number of facilities using performance-based contracts to improve the quality of service delivery."

Revised Components

20. Neither of the two components were revised.

Rationale for Changes and Their Implication on the Original Theory of Change

21. Given the initial delays in implementation, the main rationale for the abovementioned changes was to allow for additional time to complete project activities and achieve desired results. These changes had no implications on the original theory of change.

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

Rating: High



22. The relevance of PDO was high both at the time of appraisal and during implementation and was well aligned with the country assistance and partnership strategies between 2009-2012 and 2018-2022. The PDO was especially relevant to the 2009-2012 Country Assistance Strategy's third pillar which aimed to support improvements in the organization and delivery of publicly-financed services that would enhance the development effectiveness of public spending, including in the health sector. The emphasis of this pillar was to address: (i) getting results including demand-side accountability through beneficiary, civil society and community involvement; (ii) strengthening capacity for publicly-provided services; and (iii) enhancing private sector participation. Similarly, the 2013-17 Country Partnership Strategy for India (Report No. 76176) aimed to contribute to the World Bank's global objectives of ending extreme poverty by 2030 and boosting shared prosperity. The strategy described how strengthening health and nutrition service delivery systems, including developing local systems and capacities, contributes to the 'Inclusion' engagement area. Finally, the project directly supported objective 3.4 of the India Country Partnership Framework (July 25, 2018) namely "to improve the quality of health service delivery and financing as well as access to quality healthcare."

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

Rating: High

23. The following section describes the achievement of each component of the PDO, namely improving (i) efficiency (ii) quality and (iii) accountability of health service delivery (iv) by strengthening the State Health Department's management and systems capacity.

24. **PDO focused on improving efficiency of health service delivery:** Several project initiatives helped in improving the efficiency of health service delivery. These included establishment of routine information systems, at the facility, district and state levels, to report and monitor data on service delivery and human resource management as well as using performance-based contracts for non-clinical and laboratory services. These successes were reflected in the achievement of indicators measuring improvement in efficiency of service delivery (PDO#1, PDO#2, PDO#3 and PDO#5), with end of project targets surpassed for all indicators. For example:

- **PDO#1 - Percentage of hospitals under the accreditation program that annually produce data and monitor service productivity, efficiency, quality, patient satisfaction, and accountability:** Against a target of 36 hospitals (out of 40 under the accreditation program), 51 hospitals were annually producing data and monitoring key performance indicators for measuring production of services (number of inpatients, surgeries), efficiency (average length of stay, bed occupancy rate), quality (surgical site infection, needle stick injuries), equity (proportion of patients below poverty line receiving services), accountability (number of complaints and Right to Information requests) and patient satisfaction. These indicators were initially monitored through a paper-based information system which was later transitioned into an electronic dashboard called the Quality Management Information System (QMIS) in 2018.
- **PDO#2 - Percentage of districts using an electronic system for paying salaries of health workers:** Against an end-of-project target of 56 (75 percent) districts, salaries of all health workers in all 75 districts are paid using an electronic system from the Treasury Department. The Personnel Information System (PIS), designed and developed in collaboration with the National Informatics Centre (NIC), for salary disbursement of medical and paramedical employees in the Department of Health and Family Welfare was operationalized by the project. Subsequently, information from the PIS was merged into a comprehensive health workforce management



system called the Manav Sampada, an initiative by NHM, in 2017 and implemented across the entire state. At present, the state disburses salaries to all its workforce through this system.

- **PDO#3 - Percentage of districts with completed and published data on national health programs indicators and facility-level performance:** Against an end-of-project target of 68 (90 percent) districts, all districts (100 percent) are using the Uttar Pradesh Health Management Information System (UPHMIS) to report on national health program indicators by district and facility-level. A facility-based Health Report Card (HRC), which was a web-based online reporting tool detailing national health programs indicators and facility-level performance data was piloted by the project. It included key indicators on inputs (human resource, budget utilization, equipment, infrastructure and drugs) and service delivery performance. The HRC was implemented at district-level health facilities and office of the district Chief Medical Officers. It was scaled up across all the districts of the state and was merged with the Uttar Pradesh Health Management Information System (UPHMIS) developed by NHM in 2016-17.
- **PDO#5 - Number of facilities using performance-based contracts for non-clinical services (outsourcing to the private sector for housekeeping and laboratory services):** Against an end-of-project target of 50 facilities, this indicator was achieved for all targeted hospitals. For example, cleaning and gardening services were operational in 51, high-end laboratory services in 52, and mechanized laundry services in 50 hospitals. Additionally, software applications were developed to monitor performance of these services on a real-time basis. The housekeeping services including mechanized laundry, provided through a Public-Private Partnership (PPP) model, have been adopted by NHM for state government's next Financial Year.

25. **PDO focused on improving quality of health service delivery:** Project interventions significantly improved quality of service delivery, especially by introducing targeted interventions to achieve external certification for quality of care, establishing routine information systems to monitor quality of service delivery and improving delivery of non-clinical and laboratory services and patient satisfaction from them by using performance-based contracting. The achievement of this component of the PDO was evident from the progress made on related indicators (PDO#6, PDO#1 and PDO#5):

- **PDO#6: Percent of hospitals under the accreditation program that have been certified for entry level pre-accreditation):** Though slow to show progress initially, resulting in modification of targets at the time of the first restructuring, the revised indicator surpassed its end of project targets. At the time of project closing, against the revised target of 36, 40 District Hospitals received certification for entry level pre-accreditation from NABH. In order to improve quality of care and achieve external certification, the project made significant advancement in:
 - Filling critical gaps in human resources in hospitals: Against a shortage of 5636 staff identified by a gap analysis, including medical officers, specialist doctors, staff nurses, dieticians, operation theatre and lab technicians, X-Ray technicians, medical records clerks, computer operators and hospital managers, the project posted 3689 staff on a contractual basis.
 - Recruiting hospital managers in each of the 51 hospitals and building their capacity.
 - Revamping infrastructure, redesigning the hospital layout, ensuring compliance to mandatory licenses, calibrating equipment, condemnation of discarded items and introducing mechanized laundry, cleaning and gardening services.
 - Initiating several best practices for improving clinical quality of care, namely, infection prevention programs, developing standard operating procedures (SOP) for different departments, providing in-



service trainings to hospital staff, creating standardized forms and formats, including for outpatients and bed head tickets for inpatient admissions, and conducting mock drills for fire, cardiac emergencies and external disasters.

- As described above, PDO#1 and PDO#5 surpassed their end of the project targets as well.

26. **PDO focused on improving accountability of health service delivery:** Project interventions to improve accountability of health service delivery included establishing information systems for data on service delivery, routine publication of these data, transparent human resource management system for disbursement of salaries and a novel social accountability initiative to empower communities to hold providers accountable for service delivery. Related indicators (PDO#1, PDO#2, PDO#3 and PDO#4) showed significant achievements with all end of the project targets met. For example:

- **PDO#4 - Percentage of Primary Health Centers participating in the social accountability pilots for which a service delivery assessment has been completed and at least one corrective action by government is verified by the community:** Against an end-of-project target of 51 (80 percent) Block Primary Health Centers (PHCs), this indicator was achieved for all targeted 72 (100 percent) Block PHCs. The social accountability intervention showed significant progress in terms of community participation, through the platform of Jan Samvad, for escalating issues related to health service delivery to relevant authorities. The pilot intervention achieved the formation of 4238 Village Health, Sanitation and Nutrition Committees (VHSNCs), activation of 72 block-level advisory committees, improved coordination between the auxiliary nurse midwife (ANM), ASHA and Anganwadi worker, and active participation of VHSNC members in supervision. Additionally, findings from the impact evaluation study in 2 out of 12 districts concluded an increase in service utilization, especially of maternal and child health services, and better outcomes for stunting and underweight among children less than two years of age.
- As described above PDO#1, PDO#2 and PDO#3 surpassed their end of project targets.

27. The project focused on achieving its PDO by strengthening the management and systems capacity of the DOHFW at the state, district and local levels. This is described in greater detail in section E (institutional strengthening) below.

Justification of Overall Efficacy Rating

28. All end-of-project outcome targets were achieved or substantially surpassed, thereby meriting a rating of “high”. Similarly, all Intermediate Results (IR) indicators were achieved or surpassed their end-of-project targets¹⁶.

C. EFFICIENCY

Assessment of Efficiency and Rating

Rating: Substantial

29. The project performed well in terms of allocative and technical efficiency¹⁷. As discussed later in this document

¹⁶ The Results Framework in Annex 1 is not reflecting the abovementioned numbers in some cases due to a technical glitch in the portal.

¹⁷ Technical efficiency = Allocative efficiency = Are we keeping the cost per unit outcome/ rate at which inputs are translated into outputs/outcomes as low as possible? Are we doing the things the right way?



(Ref Section IV A), the focus of the project was on strengthening overall organizational performance of UP's health system. In the absence of a recognized composite indicator to measure that, key "marker" indicators were used to measure achievement of the PDO. As a result, it is not possible to conclusively attribute improvements in organizational performance to project efforts. However, the project's spending of US\$132 Million over seven years was small compared to the state's US\$2 Billion annual budget. Even if 2 percent of state annual budgets are better utilized over the next 10 years due to systems strengthening, the project represents solid value for money with a Net Present Value (NPV) of \$94 Million or an Internal Rate of Return (IRR) of 30 percent¹⁸.

30. Several factors increased the allocative efficiency ("Are we spending on the right things which are most likely to achieve desired outcomes?") of project investments, namely:

- **Successful systems-level/governance interventions inherently provide higher and longer-term value for money vis a vis piecemeal and verticalized service-delivery interventions:** Global literature acknowledges that weak health systems in low- and middle-income countries prevent the optimal deployment of known technical service delivery interventions¹⁹. Rather than addressing symptoms of a poorly functioning health system (e.g. low fund utilization, stock-outs), the project addressed their root causes through systemic interventions such as strategic planning, effective data collection/use and accountable management of personnel among others²⁰. This approach addressed known issues and tackled emerging ones such as Dengue and Japanese Encephalitis and Acute Encephalitis Syndrome (JE-AES) outbreaks.
- **The basket of systems-level interventions was well-chosen and pragmatic:** All key governance pillars (Strategic Planning, Data, Financial Management, Human Resources, Supply Chain Management, Procurement, Social Accountability) were addressed. The project focused on making the government an astute customer of private services, especially using performance-based contracts. Further, a Lancet series on Quality of Care quantified the tremendous costs of low quality of delivery²¹. External certification as a focused strategy to improve quality in public hospitals was appropriate given the overall low accountability environment.
- **The project design was pragmatic in leaving out interventions which had low likelihoods of success.** For instance, it did not attempt to outsource entire clinical departments. Similarly, attempts at regulation of quality in the large but highly fragmented private sector were left out.
- **The focus of the project on District Hospitals and building institutional capacity of the DM&HS was complementary to efforts of the NHM** most of whose resources are directed towards primary care²² while the Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) focused on tertiary care. The project's focus on District Hospitals (the weak secondary layer where funding had declined from 21 percent of total budget in FY10 to 18 percent in FY15²³), was complementary. Some of the additional demand generated by NHM (e.g. institutional delivery rates exponentially increased from 21 percent in FY06 to 68 percent to FY16²⁴) may have been served (at higher quality) due to more effective District Hospitals²⁵. Further, the project's support to improve the DM&HS' capacity was also complementary to NHM.

¹⁸ Assumptions: Discount rate: 8.3% at project start in 2012, Gol 10y bond yield, 2% of total budgets which would have otherwise been waste made effective by project starting 2017 and continuing for 10 years

¹⁹ Lieberman, A., Challenges for maternal health efforts. The Lancet. 388(10050): p. 1146-1147.

²⁰ The PAD also noted "With the easing of the funding constraint, other constraints have become binding. The government has taken note of these, and is now according high priority to resolving these constraints...reflected in the state not able to fully absorb available funds"

²¹ Kruk, Margaret E et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. The Lancet Global Health, Volume 6, Issue 11, e1196 - e125

²² The NHM is mandated to work at the DH level also but has only recently started to focus on these hospitals.

²³ Table 12 in "Tracking Financial Resources for Primary Health Care in Uttar Pradesh, India" by Peter Berman et al. 2017 (excludes NHM through Society Route)

²⁴ NFHS-3 and NFHS-4

²⁵ In the absence of the formal evaluation, it is not possible to say this with certainty.



- External certification efforts helped UP leapfrog the “business as usual” path in terms of efficiency and quality:** At completion, 40 of UP’s 160 District Hospitals were NABH entry-level certified (another 11 in process) putting the state ahead of developed states like Tamil Nadu. For a one-time certification related cost of \$1.0 Million per hospital (vs. annual operating cost of \$1.5 Million per District Hospital)²⁶, a multiyear effect on efficiency and quality was likely achieved. As shown in Table 1, average monthly in-patients (IPD)²⁷ increased by 43 percent between FY 14 to FY19. The average number of major and minor surgeries per month increased by 24 percent and 6 percent. However, it is important to note that data on all hospitals across the state were not available and thus comparisons between hospitals under the project and those that were not could not be made. Hence, these improvements could also be due to secular upward trends in service utilization.

Table 2: Changes in average monthly metrics of project hospitals (average across hospitals)²⁸

Average per month (n=30 hospitals)	FY14	FY15	FY18	FY19	Change FY19 vs FY14
In-patient admissions	1,648	1,667	2,036	2,353	43 percent
Major Surgeries	204	205	243	252	24 percent
Minor Surgeries	189	196	196	200	6 percent

- Further, according to a survey in 2019, 94 percent inpatients and 93 percent outpatients had waiting times less than 30 minutes, and 99 percent of the patients perceived doctor behavior as good or fair, indicating a high perceived quality of service²⁹. 90 percent of patients who had visited previously felt that the hospitals were cleaner than before³⁰.
- Strengthening District Hospitals and high-end pathology services may have reduced Out of Pocket Spending (OOPS) for families:** Low OOPS is considered a hallmark of good health systems – in India, OOPS constitutes 63 percent of all spending³¹. The project may have reduced OOPS by:
 - crowding out private hospitals for some hospitalizations - evidence of higher utilization above, average hospitalization expense in private hospital in UP is 4.2 times higher³²
 - reduced spending on diagnostic tests that would have been otherwise been performed in the private sector with estimated OOPs savings of savings of \$20 Million³³
 - reduced treatment costs for those who would otherwise not get prescribed tests due to financial constraints and therefore delay treatment³⁴
- The Social Accountability (SA) pilot has built a definitive case for state investments to operationalize village-level accountability mechanisms:** The project operationalized 80 percent of previously defunct Village Health, Sanitation, and Nutrition Committees (VHSNCs) in 12 districts. A randomized controlled trial, carried out by the Duke University, in 2 out of the 12 districts showed strong improvement in nutritional outcomes in children (reduced stunting, wasting in children under two by 11-13 percent over control), early treatment of childhood diarrhea (+14 percent likelihood of treatment on day 1 over control), vaccination rates (+ 12 percent over control),

²⁶ Accreditation costs = (Costs on Accreditation/addl. HR)/ 51 project hospitals, annual costs based on project team estimates

²⁷ Of 51 project hospitals, baseline data available for 30 hospitals only.

²⁸ Source: Project hospital indicator data

²⁹ Analysis of the Patient Satisfaction Survey Conducted in the District Government Hospitals, Feb 2019 by M&E team (N= 325, 23 District Hospitals)

³⁰ Patient’s Perception of Cleaning & Hygiene in District Hospitals, MLE Team

³¹ National Health Accounts, 2014-15

³² NSSO, 75th Round Survey, 2017-18, Data for Uttar Pradesh

³³ Assuming half of the total ~5 Million tests³³ conducted by the project hospitals would have been done in the private sector, at an avg test cost of Rs. 532³³ (\$8)

³⁴ According to a survey in project hospitals, 21% of patients would not have got the prescribed test done if it weren’t available for free at the hospital.



institutional delivery (+6 percent over control). Remarkably, this intervention was achieved at a shoestring budget of ~Rs. 9,000 per village per month (direct costs)³⁵.

31. On the other hand, the following factors may have decreased allocative efficiency by not being a part of the project design:

- **Systems around “Demand” were not adequately focused upon:** Barring the Social Accountability pilot, the project had a low emphasis on stimulating demand. Enhancing systems around demand could have increased appropriate service utilization and the uptake of promotive health behavior. A higher focus on demand would have increased the overall efficiency given the large fixed-cost base of the DM&HS³⁶.
- **Non-addressal of referral chain issues may have brought unwanted traffic to District Hospitals and reduced efficiency:** A study by the project showed that only 13 percent IPD patients and 4 percent OPD patients in District Hospitals were referred from any medical facility³⁷. The remaining came directly to District Hospitals. This implies that resources meant for secondary facilities were likely used for unsophisticated treatments. Pilot efforts around ‘filter’ clinic at District Hospitals were too small to affect this issue meaningfully.

32. Several key factors increased technical efficiency (“Are we keeping the cost per unit outcome/ rate at which inputs are translated into outputs/outcomes as low as possible? Are we doing the things the right way?”), of the project investments, namely:

- **The project enabled speedier procurement in a difficult environment:** Low / delayed procurement is one of the biggest reasons for budget underutilization leading to inefficient service delivery³⁸. Despite the aftermath of a major procurement scam³⁹ at NHM, the project through its procurement agents and capacity building of the Central Medical Store Department (CMSD), was able to procure 55 different types of medical equipment. Further, there was a reduction in procurement cycle time for a) equipment by 61 percent under quantity contracts and 31 percent under rate contracts and for b) drugs by 82 percent (from 930 days to 162 days) compared to baseline⁴⁰.
- **The focus on a limited number of hospitals to make them fully functional improved efficiency⁴¹:** The project resisted the temptation of spreading the funds too thin and chose to focus on 51 Hospitals. By hiring contractual staff (268 doctors & specialists, 1,700 nurses and 1,604 paramedics) to fill positions, acquiring equipment, making other services such as high-end diagnostics available, the project increased the functionality of each hospital.

33. On the other hand, the following factors may have decreased technical efficiency:

- **A longer project timeline to achieve the original goals⁴² reduced efficiency:** All revised PDO indicators were achieved, but in a longer time frame (7.5 years versus the original 5 years) than anticipated. Given the opportunity cost of capital, the efficiency of the project was reduced.
- **Piecemeal approaches to IT deployment reduced efficiency:** As many as 15 pieces of software were developed by the DRC⁴³, of which several fell into disuse. A lack of coherent IT strategy reduced efficiency.

³⁵ Mohanan et al, Mobilizing Communities for a Healthier Future: Impact Evaluation of Social Accountability Interventions in Uttar Pradesh, India, 2018

³⁶ The Strategic Planning Cell did attempt to revamp the IEC cell by creating an action plan

³⁷ Analysis of the Patient Satisfaction Survey Conducted in the District Government Hospitals, Feb 2019 by M&E team (N= 325, 23 District Hospitals)

³⁸ “Tracking Financial Resources for Primary Health Care in Uttar Pradesh, India”, Peter Berman et al. 2017

³⁹ Allegedly, over \$1.2 Billion were misappropriated, and several officials were murdered in the attempt to cover up the scam (Economic Times)

⁴⁰ This data should be considered directionally only – the baseline by EY contained only one sample.

⁴¹ 51 hospitals, which represented all 18 Commissionerate of the State were covered.

⁴² In the case of Accreditation of hospitals, the original targets were revised down due to a more realistic assessment.

⁴³ “Some of these software applications include: (i) Patients’ Diagnostics Information System (PDIS) (ii) Quality MIS (QMIS) (iii) Laundry MIS (LMIS) (iv) Financial MIS (FMIS) (v) Cleaning & Gardening MIS (CGMIS) etc.



D. JUSTIFICATION OF OVERALL OUTCOME RATING

Rating: Satisfactory

34. The PDO of the project remained highly relevant throughout the implementation period. All outcome targets were achieved and, in some cases, substantially surpassed. The project funded cost-effective interventions and contributed to redirecting resources to appropriate investments reaching the most vulnerable population. Besides achieving entry level certification through NABH in 40 out of 51 hospitals, there was significant progress on improving the quality in all 51 hospitals under the project. Most of the hospitals received statutory certification for safety, adequate staff for attending to patients, including a full-time hospital manager to focus on quality and overall management of health facility and a full-time doctor in-charge of quality of care interventions, and implemented performance-based contracts that contribute to quality and patient satisfaction. On the systems strengthening, the cells that were created in the DM&HS did significant work at the policy level to develop Standard Treatment Guidelines, such as Standard Treatment Approach, Oxygen Guidelines, Nursing Manual, Infection Control Guidelines, Referral Guidelines among others, and the State Health Policy. In addition, they helped to create a robust monitoring system that enhanced the capability of the state to perform core public health activities.

35. The overall investment by the project in the state was less than one percent of the state health budget and allocation to hospitals respectively. However, the outcomes achieved by the project were ahead of the investment paving the way for other hospitals in the State. The project also helped UP to be identified as a pioneer in the areas of District Hospitals improvement with the highest number of public hospitals in the country with certification for entry-level accreditation from NABH. As evidence of this, the CAG performance audit of District Hospitals conducted in 2019, recognized the efforts of the state for improving District Hospitals and recommended replication of good practices like deployment of hospital managers and use of several guidelines for patient satisfaction across the country. The State is also a key contributor to national guidelines that are currently being revised by the National Health Systems Resource Center for improving district level hospitals in India.

36. While the project was successful in achieving its PDO, as measured by the PDO and IR indicators, the longer duration of implementation resulted in loss of efficiency. Several challenges during implementation, described in greater detail below, resulted in the initial slow progress. Key mitigating measures and timely actions, including restructuring following the Mid-Term Review, enabled implementation to fall back on track to achieving end-of-project targets for all indicators.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

37. Various project interventions had a favorable effect on improving gender outcomes, namely:

- The social accountability intervention created demand for Mother and Child Health (MCH) services through reinvigorating Village Health Sanitation and Nutrition Committee (VHSNC) at the village/Panchayat level leading to at least 5.6 percentage points higher institutional delivery and about 3.2 percentage point higher 3 Antenatal Care (ANC) visits⁴⁴.

⁴⁴ Randomized Controlled Trial conducted by Duke University, 2018



- 11 out of the targeted 51 hospitals under the accreditation program were female District Hospitals, specializing in providing services during pregnancy, delivery and newborn care. Of these targeted female hospitals, 9 received certification for entry-level accreditation from NABH.
- About 53 percent women were employed across various health facilities under the project, including nurses, hospital managers and other allied health workers⁴⁵.
- Internal complaints committee for sexual harassment, as per Vishakha⁴⁶ guidelines, were constituted in all the hospitals under the project.

Institutional Strengthening

38. As defined by the PDO, strengthening institutional capacity and environment to improve service delivery was the main objective of the project. It focused on strengthening accountability, transparency and efficiency at each level of the health system – state, facility and community.

39. **At the state level**, the system strengthening, and improvement of institutional capacity was enabled by establishing Strategic Planning Cell (SPC), Data Resource Centre (DRC), Quality Assurance (QA), Environment Management (EM) and Public-Private Partnerships (PPP) cells in the DM&HS. The coordinated efforts of these cells supported the functioning of the DM&HS in planning for and monitoring of several health programs funded by Central and State governments. In addition, the QA, EM and PPP cells supported the implementation of bio-medical waste management (BMWM), PPP activities for clinical support and non-clinical services and overall improvement of service delivery and quality of care in the 51 hospitals supported under Component 2.

40. The financial management, procurement and supply chain management (SCM) systems were strengthened through capacity building of staff and by providing technical support for developing monitoring tools at the state level. As a result, the DM&HS developed a dashboard with information on overall health spending in the state from various sources of funding and provided comprehensive and timely data for planning. The procurement function was improved by providing technical support to the Central Medical Stores Department (CMSD) for developing standard documents and processes for procurement and introducing systems for forecasting, inventory and asset monitoring. It also included regular training for district-level staff on financial management, procurement and SCM to improve program management and reporting. The turnaround time for procurement of drugs, goods and services in the DM&HS during 2011 to 2015 was reduced by 20 percent.

41. **At the district hospital level**, the project introduced a bottom-up approach and decentralized planning for quality improvement. This allowed some degree of autonomy to hospitals for identifying gaps and preparing their own improvement plans. The introduction of hospital managers helped to build better organizational capacity and strengthened quality assurance through the implementation of quality checklists, training and periodic assessments. Thus, 40 out of 51 hospitals secured NABH certification, effectively managing performance-based contracts for clinical support and non-clinical services and with greater clarity on areas of improvement using available resources optimally.

42. **At the community level**, the project contributed towards strengthening the voice of community to demand for services through a social accountability intervention that was piloted in 12 districts through the State Institute of Rural Development (SIRD). More details on the impact of this intervention are provided in the section below.

⁴⁵ Project data, UPHSSP, 2019

⁴⁶ Government of India guidelines for formation and operation of Sexual Harassment Committees in the workplace



43. While the project design and its implementation were successful in creating and embedding several new institutional mechanisms and processes, the efforts to ensure their sustainability after the completion of the project period were less efficacious. For example, at the time of closing, permanent institutionalization of the Technical Cells was partially achieved. Discussions between DM&HS and NHM were ongoing, with a greater likelihood of the latter providing the financial support for sustaining the cells. At the time of closing, additional staff hired through the project were transferred to contractual arrangements with NHM to ensure sustainability. However, in case of many positions, these contractual arrangements offered a lower salary than what was being provided during project implementation. Similarly, ensuring continuity of the social accountability initiatives was not achieved beyond the completion of the project.

Other Unintended Outcomes and Impacts

44. In addition to striving for external certification from NABH, 37 District Hospitals in the state received the Kayakalp⁴⁷ award given by NHM, of which 22 are part of the project. Similarly, three hospitals in the state have achieved certification from the National Quality Accreditation System (NQAS)⁴⁸ of which two are also supported by the project.

45. The State Institute of Rural Development (SIRD), responsible for implementing the social accountability intervention, adopted the training modules developed under this intervention for trainings in other sectors aiming to strengthen social accountability initiatives.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

46. **Difficult political environment:** UPHSSP was initially conceived in 2006 as a second phase of its predecessor, Uttar Pradesh Health Systems Development Project (UPHSDP), which was closing in 2008. However, due to concerns about possible fraud and corruption in procurement in five health sector projects in India raised by a Detailed Implementation Review (DIR), conducted between 2006-2007 and released in 2008, the preparation of UPHSSP, along with other health-sector projects in India, was put on hold. Despite that environment, a strong state-level dialogue resulted in a renewed request for a project in 2009 and preparation efforts were resumed.

47. **Use of Disbursement-Linked Indicators:** UPHSSP was designed as an innovative project that helped change the Bank's approach to supporting state-level health projects by focusing on systems rather than only providing inputs. The project used an Investment Project Financing (IPF) instrument (US\$152 million), with a mix of traditional input financing (US\$102 million) and results-based financing (US\$50 million) using disbursement-linked indicators (DLIs). The latter approach was used for the first time for a health sector project in India. The DLIs were linked to the six PDO indicators with a total of 25 targets over the project period. In addition, a DLI for improving procurement cycle time was also introduced for bringing about institutional reforms in the state's procurement processes. Given that the project was aiming to strengthen accountability of health service delivery across all levels of the government, using DLIs further ensured ownership and oversight of the project from the highest levels of the government.

48. **Lessons learnt and incorporated in the project design:** Based on lessons learnt from the experience of Uttar Pradesh Health Systems Development Project, institutional capacity and management systems of the DOHFW

⁴⁷ Kayakalp award focuses on core patient safety aspects such as cleanliness and hygiene

⁴⁸ NQAS is an accreditation system established by the central Ministry of Health and Family Welfare. Unlike NABH, which was designed primarily for private hospitals, NQAS was created with a focus on public hospitals.



were considered the “weak middle”, representing major challenges to improved service delivery. The PAD documented that decision making was highly centralized in the state and subject to political patronage while accountability was diffused between elected officials and local administrators/providers, between elected officials and citizens, and between citizens and local administrators/providers. Community driven accountability mechanisms for improved service delivery, and community led approaches to improving health promoting and health seeking behavior were limited in the state. Absenteeism, high staff turnover, lack of appropriate training/skills, absence of citizen grievance redressal, and monitoring failures combined to undermine sector performance. Disparate information systems existed, and survey data were seldom used to inform planning and budgeting. There was weak capacity in the DOHFW to generate, analyze and use data for decision making. Thus, UPHSSP was designed with a primary mandate to strengthen the institutional capacity of the state and thereby bring about improvement in health service delivery outcomes.

49. **Risk assessment:** Critical risks were identified and mitigating measures were incorporated into project design. These included leadership risks given the high turnover of senior members in the DOHFW, technical capacity risks due to lack of specialist personnel to support sector reforms and timely implementation of project components, and weak public sector management systems. The project design, as described in the Governance and Accountability Action Plan (GAAP), incorporated several mitigation measures to counter these risks and through its focus on institutional development and strengthening local systems and accountability provided an enabling environment for these measures.

50. **Implementation readiness:** The task team had ensured the following implementation readiness steps such that implementation could begin as soon as the project was approved:

- A procurement plan for contracts for the first 12 months of project implementation was developed.
- Financial arrangements at the center and states were established.
- The budget for the first year of the project was approved and released.
- Results monitoring indicators were agreed along with baseline values and targets for each year.
- Environment and social assessments were conducted to prepare a detailed action plan that was monitored throughout the implementation.
- A Project Support Unit (PSU) was established during preparation and the procurement for the Technical Assistant Provider (TAP) was initiated.

B. KEY FACTORS DURING IMPLEMENTATION

51. **Stabilization of leadership:** Soon after effectiveness, the project got off to a very slow start due to frequent changes in leadership, including the state government itself, and capacity constraints in the state. During the first three years of implementation, the project was led by nine different Project Directors (PDs), with an average tenure of four to five months and longest of eight months, which affected both decision-making and oversight of the project. As a result, the project disbursed less than 20 percent of the total credit during this time. With repeated requests from the task team, the state government committed to ensuring steady leadership. Henceforth, the project was led by two PDs, each serving for at least a couple of years. Both PDs were instrumental in providing strategic direction, expediting project implementation and changing the working culture of the project team. The project ratings for the PDO and IP was upgraded from Moderately Satisfactory to Satisfactory in May 2017, and these ratings have been maintained since. The project was fully compliant with its legal covenants, including FM and audit-related requirements.



52. **Appropriate project restructuring:** As a result of the slow pace of implementation in the initial years, the Mid-Term Review conducted in June 2014 recommended project restructuring. The initial aim of the restructuring was to extend the Closing Date of the project by two years as well as collaborate with the International Finance Corporation (IFC) for leveraging the private sector for an expanded scope of public-private partnerships. During subsequent discussions, it was agreed that collaborations with IFC will be used for designing the contracts for high-end pathology services only and not for any further engagements. The final request sent by the Department of Economic Affairs for restructuring, which was received towards the end of 2015, included only an extension of Closing Date with minor changes to the Results Framework. Given the challenging environment and initial delays in implementation, the restructuring allowed for more time for the achievement of all PDO indicators and made their targets more realistic.

53. **Change in approach towards monitoring, documentation and data use:** The Data Resource Center (DRC) and the Strategic Planning Cell (SPC) strengthened the capacity of the DOHFW to design and implement monitoring tools, carry out detailed documentation of activities and use data for decision making. These efforts enhanced the capability of the state to perform core public health functions. For example:

- The DRC enabled regular reporting from a State Outbreak Reporting System, supported by a Health Geographic Information System, to inform state action plans to address dengue, JE-AES as well as strengthen the implementation of the Integrated Disease Surveillance Program.
- The DRC developed over 20 software applications, for data collection and analysis, informing day-to-day program activities pertinent to the project as well as the DM&HS.
- The SPC & DRC produced eight policy documents, including the State Health Policy, five manuals, five State Action Plans (including for Dengue, JE-AES, and Trauma), eight guidelines, two research studies, and numerous Information, Education and Communication (IEC) short documentary films.

54. **Experimentation with new modalities to strengthen social accountability:** The social accountability pilot created mechanisms for community assessment of health service delivery at the local level and empowered the community to use these mechanisms to (a) demand better services; (b) enhance positive health behaviors and community actions that improved health and nutrition; and (c) promote community audits of service delivery and drug and human resource availability.

- These interventions included a combination of providing information on healthy behaviors to the community, strengthening the role of Village Health Sanitation and Nutrition Committees (VHSNC) for providing community-level services as well as additional facilitation through Gram Panchayat Coordinators to make VHSNCs more functional.
- These were accompanied by a rigorous impact evaluation that showed improvements in access to and utilization of health services in these communities, particularly vaccination rates (11.8 percent increase), institutional delivery (5.6 percent increase), and nutrition outcomes such as reduction in stunting (by 11 percent) among children less than two years of age.

55. **Using external certification for quality as a platform to initiate new processes to improve service delivery and quality of care in District Hospitals:** In order to achieve the PDO indicator on external certification for entry-level accreditation from NABH, the project initiated several new processes which not only enabled surpassing the target of the PDO indicator but also laid the foundation for potentially sustainable quality of care initiatives.



- While the recruitment and skill upgradation of additional human resources was a significant achievement for improving quality of care, the most pivotal change was the introduction of the **hospital managers**. Creation of a manager cadre, separate from a clinician in-charge, greatly enabled hospitals to implement and monitor several initiatives to improve quality of service delivery. Similarly, initiating the role of a full-time medical doctor providing oversight to quality of care interventions further complimented these efforts.
- The project adopted a **cluster-based monitoring** approach for supervising the District Hospitals, based on a checklist of 109 essential structures and processes, through daily reporting and “war room” reviews. This cluster-based monitoring approach was subsequently adopted by the DM&HS for other programs as well.
- The project **leveraged the private sector** to improve clinical support (such as high-end pathology) and non-clinical (laundry, cleaning and gardening) services through performance-based contracts. It developed routine monitoring mechanisms to evaluate monthly performance of different vendors, including collecting information on patient satisfaction of these services.
- **Outsourcing recruitment of human resources** to an external agency expedited filling of vacancies in District Hospitals enabling service delivery as well as introduction of several key processes for improving quality of care.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

56. Given the focus of the project on strengthening organizational performance rather than providing incremental inputs for service delivery, and in the absence of a recognized composite indicator to measure the former, key “marker” indicators were used to measure achievement of the PDO. These indicators were strong and covered the entire gambit of interventions that the project aimed to implement. The PAD defined a clear project Results Framework, with a parsimonious set of indicators (six PDO and seven IR indicators) all with baseline, yearly targets, data sources, and frequency of data collection. In addition, Table 2 of the Results Framework described seven DLIs associated with PDO indicators, along with their targets and data sources. The project M&E design included a set of “service delivery monitoring indicators” which were meant to be tracked, through a Quality Management Information System (QMIS), and to be used to measure the correlation between institutional capacity and service delivery performance.

57. Data for the PDO, IR and DLIs were planned to be obtained directly by the project in coordination with the DOHFW or the Directorates. The DLI achieved by the project were verified by an Independent Verification Agency (IVA) for receiving the disbursement. An impact evaluation was designed to measure the impact of the pilot social accountability interventions on key maternal and child health and nutrition services and outcomes in two districts and was conducted by an external agency. No evaluation of the quality of care interventions at District Hospitals was built-into the design of the project and perhaps a missed opportunity for documenting effects of different processes that were introduced for strengthening service delivery and quality of care.

58. As described above, during the first restructuring of the project in June 2016, the task team changed the wording of three PDO indicators to reflect achievement of the outcome irrespective of the specific platform through which it would be achieved. Similarly, the PDO indicator for the indicator pertaining to accreditation of District Hospitals was revised to entry-level accreditation only rather than entry, progressive and full to reflect ground realities



of the current status of the hospitals. Given that it took two years longer to achieve even the revised targets, the original indicator and targets were overambitious.

M&E Implementation

59. Although the design has envisioned using data from existing government sources, the Results Framework relied on parallel information systems created by the project. For example, a set of indicators for measuring efficiency, quality and accountability of health service delivery for reporting on annual performance of hospitals was designed by the project and the DM&HS. Similarly, health facility report cards were designed to monitor the facility's progress on service delivery performance. Additionally, various Management Information System (MIS) software applications were designed to support the monitoring and reporting needs of project activities. These included, among others, applications for Health Facility Data Collection, QMIS, contract management for laundry, cleaning and gardening, bio-medical management system, financial management, drug procurement.

60. Apart from the bi-annual missions, the task team carried out additional supervision visits routinely, especially during the initial phase of the project. At the onset, these visits were to set up the various cells within the DM&HS which were critical to ensure implementation of the project activities. For example, the DRC performed various trainings and hand holding support for the implementation of activities pertaining to various MIS developed. These activities were aimed at providing support to ensure that the facilities, contractors and implementation staff understand these MIS and enter the data as per correct definitions. The task team also monitored the selection of the TAP which in turn helped in monitoring and facilitating implementation of project activities. TAP staff worked in tandem with the PSU to conduct routine monitoring, including conducting field visits for supportive supervision, to provide analytical feedback to the PSU and facilities.

M&E Utilization

61. The project indicators were reviewed by the task team on every implementation support mission and were utilized for resolving implementation bottlenecks and steering the project towards its goals. For example, the cleaning and gardening MIS was used to release performance-based payments to the contractors where performance was measured through patient satisfaction with cleanliness in the facilities. The QMIS was utilized as a routine management tool to monitor the progress of the District Hospitals towards quality assurance and identify gaps in service delivery.

62. Several of the parallel information systems designed by the project were extensively used by the DOHFW and subsequently transitioned to routine data management systems and used across the state. For example, the facility-based Health Report Card (HRC) was designed as a repository of information on availability of human resources, drugs, equipment and infrastructure, budget utilization, service utilization and was used by the PSU to assess efficiency, equity and accountability of service delivery in targeted facilities. Additionally, DOHFW utilized this information for routine monitoring of state-level programs. Given the ease of access to comprehensive information and its utility for routine monitoring, the HRC was integrated with other information portals to create a state specific health management information system called the UPHMIS which was scaled up to the entire state in 2016-17.

63. The results from the impact evaluation of the pilot social accountability intervention were disseminated widely and several agencies in other sectors have adopted a similar model of social accountability.

64. As envisaged in the PAD, data for service delivery monitoring indicators were collected, initially through a paper-based system which evolved into an electronic QMIS. However, quality of the QMIS was not validated and



remained a concern throughout implementation. Moreover, the project did not test the association between institutional performance as measured by the PDO indicators and the service delivery monitoring indicators.

Justification of Overall Rating of Quality of M&E

Rating: Substantial

65. The M&E design was well placed to assess the achievements of the project. The routine monitoring of project activities using newly created MIS provided necessary information for the task team, PSU and TAP to perform corrective actions towards achieving the PDOs, IR and DLIs. For example, the change in the wording of PDO #6 was based on the information acquired through the M&E design and extensive monitoring visits. The most notable achievement of the M&E design of the project has been the merging of HRC and PIS to comprehensive state-wide information systems.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

66. Review of project documentation indicates compliance with both environment and social safeguards policies of the Bank. The Environment and Social Action Plan was developed and implemented by the project to ensure improved access and uptake of preventive, curative and essential public health services. Overall safeguards were assessed to be Moderately Satisfactory in 12 and Satisfactory in four out of 16 Implementation Status and Results (ISR). Aside of complying with both national guidelines for management of bio-medical waste, the project also met Bank's policies for environment assessment (EA), which were assessed to be Moderately Satisfactory in 12 of 16 missions and the remaining four were Satisfactory. The 14 times EA was assessed to be Moderately Satisfactory was on account of delayed and slow implementation of the environment action plan and due to frequent change of leadership that had resulted in delay of decision making related to implementation of EA activities that were beyond the control of DOHFW. The project undertook interesting innovations for handling bio-medical waste management using technology for effective monitoring and creating an accountability system starting from source of collection (District Hospitals) to destination (Common Treatment Facility). The details for Social and Environment Safeguards are described below.

67. **Social Safeguards:** The project had no land acquisition or resettlement. Similarly, the scheduled tribe (ST) population in the state is very low (0.6 percent) and scattered. Hence, neither OP 4.12 nor OP 410 was triggered.

68. The social accountability (SA) interventions implemented were effective in improving service delivery at the community level as well as household health seeking behavior. Under this initiative, Village Health Sanitation and Nutrition Committees (VHSNCs) in 4238 Gram Panchayats (GPs) across 72 Blocks in 12 project districts were activated, with more than 90 percent of the VHSNCs remaining active through the project duration and organizing meetings on a regular basis. About 47,627 VHSNCs members, including front line workers associated with health and nutrition activities such as ASHA, ANM and Anganwadi, workers were trained. Similarly, 34,807 Village Health and Nutrition Days sessions were facilitated by the project team, ensuring adequate supply of drugs and coordination between frontline workers and community members. Further, 51 Jan-Samvads (public hearing on health services) for escalating service delivery issues and grievances to relevant authorities were organized at the block level in the project districts which led to significant progress on community participation and redressal of their grievances.

69. These interventions led to a surge in community-based inputs in planning and actions in service delivery, especially in the use of untied funds at the level. The randomized impact evaluation of the pilot SA interventions implemented across 120 villages in two districts suggested that they had a positive impact on nutritional outcomes



with a reduction in stunting (5.6 percentage points in less than 2 years and 2.6 percentage in 2-5 years age cohort) and underweight children (6.5 percentage in 2-5 years age group), improvement in full immunization (11.8 percentage), increased institutional delivery (5.6 percentage) and ANC visits (3.2 percentage).

70. **Environmental safeguards:** The project made significant progress in improving the biomedical waste management (BMWM). A performance-based contract with adequate use of information technology (IT) system was developed, piloted in one district and then replicated across the State. The android-based BMW management information system (BMWIS) included 129 District Hospitals and 140 Community Health Centers. More than 14,000 personnel at the health facility level, including data entry operators and pharmacists, have received training on data entry in the BMWIS. Additionally, division-level sensitization workshops on BMWM were conducted in 14 of the 18 divisions⁴⁹. The interactive IEC material, training modules and short films on BMWM developed under the project were distributed across the state.

71. **Financial management (FM):** The fund flow arrangements designed for the project functioned well. The project was adequately budgeted by the state government and funds were released in a timely manner by its Treasury. The PSU was headed by the Financial Controller from the state and supported by an experienced chartered accountant to oversee FM functions. The FM staff at District Hospitals were given additional training to strengthen accounting practices. Adequate documents, such as vouchers/bills, were maintained by the PSU and District Hospitals to support payments and these accounting records were provided to audit for verification.

72. The PSU was regular in the submission of Interim Financial Reports (IUFs) to the Bank for disbursement. It had an effective internal and external audit mechanism. The internal audit was conducted by a firm of chartered accountants and annual external audit was conducted by the Comptroller and Auditor General (CAG) of India. During the initial project years, there were minor delays in the submission of CAG audit reports but for subsequent years they were submitted on time. Additionally, the PSU took corrective actions to settle the audit findings promptly. The PSU submitted the State Audit Report issued by CAG on State Finances and Appropriation Accounts to confirm the Eligible Expenditure Program (EEP) for claiming DLI amounts.

73. **Procurement:** UPHSSP was a procurement-heavy project with almost 55 percent of the project's financing used for procurement activities. In addition, four percent of DLIs were linked to procurement related indicators. Procurement activities under the project were handled by the PSU and procurement agent (PA) due to weak and limited procurement capacity at the decentralized facility level, whereas contract management and monitoring were decentralized. Even though a Request for Proposal (RFP) for hiring a PA was issued before loan negotiations, there was a significant delay in the selection as the assignment had to be re-bid due to poor competition and decision on part of the government to revise the terms of reference. This contributed to a delayed start of procurement of Goods under the Project. However, it gained momentum after an initial delay and became an enabler for public health service delivery.

74. Some of the main achievements of procurement included innovative approach in engaging the private sector for providing high-end laboratory services in District Hospitals where part payment was linked to performance, completion of all procurement activities and handing over of service delivery contracts for continued service delivery to NHM. The project adopted technology for bringing in transparency and efficiency in its procurement process demonstrated by use of the NIC portal for eProcurement for national open competitive procurements in 2017, and adoption of Government e-Marketplace [GEM] for commonly used items.

⁴⁹ 75 districts in fall under 18 divisions in UP.



75. Procurement post reviews were carried out regularly and identified delayed release of payments and lax monitoring and control of contracts as internal controls issues. Improvement in existing procurement complaint handling system and weak record keeping were also identified as areas for strengthening. However, these initiatives were not achieved till the closure of the Project. Even though the Bank provided handholding support to the extent possible (for example in preparation of bidding documents for outsourced services), the government needed to invest more in building procurement capacity, such that the reforms introduced could be scaled-up beyond the project. The procurement assessment carried out throughout the project was moderately satisfactory in all 16 Implementation Status and Results Reports (ISRs).

76. The overall rating for Fiduciary is considered Moderately Satisfactory.

C. BANK PERFORMANCE

Quality at Entry

77. A Quality Enhancement Review was conducted during preparation of the project, which raised concerns related to implementing the project in the operating environment, which was subject to (i) high turnover of senior leadership, (ii) technical capacity risks including lack of specialist personnel to support sector reform and the timely implementation of project components; and (iii) weak public sector management systems for planning, monitoring, procurement, contract management and financial management. The project team accordingly calibrated the design by confining the project operations to selected districts and introduced mitigation measures to control and monitor governance and capacity issues using Governance and Accountability Action Plan (GAAP). Accordingly, all the risk ratings were upgraded with mitigation measures for forecasted risk at the preparation phase.

78. The 19.5 months period from concept review to first disbursement was reasonable for a complex state like Uttar Pradesh, especially in the environment which had recently witnessed one of the largest scams in the health sector in India. The Bank team performed well in delivering a project that was fully aligned with government and Bank priorities of working in low income states. The quality at entry therefore is considered Satisfactory.

Quality of Supervision

79. The project was supervised by a high-caliber, committed and proactive task team, with most of the members based in the country office and had excellent working relationships with the state government. There was strong continuity in the team membership, and people with additional specialized expertise were added to the team as needed. The mutual respect between the task team and government counterparts was reflected in the Aide Memoirs and feedback received by the state government.

80. As described above, the project got off to a slow start and was not able to disburse expeditiously for the first three years. To improve the pace of project implementation, the task team visited the state almost every month for the first 4.5 years, making nearly 54 visits over and above the regular six-monthly implementation support missions. Supervision was systematic and detailed with an intensive Mid-term Review. Moreover, the Bank team's support to procurement agents while they became familiar with Bank procurement requirements helped ensure that all procurement of goods, services, and works were completed smoothly without causing any delay. The team was diligent in monitoring safeguards, including recommending special assessment studies to provide additional



information, and ensured fiduciary compliance throughout the project, with concerted efforts in the final year to achieve almost full use of the funds.

81. The World Bank task team gave honest ratings throughout the project period but especially during the initial years of implementation.

82. Additionally, the task team applied for a DFID technical assistance grant and internal non-lending technical assistance, to support the client in designing health public-private partnerships (PPPs), conducted training programs for the staff working on PPPs and supported the design and implementation of social accountability interventions. With all these efforts, the project moved out of problem status from early 2016 and continued to be among the top five disbursing projects, with a satisfactory rating for PDO and IP maintained till end of the project.

Justification of Overall Rating of Bank Performance

Rating: Satisfactory

83. The project design was innovative and went beyond the traditional investment financing to support institutional reforms with a focus on systems strengthening and improvement of District Hospitals, coupled with results-based financing through DLIs. The project design led to strengthening of the capacity of the DM&HS to perform core public health functions, demonstrated an approach for improving service delivery in hospitals, and created evidence by piloting a high impact social accountability intervention. While several challenges were witnessed during implementation on both technical design and fiduciary systems, several mid-course corrections were made to address the needs of the state to improve health outcomes. The task team continued to maintain the focus on systems strengthening and improving quality of service delivery with a minimum number of restructuring. With a rating of satisfactory for preparation and supervision, overall Bank performance is rated Satisfactory.

D. RISK TO DEVELOPMENT OUTCOME

84. The risk to sustainability of development outcomes is negligible. In terms of financing, the project represented 1 percent of total state funding for health. Similarly, the project support to hospitals improvement was in tune of 1 to 2 percent against the total annual funding allocated to each hospital (details are provided in the efficiency section above).

85. The state government made considerable efforts towards ensuring sustainability of the project initiatives such as public private partnerships (PPPs) and human resource support in the hospitals by budgeting for continuation of project activities in the 2019-20 NHM Program Implementation Plan (PIP). Given the contribution of cells for systems strengthening, the Director General of the DM&HS, requested for provision of funds to continue three out of five cells namely DRC, SPC, and EM in the DM&HS while the technical expertise gained by the QA cell was transferred to NHM. At the time of project closing, NHM was likely to fund the cells going forward. To maintain the quality of service delivery, NHM made provisions to support the project budget associated with hiring additional human resources, contracts such as cleaning and gardening, laundry service and bio medical waste management going forward. However, the extent to which these budgetary allocations would remain fixed is yet to be seen.

86. The high impact social accountability intervention had drawn NHM to include the same as part of their current PIP. However, NHM was unsuccessful in attaining the necessary approvals in their Record of Proceedings (ROP) for an immediate transition of the intervention. Meanwhile, the model piloted by the project was replicated by other development partners in 8 districts of the state. All information education and communication (IEC)



materials, training manuals and best practices were transferred to NHM to ensure sustainability. As described above, SIRD adopted the training modules developed under this intervention for trainings in other sectors to strengthen social accountability.

87. The monitoring software applications and the project knowledge repository were absorbed by the DOHFW.

V. LESSONS AND RECOMMENDATIONS

88. The implementation of the project over seven years has offered tremendous learning opportunities for technical design and implementation of systems strengthening initiatives given the context of weak institutional capacity of the state.

89. **Project design:**

- **Disbursement-Linked Indicators (DLIs) approach under Results-Based Financing catalyzes effective policy dialogue and institutional development.** UPHSSP was the first project in the HNP Global Practice in the South-Asia region to have designed and implemented Disbursement-Linked Indicators. Given the context of UP, ranging from a large share of rural population with low income levels, poor health service delivery and utilization coupled with weak governance and institutions, the use of DLIs was an appropriate and relevant shift in financing mechanisms. Since funding was linked to pre-agreed results in the form of indicators it helped to gain more visibility with the senior management to ensure stronger focus on implementation support and achievement of results. It provided a more stable basis for disbursements as it was proportional to the progress achieved. Similarly, **linking DLIs to procurement reform** contributed to improvement in efficiency and bringing stewardship of public funds expended by health services.

- **Better synchronization of demand-side and supply-side initiatives could result in greater community ownership of quality of care interventions.** Although the project design included initiatives to strengthen social accountability at the community level and increasing citizens' demands for high quality service delivery, given the context of the UP's health system its primary approach focused on improving supply side factors. A more targeted approach to involve the community, especially those utilizing services of the district hospital, and measuring patient experiences could have further strengthened the bottom-up approach to quality enhancement.

90. **Institutional arrangements:**

- **Establishment of technical cells within the Directorate of Medical and Health Services enhanced its efficiency and quality.** The embedding of technical cells within different units of the DM&HS, strengthened it for carrying out evidence-based policy formulations and developing detailed procedural and protocol manuals, guidelines, and standards, resulting in stronger decision making. The creation and sustenance of such technical expertise within government departments could result in greater preparedness to tackle health systems challenges in the future.

- **Implementation of social accountability initiatives through institutionalized implementation channels involving community participation demonstrated a large impact on overall health and nutrition service delivery and outcomes.** A detailed impact evaluation supported evidence that social accountability interventions led to systematic improvements in health delivery and utilization for maternal and child health services, thereby improving key health and nutrition outcomes. The experiences of implementation of such initiatives also provide crucial lessons which can be adapted and applied in other settings in the country.



91. **Service delivery and quality of care:**

- **A focused decentralized approach towards quality improvement can achieve high quality service delivery in District Hospitals.** The introduction of key quality improvement processes in 51 hospitals helped significantly to improve quality of service delivery and patient satisfaction. While the project achieved external certification from NABH for 40 hospitals, it introduced several decentralized interventions across all targeted hospitals, such as tactical revamping of infrastructure, redesigning the hospital layout for better patient flow and equipment condemnation. Similarly, focused project inputs for enhancing the managerial capacity of the hospital by deployment of hospital managers, maintaining minimum standards, and securing statutory safety certifications resulted in better coordination, improved quality and accountability at the district level. This experience contributed to the task team's understanding about quality improvement, particularly the limits of accreditation, throughout implementation of the project and has re-shaped the thinking on how to improve quality of district hospitals in other states as well.
- **Performance-based contracts for clinical and non-clinical services can improve efficiency and accountability of service delivery:** The project demonstrated the effectiveness of the design and implementation of performance-based contracts for clinical support (high-end laboratory) and non-clinical (mechanized cleaning, gardening and laundry) services in targeted hospitals. The design and monitoring mechanisms for these contracts have been replicated in the remaining hospitals by DOHFW. While further collaboration with the private sector, particularly through IFC, could not be achieved the project offers key insights gained from operationalizing performance-based contracts within PPP modalities.

92. **Fiduciary:**

- **Preparation of a thorough and realistic Project Procurement Strategy** could have benefitted the project in deciding an appropriate market approach for geographically dispersed service delivery. For example, procurement of non-consultancy services such as Cleaning and Gardening Services in Government District Hospitals was initiated as International Competitive Bidding, whereas National Competitive Bidding was more appropriate for nature of contracts, and decentralized, citizen-centric service delivery.
- **Upfront market and stakeholder engagement while designing the terms and conditions of Performance-Based Contracts** may have resulted in mitigating the risk of delay in incentive-based payment linked to performance of pathology services by laboratories and may have resulted in better scheduling of contracts with dependencies, such as External Quality Assurance System (EQAS) contracts (EQA is annual, cyclical program) and contracts for provision of pathology services.
- **Introducing procurement audits as part of internal audits** and procurement capacity building led to enhancing GoUP's institutional capability and accountability.

93. **Sustainability:**

- **Maintaining continuity in project leadership and realistic implementation ratings is critical for achieving development objectives.** A timely commitment by the state government, during project re-structuring, to ensure stable leadership improved disbursements and renewed the focus on PDO achievement. Prior to this mitigating effort, the project implementation progressed slowly resulting in low disbursement rates and unsatisfactory ratings. Realistic implementation ratings in the initial phase of the project also allowed the task team in course corrections.



- **Developing a roadmap for transition of project-led activities given the fragmented nature of governance of the health system.** While GoUP has made considerable efforts for absorbing several project-initiated activities and human resources within the regular operating framework of the government, many processes were either not transitioned or were yet to be at the time of project completion. Moreover, many that were absorbed were modified in design or numbers. Thus, developing a clear roadmap for transition of activities to ensure sustainability needs to be prioritized during implementation itself.

94. **Overall, UPHSSP can be considered a pioneer project** introducing a pivotal shift in the Bank's engagement with the health sector in India, leading the way for improving health service delivery via strengthening health systems, improving institutional capacity and state capability and accountability. Several of the project interventions for improving quality of care at District Hospitals have provided critical lessons for not just UP, but other states as well as Bank's dialogue on quality of care in India. However, going forward, crucial lessons from design and implementation challenges should be incorporated for projects in both UP and other states, namely balancing demand and supply side approaches for improving service delivery, adopting strategies for enhancing quality of care strategies beyond accreditation, and planning for a transition of project-led interventions at the onset of the project rather than towards the end.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Efficiency

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PDO 1: Percentage of hospitals under the accreditation program that annually produce data and monitor: service productivity, efficiency, quality, patient satisfaction & accountability.	Percentage	0.00 31-Mar-2012	90.00 31-Mar-2017	90.00 30-Mar-2019	128.00 31-Mar-2019

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PDO 5: Number of facilities using performance based contracts to improve the quality of service delivery	Number	0.00 31-Mar-2012	50.00 31-Mar-2017	50.00 30-Mar-2019	52.00 19-Mar-2019



(quality and efficiency).

Comments (achievements against targets):

Objective/Outcome: Accountability

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PDO 2: Percentage of districts using an electronic system for paying salaries of health workers (accountability and efficiency)	Percentage	0.00	75.00	75.00	100.00
		31-Mar-2012	31-Mar-2017	30-Mar-2019	31-Mar-2019

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PDO 3: Percentage of districts with completed and published data on national health programs indicators and facility-level performance (efficiency and accountability)	Percentage	0.00	90.00	90.00	100.00
		31-Mar-2012	31-Mar-2017	30-Mar-2019	31-Mar-2019



Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PDO 4: Percentage of Primary Health Centers participating in the social accountability pilots for which a service delivery assessment has been completed & at least 1 corrective action by govt.	Percentage	0.00 31-Mar-2012	80.00 31-Mar-2017	80.00 30-Mar-2019	100.00 31-Mar-2019

Comments (achievements against targets):

Objective/Outcome: Quality

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PDO 6: Number of public facilities with quality certification. (Quality)	Number	0.00 31-Mar-2012	36.00 31-Mar-2017	36.00 30-Mar-2019	40.00 19-Mar-2019

Comments (achievements against targets):

**A.2 Intermediate Results Indicators****Component:** Component 1. Strengthening the Department of Health's management and accountability systems

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
1R1: Number of agreed research studies completed, and results disseminated to key stakeholders.	Number	0.00 31-Mar-2012	4.00 31-Mar-2017	4.00 30-Mar-2019	15.00 31-Mar-2019
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IR2: Annual validation of the DRC report for health programs completed.	Text	No 31-Mar-2012	Yes 31-Mar-2017	Yes 30-Mar-2019	Yes 31-Mar-2019
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IR3: Percentage of districts	Percentage	0.00	90.00	90.00	100.00



that completed training of Financial Management staff.		31-Mar-2012	31-Mar-2017	30-Mar-2019	31-Mar-2019
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IR4: Percentage of districts that completed procurement and SCM training of staff	Percentage	0.00 31-Mar-2012	90.00 31-Mar-2017	90.00 30-Mar-2019	100.00 31-Mar-2019
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IR.5: Pilots for social accountability and 1 performance-based incentives designed, implemented, and evaluated.	Text	Nil 31-Mar-2012	Independent assessment report completed and disseminated 31-Mar-2017	Independent assessment report completed and disseminated 30-Mar-2019	Independent assessment report completed and disseminated 30-Mar-2019
Comments (achievements against targets):					



Component: Component 2. Improve the Department of Health’s capacity to perform its quality assurance role and more effectively engage the private sector

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IR6: Environment Management: Percentage of hospitals that are connected with CTF services	Percentage	0.00	85.00	85.00	128.00
		31-Mar-2012	31-Mar-2017	30-Mar-2019	31-Mar-2019

Comments (achievements against targets):

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IR7: Percentage of hospitals that prepared Action Plan based on facility survey and agreed with GOUP.	Percentage	0.00	100.00	100.00	100.00
		31-Mar-2012	31-Mar-2017	30-Mar-2019	31-Mar-2019

Comments (achievements against targets):



B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1: To improve the efficiency of health service delivery in Uttar Pradesh.	
Outcome Indicators	<ol style="list-style-type: none"> 1. Percentage of hospitals under the accreditation program that annually produce data and monitor: service productivity, efficiency, quality, patient satisfaction, and accountability. 2. Percentage of districts using the personnel information system for paying salaries of health workers. 3. Percentage of districts with completed and published facility-based report cards detailing national health programs indicators and facility-level performance data. 4. Number of facilities using performance-based contracts⁵⁰ for non-clinical services (outsourcing to the private sector for housekeeping and laboratory services).
Intermediate Results Indicators	<ol style="list-style-type: none"> 1. Number of agreed research studies completed, and results disseminated to key stakeholders. 2. Percentage of districts that completed training of Financial Management staff. 3. Percentage of districts that completed procurement and SCM training of staff.
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<ol style="list-style-type: none"> 1. 51 hospitals (against a target of 36) were annually producing data and monitoring key performance indicators for measuring production of services (number of inpatients, surgeries), efficiency (average length of stay, bed occupancy rate), quality (surgical site infection, needle stick injuries), equity (proportion of BPL patients receiving services), accountability (number of complaints and RTI requests) and patient satisfaction.

⁵⁰ Performance based contract means that a portion of payments are linked to quantifiable performance indicators.



	<ol style="list-style-type: none"> 2. Salaries of all health workers in all 75 districts are paid using an electronic system, called the Personnel Information System, from the Treasury Department. 3. All districts are using the Uttar Pradesh Health Management Information System (UPHMIS) to report on national health program indicators by district and facility-level. 4. All targeted health facilities are using performance-based contracts for the following services: cleaning and gardening services (51 hospitals), high-end laboratory services (52 hospitals), and mechanized laundry services (50 hospitals).
<p>Objective/Outcome 2: To improve the quality of health service delivery in Uttar Pradesh.</p>	
<p>Outcome Indicators</p>	<ol style="list-style-type: none"> 1. Percentage of hospitals under the accreditation program that annually produce data and monitor: service productivity, efficiency, quality, patient satisfaction, and accountability. 2. Number of facilities using performance-based contracts for non-clinical services (outsourcing to the private sector for housekeeping and laboratory services). 3. Percentage of hospitals under the accreditation program that have been certified for entry level pre-accreditation (revised indicator).
<p>Intermediate Results Indicators</p>	<ol style="list-style-type: none"> 1. Number of agreed research studies completed and results disseminated to key. 2. Percentage of hospitals that are (i) connected with Common Treatment Facility services; and (ii) Percentage of hospitals in the accreditation program having Health Center Waste Management (HCWM) monitoring mechanisms and staff trained in HCWM. 3. Percentage of hospitals that prepared Action Plan based on facility survey and agreed with GOUP.
<p>Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)</p>	<ol style="list-style-type: none"> 1. 51 hospitals (against a target of 36) were annually producing data and monitoring key performance indicators for measuring production of services



	<p>(number of inpatients, surgeries), efficiency (average length of stay, bed occupancy rate), quality (surgical site infection, needle stick injuries), equity (proportion of BPL patients receiving services), accountability (number of complaints and RTI requests) and patient satisfaction.</p> <ol style="list-style-type: none"> 2. All targeted health facilities are using performance-based contracts for the following services: cleaning and gardening services (51 hospitals), high-end laboratory services (52 hospitals), and mechanized laundry services (50 hospitals). 3. 40 District Hospitals (against an end-of-project target of 36) received certification for entry level pre-accreditation from NABH.
<p>Objective/Outcome 3: To improve the accountability of health service delivery in Uttar Pradesh</p>	
<p>Outcome Indicators</p>	<ol style="list-style-type: none"> 1. Percentage of hospitals under the accreditation program that annually produce data and monitor: service productivity, efficiency, quality, patient satisfaction, and accountability. 2. Percentage of districts using the personnel information system for paying salaries of health workers. 3. Percentage of districts with completed and published facility-based report cards detailing national health programs indicators and facility-level performance data. 4. Percentage of Primary Health Centers participating in the social accountability pilots for which a service delivery assessment has been completed and at least one corrective action by government is verified by the community.
<p>Intermediate Results Indicators</p>	<ol style="list-style-type: none"> 1. Number of agreed research studies completed and results disseminated to key. 2. Annual validation of the DRC report for health programs completed. 3. Pilots for social accountability and performance-based incentives designed, implemented, and evaluated.



Key Outputs by Component
(linked to the achievement of the Objective/Outcome 2)

1. 51 hospitals (against a target of 36) were annually producing data and monitoring key performance indicators for measuring production of services (number of inpatients, surgeries), efficiency (average length of stay, bed occupancy rate), quality (surgical site infection, needle stick injuries), equity (proportion of BPL patients receiving services), accountability (number of complaints and RTI requests) and patient satisfaction.
2. Salaries of all health workers in all 75 districts are paid using an electronic system, called the Personnel Information System, from the Treasury Department.
3. All districts are using the Uttar Pradesh Health Management Information System (UPHMIS) to report on national health program indicators by district and facility-level.
4. All targeted 72 Block Primary Health Centers were participating in the social accountability pilot and a service delivery assessment had been completed in each of these with at least one correction action by the government was verified by the community.
5. The pilot intervention achieved the formation of 4238 Village Health, Sanitation and Nutrition Committees (VHSNCs), activation of 72 block-level advisory committees, improved coordination between the auxiliary nurse midwife (ANM), ASHA and Anganwadi worker, and active participation of VHSNC members in supervision.
6. Findings from the impact evaluation study in 2 out of 12 districts concluded an increase in service utilization, especially of maternal and child health services, and better outcomes for stunting and underweight among children less than two years of age.



ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Vikram Sundara Rajan	Task Team Leader(s)
Atin Kumar Rastogi	Procurement Specialist(s)
Tanuj Mathur	Financial Management Specialist
Ruma Tavorath	Social Specialist
Chandrika Sunethra Samara Samarakoon Mudiyansele	Team Member
Shafali Rajora	Team Member
Amith Nagaraj Bathula	Team Member
Supervision/ICR	
Amith Nagaraj Bathula	Task Team Leader(s)
Geeta Shivdasani	Procurement Specialist(s)
Arvind Prasad Mantha	Financial Management Specialist
Martha P. Vargas	Team Member
Sangeeta Kumari	Social Specialist
Tanusree Talukdar	Team Member
Anupam Joshi	Environmental Specialist
Jorge A. Coarasa Bustamante	Team Member
Aarushi Bhatnagar	Team Member
Harminder Singh	Team Member



B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
Preparation		
FY07	37.241	305,226.11
FY08	42.405	447,521.78
FY09	14.393	96,750.20
FY10	2.500	16,075.23
FY11	49.991	155,847.07
FY12	49.521	160,036.40
FY13	0	0.00
Total	196.05	1,181,456.79
Supervision/ICR		
FY08	0	3,730.91
FY09	0	0.00
FY12	0	29,375.05
FY13	54.338	203,673.95
FY14	34.847	114,230.97
FY15	38.837	139,586.98
FY16	37.919	147,848.40
FY17	32.369	112,304.66
FY18	27.506	114,867.71
FY19	15.981	50,774.95
FY20	22.025	71,613.05
Total	263.82	988,006.63



ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US\$M)	Actual at Project Closing (US\$M)	Percentage of Approval
Component 1. Strengthening the Department of Health's management and accountability systems	51.00	51.00	100%
Component 2. Improve the Department of Health's capacity to perform its quality assurance role and more effectively engage the private sector	101.00	101.00	100%
Total	152.00	152.00	100%



ANNEX 4. EFFICIENCY ANALYSIS

The project performed well in terms of allocative and technical efficiency. As discussed earlier in this document (Ref Section IV A), the focus of the project was on strengthening overall organizational performance of UP's health system. In the absence of a recognized composite indicator to measure that, key "marker" indicators were used to measure achievement of the PDO. As a result, it is not possible to conclusively attribute improvements in organizational performance to project efforts. However, the project's spending of US\$132 Million over seven years was small compared to the state's US\$2 Billion annual budget. Even if 2 percent of state annual budgets are better utilized over the next 10 years due to systems strengthening, the project represents solid value for money with a Net Present Value (NPV) of \$94 Million or an Internal Rate of Return (IRR) of 30 percent⁵¹.

Allocative Efficiency (Are we spending on the right things which are most likely to achieve desired outcomes?)

Factors increasing allocative efficiency

- Successful systems-level/governance interventions inherently provide higher and longer-term value for money vis a vis piecemeal and verticalized service-delivery interventions: Global literature acknowledges that weak health systems in low- and middle-income countries prevent the optimal deployment of life-saving technical service delivery interventions⁵². In the context of non-achievement of several Millennium Development Goals, it has become clear that health systems are often the binding constraints⁵³. Rather than addressing individual symptoms of a poorly functioning health system (e.g. vacancies and absenteeism, low utilization of funds, stock-outs), the project addressed their root causes through systemic interventions⁵⁴. The systems approach of the project addressed known issues and also tackled ones that emerged along the way, as evidenced by the following examples (non-exhaustive)
 - Building the DM&HS' strategic planning capabilities helped in creating a coherent long-term vision articulated in a first-ever State Health Policy. Further, the Strategic Planning cell (SPC), which was funded to the tune of \$2.5 Million, helped create four policy documents, eight guidelines, five manuals, and conducted two research studies. This has led to a more deliberative approach to budget planning (vs. passively adding a fixed percentage to budgets every year). Many of the cell's initiatives were in response to state requirements as they emerged and could not have been known a priori. Serious public health outbreaks (Dengue, JE-AES) were monitored through GIS-enabled systems supported by the SPC, which led to evidence-based decision making.
 - The operationalization of an electronic HR information system addressed multiple symptoms such as low accountability of personnel, irrational transfer policies, and deployment. This intervention brought transparency into payroll which represents 65 percent of DM&HS' expenditure⁵⁵. This work facilitated the introduction of a more comprehensive HR information system, the Manav Sampada.
 - The Data Resource Centre (DRC) with a funding of \$4.7 Million built facility report cards that provided visibility into specific gaps that the administration could then address. New problems were solved by

⁵¹ Assumptions: Discount rate: 8.3% at project start, Gol 10y bond yield in 2012, 2% of total budgets which would have otherwise been waste made effective by project starting 2017 and continuing for 10 years

⁵² Lieberman, A., Challenges for maternal health efforts. *The Lancet*. 388(10050): p. 1146-1147.

⁵³ Tamara Hafner, Jeremy Shiffman, The emergence of global attention to health systems strengthening, *Health Policy and Planning*, Volume 28, Issue 1, January 2013, Pages 41–50

⁵⁴ The PAD also noted "With the easing of the funding constraint, other constraints have become binding. The government has taken note of these, and is now according high priority to resolving these constraints...reflected in the state not able to fully absorb available funds"

⁵⁵ FY15 data, "Tracking Financial Resources for Primary Health Care in Uttar Pradesh, India", Peter Berman et al. 2017



building sufficient analytical capabilities into the system. For instance, the DRC developed a new method for posting over 1,600 newly recruited staff to various locations by taking their preferences into consideration. This resulted in a faster deployment of the much-needed personnel whose salaries were already being paid each month.

- The basket of systems-level interventions was generally well-chosen and pragmatic: Component 1 addressed fundamental governance capabilities such as Strategic Planning, Use of Data, Financial Management, HR management, Supply Chain Management and Procurement. Each of these has a clear bearing on the efficiency of the health system far beyond the project period. The Social Accountability pilot explored a powerful bottom-up lever to hold providers accountable.

Component 2 addressed Quality Assurance and stewardship of the private sector. A recent Lancet series on Quality of Care quantified the tremendous costs that low quality of delivery imposes on health systems⁵⁶. External certification as a focused strategy to improve quality in public hospitals was appropriate given the overall low accountability environment. Further, the project has made the government a savvier customer of private services, especially through the use of performance-based contracts. Both “hotelings” type functions (gardening, housekeeping, laundry⁵⁷) and selected clinical functions (high-end diagnostics that were de facto absent previously) were outsourced to the private sector⁵⁸. Significant monitoring and contract management capabilities have been built within the government.

The project design was also pragmatic in leaving out interventions which had low likelihoods of success. For instance, it did not attempt to outsource entire clinical departments. Similarly, attempts at regulation of quality in the large but highly fragmented private sector were wisely left out of the project scope.

- The focus of the project on building institutional capacity of the DM&HS and on District Hospitals was highly complementary to efforts of others, notably, the NHM: At the time of project design, the NHM had begun to infuse significant additional human, financial, and technical resources into the system. Most of these resources were directed towards primary (SC, PHC, CHC) care⁵⁹. The NHM also provided demand-side stimulation by introducing financial incentives to families⁶⁰ for service utilization and by enhancing outreach through a new front-line cadre, ASHA, among others. At the tertiary level, the Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) was focusing on Medical Colleges. By choosing to focus on District Hospitals (the weak secondary layer where funding had declined from 21percent of total budget in FY10 to 18percent in FY15⁶¹), the project worked in a highly complementary manner to NHM. Some of the additional demand generated by NHM (e.g. inst. delivery rates zoomed from 21percent in FY06 to 68percent to FY16⁶²) may have been served (at higher quality) due to more effective District Hospitals⁶³. Further, the NHM, as a focused mission has built an independent (parallel) system at the block, district, and state levels. While they have contributed immensely to the health apparatus, there were no mechanisms to strengthen the institutional capacity of the DM&HS⁶⁴. The project’s support to the DM&HS (which spends the overwhelming majority of health funds in the state) was therefore also complementary.

⁵⁶ Kruk, Margaret E et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. The Lancet Global Health, Volume 6, Issue 11, e1196 - e125

⁵⁷ Although included in hoteling type function here, cleaning has a major role in reducing hospital infections.

⁵⁸ A 2002 review of Health Systems Projects in India had recommended that projects “deepen public-private partnerships (PPP) by going beyond contracting out “hotelings” functions which do not impact clinical care”

⁵⁹ The NHM is mandated to work at the DH level also, but has only recently started to focus on these hospitals.

⁶⁰ Demand Incentives were mostly focused on Reproductive, Maternal and Child Health.

⁶¹ Table 12 in “Tracking Financial Resources for Primary Health Care in Uttar Pradesh, India “ by Peter Berman et al. 2017 (excludes NHM through Society Route)

⁶² NFHS-3 and NFHS-4

⁶³ In the absence of the formal evaluation, it is not possible to say this with certainty.

⁶⁴ The UP-TSU, funded by BMGF, provided technical support to the NHM.



- External certification efforts have helped UP leapfrog the “business as usual” path in terms of efficiency and quality:
At completion, 40 of UP’s 160 District Hospitals were NABH entry-level certified (another 11 in process) putting the state ahead of developed states like Tamil Nadu. For a one-time accreditation related cost of \$1.0 Million per hospital (vs. annual operating cost of \$1.5 Million per DH)⁶⁵, a multiyear effect on efficiency and quality was likely achieved. As shown in Table 1, average monthly in-patients⁶⁶ increased by 43 percent between FY 14 to FY 19. The average number of major and minor surgeries per month increased by 24 percent and 6 percent.

Table 1: Changes in average monthly metrics of project hospitals (average across hospitals)⁶⁷

Average per month (n=30 hospitals)	FY14	FY15	FY18	FY19	Change FY19 vs FY14
In-patient admissions	1,648	1,667	2,036	2,353	43 percent
Major Surgeries	204	205	243	252	24 percent
Minor Surgeries	189	196	196	200	6 percent

Source: Project hospital indicator data

Further, according to a patient satisfaction survey conducted in 23 project hospitals in 2019, 94 percent of IPD and 93percent of OPD patients had waiting times <30 minutes, and 99 percent of the patients perceived doctor behavior as good or fair, indicating a high perceived quality of service⁶⁸. 90 percent of patients who had visited previously felt that the hospitals were cleaner than before⁶⁹. The higher use of in-hospital diagnostics for over 1.7 Million patients likely led to better, more appropriate treatment choice and fewer abandoned treatments (due to the cost deterrent of getting diagnostics in the private sector)⁷⁰. The highest volume tests were T-3, T-4 and TSH, commonly used for detecting complications in pregnancy, indicating a high use of the service by women.

- Strengthening District Hospitals and high-end pathology services may have reduced Out of Pocket Spending (OOPS) for families: Lowered OOPS is considered a hallmark of good health systems – in India, OOPS

⁶⁵ Accreditation costs = (Costs on Accreditation/addl HR)/ 51 project hospitals, annual costs based on project team estimates

⁶⁶ Of 51 project hospitals, baseline data available for 30 hospitals only. DH (W) Allahabad, DH – Etawah, Mahatma Jyotibaphule Combined DH - Ambedkar Nagar, Pt. DeenDayal Upadhyay Joint Hospital – Aligarh, UHM Hospital – Kanpur, TB Sapru DH Allahabad, DH Moradabad, DH Hamirpur, DH Raebarelli, Shri Ram Hospital Ayodhya -Faizabad, DH Kannauj, Umashankar Dixit DH (W) – Unnao, DH (M) -Bahraich, DH Firozabad, DH (W) Muzaffarnagar, DH Saharanpur, DH Meerut, DH (M) Faizabad, DH (W) Hardoi, Dr. S.P.M (Civil) Hospital Lucknow, DH (W) Agra, DH Agra, DH Jaunpur, DH (W) Azamgarh, DH (M) Fatehpur, Maharana Pratap Joint Hospital Bareilly, DH (W) Saharanpur, DH Khushinagar, Pt. Dindayal Upadhya Hospital Varanasi, DH (W) Meerut

⁶⁷ Source: Project hospital indicator data

⁶⁸ Analysis of the Patient Satisfaction Survey Conducted in the District Government Hospitals, Feb 2019 by M&E team (N= 325, 23 District Hospitals)

⁶⁹ Patient’s Perception of Cleaning & Hygiene in District Hospitals, MLE Team

⁷⁰ The PAD noted “Diagnostics...account for 14% and 15.4% of out-of-pocket (OOP) expenditure in public facilities in rural and urban areas of UP respectively (NHA 2004-05). Lack of availability of and accessibility to laboratory services may be one of the reasons behind substantially low hospitalization rates observed in UP in comparison to national average. For every 1000 population only 15 persons got hospitalized cases in UP as compared to the national average of 25.”



constitutes 65percent of all spending⁷¹. At least three mechanisms exist by which the project may have reduced OOPS:

- a) Crowding out private hospitals for some hospitalizations due to improved perceived quality at District Hospitals (evidence of higher utilization above, avg. hospitalization expense in private hospital in UP is 4.2x higher⁷²). This would have particularly helped the poorest - utilization of services at public hospitals is much higher among the bottom two quintiles⁷³
 - b) Reduced spending on diagnostic tests that would have been otherwise been performed in the private sector (even if half of the total ~5 Million tests⁷⁴ conducted by the project were otherwise done in the private sector, at an average test cost of Rs. 532⁷⁵ (\$8), it would have resulted in OOPS savings of \$20 Million). Diagnostics are estimated to constitute 14-16percent of all OOPS⁷⁶.
 - c) Reduced treatment costs for those who would otherwise not get prescribed tests due to financial constraints and therefore delay treatment (according to a survey in project hospitals, 21percent of patients would not have got the prescribed test done if it weren't available for free at the hospital⁷⁷).
- The Social Accountability (SA) pilot has built a definitive case for state investments to operationalize village level accountability mechanisms: Through its SA pilot in 12 districts, the project revitalized 4,238 Village Health, Sanitation, and Nutrition Committees (VHSNC) in UP. VHSNCs have been part of the NHM's program since 2005, but have been mostly defunct. According a baseline survey in April 2015, only 8 percent of surveyed households were aware of a VHSNC existing in their village. The project operationalized 80percent of VHSNCs in the 12 intervention districts and issues raised were addressed at the village level or escalated through a platform called Jan Samvad⁷⁸. Duke University's cluster randomized control trial of the SA pilot in 2 districts showed strong increases in nutritional outcomes in children (reduced stunting, wasting in children under 2 by 11-13percent over control), early treatment of childhood diarrhea (+14percent likelihood of treatment on day 1 over control), vaccination rates (+ 12percent over control), institutional delivery (+6percent over control). Remarkably, this intervention was achieved at a shoestring budget of ~Rs. 9,000 per village per month (direct costs).⁷⁹

Factors potentially decreasing allocative efficiency

- Systems around "Demand" were not adequately focused upon: Barring the Social Accountability pilot, the project had a low emphasis on the stimulating demand. Enhancing systems around Demand⁸⁰ (NHM's demand focus is on RMNCH, National programs focus on respective programs) could have increased

⁷¹ National Health Accounts, 2014-15

⁷² NSSO, 75th Round Survey, 2017-18, Data for Uttar Pradesh

⁷³ Ministry of Statistics and Programme Implementation. 2016. "National Sample Statics 71st Round. Health in India." New Delhi.

⁷⁴ The PAD notes "A large facility survey covering 78 district hospitals and 145 CHCs in UP reported that only 9 percent of district hospitals and 2.8 percent of CHCs had the facility to conduct basic blood and urine tests", USAID Report on Rapid Assessment of the Functionality of FRUs and 24x7 PHCs in Uttar Pradesh prepared by Constella Futures, New Delhi May 2008.

⁷⁵ Test in public facility costs Rs. 266 – conservatively taking 2x price in private sector – A study on estimating out of pocket payments in accessing pathological services in Uttar Pradesh, M&E Team, 2016

⁷⁶ NSSO, 75th Round Survey, 2017-18, Data for Uttar Pradesh

⁷⁷ A study on estimating out of pocket payments in accessing pathological services in Uttar Pradesh, M&E Team, 2016

⁷⁸ A platform where the community could air their grievances to block or district administration

⁷⁹ Mohanan et al, Mobilizing Communities for a Healthier Future: Impact Evaluation of Social Accountability Interventions in Uttar Pradesh, India, 2018

⁸⁰ The Directorate's IEC cell was revived based on project needs, but activities appear modest and ad-hoc.



appropriate service utilization and the uptake of promotive health behavior. This would have increased the overall efficiency of the system given the large fixed-cost base of the DM&HS⁸¹.

- Non-addressal of referral chain issues may have brought unwanted traffic to District Hospitals and reduced efficiency: A study by the project showed that only 13 percent IPD patients and 4 percent OPD patients in District Hospitals were referred from any medical facility⁸². The remaining came directly to District Hospitals. This implies that resources meant for secondary facilities were likely used for unsophisticated treatments.
- The Social Accountability work was somewhat disconnected from other project activities: Although many of the interventions were at the secondary hospital level, the Social Accountability level was at the primary level. A more complementary or an additional social accountability intervention tied to the project's work at hospitals might have provided a fuller picture of patient experience at those facilities. It is unclear whether and how patient feedback from the patient satisfaction studies was incorporated into the project.

Technical Efficiency (*Are we keeping the cost per unit outcome/ rate at which inputs are translated into outputs/outcomes as low as possible? Are we doing the things the right way?*)

Factors potentially increasing technical efficiency

- The project enabled speedier procurement in a difficult environment through the use of a procurement agent and through capacity building: Low / delayed procurement is one of the biggest reasons for budget underutilization leading to inefficient service delivery⁸³. A large-scale procurement scam in the NHM surfaced at the time of project preparation⁸⁴. In the lead up to the project, the Bank also tightened procurement processes, following an adverse DIR report for India operations. Given the context, it was impressive that the project, through its procurement agents and capacity building of the CMSD, was able to procure 55 different types of medical equipment. This procurement was critical for their operational efficiency as well as NABH certification of 40+ hospitals. Further, the project improved procurement times significantly. As per an assessment team from IIM Kashipur, there was a reduction in procurement cycle time for a) equipment by 61percent under quantity contracts and 31percent under rate contracts and for b) drugs by 82percent (from 930 days to 162 days) compared to baseline⁸⁵
- The focus on a limited number of high-traffic hospitals to make them fully functional improved efficiency at individual hospital levels⁸⁶: The project resisted the temptation of spreading the funds too thin and chose to focus on 51 Hospitals. By hiring 268 doctors & specialists, 1,700 nursing staff and 1,604 paramedical staff contractual staff to fill positions, acquiring equipment, making other services such as high-end diagnostics available, the project increased the functionality of each hospital. Money spent on dedicated hospital administrators provided tremendous value, as this cadre was responsible for holding together major initiatives. This resulted in tangible improvements in efficiency of operations as shown above in Table 4.1.

⁸¹ The Strategic Planning Cell did attempt to revamp the IEC cell by creating an action plan

⁸² Analysis of the Patient Satisfaction Survey Conducted in the District Government Hospitals, Feb 2019 by M&E team of the Technical Assistance Provider and Hospital Managers (N= 325, 23 District Hospitals)

⁸³ Peter Berman et al. 2017, "Tracking Financial Resources for Primary Health Care in Uttar Pradesh, India "

⁸⁴ Leading national newspapers had reported that over \$1.2 Billion were misappropriated, and several officials were murdered in the attempt to cover up the scam.

⁸⁵ This data should be considered directionally only – the baseline contained only one sample.

⁸⁶ 51 hospitals, which represented all 18 Commissionerates of the State were covered.



- Several instances illustrate that the project was on the lookout for value for money and implementational efficiency: Illustrations:
 - The choice of a government organization, State Institute of Rural Development (SIRD) for implementation of the Social Accountability Pilot provided value for money in addition to improved chances of sustainability.
 - The project's M&E/SP teams carried multiple surveys/visits to evaluate if contracts to service providers for cleaning and gardening, laundry services and high-end pathology services should be renewed. This active contract management likely improved the service quality. For instance, a prescription audit study to understand issues in high-end testing resulted in improved doctor behavior between the 2018 and 2019 rounds.
 - The use of an HR agency to hire medical and para-medical staff reflected an understanding of the challenges in government hiring. The additional spend on agency costs were more than compensated by ensuring that hospitals were adequately staffed within a reasonable time. The counterfactual is all too apparent looking at the high level of government vacancies across departments.

Factors potentially decreasing technical efficiency

- A longer project timeline to achieve the original goals⁸⁷ reduced efficiency: All revised PDO indicators were achieved, but in a longer time frame (7.5 years vs the original 5 years) than anticipated. Given the opportunity cost of capital and the additional interest paid by the client, the efficiency of the project was reduced by the lost time between 2012 and 2014-15. As described elsewhere, frequent turnover of project management caused the project to have a very slow start.
- Piecemeal approaches to IT deployment reduced efficiency: As many as 15 pieces of software were developed by DRC⁸⁸, of which several of which fell into disuse. A lack of a coherent IT strategy is apparent and reduced efficiency.

⁸⁷ In the case of Accreditation of hospitals, the original targets were revised down due to a more realistic assessment.

⁸⁸ "Some of these software applications include: (i) Patients' Diagnostics Information System (PDIS) (ii) Quality Management Information System (QMIS) (iii) Laundry Management Information System (LMIS) (iv) Financial Management Information System (FMIS) (v) Cleaning & Gardening Management Information System (CGMIS) (vi) Revamping of hospitals software (vii) Integrated Biomedical Waste Management Information System (BMWMIS). For applications like PDIS, CGMIS, BMWMIS, LMIS, a separate online web portal was developed."



ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

The Implementing Agency, the Department of Health and Family Welfare, Government of Uttar Pradesh reviewed the Implementation Completion and Results Report and concurred with the findings.



ANNEX 6. SUPPORTING DOCUMENTS (IF ANY)