A. Description of the Monitoring and Evaluation System

1. The Government of India’s National Health Policy (2017) demonstrates its commitment toward the health-related Sustainable Development Goal 3 by emphasizing the importance of and need for universal health coverage. It recommends comprehensive primary health care (CPHC) for progress toward universal health coverage. The policy also recommends establishing health and wellness centers (HWCs) as platforms for the delivery of CPHC.1

2. In September 2018, the government launched the flagship Ayushman Bharat scheme, encompassing two major program components: (i) the Ayushman Bharat Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY), a social health insurance scheme for the poor; and (ii) the creation of 150,000 HWCs to deliver CPHC in rural and urban areas.2 The key element of the Ayushman Bharat Health and Wellness Centres (AB-HWC) model transforms the current health system from a curative to an individual demand-responsive and disease-preventive system. The AB-HWC expand the primary health care from the earlier focus on reproductive and child health services to a multifaceted approach providing CPHC—including expanded service delivery; the continuum and quality of care; beneficiary referral, including follow-up; and beneficiary feedback, using tools for tracking and feedback processes.

3. In May 2020, as a response to the coronavirus disease (COVID-19) pandemic, the government announced the Pradhan Mantri Atmanirbhar Swasth Bharat Yojana (PM-ASBY), to prepare health systems and institutions to respond effectively to the current and future pandemics and disasters. Taking learnings from the disproportionate concentration of COVID-19 cases in urban areas, the PM-ASBY envisages a new urban primary health care paradigm, aiming to establish (i) 10,380 HWCs in urban areas, in collaboration with urban local bodies; (ii) a hub-and-spoke tele-consultation model for patients at the HWCs; and (iii) specialist services through outpatient department polyclinics.

4. The results-based lending program focuses on strengthening CPHC under the AB-HWC and the PM-ASBY, and supports the operationalization of HWCs in urban areas. The loan is to be disbursed annually on the achievement of the disbursement linked indicators (DLIs), which are a subset of the common results framework for PM-ASBY. The results-based lending program outcome is improved equitable access to quality CPHC services in urban areas in 13 states;3 and the outputs span three areas: (i) CPHC in urban areas strengthened, (ii) support for improved health-seeking behavior increased, and (iii) health systems strengthened.

5. The AB-HWC and the subsequent PM-ASBY monitoring and evaluation (M&E) processes are being developed largely based on the existing systems under the National Health Mission (NHM), with improvements. The intended outcomes and outputs of the AB-HWC and the PM-ASBY will be measured annually through a common results framework, derived from key elements of the programs. The indicators chosen are specific, measurable, aspirational yet achievable, relevant, time-bound, and transparent. To report on the progress of HWCs through specific, measurable, aspirational yet achievable, relevant, time-bound, and transparent

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3 The selected states are Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Telangana, and West Bengal.
indicators, the HWC portal was established in 2019 as the main repository of data for the expanded services. For program monitoring, this portal is supplemented by other data collection or reporting processes, such as the health management information system (HMIS), the reproductive and child health (RCH) portal, quarterly progress reports (QPRs), common review missions, the integrated health information platform, and information from accredited social health activists, and the quality improvement microsite.

6. The existing process of monitoring the AB-HWC is well defined and functional at all levels: central, state, district, and facility. Nationally, it is managed by the NHM, under the Ministry of Health and Family Welfare (MOHFW), with technical support from the National Health Systems Resource Centre (NHSRC). At the state level, the mission director of the NHM leads monitoring, assisted by an additional or joint director, nodal or program officers, and a team of consultants, with technical support from the state health systems resource center. A chief medical health officer or dedicated program officer, supported by the district program manager or district community mobilizer, is responsible in districts; and a commissioner for health, supported by a city program manager, is responsible in corporations. Program monitoring in wards is the responsibility of the ward program manager or ward community mobilizer. State, district, corporation, and city technical units undertake field visits; obtain regular feedback on monthly service delivery, including follow-up; and provide recommendations for corrective measures.

7. Both programs (the AB-HWC and the PM-ASBY) envisage strengthening the existing information collection processes and developing additional information technology (IT) tools to support the HWC team. The aim is to record the services delivered; enable follow-up of service users; facilitate referral, coupled with continuity of care; create individual or family folders and profiles; generate analytical reports for decision making support; and undertake population-based analytics. The developed IT platforms, primarily the HWC portal, provide the necessary data for reports and support related monitoring at the state and central levels.

8. The data for two of the three outcome DLIs pertaining to the number of patient visits in urban HWCs and the number of screenings for noncommunicable diseases (NCDs) at urban HWCs will be sourced from the HWC portal. The HMIS will be used to provide data for the outcome DLI on increased antenatal check-ups (at least four) in urban poor pregnant women. Output DLIs will be monitored using the HWC portal, quality improvement micro-site, and reports from joint review missions and program QPRs. Apart from routine monitoring data, the data sets from national health surveys are expected to contribute to assessing results independently and comparatively. In addition to the existing systems to monitor and evaluate the program’s impact, outcome, and output indicators, the Asian Development Bank (ADB) review missions and the independent verification agency will conduct independent assessments.

B. Assessment of the Monitoring and Evaluation System

9. The National Urban Health Mission (NUHM) placed significant emphasis on improving the M&E system through systematic data capture and collation. The HMIS, as a primary source of information—coupled with other systems and processes such as the Mother and Child Tracking System, National Family Health Surveys, and the accredited social health activists management information system—have all contributed to structured data capture and collation. As a result of HMIS strengthening under the NUHM, almost all states have shifted to facility-based reporting. In 2016, the HMIS started identifying urban health facilities that were located near slum areas, and urban-specific QPRs were introduced. ADB support for resolving gaps and enhancing capacities for data management has contributed to improving the M&E system. Most monitoring indicators were already part of information systems such as the HMIS in the NUHM. With the AB-HWC, the
indicators related to CPHC were further defined, granularized, and incorporated in the HWC portal.

10. **Health and wellness center portal.** The HWC portal provides a much-needed platform for information on the progress of CPHC. The portal provides the requisite information related to HWCs, such as the facility profile and service delivery data, at fixed intervals (daily and monthly). Reports and dashboards of the HWC portal are being used at the national and state levels and by the NHSRC for analysis and monitoring of CPHC implementation progress. In July 2020, the portal received a further boost in efficiency with the launch of a new version of the HWC portal and an updated android-based HWC application. The app facilitates both offline and online data collection on mobiles or tablets, and makes the portal less dependent on internet connection or related IT infrastructure. Since all the information is collated in one place, it is easier to validate and ascertain the completeness of the information provided, and enables quick and easy reporting. For effective monitoring of DLIs and program performance, the current M&E system will be primarily based on the HWC portal while addressing challenges related to multiple information systems, the adequacy of IT infrastructure, capacity development needs, quality assurance, and scaling up of innovations.

11. **Multiple information systems.** These systems exist to capture data, and are already in use in the states. Multiple information systems were developed as part of the NHM and different national programs. For example, the NCD portal captures NCD-related data, while the drugs and vaccine distribution management system such as e-Aushadhi captures drug-related data and Nikshay Poshan Yojana (Nutritional Support to tuberculosis patients) captures tuberculosis related data. The existence of different information systems gives comfort that a system is in place for capturing certain data, but also poses coordination and harmonization challenges to avoid data overlaps or duplication. For example, NCD-related data are captured in the NCD portal and entered in the HWC portal as well as the HMIS, leading to an unnecessary burden on the system and staff collecting and collating data.

12. **Data collection.** Data collection depends mainly on manual recording in forms or notebooks, which data entry operators transfer to existing portals. For instance, for every NCD, data pertaining to outpatient department consultations, screening, diagnosis, and treatment are noted manually on forms and then entered in the HWC portal. Further, in most states, to identify patients with high NCD risk scores and bring them to a health facility for screening or follow-up, a community-based assessment checklist is filled out manually and entered in the HWC portal later. In most situations, data input processes are not real-time, leading to duplication of efforts and increased probability of errors. Digitization is being expanded and replicated across states, and some states have already taken initiatives to use software for recording data. For instance, Karnataka is using the Namma Samudaya (Our Community) survey tool, an android application, to record community-based assessment checklist data. Techo-plus is a mobile application used by multipurpose health workers in Gujarat to capture data from the catchment area population. The MOHFW’s auxiliary nurse midwives online, a real-time data entry application for auxiliary nurse midwives (ANMs) for RCH services provided by ANMs, has also been scaled up in many states.

13. **Quality assurance.** Besides being dependent on efficient personnel, robust information systems, and technology infrastructure, the issue of data entry errors needs to be taken into consideration. Information systems are continually strengthened to identify and flag errors, such as when the number of people treated is higher than the number of people screened or when antenatal services are provided to males. Data validation is built into the HWC portal; and the data are reviewed at the city, district, and state levels for accuracy. Data checks are performed at
every level of collation and reviewed at periodic review meetings, which is an established practice across all states. Monitoring of all 364 urban primary health centers in Karnataka is undertaken using a standard supportive supervision checklist. The state program management unit M&E and management information system consultants undertake monthly monitoring visits in one to two districts, and cover all urban primary health centers. Quality assurance can be strengthened by focusing on system strengthening to reduce multiple sources of the same data; and harmonizing the HMIS and the HWC portal, followed by other portals such as the RCH database, the NCD app, the drugs and vaccine distribution management system, and ASHA Soft.

14. **Differences across states.** Variations in human resources and IT infrastructure impact the monitoring processes, as the central HWC portal primarily reflects the data inputs received from the state portal. Any major variations in states’ capacities to operate or collect data reflect in the outputs of the central portal. Focusing on weaker states for capacity development is important for the information system to work better, and it is essential that lagging states should improve data collection processes with the required IT infrastructure and human resources.

15. **Basic information technology infrastructure.** The IT system is in place in all the states, and is being expanded and strengthened to meet emerging needs. States have also provided tablets or cell phones to frontline health workers to capture data, e.g., Techo-plus on android phones in Gujarat and tablets to ANMs across states. However, areas still need improvement. For instance, slow internet speeds caused by limited bandwidth may lead to a backlog of entries. IT system strengthening is a continuous process and should focus on hardware and software provisioning and regular upgrading.

16. **Capacity gaps.** Lack of human resources can hamper the M&E process. The NHSRC at the central level; state health systems resource centers at the state level; state institutes for health and family welfare; and public health, academic, and research institutions are responsible for providing technical support for training and mentoring. The Ayushman Bharat program can provide trained personnel to some states to supplement their capacity in data entry operators. In some states, division clerks or accountants take the responsibility of data entry operators, too.

17. **Emerging innovations.** Some states started making the HWC portal easier to use, where good practices are emerging in more efficient monitoring of HWC performance and increased staff accountability. For instance, in Karnataka, a local language manual on the HWC portal has been prepared and disseminated with the HWCs. A standardized supervision checklist is also being used at all levels of monitoring (state, district, and block), which leads to the generation of a report with specific recommendations uploaded onto Google Drive for easy access by relevant staff. Further, Karnataka has set up district-wise WhatsApp groups where weekly performance updates of HWCs are shared.

C. **Managing Risks and Improving Capacity**

18. **Addressing incongruencies arising from multiple systems.** The multiple information systems require effective and seamless coordination as well as eventual harmonization of different data sets into a single platform based on a portal like the HWC portal. Therefore, a primary risk mitigation measure would be to assess and identify overlaps, gaps, or potential discrepancies between different information systems and the HWC portal. It would also be useful to prioritize across different portals to identify one or two previously existing key information systems for cross-assessment, analysis, and the required corrective measures. Once the major identified system issues are addressed, the process can be widened to include and align other systems with the new HWC portal. An assessment and subsequent realignment of existing
information tools will contribute to information systems working collaboratively, reinforcing, and complementing the HWC portal.

19. **Assessing differentially across states.** Considering the varying readiness of states in human resources and infrastructure, tailor-made capacity development plans will be required to stabilize the HWC portal with increased number of HWCs reporting into it. More effort and resources should be directed to the states with lower capacity so that the HWC portal can provide credible and standardized data and reports.

20. **Robust technology infrastructure.** Additionally, to facilitate the implementation of the new National Digital Health Mission, AB-HWC’s digital infrastructure, tools, and human resources need to be strengthened. As part of the National Digital Health Mission, AB-HWC will contribute significantly to electronic health records including unique identity numbers for patients. HWCs will play a critical role in digitizing existing paper-based data or compiling individual electronic health records into an integrated system for easy retrieval and follow-ups. This, coupled with software to make data capture and use more efficient, is critical for online M&E systems. This requires a situation analysis of information technology infrastructure across states to assess and address gaps.

21. **Transition from a manual to a digital system.** In several cases, data input on the portals is not in real time and is entered by operators from pre-filled manual formats, which often leads to delays, oversight, and errors. Software and application development needs to be accelerated and digital adoption facilitated so that field staff can be provided with cell phones or tablets and web-based apps that facilitate real-time data capture, upload in the field, and compilation at administrative units.

22. **Capacity gaps.** Such gaps can be tackled more effectively by incorporating a bottom-up approach to identify capacity development needs. The capacity development process focuses on enhancing staff skill sets to collect, collate, analyze, and use data through several existing information systems such as the HWC portal, NCD app, and Integrated Health Information Platform. Regular training for different levels of staff (e.g., data entry operators, supervisors, and managers) would strengthen different functional capacities and lead to improved data quality. User-friendly training manuals, online certification programs, supportive supervision, and regular monitoring of existing capacities are essential to develop competent personnel responsible for data collection, collation, and analysis. The capacity development process also needs to incorporate peer-to-peer learning or institutional best practices, while incorporating feedback on gaps and issues identified during reviews and assessments.

23. **Quality assurance.** This is a critical element of information system management to meet the challenges of coordination and validation. It is important to develop and put in place the requisite software functionality and procedures to validate data and rectify data collection or data entry errors. Under the NUHM, the MOHFW made intensive efforts to implement data quality initiatives. These will need to be adopted for the new program. To ensure quality, processes such as patient satisfaction surveys, data quality assessment, and data audits should be introduced.

24. **Review missions.** These are important to gain deeper insight, feedback, and recommendations that can lead to a significant improvement in the program, with proper follow-up. A combination of periodic review missions, and annual and midterm reviews facilitated by ADB, will help monitor the targets and DLIs and evaluate program progress.