

Disease Control Priorities, Fourth Edition Volume 1, Disease Control Priorities in Practice

India's Transformational *Ayushman Bharat* Health System Reforms

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DCP4 Disease Control Priorities

economic evaluation for health





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Preface

Since the early 1990s, researchers involved in the Disease Control Priorities (DCP) effort have been evaluating options to decrease disease burden in low- and middle-income countries. This working paper was developed to support the Fourth Edition of this effort. It is posted to solicit comments and feedback, and ultimately will be revised and published as part of the DCP4 series.

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India's Transformational *Ayushman Bharat* Health System Reforms

Abstract

As of 2023, India is the world's most populous country and by 2030 is expected to be its third largest economy. India has made much progress on improving key population health outcomes, but several challenges remain including relatively high levels of out-of-pocket (OOP) spending and inequalities in effective coverage and new challenges are emerging such as a rapidly growing burden from non-communicable diseases (NCDs) and increasing risk factors related to climate change. To further improve outcomes, India is implementing several potentially transformational reforms including: (i) *Ayushman Bharat* Health and Wellness Centers (AB-HWC) to bolster provision of comprehensive primary health care at frontline public facilities; and (ii) the Ayushman Bharat *Pradhan Mantri Jan Arogya Yojana* (PM-JAY), a tax-financed non-contributory health insurance scheme that provides inpatient care at public and empaneled private hospitals to more than 500 million poor and near-poor individuals. In addition to detailing AB-HWC and PM-JAY, this chapter summarizes the process by which benefit packages under these reforms were identified and adopted.

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1.0 Introduction

With a population of 1.4 billion in 2023, India is the world's most populous country and by 2030 is expected to be its third largest economy. With an estimated national income of US\$2,380 in 2022, India is classified by the World Bank as a lower middle-income country. In recent decades, the country has made notable progress on sustaining rapid economic growth as well as reducing poverty. At 2.0 children per woman, the total fertility rate (TFR) is now below replacement level (IIPS and ICF, 2021). Significant improvements in key health outputs such as routine immunization, antenatal care, skilled birth attendance, and institutional deliveries have occurred.¹ However, despite significant improvements in outputs, progress on population health outcomes has been relatively mixed. At 26 per 1,000 live births, infant mortality rates are worse than in neighboring countries such as Bangladesh, Bhutan, and Nepal (WDI, 2023). At 103 per 100,000 live births, India's maternal mortality ratio is still higher than the 2030 Sustainable Development Goal (SDG) target of 70 and more than four times worse than China's. Almost one-fifth of all households in the country reported spending >10 percent of their budget on out-of-pocket (OOP) spending for health; as a result, an estimated 65 million individuals are pushed into poverty annually (WHO and World Bank, 2021). Underlying average or poor performance on health outcomes are enormous inequalities: e.g., states such as Kerala and Tamil Nadu have health indicators that are several magnitudes better than those in Bihar and Uttar Pradesh; and the poor and Scheduled Caste/Scheduled Tribe (SC/ST) populations – i.e., those belonging to officially designated disadvantaged socio-economic groups -- have significantly worse access to health services and outcomes. And additional risk factors due to climate change are rapidly emerging.

India is currently in the midst of implementing several transformational reforms, realizing the vision laid out in its 2017 National Health Policy (NHP) which recognized four major trends impacting the country's health system: (i) improvements in maternal and child health alongside a growing burden from non-communicable diseases (NCDs) and an unfinished agenda related to infectious diseases; (ii) emergence of a robust health industry; (iii) high rates of new and deeper impoverishment due to dependence on OOP financing for health; and (iv) availability of enhanced 'fiscal space' due to sustained economic growth (MOHFW, Government of India, 2017). Most notably, the 2017 NHP called for a paradigm shift in primary health care: from limited and selective care to provision of comprehensive services at frontline public facilities along with appropriate forward and backward referral linkages. For secondary and tertiary care, NHP emphasized the need for a move from input-based financing to output-based strategic purchasing from both public and private providers.

NHP 2017's vision was realized in 2018 with initiation of the first stage of *Ayushman Bharat* reforms that comprise two distinct sub-components: (i) *Ayushman Bharat* Health and Wellness Centers (AB-HWCs). These reforms include upgrading of existing frontline public primary health care infrastructure into HWCs and creating a new layer of HWCs catering to the urban poor that provide diagnostic tests, free essential medicines, and other comprehensive primary health care services including to address NCDs; and (ii) and the *Pradhan Mantri Jan Arogya Yojana* (PM-JAY). PM-JAY provides tax-financed non-contributory health insurance coverage for a package of inpatient secondary and tertiary hospital care to more than 500 million poor

¹ Based on 2019-21 National Family Health Survey-5 data: 76 percent of children aged 12-23 months were fully vaccinated, 58 percent of pregnant women had at least four antenatal care visits, skilled birth attendance was 89 percent, and the institutional delivery rate was 89 percent (IIPS and ICF, 2021).

and near-poor individuals up to a maximum annual limit of ₹500,000 (~US\$6,000) per eligible family at government and empaneled private hospitals.

The remainder of the chapter discusses in further detail the process and nature of amendment to services and benefits that are being implemented under AB-HWC and PM-JAY, including whether and how explicitly cost-effectiveness criteria were utilized for informing the design and implementation of these reforms. Section II provides an overview of India's health system. Section III details reforms related to AB-HWC. Section IV discusses PM-JAY. Section V concludes with a summary.

2.0 Health Financing, Service Delivery, and Governance of India's Health System

India has a three-tiered federal governance system. In addition to the center, there are 28 states and 8 centrally administered union territories (UTs). Below the states are local government bodies (both urban and rural). India's central government levies taxes on corporations, income (excluding agricultural income), wealth, customs, union excise duties (including on petrol, diesel, crude oil, tobacco, and sugar), and the goods and services tax (GST); 41% of central tax receipts – i.e., all taxes collected by the center excluding proceeds from surcharges and cesses, net of collection costs - are shared with states based on an allocation formula. The center also receives non-tax revenues from dividends and profits from public enterprises, interest receipts, regulatory charges, user charges, and license fees, among others. In addition to receiving transfers from the center, states also generate own-source tax revenues from GST, vehicle taxes, stamps and registrations, property taxes, taxes on agricultural income, as well as from state excise duties (including on alcohol and petroleum products). Sources of state-level nontax revenues are similar to those at the center; some states that are rich in natural resources also raise non-tax revenues from sources such as petroleum and mining. Local government bodies - in addition to receiving transfers from the center and the state - can also levy property taxes, profession taxes, and entertainment taxes, among others, but their own-source tax collection is relatively low.

Health is a 'state subject' in India, implying that states have the primary responsibility for implementing health programs and two-thirds of all public expenditure for health occurs at the state level. The central government plays a stewardship role and influences the direction of reforms by providing vision, guidelines, and co-financing via several centrally sponsored schemes (CSSs) which are special purpose co-financing arrangements to implement programs to attain national goals including for health. Public sector healthcare delivery channels use a three-tier model of primary, secondary, and tertiary care facilities with the referral hierarchy in the same order. Primary healthcare facilities in rural areas included sub-health centers (SHC), primary healthcare centers (PHC), and community health centers (CHC); in urban areas these are designated as urban primary healthcare centers (UPHCs) and urban community health centers (UCHCs). Secondary healthcare delivery facilities include sub-district hospitals and district hospitals. Tertiary care delivery facilities are either medical college hospitals or other super-specialty hospitals. In addition to the public sector, India has a large number of private facilities and in many states utilization of healthcare services is higher in the private rather than public sector.

Financing of AB-HWC is being implemented via the existing architecture of the National Health Mission (NHM) of the Ministry of Health and Family Welfare (MOHFW), a CSS whereby the central government and state governments co-finance implementation using a 60-40 ratio (i.e., 60% from the center and 40% from the state; the co-financing ratio is 90-10 for smaller and hilly states; and 100-0 for UTs). PM-JAY is also implemented with the same cofinancing arrangements as NHM but operates as a separate CSS with overall coordination and implementation oversight from the National Health Authority (NHA) - an attached office of MOHFW -- at the central level and State Health Agencies (SHAs) at the state level. Whereas outpatient primary and some elements of secondary care are available universally under NHM at public healthcare facilities, PM-JAY focuses on provision of certain daycare treatments, inpatient secondary and tertiary care at public and empaneled private hospitals for India's poor and near-poor population (Figure 15.1). Three states/UTs including Delhi, Odisha, and West Bengal have opted not to implement PM-JAY; instead, they implement their own-financed versions of the health insurance scheme. Other states including Andhra Pradesh, Chhattisgarh, Assam, Meghalaya, Nagaland, Maharashtra, Rajasthan, Tamil Nadu, Karnataka, Kerala, and Uttarakhand have expanded population and benefits coverage beyond the minimum required under PM-JAY.

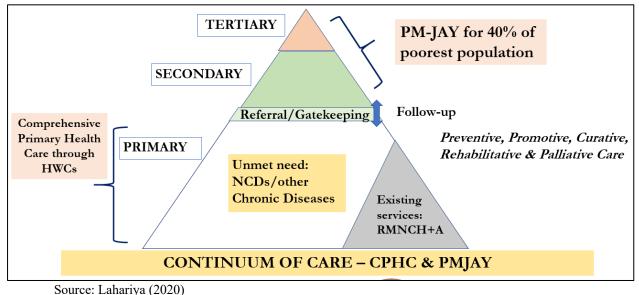


Figure 15.1: Summarizing India's Ayushman Bharat Reforms

AB-HWC and PM-JAY reforms build upon previous iterations of policy shifts that were implemented beginning in 2005 when the National Rural Health Mission (NRHM) was introduced to improve reproductive, maternal, neonatal, child, and adolescent (RMNCH+A) health outcomes and to bridge rural-urban inequalities. In 2013, NRHM and its urban submission counterpart were combined and renamed NHM. PM-JAY builds upon and expands the *Rashtriya Swasthya Bima Yojana* (RSBY) scheme which was launched by the Ministry of Labor in 2008 to provide 36 million below poverty line (BPL) families with tax-financed non-contributory inpatient care up to an annual coverage of ₹30,000 (~US\$400) per family at public and empaneled private facilities for mostly secondary care.

In 2021, *Ayushman Bharat* reforms were further expanded under the *Pradhan Mantri Ayushman Bharat* Health Infrastructure Mission (PM-ABHIM) which includes financing for additional investments for improving pandemic preparedness in light of COVID-19 as well as establishment of a new layer of frontline urban health and wellness centers (UHWCs) in urban

slum areas catering to catchment populations of 15,000-20,000. In addition, the Fifteenth Finance Commission (XVFC) -- complementing PM-ABHIM – is providing financing to local government bodies for bolstering provision of comprehensive primary health care in rural and urban areas along with strengthening Block Public Health Units (MOHFW, Government of India, 2021). These reforms are also complemented by the *Ayushman Bharat* Digital Mission (AB-DM) which is developing the necessary digital ecosystem for linking providers and patients digitally and introducing electronic health records.

At 1.35% of GDP in 2019/20, public spending on health in India remains relatively low, a result of a low priority given to health in central and state budgets (National Health Systems Resource Center, 2023). Despite remaining low as share of GDP, levels of public financing for health have increased over the last several years to over ₹2,000 in 2019/20, primarily a result of robust economic growth. Nevertheless, India remains one of the most privatized health systems in the world both in terms of health financing as well as service delivery. Almost 73% of outpatient utilization and 58% of all inpatient utilization occurs at private facilities (Ministry of Statistics and Program Implementation, Government of India, 2020). Regulation of the private sector remains weak, both in terms of quality and prices charged for services. Private OOP spending - representing just over half of all health spending - is the largest source of financing for health. High levels of OOP spending are a result of payments for outpatient-level medicines and diagnostics due to high utilization rates of services in the private sector as well as poor supplyside readiness and responsiveness at government facilities.

3.0 Comprehensive Primary Health Care via Health & Wellness Centers

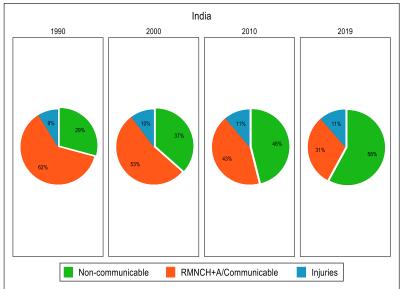
AB-HWC reforms are expanding the package of primary care services to include among others, NCD management at frontline public facilities across India. One foundational element of these reforms is the new role of HWCs in provision of comprehensive primary health care with the objective of 'time to care' of less than 30 minutes and to decrease preventable morbidity and mortality. HWCs provide an expanded package of 12 services, up from an existing package of six services (Table 15.1). Most progress to date has been made on expanding one additional package - screening and management of NCDs - at HWCs and three additional packages on health education: on eating right, staying fit, and yoga. The upgraded frontline HWCs (i.e., SHCs and PHCs that are upgraded to HWCs in rural areas as well as upgraded UPHCs and the new layer of urban HWCs catering to a smaller catchment population than UPHCs) - manned by a primary health care team headed by a Community Health Officer (CHO) and supported by a team of two Multi-Purpose Health Workers (at least one of whom is female) as well as three to five Accredited Social Health Activists (ASHAs) - provide preventive, promotive, curative, and rehabilitative care via outreach visits to communities and households, at the HWCs themselves, and via upward referrals to CHCs and UCHCs as well as district and other hospitals. The first converted HWC was launched in Jangla village in Bijapur district in the state of Chhattisgarh in April 2018; as of August 23, 2022, 120,162 HWCs were operational throughout the country. One of the primary objectives of HWCs is to create population-based household lists and undertake registration of all individuals and families residing within its catchment area. ASHAs are expected to undertake home visits to ensure screening, encourage risk factor modification, counselling, and adherence to treatment. Although termed as honorary volunteers, ASHAs receive activity-based compensation and incentives. From the perspective of surveillance for infectious diseases, ASHA and other frontline workers are also expected to

fill out 'Form S', the reporting form for syndromic surveillance under India's Integrated Disease Surveillance Program (IDSP).

Services through SHCs, PHCs	Services added as part of HWCs
General outpatient care for acute simple	Screening and management of NCDs
illnesses and minor ailments	
Family planning and other reproductive health	Screening and basic management of mental
services	health ailments
Neonatal and infant health care services	Care for common ophthalmic and ear, nose,
	throat (ENT) problems
Care in pregnancy and childbirth	Basic dental health care
Childhood and adolescent health care services	Geriatric and palliative health care services
Services for communicable diseases under	Basic trauma and emergency medical services
national health programs	
Source: Lahariya (2020)	

Table 15.1: Service provision via HWCs

One primary motivation behind India's HWC reforms was the recognition that NCDs are now the largest source of morbidity and mortality in the country and that addressing NCDs at frontline primary health care facilities was both necessary and cost-effective. NCDs now account for 56% of the overall burden of disease (Figure 15.2). Whereas in 1990 less than onethird of morbidity and mortality was due to NCDs, by 2019 this number had almost doubled. Neonatal disorders were responsible for the largest -- albeit declining -- share of the overall disease burden, causing 9% of all disability-adjusted life years (DALYs) lost due to morbidity and premature mortality in 2019 (Table 15.2). Ischemic heart disease has rapidly increased to the second-highest position, followed by chronic obstructive pulmonary disease (COPD). Although declining slowly, tuberculosis remains among the top ten contributors to the burden of disease. The share of diabetes in the overall burden of disease is also rapidly rising. Particulate matter pollution is now the largest risk factor for health (Table 15.3). And additional risk factors related to urbanization and lifestyle changes - high systolic blood pressure, high fasting plasma glucose, high body-mass index (BMI), and high LDL cholesterol -- are prominent among the top ten risk factors contributing to the overall disease burden in the country. Within India, the states of Chhattisgarh, Uttar Pradesh, Assam, Madhya Pradesh, and Odisha have the highest per capita burden of disease (and also the highest shares due to RMNCH+A/Communicable conditions). Tamil Nadu, Goa, and Kerala are the states with the highest burden from NCDs which accounts for more than two-thirds of the overall disease burden in these states.



Source: ICMR, PHFI and IHME; 2019

Figure 15.2: NCDs are the largest share of the overall burden of disease in India

Γ						
Rank in	ank in Top ten diseases/conditions in 2019		DALYs share			
2019	9 1 op ten diseases/conditions in 2019	1990	2000	2010	2019	
1	Neonatal disorders	14%	14%	12%	9%	
2	Ischemic heart disease	3%	4%	6%	8%	
3	Chronic obstructive pulmonary disease	2%	3%	3%	5%	
4	Diarrheal diseases	10%	9%	6%	4%	
5	Lower respiratory infections	10%	8%	6%	4%	
6	Stroke	2%	2%	3%	4%	
7	Tuberculosis	5%	5%	4%	3%	
8	Road injuries	2%	3%	3%	3%	
9	Diabetes mellitus	1%	1%	2%	3%	
10	Dietary iron deficiency	2%	2%	2%	2%	
	C ICMD DUEL 1 HIME 2010					

Table 15.2: Top ten diseases/conditions

Source: ICMR, PHFI and IHME; 2019

Table 15.3: Top ten risk factors

Rank in Ton ton wish factors in 2010		DALYs share			
2019	Top ten risk factors in 2019	1990	2000	2010	2019
1	Particulate matter pollution	13%	12%	12%	11%
2	Low birth weight, short gestation	17%	15%	13%	9%
3	High systolic blood pressure	3%	5%	6%	8%
4	High fasting plasma glucose	2%	3%	4%	7%
5	Smoking	4%	4%	5%	6%
6	High body-mass index	1%	1%	3%	4%
7	High LDL cholesterol	2%	2%	3%	4%
8	Unsafe water source	9%	7%	5%	3%
9	Alcohol use	2%	2%	3%	3%
10	Kidney dysfunction	1%	2%	2%	3%
	Source: ICMD DUEL and IUME (2017)				

Source: ICMR, PHFI and IHME (2017)

Other factors motivating HWC reforms included reducing the need for secondary and tertiary care by screening, early detection, and treatment of common NCDs such as hypertension and diabetes, as close to communities as possible. Government guidelines for population-level

screening of these common NCDs estimate that over half of all conditions can be managed at the primary care level (NHSRC, MOHFW, Government of India 2018). Prior to HWC reforms, opportunistic screening for common NCDs was conducted at the district and CHC levels via NCD clinics. In addition, glucose monitoring was supposed to have been implemented at PHCs and SHCs in 2012 for all those above 30 years of age and all pregnant women. Despite these programs, screening rates for NCDs remain extremely low in the country and most who have hypertension and diabetes are unaware or are not on treatment. For instance, only 1.9% of women aged 30-49 years had ever been screened for cervical cancer and only 0.9% had been screened for breast cancer or oral cancer (IIPS and ICF, 2021). And only 1.2% of men in the same age group reported ever being screened for oral cancer. Over 80% of the population that is hypertensive is not aware or not on treatment; and over 90% of those with impaired blood glucose were in similar predicament of either not being aware or not being on treatment (IIPS and ICF, 2021). Supply-side readiness problems at both private and public primary health facilities compound the issue: studies have identified gaps in terms of availability of essential medicines, technologies, and training of human resources for NCDs (Krishnan et al., 2021). Under the latest set of reforms, opportunistic screening has been replaced with populationbased screening and all men and women above the age of 30 are being screened annually for hypertension and diabetes and every five years for three cancers (oral, breast, and cervical). MOHFW guidelines mention that the 'yield' for breast cancer is better for screening women over 40 years of age but that over 30 years was being implemented for ease of operational management; however, no specific references are made to studies with evidence to suggest this is the case (NHSRC, MOHFW, Government of India 2018).

In terms of the process of priority setting under AB-HWC, MOHFW constituted a task force on the rollout of comprehensive primary health care in 2014 that submitted its findings in 2015 (MOHFW, Government of India 2015). These findings were subsequently adopted by the 2017 NHP and the roll-out of HWCs began in 2018. The task force included representatives from MOHFW, state governments, academia, think-tanks, as well as non-governmental organizations (NGOs); the task force also included representatives of the World Health Organization (WHO) and the World Bank.

In making recommendations for expanding the benefits package to include frontline screening for NCDs, references were made to studies that demonstrated the burden and cost-benefits in the Indian context. For instance, MOHFW's cancer screening guidelines report that breast, cervical, and oral cancers account for almost one-third of all cancers in India and are therefore a public health priority. Screening and early detection of cancers MOHFW guidelines reference a World Bank working paper that estimated the likelihood of incurring catastrophic hospitalization expenditure – i.e., incidence of OOP spending for health that was a relatively large share of the household budget -- was 160% higher with cancer than for hospitalization costs for communicable diseases; the same study found the incidence of catastrophic expenditures with cancers to be nearly double when compared to accidents and cardiovascular diseases (Mahal, Karan, and Engelgou 2010). A full assessment of costs and benefits was not conducted or reported in MOHFW guidelines but expectations of improvements in financial risk protection were implied in deciding to roll-out frontline NCD reforms. Also noted was the fact that all three cancers had good survival rates if detected early, implying cost-effectiveness, but no specific numbers were provided or referenced. For oral cancer screenings, the guidelines reference a cluster-randomized trial to prioritize screenings among tobacco users (Sankaranarayan et al., 2005).

As part of the national roll-out, MOHFW's Department of Health Research commissioned a study to look at health technology assessment (HTA) of three different strategies for cervical cancer screening: (i) visual inspection with acetic acid (VIA); (ii) Papanicolaou test (PAP smear); and (iii) human papillomavirus (HPV) DNA test at a frequency of every 3, 5, or 10 years among women aged 30-65 in India (Chauhan et al., 2020). The study recommended screening using VIA every 5 years. The study estimates that a minimum 30% of screened positive patients and a lifetime risk of at least 0.7 are needed for a strategy of VIA every 5 years to remain cost effective. In terms of equity, reductions in cervical cancer cases and subsequent mortality gains were estimated to be much higher among the poorest one-third of the population. Financial risk protection was also estimated to be better for the poor in terms of estimated reductions in OOP treatment costs. Overall cost-effectiveness analysis took a societal perspective including costs of implementing the intervention and costs averted among households due to early detection.

An HTA study was also commissioned by MOHFW to examine the economic case for implementing population-based screening programs for diabetes and hypertension as envisioned under AB-HWC, including for assessing which age groups to target and determining the cost-effectiveness at different frequencies for screening (Kaur et al., 2021). The study used incremental costs per quality-adjusted life years (QALYs) resulting from various implementation scenarios. Costing information was derived from the government's National Health System Cost Database and the Costing of Health Services in India (CHSI) study.² The study found that population-level screening for diabetes and hypertension in of itself was not a cost-effective strategy for India. However, when combined with provision of treatment of these conditions as envisioned under AB-HWC, screening programs were cost-effective. If even 20% of newly diagnosed patients for uncomplicated diabetes or hypertension are provided treatment at HWCs, screening interventions would be cost-effective for those 30-65 years at either a 3-year or 5-year frequency. If 70% of newly diagnosed patients receive treatment at HWCs – up from the existing 4% that currently do so – the study found annual population screening to be cost saving (Kaur et al., 2021).

Equity considerations were noted in several of the government guidelines and training material, especially in terms of the positive impact of the availability of comprehensive primary health care at frontline facilities in terms of helping improve access for screening especially for women and the poor who otherwise would have to forego at least a day's wages to access such preventive and promotive care for several conditions included in the CPHC package of services. The government's training module for Medical Officers mentions that '...primary and secondary prevention of chronic diseases and their common risk factors provide the most sustainable and cost-effective approach to chronic disease prevention and control' but does not provide any explicit references (Training Module for Medical Officers 2017).

² CHSI is the first nationally representative costing survey in India. The costing methodology followed the standard principles using an economic perspective so that all resources used for delivering a service – regardless of who pays -- are identified, measured, and accounted. CHSI data included both public and private hospitals -- a total of 52 public health facilities including 13 public tertiary care hospitals and 39 district hospitals providing secondary care -- across 13 states. Unit costs were calculated using a top-down approach as data on the use of input resources as per the morbidity profile of patients was not available. However, while calculating the unit cost of various surgical interventions in operation theatres, a bottom-up approach was used.

4.0 Tax-Financed Hospitalization Insurance for the Poor and Near-Poor under PM-JAY

In complementing AB-HWC reforms, PM-JAY focuses on expanding access to inpatient secondary and tertiary care for India's poor and near-poor population. Unlike AB-HWC reforms which are designed to be universal in entitlement, PM-JAY targets the bottom 40% of India's population (more than 500 million individuals) as identified by the 2011 Socio-Economic Caste Census (SECC) based on deprivation criteria in rural areas and occupational categories in urban areas (Table 15.4). Those families that were eligible for RSBY – the precursor to PM-JAY – were automatically eligible for PM-JAY. In addition, those in rural areas living in households with no adult members 16-59 year of age, female-headed households with no adult male member between age 16-59 years of age, and other such criteria were deemed eligible. In urban areas, deprivation criteria were based on employment: domestic workers, drivers, conductors, and other such categories of workers were eligible. Some households – e.g., those paying income taxes, those with refrigerators, with at least one member being a government employee, etc. – were automatically ineligible for the scheme.³

³ Some states such as Chhattisgarh, Karnataka and Maharashtra use ration card for targeting.

Rural	Deprivation criteria for eligibility	Ineligible
Only one room with <i>kucha</i> walls and <i>kucha</i> roof	Rag picker	Households having motorized 2/3/4 wheeler/fishing boat
No adult member between age 16 to 59	Beggar	Households having mechanized 3/4 wheeler agricultural equipment
Female headed households with no adult male member between age 16 to 59	Domestic worker	Households having Kisan Credit Card with credit limit above ₹50,000
Disabled member and no able-bodied adult member	Street vendor, cobbler, hawker, other service provider working on streets	Household member is a government employee
Scheduled Caste/Scheduled Tribe households	Construction worker, plumber, mason, labor, painter, welder, security guard	Households with non- agricultural enterprises registered with government
Landless households deriving income from manual casual labor	Coolie and another head-load worker	Any member of household earning more than ₹10,000 per month
Households without shelter	Sweeper, sanitation worker, <i>mali</i>	Households paying income tax
Destitute/living on alms	Home-based worker, artisan, handicrafts worker, tailor	Households paying professional tax House with three or more
Manual scavenger families	Transport worker, driver, conductor, helper to drivers and conductors, cart puller, rickshaw puller	rooms with pucca walls and roof; Owning at least 7.5 acres of land or more with at least one irrigation equipment
Primitive tribal groups	Shop worker, assistant, peon in small establishment, helper, delivery assistant, attendant, waiter	Owns a refrigerator; Owns 5 acres or more of irrigated land for two or more crop season
Legally released bonded labor	Electrician, mechanic, assembler, repair worker, washerman, chowkidar	Owns a landline phone; Owns more than 2.5 acres of irrigated land with 1 irrigation equipment

Table 15.4: Deprivation criteria for eligibility for PM-JAY

Source: Ayushman Bharat PM-JAY IEC Guidelines 2021-22, Version 2.0

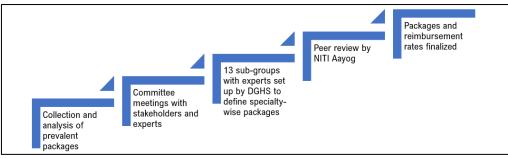
NHA as the apex body for implementing PM-JAY is responsible for providing policy and strategic direction to PM-JAY and provide guidelines to states on all aspects including beneficiary authentication, health benefit packages, standard treatment guidelines, hospital empanelment, claim adjudication, and grievance management. NHA is also responsible for providing a strong information technology (IT) backbone for ensuring that all processes -- from beneficiary identification to claim settlement -- are paperless and can be conducted online via the PM-JAY IT platform. NHA, as an attached office of MOHFW, has full functional autonomy and is governed by a Governing Board chaired by the Union Minister for Health and Family Welfare with the NHA's Chief Executive Officer (CEO) as the Member Secretary. PM-JAY is implemented at the state level by respective SHAs that have the flexibility to implement

the scheme either under an 'assurance/trust' mode (i.e., where the SHA purchases health services directly from providers) or an 'insurance' mode (where the SHA contracts an insurance company to purchase health services from providers on its behalf) or using a combination of the two modes (e.g., use of insurance mode up to a certain threshold and trust/assurance mode above that). NHA provides guidelines on various processes of the scheme with flexibility for state-level implementation.

The program's initial health benefits package (HBP 1.0) provided coverage for a total of 1,393 secondary and tertiary care procedures, included one surgical procedure that was classified as 'unspecified', covering eight medical specialties and 16 surgical specialties.⁴ In order to define HBP 1.0, a Technical Committee established by MOHFW's Directorate General of Health Services (DGHS) in 2016 initiated the process by collecting and analyzing data on prevalent packages throughout the country. The Technical Committee included representatives from state governments, central government hospitals, state government funded health insurance schemes, clinical and health financing experts, industry representatives, quality control bodies, the Central Drugs Standard Control Organization, the National Institution for Transforming India (or NITI Aayog, the apex think tank for the Government of India), as well as the World Bank and WHO. The Technical Committee's terms of reference included development of a comprehensive list of hospitalization packages, identification of packages that might be at risk of misuse and identification of mitigative strategies could be put in place to minimize misuse, development of criteria for empanelment of providers, establishment of preauthorization modalities, as well as delineating strategies for ensuring quality of care. A preliminary HBP list was developed by 21 subgroups comprising of clinical specialists, insurance experts, and other relevant stakeholders identified by the Technical Committee. These sub-groups also reviewed existing evidence on prices from state and central government insurance programs and from available costing studies before finalizing recommendations. In 2018, post the announcement of the launch of PM-JAY, MOHFW reconvened the Technical Committee to review recommendations of the 21 subgroups. Subsequent to its review, NITI Aayog reviewed the contents of HBP 1.0 in consultation with MOHFW's Department of Health Research (DHR) following a four pronged strategy for finalization of reimbursement rates: (i) rapid survey of public and private hospitals across different cities; (ii) comparison of insurance data with reimbursement rates from central and state government health insurance schemes; (iii) expert consultations convened by NITI Aavog and DHR to seek recommendations on inclusion or exclusion of packages and appropriateness of reimbursement rates; and (iv) private sector stakeholders consultations to seek feedback on the benefit package list as well as rates.

The recommendations of experts and other stakeholders were reviewed by the national committee under the chairpersonship of NITI *Aayog* and MOHFW and the final list of 1,393 packages and reimbursement rates were finalized. The process is summarized in Figure 15.4. Prioritization was based primarily on existing utilization patterns, clinical effectiveness of interventions, and burden of disease. Primary criteria appear to have been to define and finance packages that cover high incidence/prevalence of diseases as well as those that contribute to high OOP expenditure (NHA, 2020).

⁴ States have the option to expand coverage beyond that specified by the central government using own-source revenues; for example, the state of Tamil Nadu provides additional coverage for outpatient diagnostics and additional inpatient high-end packages that are not covered by PM-JAY; some states such as Himachal Pradesh have also expanded population coverage beyond the target population specified by the central government using own-source revenues.



Source: Adapted from National Health Authority Figure 15.4: PM-JAY benefits package process

In November 2019, PM-JAY's health benefits package was refined and expanded (and renamed HBP 2.0) wherein the number of procedures was expanded to 1,573, reimbursement rates of 270 packages were revised upwards and reduced for 57 packages, 237 new packages were added, 554 packages were discontinued, and 43 stratified packages were adopted (NHA, 2022).⁵ The updating of HBP was prompted by several factors. Prominent among these was feedback from private providers that reimbursements were insufficient to cover costs for several packages thereby resulting in lower-than-expected empanelment of private hospitals as well as low participation in provision of these packages among private hospitals that did empanel. Whereas public hospitals are co-financed via government budgetary allocations, private hospitals were not. In addition, some overlap and inconsistencies were found across different packages offered both within HBP 1.0 as well as some that were already covered under separate national health programs.⁶ HBP 2.0 included additional diseases and conditions which were earlier not covered such as heart catheterization, chronic hepatitis, diabetic foot, triple valve procedure, and gastrectomy. HBP 2.0 also helped identify specific procedures to be reserved for certain types of hospitals (e.g., public or tertiary hospitals) to reduce fraud and help ensure provision of services at the appropriate level. NHA led the rationalization process by constituting eight 'specialty committees' that relooked at the packages and used inputs from CHSI data and held consultations with apex public hospital experts for specialties for which CHSI data were not available (Prinja et al., 2021). In addition, the review of oncology packages for four subspecialties (surgical, medical, radiation, and pediatric) was conducted by Tata Memorial Hospital (TMH), an autonomous grant-in-aid institution under the overall administrative control of the central government's Department of Atomic Energy, that provides comprehensive cancer care. The governing body approved the NHA review committee recommendations for updating of health benefits package to HBP 2.0 based on the inputs from 'specialty committees', state consultations, TMH (for oncology packages), and the suggestions of the 24 specialist committees (constituted under HBP 1.0). HBP 2.0 also marked the introduction of various new concepts including cross-specialty packages, stratified packages, add-on packages, packages with multiple procedures, and dynamic-priced packages (see Annex 15 for additional details).

In 2021, two additional revisions were made in HBP 2.0: these were termed as HBP 2.1 and HBP 2.2 with the overall package now comprising of 1,670 procedures. NHA updated this with support from SHAs, DHR, the All India Institute of Medical Sciences (AIIMS), the World Bank, PGIMER Chandigarh, and Christian Medical College and in consultation with FICCI,

⁵ 61 percent of package prices were increased while 18 percent saw a decline. Nearly 42 percent of HBP 1.0 packages was estimated to be priced at less than half of the true cost of provision; this number is estimated to have declined to 20 percent with HBP 2.0.

⁶ For example, tubectomy and vasectomy packages were discontinued under PM-JAY as these services are already provided under the National Family Welfare Program.

CII, and the Association of Healthcare Providers India (AHPI), among others. With this interim review, a new specialty of organ and tissue transplants was introduced which consisted of renal and corneal transplant procedures (NHA, 2021).

5.0 Summary and Conclusions

This chapter has summarized some of the potentially transformational *Ayushman Bharat* reforms that are currently being implemented across India. One of the unique aspects of these reforms is the mechanisms by which they are being implemented: one set of reforms aims to bolster frontline provision of comprehensive primary health care by public sector facilities under the AB-HWC program including and especially for addressing the rising NCD burden. A second complementary program is providing tax-financed non-contributory health insurance coverage for inpatient care at public and empaneled private hospitals targeting more than 500 million poor and near-poor individuals. Although it is too soon to assess the impact of both programs, the underlying intent is to emphasize prevention, promotion, and early detection as well as to improve financial risk protection from high OOP spending, especially for the poor and vulnerable. It remains to be seen whether the country will take steps towards greater integration of both programs – formally or otherwise – to ensure provision of health services across the entire care continuum under a single scheme.

India's use of HTA is still at a nascent stage. Nevertheless, at least for the case of the AB-HWC program, cost-effectiveness criteria combined with information on the changing burden of disease appears to have helped inform the design of comprehensive primary health care services. The government commissioned several studies to assess both the localized cost-effectiveness of proposed interventions as well as referenced global evidence in determining the choice of additional services to be included.

PM-JAY has also expanded coverage to include a comprehensive and wide-ranging inpatient benefits package; however, the formal use of HTA appears to have been limited to date. A Health Financing and Technology Assessment (HeFTA) unit is under establishment at NHA which should help ensure future formalization of the HTA process. The unit evaluates existing and newer interventions to refine the health benefits package and undertake other strategic purchasing decisions. The inclusion of new packages and pricing decisions is also expected to be informed via greater use of value-based pricing methods.

References

- Chauhan, Akashdeep Singh, Shankar Prinja, Radhika Srinivasan, et al. "Cost Effectiveness of Strategies for Cervical Cancer Prevention in India." *PLoS One* 15, no. 9 (2020): e0238291.
- Indian Council of Medical Research, Public Health Foundation of India, and Institute of Health Metrics and Evaluation. *India: Health of the Nations States – The India Statelevel Disease Burden Initiative*. New Delhi, India: ICMR, PHFI, IHME, 2017.
- Institute for Health Metrics and Evaluation (IHME). *India profile*. Seattle, WA: IHME, University of Washington, 2021. <u>http://www.healthdata.org/india</u>.
- International Institute for Population Sciences (IIPS) and ICF. *National Family Health Survey* (NFHS-5), 2019-21: India. Mumbai, India: IIPS, 2021.
- Kaur, Gunjeet, Akashdeep Singh Chauhan, Shankar Prinja, et al. "Cost-effectiveness of population-based screening for diabetes and hypertension in India: an economic modelling study." *The Lancet Public Health* 7, no. 1 (2021): e65-e73.
- Krishnan, Anand, Prashant Mathur, Vaitheeswaran Kulothungan, et al. "Preparedness of primary and secondary health facilities in India to address major noncommunicable diseases: results of a National Noncommunicable Disease Monitoring Survey (NNMS)." *BMC Health Service Research* 21, no. 757 (2021).
- Lahariya, Chandrakant. "Health & Wellness Centers to Strengthen Primary Health Care in India: Concept, Progress and Ways Forward." *The Indian Journal of Pediatrics* 87, no. 11 (November 2020): 916–929. <u>https://link.springer.com/article/10.1007/s12098-020-03359-z.</u>
- Ministry of Health and Family Welfare (MOHWFW), Government of India. "Operational Guidelines for Pradhan Mantri Health Infrastructure Mission." 2021. <u>https://main.mohfw.gov.in/sites/default/files/Operational%20Guideline%20%28CSS</u> <u>%20Component%29_PM-ABHIM.pdf</u>.
- Ministry of Health and Family Welfare, Government of India. "Report of the Task Force on Comprehensive Primary Health Care Rollout." 2015. <u>https://nhsrcindia.org/sites/default/files/2021-</u> 03/Report%20of%20Task%20Force%20on%20Comprehensive%20PHC%20Rollout. pdf.
- Ministry of Health and Family Welfare (MOHFW), Government of India. "National Health Policy." 2017. <u>http://cdsco.nic.in/writereaddata/National-Health-Policy.pdf</u>.
- Ministry of Statistics and Program Implementation, Government of India. "Health in India." 2020. https://mospi.gov.in/sites/default/files/publication_reports/NSS%20Report%20no.%2

https://mospi.gov.in/sites/default/files/publication_reports/NSS%20Report%20no.%2 0586%20Health%20in%20India.pdf

- National Health Authority, Pradhan Mantri Jan Arogya Yojana (PM-JAY). "Journey from HBP 1.0 to HBP 2.0." 2020. <u>https://pmjay.gov.in/sites/default/files/2020-01/Journey-from-HBP-1.0-to-HBP-2.0.pdf</u>
 - National Health Authority. *National Health Benefit Package 2.2: User Guidelines*. New Delhi, India: November 2021. <u>https://nha.gov.in/img/resources/HBP-2.2-manual.pdf</u>.
- National Health Authority. Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, Health Benefit Package Manual Part -1. New Delhi, India: NHA, 2022.
- National Health Systems Resource Centre, Ministry of Health and Family Welfare, Government of India. "Ayushman Bharat Comprehensive Primary Health Care through Health and Wellness Centers- Operational Guidelines." 2018. <u>https://www.nhm.gov.in/New_Updates_2018/NHM_Components/Health_System_Str</u> <u>egthening/Comprehensive_primary_health_care/letter/Operational_Guidelines_For_C</u> <u>PHC.pdf.</u>
- National Health Systems Resource Center, Ministry of Health and Family Welfare, Government of India. "Operational Guidelines for Pradhan Mantri Ayushman Bharat Health Infrastructure Mission." 2021. https://nhsrcindia.org/sites/default/files/FINAL%20PM-ABHIM 15-12-21.pdf.
- National Health Systems Resource Center, Ministry of Health and Family Welfare, Government of India. "National Health Accounts: Estimates for India 2019-20." 2023. <u>https://main.mohfw.gov.in/sites/default/files/5NHA_19-</u> 20_dt%2019%20April%202023_web_version_1.pdf
- Prinja, Shankar, Maninder Pal Singh, Kavitha Rajsekar, et al. "Translating Research to Policy: Setting Provider Payment Rates for Strategic Purchasing under India's National Publicly Financed Health Insurance Scheme." *Applied Health Economics* and Health Policy 19, no.3 (2021): 353-370.
- Sankaranarayan, Rengaswamy, Kunnambath Ramadas, Gigi Thomas, et al. "Effect of Screening on Oral Cancer Mortality in Kerala, India: A Cluster-Randomized Trial." *Lancet* 365, no. 9475 (2005): 1927-1933.
- World Development Indicators. 2023. <u>https://databank.worldbank.org/source/world-development-indicators</u>, Washington, DC: World Bank.
- World Health Organization (WHO) and World Bank. *Global Monitoring Report on Financial Protection in Health 2021*. Washington, DC: World Bank, December 13, 2021. <u>https://openknowledge.worldbank.org/handle/10986/36723</u>.

Annex 15: New Concepts Introduced in HBP 2.0

Cross-specialty packages: These packages fell under the purview of more than one specialty in HBP 1.0 wherein the practice was to write the package under every concerned specialty, resulting in unnecessary repetition/duplication. In HBP 2.0, such packages are defined under one specialty and marked as cross-specialty packages, and the name of other relevant specialties is mentioned against such procedures so that they can also be used by other relevant specialties.

Stratified packages: Some packages may involve different treatment modalities for the same or similar procedures (e.g., type of anesthesia, surgical approach, unilateral/bilateral application, etiology, etc.). The rates of these stratified packages may or may not be the same or one of the packages will have an additional treatment modality used along with the basic procedure. These kinds of packages are labeled as stratified procedures and the stratification criteria are defined in detail along with the financial implications, if any.

Add-on packages: Certain packages can be booked with a primary package at a 100% reimbursement, contrary to the principle of 100% reimbursement of the primary package and 50% reimbursement of the second package under HBP 1.0. These packages are defined as add-on packages.

Stand-alone packages: Packages identified as stand-alone packages cannot be booked with any other package.

Packages with multiple procedures: Some of the packages are a group of procedures. In view of the need to capture the different procedures covered under a single package separately, the packages were further divided into respective procedures wherever considered required.

Follow-up packages: Some procedures require prolonged/multiple follow-up care beyond the limit of 15 days included in a package. For such procedures, the specialist committees included some follow-up packages that can be booked only if there is documented history of treatment covered under the primary package. The follow-up packages are aligned with their specific primary packages.

Static-priced packages: Procedures where there is either no usage of implants/high-end consumables or usage of a definitive number and type of implants are defined as price static procedures. (Note: In HBP 2.0, the implant rates were separately configured.)

Dynamic-priced packages: Procedures where variable numbers and types of implants/highend consumables are used are defined as dynamic-priced procedures. The cost of implant(s) will be added to this price. (Note: In HBP 2.0, the implant rates were separately configured)

Source: Adapted from National Health Authority: Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, Health Benefit Package Manual Part -1: NHA; 2022