Review Article

A Critical Analysis of the World's Largest Publicly Funded Health Insurance Program: India's Ayushman Bharat

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Abstract

Background: Launched in September 2018, the ABPMJAY is the world's largest publicly funded health insurance (PFHI) program with population coverage of 500 million. A systematic review was conducted. **Methods:** A comprehensive literature search was conducted in four databases: PubMed, Web of Science, Scopus, and Google Scholar. The literature search was conducted with the search terms: "Ayushman Bharat OR ABPMJAY OR modicare AND RSBY." The search was set to title and abstract. Gray literature and government websites were also searched for relevant documents. A total of 881 documents were identified (PubMed: 53, Web of Science: 46, Scopus: 97, Google Scholar: 681, government websites: two, and gray literature: two). Fifty-two duplicates were identified. After the elimination of the duplicates, 829 unique documents were identified. These 829 unique citations were then subjected to a review of title and abstract independently by 2 reviewers. Six-hundred and ninety-two articles were rejected after review of title and abstract. One-hundred and thirty-seven articles were screened for full text independently by two reviewers. Sixty-six articles were rejected after review of the full text. Disagreements were resolved by discussion. Seventy-one unique articles were included in the final review. To attain the objective of the study, which is to critically analyze and provide an overview of Ayushman Bharat, a narrative synthesis was performed. **Results:** Seven themes were identified from the review: (1) health and wellness centers (HWCs); (2) out-of-pocket health expenditure (OOPHE); (3) fraud; (4) upcoding and provision of unnecessary medical care; (5) moving focus away from primary care; (6) coverage; and (7) lop-sided access, exclusion at the periphery, and brain drain. There is very little impact evidence of the ABPMJAY available. **Conclusions:** The government could plan impact evaluation studies in every state that the ABPMJAY is functional in. Any high-quality feedback generated might enable the National Health Authority, the government body leading and coordinating the ABPMJAY, to take necessary steps operationally and advice the government on strategy. Another concern is that the ABPMJAY PFHI might negatively impact the ongoing process of continuous strengthening and development of the government health-care system at all levels—primary, secondary, and tertiary. Continual recalibration and course corrections on the basis of high-quality feedback might enable ABPMJAY reduce catastrophic OOPHE for 500 million Indians. This is more than 6% of humanity: the largest block of people served by a single PFHI in history.

Keywords: *ABPMJAY, Ayushman Bharat, modicare, publicly funded health insurance (PFHI), RSBY, universal health care*

Introduction

India has a government health-care infrastructure of subcenters (SCs) (1 for every 5000 population), primary health centers (1 for every 30,000 population), and community health centers (1 for every 120,000 population).[1] There is significant interstate variation in the quality of the infrastructure of these health centers as well as the quality of care provided in them, with the better governed states doing better than the rest.[2] These health centers are almost entirely in the rural areas, where 65% of the population resides.[3] Thirty-five percent of the population in urban areas receives public health care from district hospitals and general hospitals. Seventy percent of health care is accessed from the private health-care sector and the rest from the public health-care system.[4] Evidence of effective regulation of health care is not obvious. The National Accreditation Board for Hospitals and Health-care Providers (NABH) is India's quality agency for health-care quality accreditation. Despite efforts to increase NABH penetration, its spread has remained limited. Evidence

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of its impact on health-care quality is also very limited, as also its effectiveness against the challenges faced by publicly funded health insurances (PFHIs) that have been discussed in this paper. An inbuilt limitation of the NABH is that it is entirely voluntary. With the intention of reducing catastrophic OOPHE, India's first national attempt at a PFHI was with the RSBY in 2008.[5] ABPMJAY is intended to be a bigger and better version of the RSBY.

ABPMJAY is a PFHI scheme launched by the Government of India in September 2018. It has two components: (1) the PFHI scheme and (2) health and wellness centers (HWCs). The PFHI scheme is targeted at the bottom 40% of the Indian population. This amounts to about 100 million families and 500 million people, based on deprivation and occupational criteria of the socio-economic caste census 2011.[6] The cashless cover is Rs. 500,000 (€5800), which is at least 50 times the monthly earnings of more than 80% of the Indian workforce. The cover is for secondary and tertiary care hospitalization across public and private impanelled hospitals.[7] It is portable across the country. There is no cap on family size and no age bar. Preexisting conditions are covered from day 1. Costs of diagnostics and medicines are covered up to 3 days prehospitalization and 15 days posthospitalization. All preexisting conditions are covered. More than 1300 procedures are covered. The scheme is administered by the National Health Authority (NHA) which reports to the Ministry of Health and Family Welfare. The NHA has a governing board with representatives from the central government, domain experts, and states. The financing is shared by the central and state governments in 60:40 ratio. Implementation can be through three models: trust, insurance, and mixed. In the trust model adopted by a majority (22/28) of the states, the scheme is directly administered by the state health agency (SHA) without the involvement of Insurance companies. The government bears the entire financial risk. In the Insurance model, the SHA selects an insurance company through a tendering process. The insurance company bears the financial risk and is paid a premium per family. The mixed model with both the trust and insurance companies is employed in brownfield states which had existing schemes.[8]

With the government estimating an annual premium of Rs. 1000 (€12) per family per year, the annual premium for 100 million families comes to Rs. 10,000 crores (€1.16 billion), which is about 6% of the total annual government (central plus state) spending of Rs. 160,000 crores (€18.7 trillion) on health care and about 0.45% of the 2019 GDP (nominal) of 22 lakh crores (€257 trillion). The share of the central government is 60% of this, which comes to Rs. 6000 crores (€700 million). This is reflected in the allocation of Rs. 6400 crores (€742 million) for financial year 2020–2021, which is about 9% of the total central health budget of Rs. 69,000 crores (€8 trillion).[9] Going forward, with increased coverage, the probability of hospitalization rates increasing exists. This can lead to increased claims ratios, which in turn can lead to increased premiums, without which insurers would find the business unprofitable. Increased premiums would lead to an increased fiscal burden on the government exchequer. The concern is whether this would eat into primary and secondary health-care spending. The evidence on this is mixed and depends on the fiscal health of the state. Wealthier states with bigger health budgets might be better placed to handle increased spending requirements of PFHIs. Poorer states might have lesser fiscal space to do so. Strong public health systems seem to be associated with lower levels of spending on PFHIs. This could be happening in two ways: (1) better primary and secondary care translating into a lower burden of tertiary care and (2) better public hospitals translating into a strong competitive public health-care system, which drives down the insurance package rates that private hospitals can command.

The ABPMJAY is an extension of the RSBY, which targeted below-poverty-line (BPL) families. The RSBY had a cashless cover of Rs. 30,000 (€350) with a limit of five on the family size. Depending on which estimate one looks at, the proportion of the population that is BPL varies from 20% to 30%. RSBY gross enrolment numbers do not seem problematic when the target beneficiaries are the bottom 20% of the population, that is, the proportion of the population below the poverty line in India is assumed to be 20%. If we took the higher end of the estimate, that is, 30%, the shortfall would be 32%. In contrast, with 114 million e-cards issued as of November 2019, ABPMJAY seems to have exceeded its target of 107.4 million families.[8] Assuming an expected hospitalization rate range between 5 and 10 per 1000 population based on NSSO data, the expected number of hospital admissions for 500 million people in 1 year would be 2.5–5 million, assuming all were enrolled. The ABPMJAY clocked 6.27 million hospital admissions in a little over a year since launch, despite not starting with full enrolment.[8]

If it works well, ABPMJAY might improve health outcomes, reduce morbidity and mortality, and reduce OOPHE. Out-of-pocket catastrophic health-care expenditure (OOPHE equaling or exceeding 10% of the household expenditure) prevalence in India varies from 19% to 30% across states. ABPMJAY can provide much-needed secondary and tertiary health care to hundreds of millions of people, who might otherwise never have had access to high-quality specialty and superspecialty care. Efforts to improve ABPMJAY delivery by identifying and plugging loopholes in the scheme, along with identifying and understanding the reasons driving undesirable health-care seeker and health-care provider behavior, could prove to be useful.

Methods

Search methods for identification of studies: A comprehensive literature search was conducted in four databases: PubMed, Web of Science, Scopus, and Google Scholar. The results of the search are depicted in Figure 1. The literature search was conducted with the search terms: "Ayushman Bharat OR ABPMJAY OR modicare AND RSBY." The search was set to title and abstract. Rashtriya Swasthya Bima Yojana (RSBY) (National Health Insurance Program) is the immediate precursor of the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (ABPMJAY: long live India—prime minister's health program for the people). The likelihood exists of strengths and weaknesses being carried over from the RSBY into the ABPMJAY. Gray literature and government websites were also searched for relevant documents. The search was conducted by RK. A total of 881 documents were identified (PubMed: 53, Web of Science: 46, Scopus: 97, Google Scholar: 681, government websites: two, and gray literature: two).

Selection of studies: Fifty-two duplicates were identified. After the elimination of the duplicates, 829 unique documents were identified. These 829 unique citations were then subjected to a review of title and abstract independently by 2 reviewers: RK and HB. Six-hundred and ninety-two articles were rejected after review of title and abstract. One-hundred and thirty-two articles were screened for full text independently by two reviewers: RK and HB.

Inclusion criteria: Paper has at least one substantial theme.

Exclusion criteria: Paper has no substantial theme. Sixty-six articles were rejected after review of the full text. Disagreements were resolved by discussion. Seventy-one unique articles were included in the final review. Papers were grouped into themes based on the most substantial theme in the paper. To attain the objective of the study, which is to critically analyze and provide an overview of Ayushman Bharat, a narrative synthesis was performed.

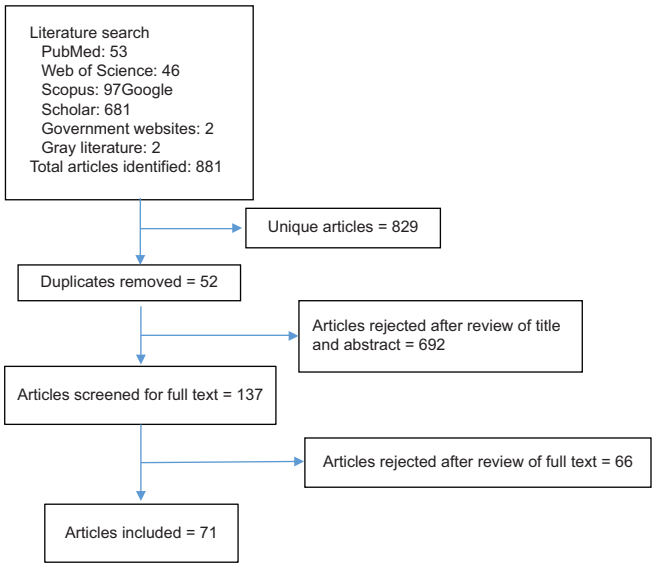

Figure 1: PRISMA flow diagram. PRISMA, Preferred reporting items for systematic reviews and meta-analyses

Results

Seven themes were identified from the review: (1) HWCs, (2) OOPHE, (3) fraud, (4) upcoding and provision of unnecessary medical care, (5) moving focus away from primary care, (6) coverage, and (7) lop-sided access, exclusion at the periphery, and brain drain [Supplementary File 1].

1. Health and wellness centers: With the insurance component of ABPMJAY catering to secondary and tertiary care, HWCs are supposed to provide outpatient care and medicines: maternal and child health-care services, noncommunicable disease care, palliative care, rehabilitative care, oral care, eye care, ENT care, mental health care, first level care for emergencies and trauma, essential drugs at no cost, and diagnostic services.[10] ABPMJAY envisions the creation of 150,000 HWCs across the country. When ABPMJAY was announced, India had a public health infrastructure of 150,000 health SCs and 25,000 primary health centers (PHCs) apart from 5000 community health centers (CHCs) and 800 district hospitals.[11]

The SCs and PHCS are to be upgraded to HWCs. According to the Indian Public Health Standards, the rural health-care physical infrastructure is planned at 1 SC for every 5000 population, 1 PHC for every 30,000 population, and 1 CHC for every 120,000 population.[12] India's rural population is 65% of the total population (135 crores), amounting to 88 crores. The expected and actual numbers of SCs, PHCs, and CHCs and the percentage shortfall are mentioned in Table 1.

There is significant interstate variability in the quantity and quality of these centers.[13] Shortfalls of centers can be as high as 80% in some states. Even at the national level, the auxiliary health manpower shortfall varies between 47% and 66% across different categories. Ten percent of PHCs do not have a doctor. Fifty-six percent of SCs do not have washroom facility for staff. Seventy-three percent of SCs do not have separate washrooms for men and women. Thirty-six percent of PHCs do not have separate washrooms for men and women.

Table 1: Expected and actual numbers of SCs, PHCs, and CHCs and the percentage shortfall

	Subcenter	Primary health center	Community health center
Expected	176,000	29,300	6600
Actual	157,000	24,800	5300
Percentage shortage	11%	15%	20%

Health-care quality is assessed across structural, process, and outcome indicators.[14] Government publications on rural health statistics contain only structural indicators. There is no data available for process and outcome indicators. This gap needs to be bridged. In the absence of any process and outcome indicators, it is difficult to identify areas for improvement and achieve any degree of patient centricity in health-care delivery.[15] As of April 2020, nearly 39,000 SCs and PHCs had been upgraded to HWCs. The target is to complete 150,000 HWCs by December 2022. Currently, government data report that the phase-wise implementation is on target. This assertion is structural indicator based. A better picture could be provided with credible process and outcome indicator data, without which it is not possible to know whether the upgradation of the SCs and PHCS to HWCs had a definite positive effect on the health and wellness of citizens.

Currently, SCs are estimated to service about 10% of morbidity.[16] An HWC is projected to handle about 70% of morbidity. This would include NCD burden and mental illness.[17] Apart from diagnosis and treatment, the physician's role would be extended to ensuring medication compliance for chronic illness and follow-up care delivered close to home.[18] Each HWC will have three full-time health workers in addition to five community health workers called ASHAs (Accredited Social Health Activists). HWCs will have a wider range of drugs and diagnostics. The effort and expenses involved in traveling to the nearest district hospital or medical college hospital to access medications is a barrier that is estimated to drop compliance levels by more than 80% in rural India. This leads to high-prevalence conditions like diabetes and hypertension that can be well controlled with low levels of expenditure, to metamorphose, in the absence of compliance, into life-threatening cardiovascular, cerebral, and renal complications.[19] High-quality HWCs would fulfill three objectives: improve health outcomes of a very significant proportion of the population, reduce burden on the secondary and tertiary health-care system, and drastically reduce OOPHE, more than 70% of which is currently spent on outpatient care. HWCs can be the key to universal health care through primary health care.

2. Out-of-pocket health-care expenditure: The primary goal of ABPMJAY and its precursor RSBY is to reduce OOPHE.[20] As no ABPMJAY impact evaluation studies have been conducted, and since the ABPMJAY is a scale up of the RSBY, it might be instructive to assess the evidence from RSBY impact evaluation studies. Evidence from around the world and from within India suggests that PFHIs in a private provider-dominated ecosystem fail to reduce OOPHE.[21,22] PFHIs are prone to double charging, where the hospital makes the patient pay for some or all services/medicines/diagnostics which are covered under the PFHI and also claim the reimbursement from the PFHI.[23,24] This is particularly so in poorly educated and deprived populations with low awareness levels. The inherently hierarchical nature of medical care provision coupled with its complexities amplifies the stark information asymmetries between the provider and the patients.[25] This lays the ground for exploiting patient vulnerabilities through unethical practices like double charging.[26] PFHI practices that might be contributing to this phenomenon are delayed reimbursements and low-claim settlement ratios. While no data on claim settlement ratios for ABPMJAY are available in the public domain, data for RSBY are. It shows a steady decline from a high 88% in 2011–2012 to a low 57% in 2016–2017. There is no scope for an examination of the reasons for this decline with the available data. Low-claim ratios might be inducing double charging behavior.

The ABPMJAY, like the RSBY, does not cover outpatient care, which accounts for between 40% and 80% of OOPHE and is a significant cause of catastrophic health expenditure and subsequent impoverishment.[27-30] RSBY impact evaluation studies have found little or no significant reduction in OOPHE.[31-34] OOPHE can also be incurred on supplier-induced unnecessary care and hospitalization. RSBY impact studies and several media reports have documented the pernicious phenomenon of supplier-induced demand in poorly regulated markets dominated by private insurers and private for profit-care providers. The ABPMJAY is also vulnerable to this phenomenon.

3. Fraud: Fraud is a big contributor to high OOPHE.[35-38] It also contributes to poor quality health care.[39-41] Health insurance fraud in the United states and Europe is estimated to be 10% of health-care spending. In India, that number could be as high as 35%. The NHA is aware of this,[42] but in line with the experience in other countries, is unable to do anything significant about it. The percentage of cases that the National Anti-Fraud Unit of the NHA is able to detect as suspicious is in the range of 0.25% of total admissions, which is not substantial.

4. Upcoding and provision of unnecessary medical care: Being an upscaling of the RSBY, there is no reason to believe that the experience of the RSBY will not be repeated here, unless specific steps are taken to ensure that the experience is different.[43] The RSBY incentivized medicalization.[44] Private hospitals responded to the perverse incentives created by the package system to prescribe unnecessary treatment.[45] Upcoding is the practice of fraudulent medical billing in which the bill for a medical service is more expensive than it should have been based on the service that was performed.[46] RSBY incentivized upcoding. ABPMJAY might be doing the same. The systematic performance of unnecessary hysterectomies in several geographies of India has been dwelt upon at significant length in literature. This might well be the tip of the iceberg. Medicine being a highly technical and complex field, it is reasonable to assume that almost no cases of suboptimal care would be seen as such, in the absence of

any mechanism to audit or evaluate that care. This would be more so in socio-economically disadvantaged settings like rural India.[47] Only very obvious and glaring instances of medical negligence make it to the press and attract investigation. In the absence of any legal requirements to report any clinical indicators apart from maternal mortality rate and infant mortality rate and an absence of any form of medical audits in both public and private hospitals, it is impossible for any upcoding of medical care, provision of unnecessary medical care, and provision of suboptimal care to be detected.[48] Counterintuitively, provision of unnecessary medical care might not be an unpopular thing to do. Hospital insurance could be seen by many in the populace as an entitlement that needs to be spent every year. This perception could further reduce any skepticism that patients might have about the necessity of the prescribed health-care package.

5. Moving focus away from primary care: Of the two components of ABPMJAY, the PFHI scheme might have a much faster uptake and development than the HWCs. The HWCs might need extended periods of health system strengthening, given India's public health-care infrastructure development history.[49] This gives rise to concerns of a distortion of public spending on health care, with a skew toward procedure-driven, package-oriented health-care provision.[50-53] This could raise health-care provision costs, which is undesirable.[44,54,55] With low budgets, spending needs to be efficient and equitable.[56] Global evidence shows that primary health-care investment has the highest returns.[57] If, as anticipated, the ABPMJAY PFHI access and coverage increase over time, patient claims will rise. This will lead to a gradual increase in PFHI insurance premiums, which might eat into public spending on primary health care. There are concerns that this will lead to a weakening of an already weak public health-care system with the prioritization of more expensive inpatient hospital care over cost-effective primary health care.

6. Coverage: ABPMJAY will face the challenge of succeeding at attaining maximum coverage.[58,59] Earlier PFHIs have met with limited success.[60-63] Low awareness seems to lead to low utilization.[64-66] With outpatient treatment not covered, coverage of psychiatric treatment suffers.[67] State PFHIs accounted for only 15%, 7%, and 25% of the total out-of-pocket expenditure on hospitalization by eligible households in Andhra Pradesh, Karnataka, and Tamil Nadu, respectively. In terms of the number of hospitalizations, the coverage was even smaller: 10%, 3%, and 16%, respectively. This can probably be attributed to the emphasis on tertiary-level medical procedures. Ineffective IEC is a contributory factor.[5,68,69] BPL lists, which are the most important basis for eligibility, have significant levels of inaccuracy in several states.[70,71]

7. Lop-sided access, exclusion at the periphery, and brain drain: Poorly governed districts have lower enrolment rates.[72] Districts with existing state-level PHFIs have lower enrolment in national PFHIs.[72] Richer districts and states with better tertiary care health services see significantly higher PFHI claims.[73,74] More than 50% of patients from poorer districts travel to richer districts avail tertiary care. Most specialized public hospitals are concentrated in large cities, exacerbating the lop sidedness in access to quality tertiary health care.[75,76] The concern is that PFHIs may further exacerbate this imbalance in the spread of availability of quality tertiary health-care services.[77,78]

Discussion

1. Health and wellness centers: Health-care quality is assessed across structural, process, and outcome indicators. The government publications on rural health statistics contain only structural indicators. There are no data available for process and outcome indicators. This gap is to be bridged. In the absence of any process and outcome indicators, it is difficult to identify areas for improvement and achieve any degree of patient centricity in health-care delivery. As of December 2021, 80,764 SCs and PHCs had been upgraded to HWCs. The target is to complete 150,000 HWCs by December 2022.[79] Currently, government data say the phase-wise implementation is on target. This assertion is structural indicator based. A better picture could be provided with credible process and outcome indicator data, without which it is not possible to know whether the upgradation of the SCs and PHCS to HWCs had a definite positive effect on the health and wellness of citizens. Currently, SCs are estimated to service about 10% of morbidity. An HWC will handle about 70% of morbidity.[80] This would include NCD burden and mental illness. Apart from diagnosis and treatment, the physician's role would be extended to ensuring medication compliance for chronic illness and follow-up care delivered close to home. Each HWC will have three full-time health workers in addition to five community health workers called ASHAs. HWCs will have a wider range of drugs and diagnostics. The effort and expenses involved in traveling to the nearest district hospital or medical college hospital to access medications is a barrier that is estimated to drop compliance levels by more than 80% in rural India. This leads to high prevalence conditions like diabetes and hypertension that can be well controlled with low levels of expenditure, to metamorphose, in the absence of compliance, into life-threatening cardiovascular, cerebral, and renal complications. High-quality HWCs would fulfill three objectives: improve health outcomes of a very significant proportion of the population, reduce burden on the secondary and tertiary health-care system, and drastically reduce OOPHE, more than 70% of which is currently spent on outpatient care. HWCs can be the key to universal health care through primary health care.

2. Out-of-pocket health-care expenditure: It might be possible to bring about a significant reduction in OOPHE by a reduction in expenditure on medicines and outpatient care. The current thinking seems to be that expenditure on medicines and outpatient care could be taken care of to a great extent by HWCs. But given the history of the development of the public health-care system in India, characterized as it is by wide interstate and rural-urban variations, there might be significant variations in the extent to which HWCs will be able to reduce OOPHE on outpatient care and medicines. Also, a significant portion of outpatient care and medical expenditure occurs at the tertiary level. The ABPMJAY covers costs of diagnostics and medicines only up to 3 days prehospitalization and 15 days posthospitalization.[81] Follow-up care that does not require hospitalization and for which drugs are not available free of cost at HWCs is not covered under the ABMJAY. Also, almost all HWCs will be in rural areas. That leaves out 35% of the population residing in urban areas without access to HWCs. With multiple impact evaluation studies of the RSBY and state PFHIs showing very little or no impact on reduction of OOPHE, going forward, the government would need to incorporate medicines and outpatient care at tertiary level in the ABPMJAY.

3. Fraud, upcoding, and provision of unnecessary medical care: Going forward, antifraud mechanisms would need to be strengthened at every step. The following measures could help: fraud-prone packages to be limited to public hospitals only; using data analytics to detect fraud; medical audit, death audit, hospital audit, beneficiary audit, preauthorization audit, claims audit; continuing education of health-care providers including doctors and hospital managements on what constitutes fraud; investigation of fraud triggers; naming and shaming in proven fraud; recovery of dues and filing of criminal charges against offenders; strict enforcement of penalties; delisting of fraudulent providers; issuing warnings and show cause notices to doctors.

4. Moving focus away from primary care: Treatment for packages prone to fraud and upcoding could be limited to government hospitals. This could serve two purposes: reducing the fraud and upcoding, and strengthening the governmental health-care system provisioning of that treatment. The package money could be credited to that hospital. This money could be utilized by the hospital to improve its health-care provisioning through spending on necessary infrastructure, maintenance, equipment, and consumables. This could create and strengthen market competition where government hospitals would vie with private hospitals to attract patients in specific therapeutic areas. To encourage government hospitals, they could be given better package rates than private hospitals.

5. Coverage: Comprehensive coverage of primary and secondary care including outpatient care and medicines might enable the ABPMJAY to obtain the twin objectives of comprehensive coverage and significant reduction in OOPHE.

6. **Lop-sided access, exclusion at the periphery, and brain drain:** As already existing private and public tertiary care services in richer geographies draw increasing numbers of PFHI patients, they will profit and develop which is not a bad thing in itself, unless it happens at the cost of development of health-care services in poorer geographies. The poorer the state, the starker this asymmetry is likely to be. This asymmetry will also likely result in a brain drain from poorer to wealthier geographies and from public health services to private health services. This brain drain is likely to increase as one moves up the ladder of technical expertise, with extensive poaching of specialists and superspecialists by deep-pocketed private health-care providers, exacerbating the already existing crippling shortages of specialists in CHCs and district and other public hospitals.

7. COVID-19: The government data report that 830,000 (2.4%) out of a total of 34.6 million cases of COVID-19 have been treated till December 1, 2021, under ABPMJAY. No studies have assessed the quality of care. With a very real possibility of significant under-testing and underreporting, the percentage of cases treated might be lower. Also, no studies have assessed whether everyone who needed treatment received it. At the peak of the pandemic, the media reported acute and crippling supply-side deficiencies. The annual report of the ABPMJAY for the year 2020–21 would have shed more light on the PFHI's utilization trends, but the report is still not in the public domain. The ABPMJAY saw huge dips in utilization in the initial months of the pandemic-induced lockdown: utilization across states varied from 30% to 60%, with significant medical/surgical specialty-wise variations, for example, 90% fall in cataract surgeries.[82,83,84] There are no impact assessment studies of ABMPJAY in COVID-19.

There is very little impact evidence available for the ABPMJAY. The government could plan impact evaluation studies in every state that the ABPMJAY is functional in. These impact-evaluation studies could be done every 6 months and could employ qualitative methods too. The feedback thus generated could enable the NHA, the government body leading, and coordinating the ABPMJAY effort, to take necessary steps operationally and advice the government on strategy. Impact evaluation studies could be done for the HWCs also. Not enough monitoring, evaluation, and auditing are done of the government health-care system. There are no data available on process and outcome indicators. Medical audits are not done. There is a need to usher in a culture of quality. The declaration of verifiable quality indicators by hospitals could be made a legal requirement. Regular and systematic medical audits with verification of medical and surgical treatment

protocols could raise health-care standards. A culture of oversight could temper temptations to game the system. The ABPMJAY PFHI need not flourish at the expense of the continuous strengthening and development of the government health-care system at all levels—primary, secondary, and tertiary. This might not be an easy balancing act, but the ABMPJAY is a dynamic initiative.[85] With continual recalibration and course corrections on the basis of high-quality feedback, it could be a boon for 500 million Indians or more than 6% of humanity, the largest block of people served by a single PFHI in history.

Contributorship statement

Rajesh Kamath: Conceptualization, literature review, writing the paper.

Helmut Brand: Conceptualization, guidance, literature review, reviewing the final draft.

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Conflicts of interest

There are no conflicts of interest.

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Supplementary Table 1: Table of included studies

Themes	Pubmed	Web of science	Scopus	Google scholar
1. Health and Wellness Centres (HWCs)	1. Chatterjee P. India launches Ayushman Bharat's secondary care component. The Lancet. 2018 Sep 22;392(10152):997.	None	1. Lahariya C. 'More, better, faster & sustained': Strengthen primary health care to advance universal health coverage. The Indian Journal of Medical Research. 2019 Apr;149(4):433.	1. Gupta R. Universal healthcare ahoy. RUHS J Health Sci [Internet]. 2018;3:179-81.
	2. Lahariya C. 'Ayushman Bharat'program and universal health coverage in India. Indian pediatrics. 2018 Jun;55(6):495-506.			2. Bajpai N, Wadhwa M. Health and Wellness Centres: Expanding Access to Comprehensive Primary Health Care in India.
	3. Bhargava B, Paul VK. Informing NCD control efforts in India on the eve of Ayushman Bharat. The Lancet. 2022 Mar 26;399(10331):e17-9.			3. Keshri VR, Gupta SS. Ayushman bharat and road to universal health coverage in India. Journal of Mahatma Gandhi Institute of Medical Sciences. 2019 Jul 1;24(2):65.
	4. Ved RR, Gupta G, Singh S. India's health and wellness centres: realizing universal health coverage through comprehensive primary health care. WHO SouthEast Asia Journal of Public Health. 2019 Jan 1;8(1):18.			4. Jain N. Modinomics= Corporatonomics Part IV: Modi's Budgets and the Social Sectors: Health.
	5. Kumar R. Universal health coverage–Time to dismantle vertical public health programs in India. Journal of Family Medicine and Primary Care. 2019 Apr;8(4):1295.			
2. Out of pocket health expenditure (OOPHE)	1. Karan A, Yip W, Mahal A. Extending health insurance to the poor in India: An impact evaluation of Rashtriya Swasthya Bima Yojana on out of pocket spending for healthcare. Social Science & Medicine. 2017 May 1;181:83-92.	1. Das S, Jha AK. Getting coverage right for 500 million Indians. New England Journal of Medicine. 2019 Jun 13;380(24):2287-9.	1. Sangar S, Dutt V, Thakur R. Burden of out-of-pocket health expenditure and its impoverishment impact in India: evidence from National Sample Survey. Journal of Asian Public Policy. 2022 Jan 2;15(1):60-77.	1. Choudhury M, Tripathi S, Dubey JD. Experiences with government sponsored health insurance schemes in Indian states: a fiscal perspective. 2019 Nov 22.

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Themes	Pubmed	Web of science	Scopus	Google scholar
	2. Garg S, Chowdhury S, Sundararaman T. Utilisation and financial protection for hospital care under publicly funded health insurance in three states in Southern India. BMC health services research. 2019 Dec;19(1):1-1.	2. Azam M. Does social health insurance reduce financial burden? Panel data evidence from India. World Development. 2018 Feb 1;102:1-7.	2. Garg S, Bebarta KK, Tripathi N. Performance of India's national publicly funded health insurance scheme, Pradhan Mantri Jan Arogaya Yojana (PMJAY), in improving access and financial protection for hospital care: findings from household surveys in Chhattisgarh state. BMC Public Health. 2020 Dec;20(1):1-0.	
	3. Philip NE, Kannan S, Sarma SP. Utilization of comprehensive health insurance scheme, Kerala: a comparative study of insured and uninsured below-povertyline households. Asia Pacific Journal of Public Health. 2016 Jan;28(1_suppl):77S-85S.			
	4. Khetrapal S, Acharya A, Mills A. Assessment of the public-privatepartnerships model of a national health insurance scheme in India. Social Science & Medicine. 2019 Dec 1;243:112634.			
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	6. Prinja S, Bahuguna P, Gupta I, Chowdhury S, Trivedi M. Role of insurance in determining utilization of healthcare and financial risk protection in India. PloS one. 2019 Feb 5;14(2):e0211793.			

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Themes	Pubmed	Web of science	Scopus	Google scholar
	7. Gupt A, Kaur P, Kamraj P, Murthy BN. Out of pocket expenditure for hospitalization among below poverty line households in district Solan, Himachal Pradesh, India, 2013. PloS one. 2016 Feb 19;11(2):e0149824. 8. Devadasan N, Seshadri T, Trivedi M, Criel B. Promoting universal financial protection: evidence from the Rashtriya Swasthya Bima Yojana (RSBY) in Gujarat, India. Health Research Policy and Systems. 2013 Dec;11(1):1-8. 9. Rao M, Katyal A, Singh PV, Samarth A, Bergkvist S, Kancharla M, Wagstaff A, Netuveli G, Renton A. Changes in addressing inequalities in access to hospital care in Andhra Pradesh and Maharashtra states of India: a difference-in-differences study using repeated cross-sectional surveys. BMJ open. 2014 Jun 1;4(6):e004471. 10. Nandi S, Schneider H, Dixit P. Hospital utilization and out of pocket expenditure in public and private sectors under the universal government health insurance scheme in Chhattisgarh State, India: Lessons for universal health coverage. PLoS One. 2017 Nov 17;12(11):e0187904.			
3. Fraud	1. Paul V. Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PMJAY): Hope for Millions and Exciting New Prospects for NeuroHealthcare. Neurology India. 2019 Sep 1;67(5):1186.	N.A.	1. Maurya D. Understanding public health insurance in India: A design perspective. The International journal of health planning and management. 2019 Oct;34(4):e1633-50.	Pareek M, Ayushman Bharat-National Health Protection Mission a way towards Universal Health Cover by reaching the bottom of the pyramid to be a game changer or nonstarter, International Journal of Advanced and Innovative Research: 7 pp. 1-10 (7).

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Themes	Pubmed	Web of science	Scopus	Google scholar
	2. Maurya D, Ramesh M. Program design, implementation and performance: the case of social health insurance in India. Health Economics, Policy and Law. 2019 Oct;14(4):487-508.		2. Gopichandran V. Ayushman Bharat National health protection scheme: an ethical analysis. Asian Bioethics Review. 2019 Mar;11(1):69-80.	2. Goel S, Sharan S. Tightening the performance screws on Ayushman Bharat. The HinduBusiness line, June 8, 2017.
			3. Khan SA. Hurdles to implementation one year on Ayushman Bharat. Economic and Political Weekly. 2019;54(47).	3. ABPMJAY beneficiary empowerment guidebook March 2019.
4. Upcoding and provision of unnecessary medical care	1. Morton M, Nagpal S, Sadanandan R, Bauhoff S. India's largest hospital insurance program faces challenges in using claims data to measure quality. Health Affairs. 2016 Oct 1;35(10):1792-9.	N.A.	1. Ayushman bharat — Long live private healthcare (2018) Economic and Political Weekly, 53 (46), p. 8.	1. Sundararaman T. Ayushman Bharat: Hopes and Fears. International Journal of Health Systems and Implementation Research. 2018;2(1):1-5.
	2. Saxena N, Singh P, Mishra A. A qualitative comparative analysis of healthcare Supply–Demand side barriers under the publicly funded health insurance scheme in India. Indian Journal of Public Health. 2019 Oct 1;63(4):318.			2. Bagcchi S. Doctors criticise India's" ill conceived" launch of publicly funded health insurance scheme. BMJ: British Medical Journal (Online). 2018 Mar 28;360.
				3. Bharat A. Designing India's national healthcare protection: Challenges and opportunities. Perspectives. 2018 Aug 27.
5. Moving focus away from primary care	1. Kumar R. Universal health coverage–Time to dismantle vertical public health programs in India. Journal of Family Medicine and Primary Care. 2019 Apr;8(4):1295.	N.A.	1. Kumar R. Achieving universal health coverage in India: The need for multisectoral public health action. Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine. 2020 Jan;45(1):1.	1. Chaudhuri S. Ayushman Bharat: accessible healthcare or cause for concern for the welfare state?

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Themes	Pubmed	Web of science	Scopus	Google scholar
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6. Coverage	1. Angell BJ, Prinja S, Gupt A, Jha V, Jan S. The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and the path to universal health coverage in India: Overcoming the challenges of stewardship and governance. PLoS medicine. 2019 Mar 7;16(3):e1002759.	1. Kusuma YS, Pal M, Babu BV. Health insurance: Awareness, utilization, and its determinants among the urban poor in Delhi, India. Journal of epidemiology and global health. 2018 Dec;8(1-2):69.		1. Taneja PK, Taneja S. Rashtriya Swasthya Bima Yojana (RSBY) for universal health coverage. Asian Journal of Management Cases. 2016 Sep;13(2):108-24.

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Themes	Pubmed	Web of science	Scopus	Google scholar
	2. Dror DM, Vellakkal S. Is RSBY India's platform to implementing universal hospital insurance?. The Indian journal of medical research. 2012 Jan;135(1):56.	2. Nandi S, Dasgupta R, Garg S, Sinha D, Sahu S, Mahobe R. Uncovering coverage: utilisation of the universal health insurance scheme, Chhattisgarh by women in slums of Raipur. Indian Journal of Gender Studies. 2016 Feb;23(1):43-68.		2. Singh OP. Insurance for mental illness: government schemes must show the way. Indian Journal of Psychiatry. 2019 Mar;61(2):113.
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	6. Bandyopadhyay S, Sen K. Challenges of Rasthryia Swasthya Bima Yojana (RSBY) in West Bengal, India: An exploratory study. The International journal of health planning and management. 2018 Apr;33(2):294-308.			
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