

## INDIA'S NATIONAL HEALTH PROTECTION SCHEME: AYUSHMAN BHARAT

Growing Opportunities in  
Affordable Healthcare

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## Foreword

Access to quality healthcare is a fundamental need of a country's citizens and lays the foundation for sustainable and equitable economic development. Over the last few decades, India has made significant progress on the primary healthcare front. However, a large section of the population still lacks access to critical healthcare services. The shifting disease pattern from communicable to non-communicable diseases has created a gap in the healthcare supply, increasing private sector participation.

The financial burden of attaining healthcare makes millions slip into poverty every year. Thus, healthcare needs in India are more complex and require a strong healthcare financing model with an efficient patient care pathway.

Universal Health Coverage (UHC) entails the availability and accessibility of preventive, curative, rehabilitative, and palliative health services, which are of adequate quality and do not place a financial burden on people availing services.

In 2017, the Indian Government introduced a National Health Policy (Ayushman Bharat or Healthy India) that aims to offer universal health coverage and provide the foundation for equitable healthcare. The National Health Protection Scheme (NHPS) initiative signals a shift in the Government's traditional role from the primary supplier of healthcare to a payer. Implementing such a large scheme in India is an ambitious task, and the long-term success will depend on many factors. As an enabler, the Indian government will need to invite participation from the private sector and not-for-profit organizations, while being prudent about regulations, technology assessments, pricing structures, quality of care, and infrastructure.

The success depends on aspects such as funding mechanisms, socio-economic factors, political will, focused implementation, and collaboration with the private sector to build the ecosystem. The government can mitigate some of these challenges by continuing to listen to the market, monitoring the situation, and adjusting the policy over time. Leveraging technology will be crucial not only in the implementation of the program but also in delivering outcomes and monitoring the system. From an industry perspective, the domestic market will see an increase in demand, which could trigger supply expansion. However, imports may increase if domestic manufacturing does not keep pace with the added demand. Such schemes with large scale implementation tend to increase the market size exponentially over the years.

In this paper, SKP examines the potential of the NHPS and attempts to study the impact it creates on healthcare accessibility along with opportunities created for various stakeholders in the industry. If successful, it will increase the healthcare spend per capita, ensure accessibility to India's underprivileged, and provide impetus to an already growing healthcare market. NHPS will be the beginning of a new era in universal health coverage in India. With the onset of UHC, the industry will benefit from a large patient influx, offering them a higher scale of operations. This will bring in more efficiency and quality control resulting in better health outcomes for patients creating a win-win situation. The scheme could be a game changer with "the power of a billion" bringing about a paradigm shift in the Indian healthcare ecosystem.



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# Table of Contents

I. Executive Summary

4

II. India – Unlocking the vast potential in healthcare

5

III. Introduction to National Health Protection Mission

10

IV. Impact of NHPS on the Indian Healthcare Industry

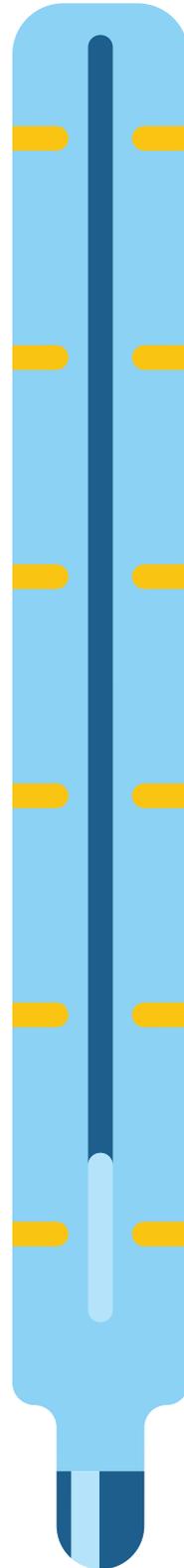
13

V. Road to Universal Health Coverage

22

VI. Conclusion

26



## Executive Summary

The first step towards Universal Health Coverage (UHC) is a strong and robust primary healthcare network. Healthcare indicators in India show a marked improvement over time in the primary care ecosystem, resulting in reduced infectious disease, decreased infant mortality, improved maternal health, and increased overall life expectancy. Immunization drives have increased with better awareness and outreach programs.

When it comes to secondary and tertiary healthcare, India lags behind for reasons of accessibility, availability, and affordability. Some pressing concerns include a high disease burden, high out-of-pocket expenses, unregulated and fragmented healthcare delivery, inadequate skilled human resources, and infrastructure gaps. While India has made efforts to address some of these issues individually, a comprehensive policy framework or approach was lacking.

NHPS is a clear indication of the Indian government's commitment to focus on secondary and tertiary healthcare, particularly for sections of the population that do not have easy access. NHPS aims to address catastrophic health events that push 30-35 million people into poverty annually and reduce out-of-pocket expenditure for the target population. To date, NHPS has covered about 100 million eligible families, offering insurance coverage of ~USD 7000 for 1350 procedures across major therapies. Over 30 states and union territories have been covered so far, and almost a million people have benefitted in the first 120 days of the program launch.

NHPS is being seen as a stepping stone to achieving UHC in India. Implementing UHC is not an easy task. Countries have faced challenges at every stage, from planning to implementation. These include - identifying the population to be covered, defining standard treatment protocols, making the Primary Healthcare Center (PHC) network robust for referral management, developing and harnessing human resources, deciding package rates, identifying funding avenues, and creating a mindset of co-payment in the long term. The major challenges to NHPS include defining package rates, private sector participation, beneficiary identification, fraud detection and management, etc. Hence, the active involvement of the private sector and the usage of information technology would be critical to its long term success.

The Indian healthcare industry has been growing steadily over the past decade, and the upward momentum is expected to continue. NHPS is expected to provide an additional impetus for growth, with results over the next few years. NHPS will open up opportunities

across multiple healthcare segments, with Healthcare Services expected to benefit the most, due to capacity addition and increasing occupancy rates. The Medical Devices and Equipment sector is also likely to be a big beneficiary, due to increased financial coverage of various procedures under NHPS. Medical devices will be required to diagnose and treat the increased number of patients, with increased demand for equipment, instruments, consumables, and disposables. Pharmaceuticals will also benefit from the inclusion of more chronic patients in the healthcare ecosystem, though this impact may be more gradual.

In the long run, NHPS provides the government with a unique opportunity to bring institutional reforms to a sector, where historically, change has been difficult to implement. NHPS is the first instance where the healthcare sector will receive significant financial support from the government. The program will bring a mindset shift for the target population by identifying healthcare as an important pillar in improving both quality of life and economic prosperity of the nation.



**Ravi Menon**  
Senior Business Adviser, APAC Healthcare

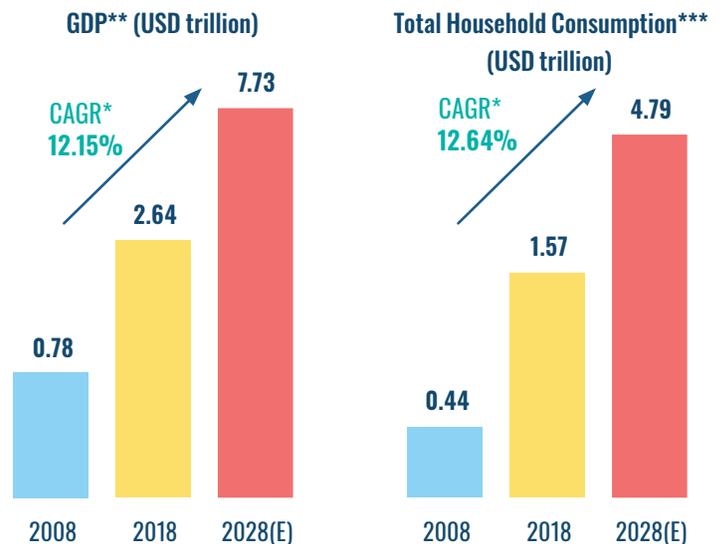
# INDIA – UNLOCKING THE VAST POTENTIAL IN HEALTHCARE



## Macroeconomic Indicators

India has been a significant growth engine for almost a decade, outpacing leading economies of the world. India has undergone significant structural and institutional reforms over the last few years. This has impacted several macroeconomic indicators, leading to growth in size, per capita income and consumer spending, some of which are shown below.

The consumption story in India is just getting started. The continuous growth in the consumption is driven by several factors like increasing population, shift in family structures, increased urbanization and discretionary spending. With India bringing more people out of poverty and burgeoning middle class, we expect the healthy growth rate to sustain in the foreseeable future.



Source: World Bank, International Monetary Fund, and World Economic Forum, Oxford Economics

\* Compounded Annual Growth Rate

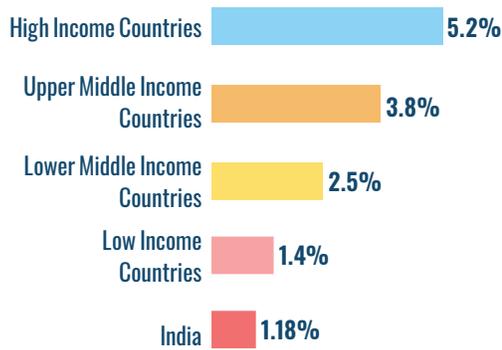
\*\* GDP at nominal value

\*\*\* Total Household Consumption at nominal value

# Healthcare Expenditure

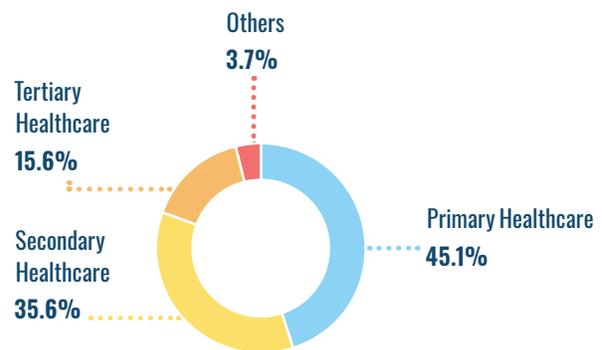
India's total expenditure on healthcare is low, close to 4% of the GDP, while the world average is around 10% of the GDP. The public expenditure is also low at ~1% of the GDP, lagging even low-income countries. The focus of India's public healthcare spend remained on providing accessible and affordable primary healthcare, with secondary and tertiary care being limited to major cities.

## Public Expenditure as % of GDP



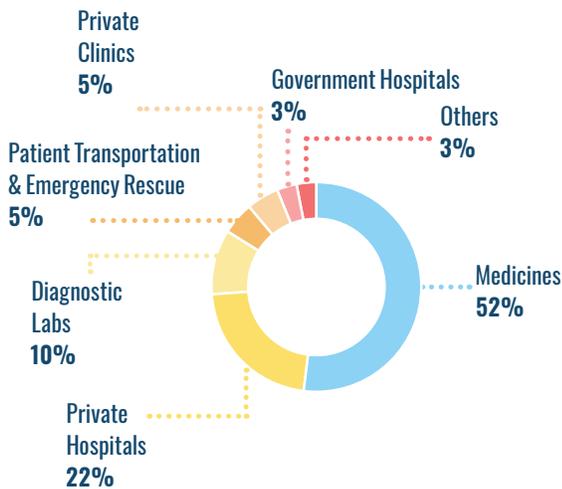
Source: National Health Profile 2018

## Expenditure Attributed to Level of Healthcare in India



Source: National Health Accounts 2017

## Distribution of Total Healthcare OoPE in India



Source: Household Expenditures in India (2013-14), December 2016, Ministry of Health and Family Welfare (MoHFW)

The Indian healthcare ecosystem lacked government support for secondary and tertiary healthcare. An inadequate and burdened public health system created a demand supply gap that is filled by private facilities. Coupled with a lack of adequate insurance penetration, this increased the Out of Pocket Expenditure (OoPE). It is estimated that 30-35 million people are pushed into poverty annually due to high OoPE.

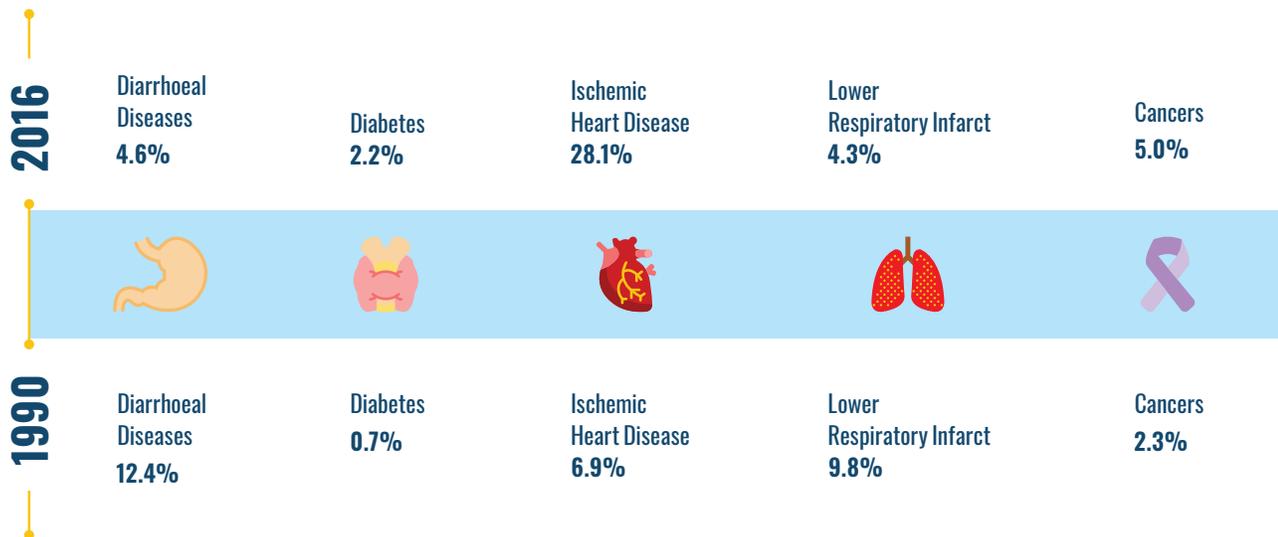
## Shift in Disease Pattern

With a large population, India accounts for ~18% of the world population and bears 20% of the global disease burden. India still accounts for 27% of neonatal deaths, 23% of infant deaths, and 23% of TB deaths in the world. India's approach to healthcare has so far been focused on primary healthcare, mainly catering to Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) and communicable diseases. However, there has been an epidemiological transition over the last three decades. India's disease profile has changed from consisting predominantly of Communicable Diseases (CDs) to a higher prevalence of Non-Communicable Diseases (NCDs).

Today, NCDs account for 62% of male deaths and 52% of female deaths, a majority of which are premature. Further, the pattern varies among different states in India, ranging between 48% to 75% for non-communicable diseases; 14% to 43% for infectious and associated diseases; and 9% to 14% for injuries. Hence India has a dual challenge of managing both a communicable and non-communicable disease burden despite the overall shift to NCDs. Low utilization of the public health system, especially at the Community Health Centre level (except for childbirth-related services) exacerbates the situation.

### Shift in Disease Burden of India

% of Overall Deaths

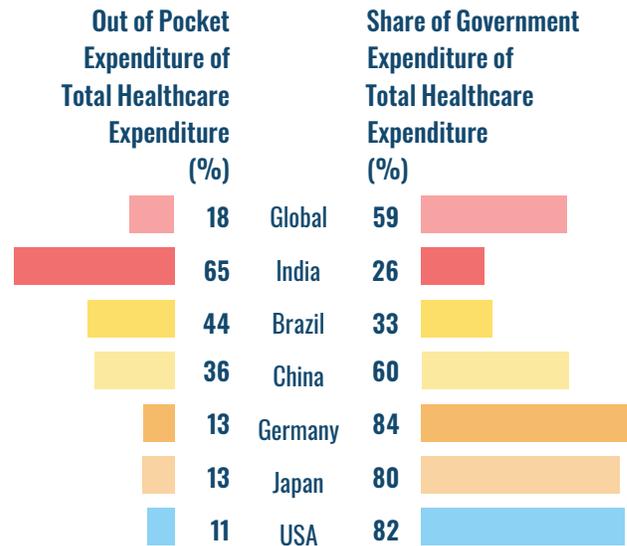
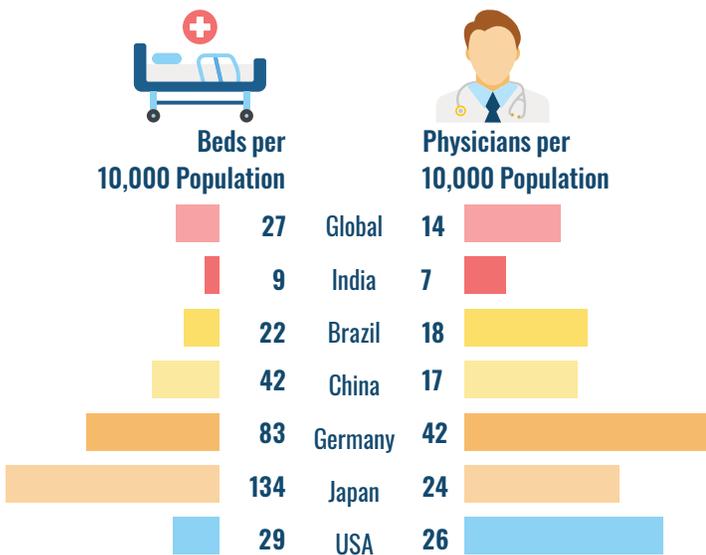
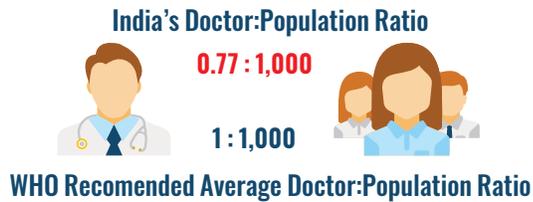


Source: India: Health of the Nation's States, Ministry of Health (MoHFW)

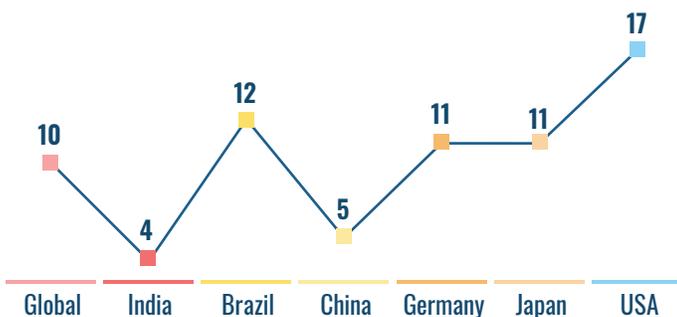
A majority of the NCDs, including diabetes, chronic kidney disease (CKD), cancer, cardiovascular disease, have witnessed a significant increase in incidence between 1990 and 2016. India needs a two-pronged approach to tackle changing disease trends- preventive care for CDs and address NCDs by developing secondary and tertiary care, which is accessible as well as affordable.

# Healthcare Indicators – Global Comparison

Due to inadequate expenditure on healthcare, India's Health Index Ranking is poor. India lags in many major healthcare indicators as compared to global peers, in particular the Organization for Economic Co-operation and Development (OECD) group countries. As one moves away from urban centers, it becomes progressively difficult to find quality healthcare.



## Total Healthcare Expenditure as % of GDP



India's healthcare infrastructure need is expected to grow with the expansion of healthcare services and insurance penetration. The government needs to address this challenge through a holistic strategy, with targeted efforts towards improving penetration in low tier cities and rural areas.

Source: World Health Organization 2011-2014, World Bank, 2016, and OECD 2017  
All figures have been rounded-off.

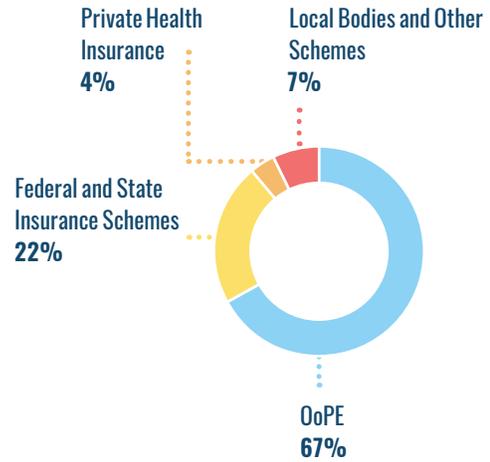
# Healthcare insurance sector in India

Given the public-private split of healthcare expenditure, it is the individual who primarily bears the cost of healthcare. The balance is distributed between government schemes (state and central) and private insurance programs.

While health insurance penetration in India has witnessed steady growth, the current penetration level is low, and public awareness and affordability are significant hurdles to growth.

Insurance coverage was poor in India; 85% of the rural population and 82% of the urban population had no coverage. Of those insured, private players had the low share of 25%, while 75% were covered under government-sponsored health schemes.

## Source of Financing Expenditure



## Pre-NHPS Scenario



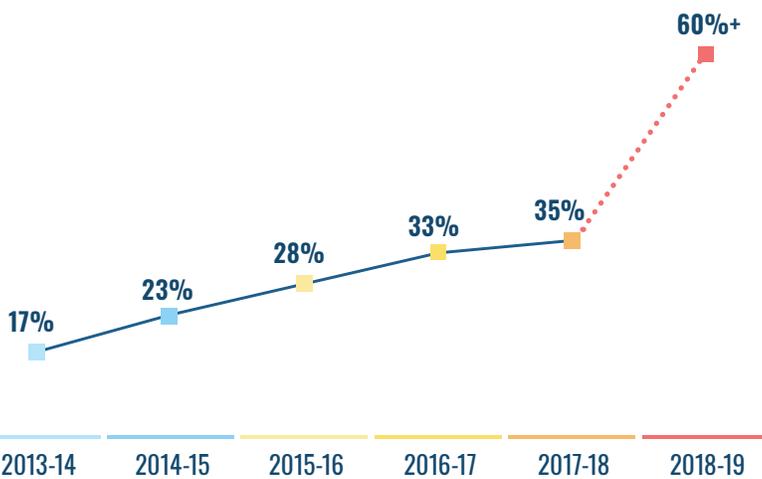
Number of Policies Issued  
**14 million**



Population Covered  
**480 million**

Source: Insurance Regulatory Development Authority (IRDA) Annual Report 2019

## % of Population with Health Insurance Coverage



Expected increase in the population's health insurance coverage due to additional inclusions under NHPS

Source: Insurance Regulatory and Development Authority of India (IRDA) Annual Reports





# NHPM (Ayushman Bharat)

## NHPS (Prime Minister Jan Arogya Yojana)

## Health and Wellness Centers



Health insurance cover of up to **USD 7,812 (INR 500,000)<sup>2</sup>** per family per year



More than **107.4 million** poor and vulnerable families (approximately **500 million** beneficiaries) covered



All families listed in the **2011 SECC database** are eligible subject to specific exclusions



**No cap** on family size and age of members



Covers **secondary and tertiary care hospitalization**



**1,350 medical packages**, which cover- surgery, medical and daycare treatments, cost of medicines, and diagnostics



All **pre-existing diseases** covered



**National Portability** allowing eligible beneficiaries to avail services across India

**150,000** Centers



**Free diagnostics and medicines** for maternal health, child health and NCD's



**Screening Patients** for referral to secondary and tertiary care



2. Conversion rate of 1USD = INR 64

# Challenges for NHPS

NHPS is an ambitious program, and is poised to be one of the largest healthcare schemes in the world. It aims to provide healthcare coverage to 500 million individuals across India.

Any scheme of this scale will be faced with implementation challenges, and NHPS is no exception. Some of the major challenges can be:



## Inadequate Infrastructure

India has an acute shortage of hospital beds, a majority of which are concentrated in urban areas. Building capacity in rural areas is a capital intensive and long term project. Since a majority of big private players are not opting for empanelment under NHPS, the burden of such capacity building falls on the government. Accessibility will be a challenge if the adequate infrastructure is not created.



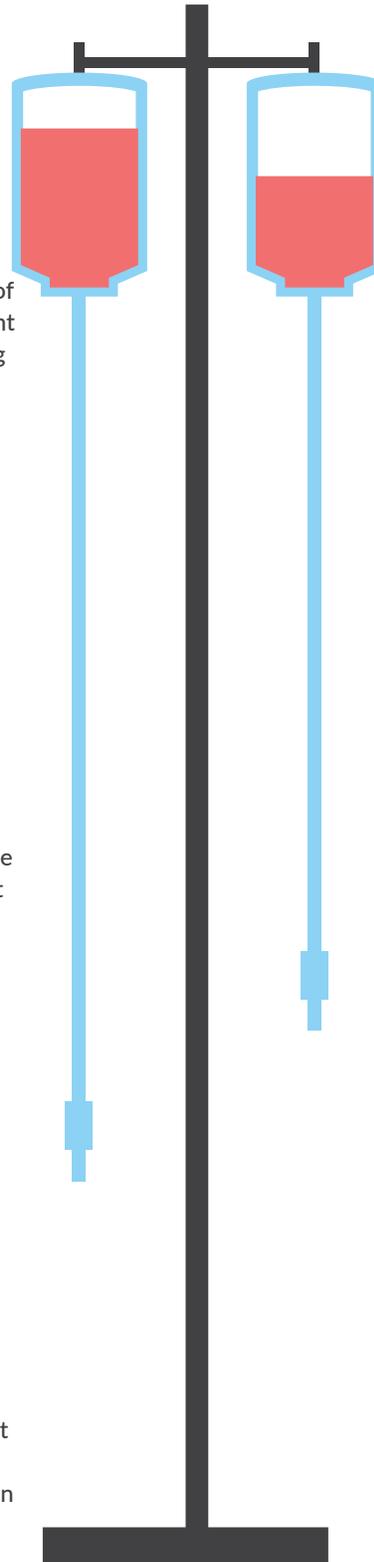
## Inaccuracy of SECC Database

The Socio-Economic and Caste Census (SECC) data is being used to identify the beneficiaries of the scheme. However, since the last SECC was released in 2011, the beneficiary data is almost a decade old. This presents its own set of challenges. Secondary screening parameters would be needed under the scheme to identify the target beneficiaries. For instance, one month post the scheme's national roll-out, the government introduced an exclusion criteria list to assist in determining the right beneficiaries.



## Fraud Detection and Prevention

One of the reasons for the lower than anticipated success of existing state and central run health insurance schemes is the high claims ratio. This can be attributed to factors like fraud or abuse of the scheme and inadequate package rates and can make schemes unviable for both – private insurance providers and the government. Hence, a robust IT infrastructure is needed, which can not only track real-time data but also conduct data mining to identify fraud. Detailed fraud prevention guidelines and a penalty structure for violations should be established.



## Skilled Human Resources



In a developing country like India, the availability of skilled human resource is a challenge. The-doctor-to-patient and nurse-to-patient ratios are very low. Further, this ratio is heavily skewed towards urban areas. For a scheme targeting the rural population, a well-rounded strategy for resource creation, optimization and rationalization will need to be developed.

## Package Rates



For the success of the scheme, it is important that the package rates offered are competitive. The current rates for the scheme are conservative and are often inadequate in the prevalent industry scenario. These low rates could discourage hospitals from empaneling for NHPS and hinder service access for patients. The government has suggested they will examine the rates after the rollout.\*

\* Nearly one year after the rollout of the initiative, the National Health Agency (NHA) analyzed the initial trends, conducted internal deliberations, and decided to revamp the scheme. They have rationalized rates across packages, introduced separate rates for implants and surgeries, and removed packages where there is a fear of duplication of claims (like cataract surgeries). These changes are yet to be officially notified but are expected to be implemented soon.

# IMPACT OF NHPS ON THE INDIAN HEALTHCARE INDUSTRY



NHPS aims to address three critical factors plaguing the Indian healthcare ecosystem - accessibility, availability, and affordability. Stakeholders have appreciated the program's intent towards Universal Health Coverage, but supply-side constraints are a concern. NHPS' premise is that if demand increases, supply will expand in response across multiple segments like healthcare delivery, equipment, consumables, medicines, and diagnostics.

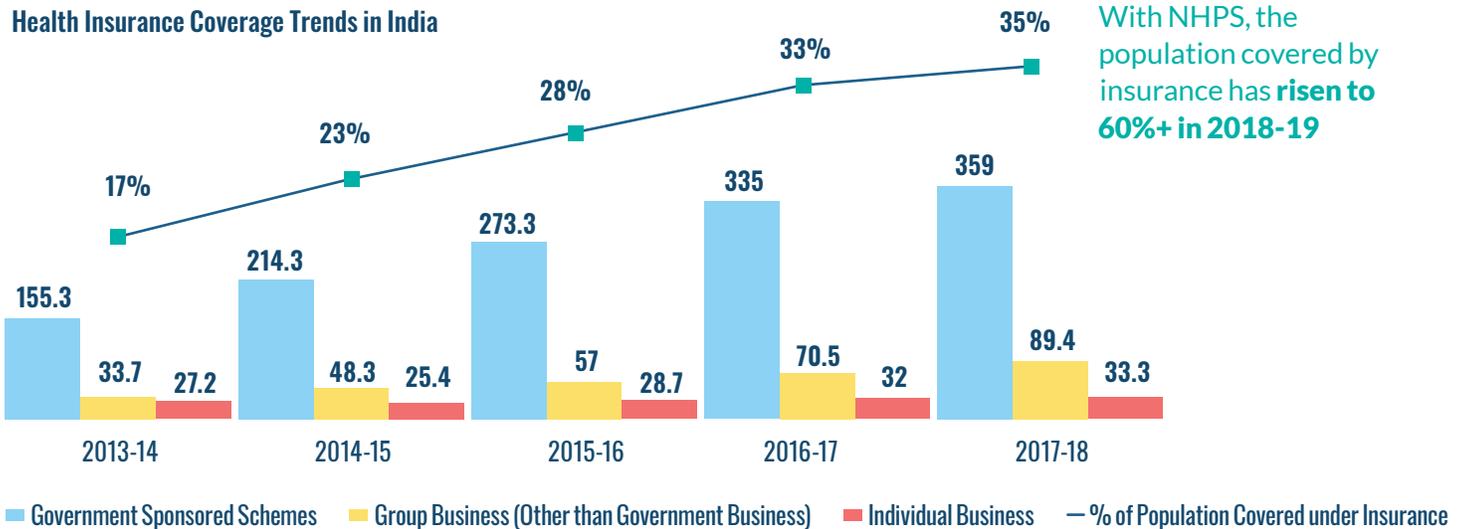
The program will bring health insurance coverage to a large section of the target population.

The government's role shifts from that of a healthcare 'Provider' to simply a 'Payer.' An increase in awareness would encourage a larger section of the population to come under the ambit of insurance. This triggers a shift in the mindset from curative to preventive care.

Penetration of health insurance in India has so far been sub-optimal, but is now on an upward trajectory, almost doubling between FY 2013-17 across urban and rural India.

NHPS' target coverage is about 500 million individuals (or 100 million families). As of March 2019, NHPS has empaneled close to 15,000 hospitals treating about 6000 patients per day, with an average spend of USD 170. This translates to ~2.5 million patients availing services annually, with an inpatient ratio of around 0.75%. Policymakers consider these to be initial numbers that will increase significantly. The National Health Agency is targeting a four-fold increase in the number of patients to 30,000 patients per day. This equals roughly 10 million patients annually once the program stabilizes (estimated by FY 2020).

Health Insurance Coverage Trends in India



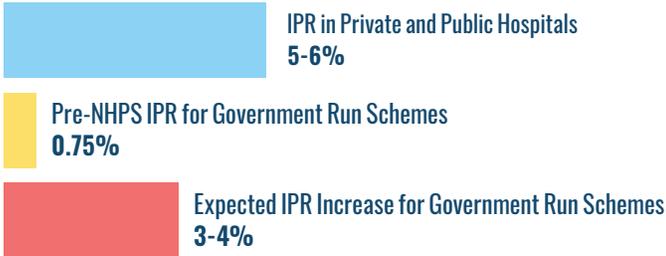
(Figures in millions)

Source: IRDA Annual Report, National Institution for Transforming India (NITI Aayog), NHPS, and SKP Analysis

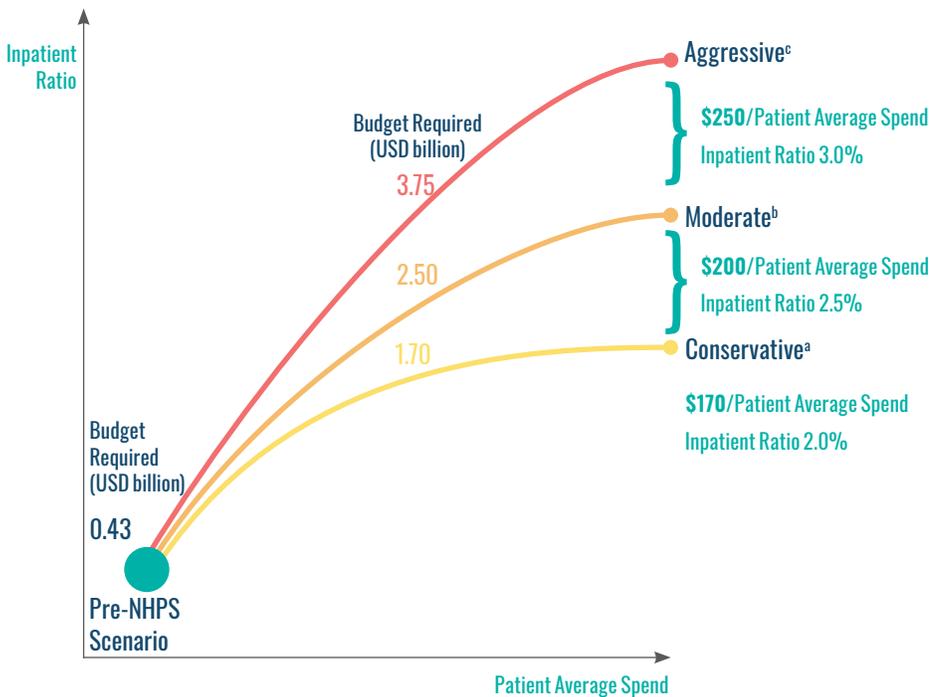
The following is an estimate of the broad impact of NHPS based on two parameters - Inpatient Ratio (IR) and average spend per patient (assuming NHPS population coverage remains constant).

The Average Spend per Patient under NHPS and other Government schemes has been USD 140-170. Increased coverage and treatment inclusions under NHPS could potentially increase average spend to USD 160-200. Expenditure required under the program would increase from USD 1.4 billion to more than USD 3 billion. The following is a beneficiary growth forecast<sup>3</sup> over the next 3 years:

**Inpatient Ratio (IPR)**



**NHPS Yearly Budget Estimates Under Different Scenarios**



a. Conservative: Base scenario, assuming inpatient ratio and spend levels in line with NHA estimates  
 b. Moderate: Adjusted to align with increasing patient awareness and spend levels, per stakeholder expectations  
 c. Aggressive: Aggressive plan implementation could result in higher than anticipated spend, and the increase of medical equipment will be fast-tracked  
 Source: NHPS, Ministry of Health (MoHFW), National Sample Survey Organization (NSSO), and SKP Analysis

3. Conversion rate of 1USD = INR 64

## Impact of NHPS on Healthcare Segments

To better understand the impact of NHPS and opportunities created for stakeholders, this analysis has been further broken down to assess industry segments and therapies. Overall, the Indian healthcare sector is expected to grow due to NHPS, but the impact on different segments will vary. NHPS will have a recurring impact on population covered, and a multiplier effect on other sections of the population not covered due to a shift in focus from curative to preventive care.

SKP's healthcare industry growth forecast uses parameters like population covered, inpatient rates, Average Length of Stay (ALoS), and occupancy rates in the hospital.

The Healthcare Delivery segment is expected to be the biggest beneficiary of the scheme, followed by Medical Devices, and Pharmaceuticals.

### Summary: 3 Year Impact of NHPS on the Healthcare Market (USD million)

Segments	Market Size (2018)	Conservative	Moderate	Aggressive	Natural CAGR (Over the next 3 years)	CAGR Post NHPS (Over the next 3 years)
Healthcare Delivery <sup>1</sup>	106,580	3,978	6,243	9,785	14%	15% to 17%
Medical Equipment and Furniture <sup>2</sup>	3,548	2,279	3,040	4,561	15%	33% to 45%
Medical Devices and Consumables <sup>1</sup>	3,022	808	1,227	1,851	13%	23% to 33%
Pharmaceuticals <sup>3</sup>	27,740	737	1,021	1,356	14%	15% to 16%
<b>Total</b>	<b>146,000</b>	<b>7,802</b>	<b>11,531</b>	<b>17,553</b>		

Source: SKP Analysis

1. Recurring impact on Healthcare Delivery and Medical Devices/Consumables numbers after the scheme stabilizes in three years
2. One-time impact on Medical Equipment and Furniture, owing to Bed additions
3. Pharmaceutical growth includes recurring chronic patients, which will have a multiplier effect since NHPS adds chronic patients each year to the coverage

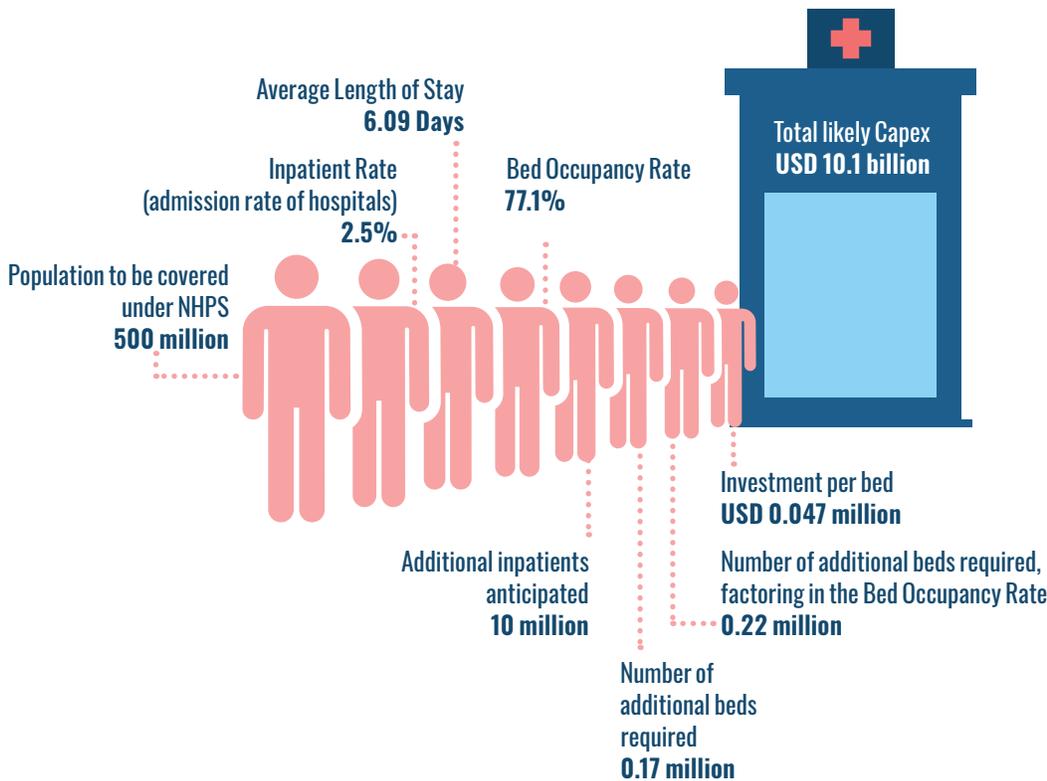
## Healthcare Delivery

Healthcare Delivery is the largest of three segments of the healthcare industry. Expansion in this segment will be spearheaded by inpatient growth. An increased patient pool will lead to higher utilization of existing capacities and encourage capacity addition in rural areas in the medium term.

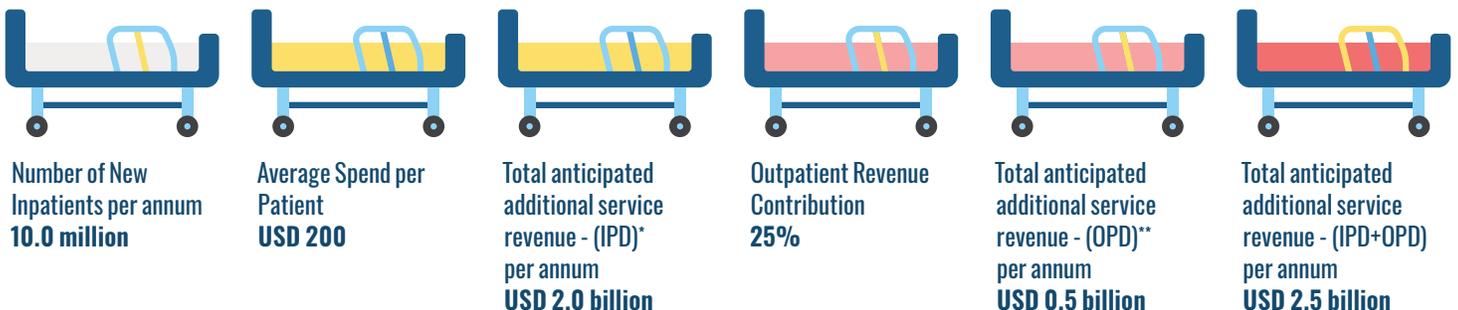
The additional capacity will become available over the next three years after hospital chains start making capital expenditure to expand their existing facilities or build new hospitals. Capacity addition will involve significant capital expenditure as described below.

Since the beds to population ratio is currently skewed with more hospital beds in urban areas, most capacity addition will be in semi-urban and rural areas. Private hospital chains have mastered the low-cost model based on geography and patient pool. Once they are empaneled, and unit economics starts making sense for them, they are expected to lead the change to cater to the additional demand. As the program is rolled out, the healthcare services segment will witness an immediate impact, and additional revenues will be recurring in nature.

While NHPS's immediate impact on Healthcare Delivery is limited, it will increase with rising awareness, average spend, and policy focus towards Universal Health Coverage.



Source: SKP Analysis



Source: NSSO Report, and SKP Analysis

\* Inpatient Department

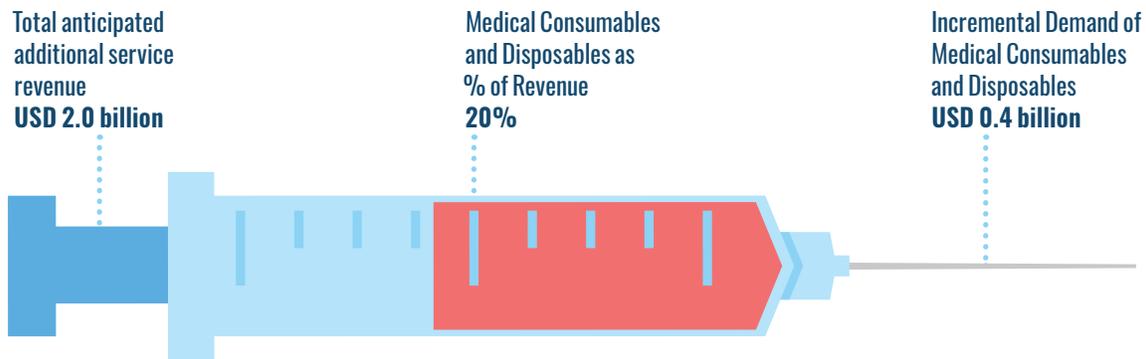
\*\* Outpatient Department

## Medical Devices

The Medical Devices industry in India is at a very nascent stage and is significantly smaller than other emerging and developing economies. The per capita medical device spend in India is USD 3, compared to USD 13 in China, and USD 340 in the USA. The overall industry size in India is USD 7 billion, for a population of ~1.35 billion. With NHPS and the resultant expansion in the patient pool and bed capacity, this industry is expected to benefit substantially, particularly categories like equipment and instruments, and consumables and disposables.

With the shifting disease burden, some medical device product categories will witness a greater impact than others. These include diagnostic equipment (replacement or new purchases), syringes and needles, stents, etc. In its first 100 days, NHPS attracted a greater ratio of patients from therapies like cardiology and oncology, indicating a future trend.

### Revenue from Inpatient Department (IPD)



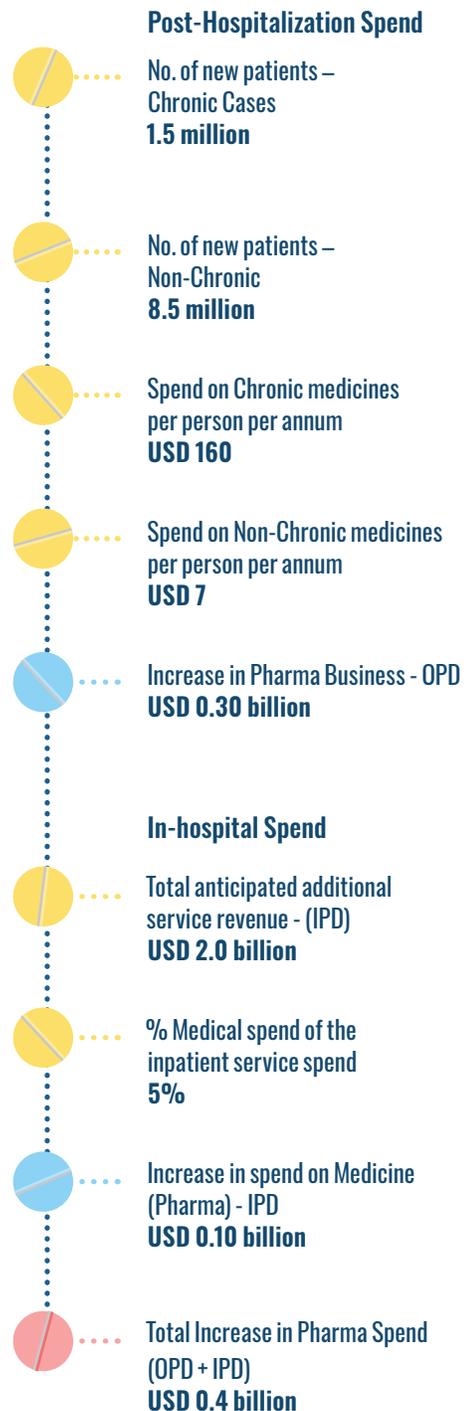
Source: NSSO Report, and SKP Analysis

## Pharmaceuticals

By value, pharma is the second largest segment in the Indian healthcare industry. NHPS incentivizes this segment to refocus on the domestic market. India is known for developing and manufacturing quality generics at affordable prices, but even these prices are out of reach for many. The domestic pharma market has been growing at a steady rate for the past decade, with GST and demonetization being minor hurdles to growth. The pharmaceutical sector can be divided into Chronic and Non-Chronic. Here are some attributes of the Pharma segment:

The Pharma segment has been growing at 8.3%, owing largely to the chronic segment, which accounts for about 32% of the total medicine market. Growth has been largely attributed to increased instances of NCDs, with a patient pool of about 100 million before NHPS. The program is expected to provide impetus to this segment on two fronts:

1. The addition of 150,000 Health and Wellness centers should create a massive influx of first-time patients who are prescribed medicines at the primary care level
2. The central and state governments have existing initiatives to provide free medicines for primary care. The boost to this sector would be limited to the secondary and tertiary sectors, and the increased demand would be met by market forces, with limited government involvement.



Source: SKP Analysis

# Top Therapies to be impacted by NHPS

NHPS provides a significant section of the society access to tertiary care for healthcare services. This influx of new patients is expected to come from therapies like cardiology, oncology,

and urology, among others. In the first 100 days of NHPS implementation, there has been a higher incidence of patients requiring the following therapies:



Cardiology



Nephrology



Neurology



Oncology



Ophthalmology



Orthopedic



Pediatrics

Source: NHPS, SKP Analysis

Patient admission patterns reflect the disease profile of the country. A majority of these admissions have been to private hospitals and for more complex procedures. This indicates the patient preference towards private healthcare as well as the shift towards NCDs.

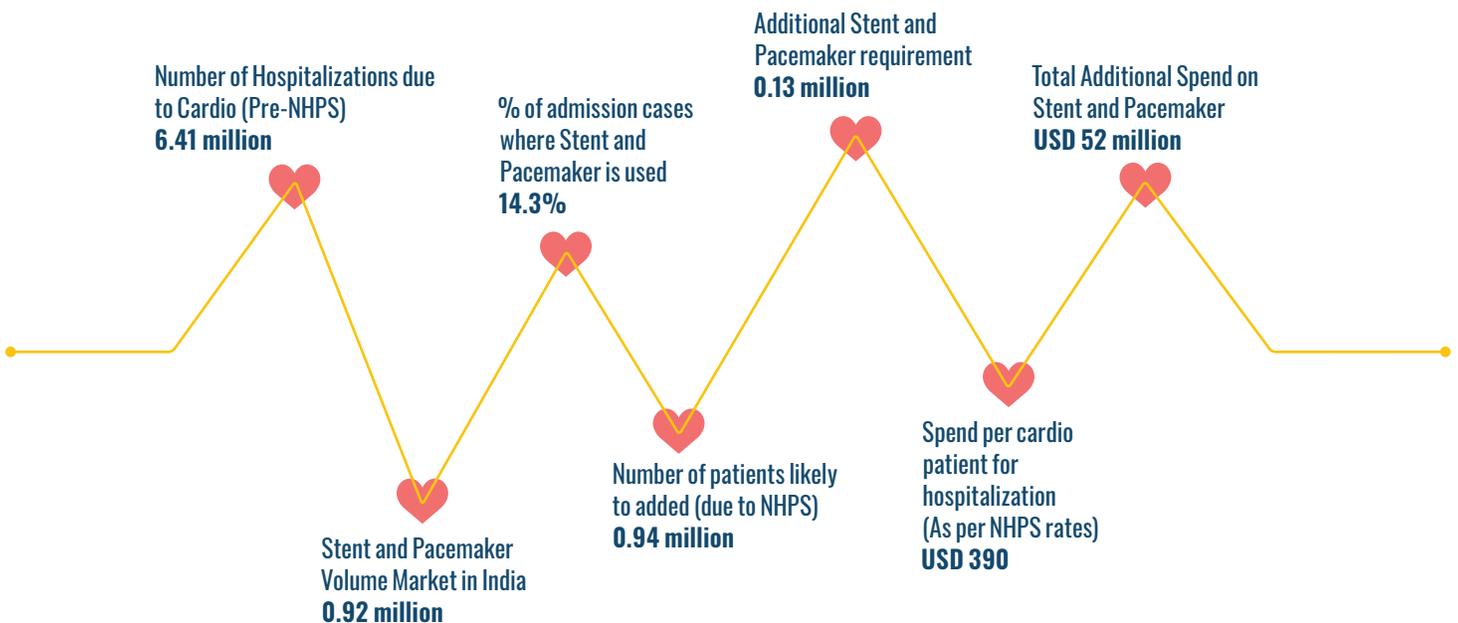
We have selected a few therapies for a better understanding of the incidence and impact of NHPS on them.

## Cardiology

In FY18, 72.5 million cardiac cases were reported in the country, with the number steadily increasing due to pollution, an aging population, and a modern lifestyle. Recurring heart abnormalities account for 80% of cardiac deaths in India, causing a higher demand for heart care devices. Almost, 10% of NHPS packages are in the cardiology, cardiovascular, and cardiothoracic segment.

Based on data from the National Health Agency, up to 22% of admissions are heart patients signed up for angioplasty, followed by coronary artery bypass graft (9%), valve replacement and repair (6%), polytrauma (4%), and joint replacement (3%). Cardiology, cardiothoracic, and vascular procedures accounted for almost 50% of the admission amount.

In the following table, Stents, and pacemakers have been used as an example to illustrate the impact of NHPS on it.



Source: NHPS, and SKP Analysis

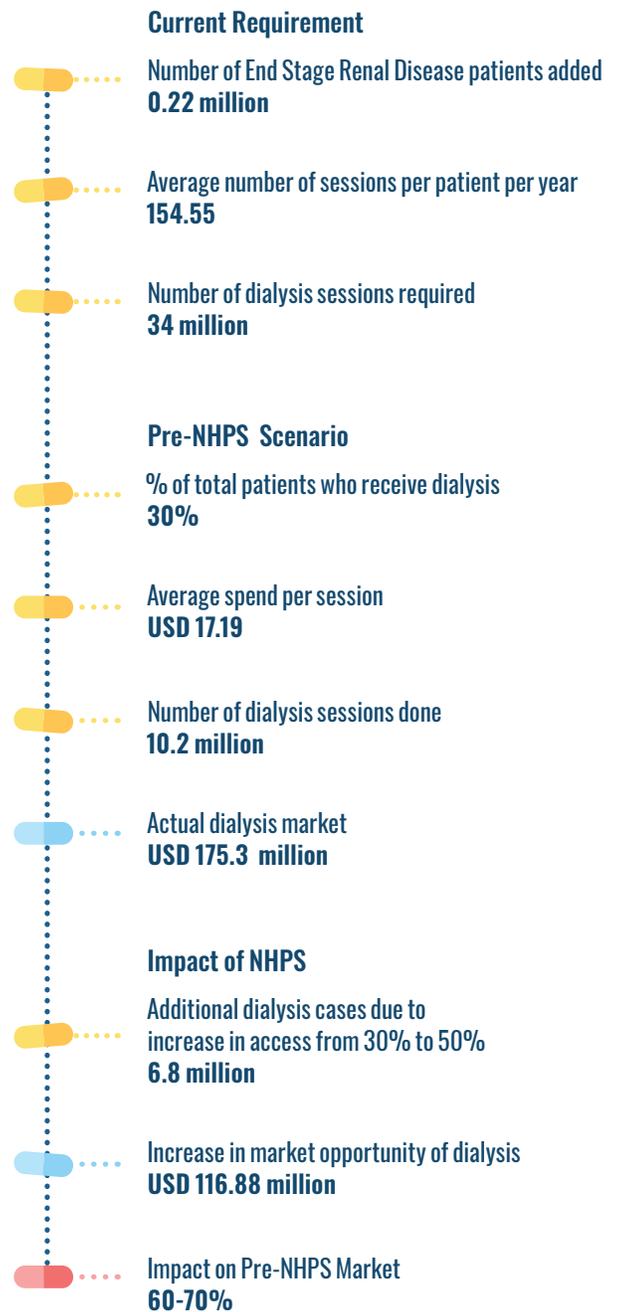
Other products like pacemakers will also witness a significant impact. While the incidence rate of CVD patients is on the rise, the infrastructure to cater to this demand is insufficient. There are currently about 1,200 cardiac catheterization laboratories and 1,000 cardiac facilities in metropolitan, tier-1, and tier-2 cities, with about 150 cardiologists joining the workforce every year.

Access, awareness, and affordability for first-time patients will have a significant impact on the therapy. Increased hospital admission rates over time will create supply infrastructure.

## Nephrology

Late diagnosis of renal failure is a worldwide phenomenon, more so in developing countries like India. To slow disease progression, early referrals are key to disbursing optimum treatment of Chronic Kidney Disease. Every year, India adds about 0.22 million new End Stage Renal Disease (ESRD) patients, of which, only 30% get access to dialysis. In 2018, 10.2 million dialysis procedures are done versus the 34 million required.

The gap exists primarily due to affordability and access issues. Only 1000 trained nephrologists are available and Hemodialysis centers are present only in cities and large towns. Earlier, the government attempted to address this issue through its Prime Minister National Dialysis Program, which is now merged with NHPS.



Source: Ministry of Health (MoHFW), and SKP Analysis

## Oncology

In 2018, cancer prevalence in India was estimated to be 1.9 million people, with 1.1 million reported incidences. India's age-standardized cancer incidence is estimated at 150-200 per 100,000 population. There is a significant shortage of oncologists in India, with one oncologist per 1,600 new cancer patients in India, as against one per 100 and 400 new cancer patients in the US and the UK respectively. The gap between reported and real incidence can be primarily attributed to under-diagnosis of cancer in India, manifested in the relatively late stage of presentation of the disease.

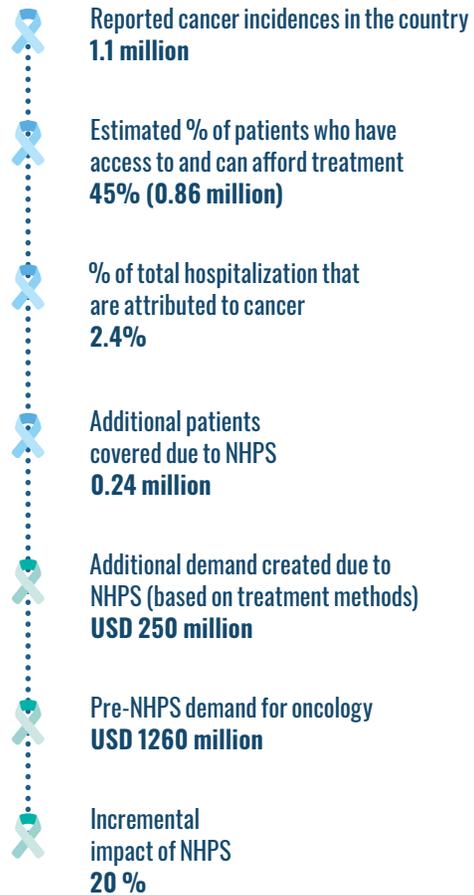
Access to multi-modal treatment options is inadequate, and 40-60% of facilities and oncologists are concentrated in the top 7-8 metropolitan cities, hampering equitable access to treatment. General medical insurance policies cover cancer only if the policyholder opts for critical illness coverage. Even cancer specific insurance policies provide specific cover. With NHPS offering more than 100 procedures in oncology, cancer patients are expected to be one of the biggest beneficiaries of the scheme.

NHPS brings 0.24 million new patients into the treatment ambit by tackling coverage. It makes treatment more affordable, reducing the cost by 30%. Under NHPS, the government will set up cancer diagnostic facilities at the primary healthcare level. This access and awareness will provide stimulus to early detection and care, creating the potential for further growth of cancer treatment in the country. Considering that India's demand for oncology is around USD 1.26 billion, NHPS is expected to create an additional impact of nearly 20% of the total market.

## Other Therapies

The potential impact of NHPS is significant, providing an opportunity for the industry to build additional capacity and with scale, bring down procedural costs. Other therapies, like Orthopedics, Neurology, Pediatrics, etc., will also benefit from NHPS implementation. The impact will slowly be felt across the disease spectrum in India.

India has slowly but steadily been building a safety net for its underprivileged, tackling fundamental needs, ranging from employment to food security. Healthcare access has been an aspect which has been lagging in this segment. Achieving the targeted benefits under NHPS will only be possible if the current implementation speed and rigor is maintained over the medium term.



Source: Ministry of Health (MoHFW), and SKP Analysis

# ROAD TO UNIVERSAL HEALTH COVERAGE



Half of the world's population does not have essential health service coverage. Healthcare costs push about 100 million<sup>4</sup> people globally into "extreme poverty" (living on 1.90 USD or less a day) annually. Over 800 million people spent at least 10% of their household budgets to pay for healthcare.

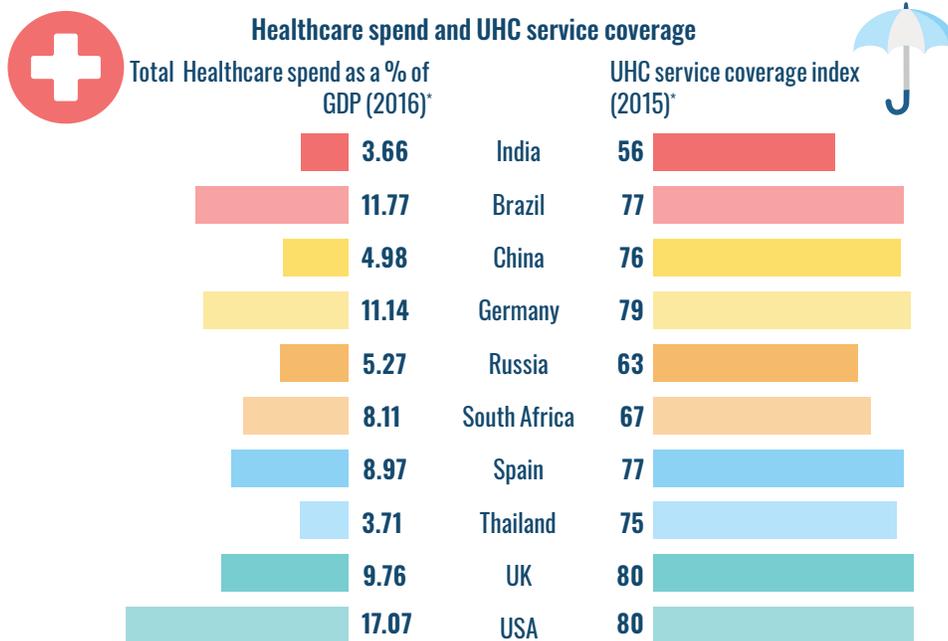
WHO defines Universal Health Coverage (UHC) as a goal to ensure all people obtain the health services they need without suffering financial hardship. UHC has three dimensions: population coverage, service coverage, and cost coverage. Successful implementation of UHC requires funding, skillful and determined implementation, and strong political will. Funding and implementation are factors that the government can directly control and impact, but without political determination and rigor, achieving UHC is challenging.

The benefits of investing in health transcend health itself, bringing financial and social benefits. Countries should view healthcare reforms as a journey with continuous progress and evaluation leading to a better ecosystem. As the second most populous country in the world, India's mammoth population and poverty levels make providing healthcare services challenging. While there has been a significant increase in non-communicable diseases, it is important for India to manage the dual burden of both communicable and non-communicable diseases simultaneously. To improve the current state of affairs and to implement UHC in a meaningful manner, the following are some key focus areas:

## Increase in Healthcare Expenditure

Countries that have implemented UHC effectively spend approx. 8% of their GDP on healthcare. While India's government spending has increased over the last decade, it still stands

at approximately 1.1-1.4% of the GDP. India has improved morbidity by focusing on primary care, maternal, and neonatal care, but its healthcare policies and investments have failed



Source: WHO, World Bank, and SKP Analysis

Coverage index for essential health services (based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access). It is presented on a scale of 0 to 100. Values greater than or equal to 80 are presented as 80 as the index does not provide fine resolution at high values.

\* The most recent available and comparable data has been used

4. Half the world lacks access to essential health services, 100 million still pushed into extreme poverty because of health expenses, WHO Press Release, December 2017

to keep pace with changing requirements. It continues to play catch up, with population and demand outstripping supply of healthcare services, and as a result, a large section of the population has limited or poor access to quality health services. India faces significant challenges in the timely disbursement of funds, which often hampers the execution of such initiatives.

A significant increase in healthcare spending is in order, and healthcare funding needs to be looked at from a long-term economic perspective. It is estimated that every USD 1 invested in health will yield a USD 10 increase in GDP by 2035.

## Adequate Funding

India is a resource-constrained country, so it is important to identify sustainable sources of funding healthcare expenditure. India's National Health Policy of 2017 envisions increasing public healthcare expenditure to 2.5% of the GDP. While 90% of public health funding comes from general tax revenue, supplementary avenues need to be identified to fund secondary and tertiary care.

India has already tapped into the "taxation model" with a 4% Health and Education component on personal and corporate taxes. A comprehensive Statutory Health Insurance (SHI) scheme is required to reduce the OoPE on healthcare for all sections. India already has SHIs, but they are limited to specific segments (for personnel in the manufacturing and informal sectors<sup>5</sup>). There are precedents of countries with employment trends similar to India (like Vietnam and Thailand) who have achieved coverage of more than 80% of their population through such policy measures.

Corporate Social Responsibility (CSR) contribution can be another source of funding, wherein companies are mandated to invest a part of their profits on social causes.

## Strengthen the Primary Care Network

Healthcare services to the poor in India have traditionally been delivered through Primary Healthcare Centers (PHCs) whose focus has been communicable disease, a key cause of mortality. While the average PHC serves about 25,000 people, as many as 75,000 are served by a single PHC in poorer states, with access further hindered by the unavailability of human resources and diagnostic equipment. In rural areas, as many as 2000 PHCs operate without a single doctor, effectively rendering these PHCs incapable of providing any level of care.

Empowering Auxiliary Nurse Midwives (ANMs) could be one way to supplement the availability of medical personnel at primary health centers. ANMs are clinically qualified to treat 'minor ailments' and provide first aid but are currently assigned non-medical tasks like data collection. Reverting to their original roles will help make the centers more effective.

Creating strong and effective health systems is a time-tested mechanism to improve health outcomes while making efficient use of limited resources. Brazil and Cuba are examples of countries with limited resources and comparatively larger populations. Their health systems have been designed to cater to the public at the community level while creating gatekeepers for higher care at each level. This approach lowers the burden on secondary and tertiary care with better expenditure efficiency and health outcomes.

## Use of Information and Communication Technologies (ICT)

ICT could work as a powerful enabler to address a variety of challenges in the healthcare sector. In this digital age, technology combined with data can become a catalyst for innovation and create a significant impact on health outcomes, especially in a resource-constrained environment. It is important to use ICT effectively for an initiative like NHPS, where delivering impact at scale can be challenging. While ICT is being incorporated in health systems through e-health records, telemedicine, or e-learning, the penetration is still low. E-learning modules can be used to bridge the knowledge gap between primary care doctors and ANMs, allowing them to climb the value chain while easing the burden on specialists. Telehealth can widen access to specialized diagnosis and care to remote areas with poor infrastructure. This increases accessibility while also easing the burden on primary and secondary healthcare centers. This addresses the significant challenge of recruiting and retaining a skilled workforce in rural areas. These applications are capable of bridging the infrastructure-resource gap to increase the availability of specialized healthcare in smaller towns and rural areas.

As a pillar supporting the implementation of NHPS, technological adoption by the healthcare industry is expected to gain momentum. Data generated from the insurance scheme can be used to design a more responsive healthcare ecosystem, enabling efficiency and prioritization of investment. ICT can enable continuous operational reviews by sharing timely and insightful reports with the relevant managers to make the platforms more user-friendly and impactful. Data analytics can play a central role in detecting and preventing fraud and misuse and increasing efficiency.

5. Existing SHIs include the Employees' State Insurance Scheme (ESIS) which covers workers in the manufacturing sector, and the Rashtriya Swasthya Bima Yojana (RSBY) which covers the informal sector

## Build robust Healthcare Infrastructure

Infrastructure has been described as the basic support for the delivery of public health activities. This section provides a snapshot of the healthcare infrastructure in India.

### Number of Healthcare Centers

India's healthcare delivery structure is extensive and complex, with primary care delivered through a combination of Public Health Centers (PHCs) and Community Healthcare centers (CHC), catering to a population of approximately 25,000 and 100,000 respectively. While the total number of these PHCs and CHCs have been growing, they have not kept pace with the increasing population, resulting in infrastructure shortfall.

PHC's and CHC's form the backbone of the primary healthcare in India and especially in tribal and rural areas, these are the only forms of healthcare services available. Eliminating this deficit will not only create accessibility but also raise awareness, hence reducing future interventions.

#### Shortfall of PHCs and CHCs in India

Health Centre	2016	2017	% Shortfall
PHCs	25,354	25,650	22%
CHCs	5,510	5,624	30%

Source: National Rural Statistics 2017

### Insufficient Hospital Beds

About 30,000 hospitals currently provide roughly 1.5 million beds in the country, serving an estimated population of around 1.35 billion in 2018. This translates to a bed density of 0.9 per 1000. This is further skewed by the fact that 65% of India's population resides in rural areas, home to only ~30% of the total hospitals and 40% of the total beds. Drastic variances exist in hospitals occupancy rates in urban and rural areas, and within that, for public and private hospitals. Urban public hospital

occupancy exceeds 75%, while private hospitals are at 55-65%. In rural areas, patients are often turned away for lack of beds, particularly in public hospitals. Capacity building is in order even for a modest increase to 2.5 beds per 1000 population. An increase in beds will have a multiplier effect on other healthcare segments like medical devices and pharmaceuticals, boosting the overall industry.

Hospital Category	No. of Hospitals (FY 18)	Total Number of Beds (FY 18)	Share of number of hospitals	Share of number of beds
Private	20,350	6,71,900	63%	46%
>100	1,200	1,92,000	4%	14%
30-100	2,600	1,82,000	8%	12%
<30	16,550	2,97,900	51%	20%
Government	12,000	7,85,398	37%	54%
Total	32,350	14,57,298	100%	100%

Source: Ministry of Health, and SKP Analysis



## Inadequate Skilled Talent

India has historically been plagued with this challenge. While steps have been taken to address this, the progress has been slow. Approximately 529 medical colleges in the country produce roughly 75,000 doctors, and about 3,000 institutions produce 125,000 nurses each year, but with India's population increasing annually by 26 million, supply is inadequate.

The doctor-population ratio is roughly at 0.7 to 0.8 doctors per 1000 population and gets further skewed as you go into the heartlands of India. Additionally, per the Medical Council of India, only 80% of registered doctors are in active service at any given time, further reducing service availability.



**Doctors**  
1,022,859



**Doctors in public hospitals**  
113,328



**Dental Surgeons**  
197,734



**Auxiliary Nurse Midwives**  
821,147



**Complimentary and Alternative Medicine Practitioners**  
771,468

Source: Medical Council of India, National Health Profile 2017, WHO and SKP Research

Some of the factors impacting the availability of medical resources are:

- A dearth of quality physicians available for primary and secondary care, owing to the preference for tertiary and quaternary care specializations
- An exodus of nursing staff due to better pay and career prospects overseas

- Overqualified specialists dealing with routine illnesses (which would be best managed by primary care), leading to inefficiency

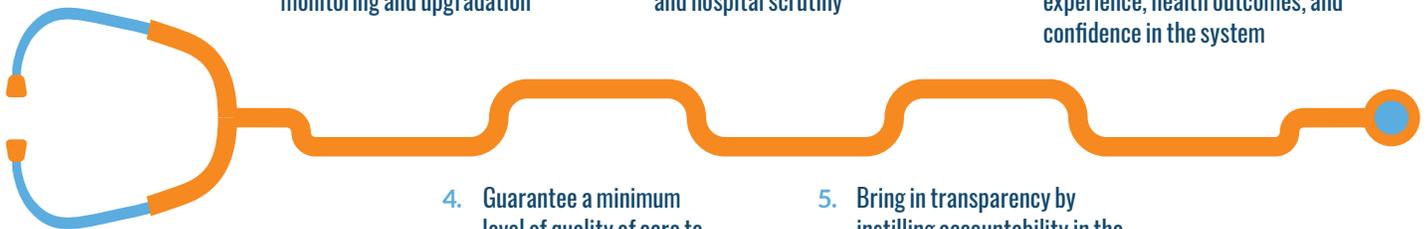
The government needs to consider these factors and evolve incentives and systems.

## Improve Quality

Quality of care and services is the cornerstone of any sound healthcare system, driving better health outcomes and contributing to the financial welfare of society. Low-quality health systems result in the death of 8 million people in Low-Middle Income Countries (LMIC) and cause economic losses of USD 6 trillion<sup>6</sup>. Some of the criticisms leveled against public healthcare systems have to do with variable quality of care and lack of standardization in the health ecosystem.

The National Health Agency in consultation with the Ministry of Health & Family Welfare and other stakeholders should look at improving quality progressively and continuously. In UHC, quality is critical and drives the motivation of people to avail services and reduce OoPE. The following are some areas of focus:

1. A comprehensive vision and strategy for quality, backed by regulation and continuous monitoring and upgradation
2. Careful monitoring and control to ensure effective claims management, clinical audits, and hospital scrutiny
3. Holistic focus with constant measurement of parameters like competent care provided, user experience, health outcomes, and confidence in the system
4. Guarantee a minimum level of quality of care to be provided by institutions that can then be scaled
5. Bring in transparency by instilling accountability in the system through legislation, public awareness, regulation, etc.



6. High-quality health systems in the Sustainable Development Goals era: time for a revolution, The Lancet Global Commission, November 2018

## Conclusion

The Ayushman Bharat initiative has the potential to become the most significant healthcare policy initiative in the country since independence. India currently lags behind global peers on several parameters related to healthcare infrastructures and outcome. Ayushman Bharat marks a significant step towards providing Universal Health Coverage (UHC) to citizens and recognizes the need to systematically improve healthcare access and coverage across the country. This improvement is critical to maintaining India's economic growth and competitive success.

The program seeks to strengthen the primary healthcare infrastructure as well as to significantly improve access to good quality, affordable secondary and tertiary healthcare for the inadequately served sections of the population. With NHPS, the government is taking on the role of a payer as opposed to that of a provider, which is a major change in approach. With healthcare services and delivery being provided by specialists, an increase in economic efficiency is expected.

Achieving UHC is a steep goal for India, and there are structural gaps that need to be bridged to achieve this. India needs to significantly scale up the physical infrastructure and the availability of trained human resources without compromising on the quality of care. This will need a large infusion of government funding and as well as the definition of new funding models that taps private sector resources.



**Nimish Shah**

Vice President

North America Sales and Marketing, Corporate Services

The government must adopt an inclusive approach that brings in the expertise of different stakeholders to build a robust, efficient healthcare ecosystem with good governance.

While initial indications after the rollout of NHPS have been positive, the rigor of implementation will be the key to its success. Healthcare is governed at the state level in India, so co-operation between the center and the states will shape the scheme's implementation. The government's focus on ensuring adoption by providing the required financial and administrative resources is encouraging.

NHPS provides a significant impetus to the healthcare industry, accelerating growth rates across sectors in the years to come. The Healthcare Delivery sector would be the largest beneficiary by volume, as hospital capacity needs to be built up significantly and rapidly to service the added influx of patients. The Medical Equipment and Devices industries will naturally follow with improved demand arising out of the jump in access and affordability. We expect pharmaceuticals also to see an acceleration in growth, though that will be more in the course of a more gradual term.

The Indian healthcare market is underpenetrated and has tremendous potential for growth. For players looking to establish themselves in the Indian market, Ayushman Bharat and NHPS set the stage for considerable long-term benefits.

### Strategic Guidance

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# ACKNOWLEDGEMENTS AND INDUSTRY OPINION



India's latest health care mission will provide tremendous benefits and create opportunities within the healthcare ecosystem. The scale of the scheme will lead to innovative solutions and structural changes in the industry over the next decade.

**A. Vaidheesh**

Vice President, South Asia and Managing Director, GlaxoSmithKline Pharmaceuticals Ltd.  
President, Organisation of Pharmaceutical Producers of India (OPPI)



One of the ways to make Ayushman Bharat (NHPM) financially viable and sustainable is to consider contributions to NHPM by the Industry as a part of Corporate Social Responsibility under current Ministry of Corporate Affairs guidelines on CSR.

**Dr. Ajit Dangi**

President and CEO  
Dansen Consulting



PMJAY NHPM will bring about a shift in paradigm in the Indian Healthcare sector. It will take the penetration of health insurance among weaker section of the society from 4% to 40% very quickly. With the goal of universal health coverage, NHPM is a step in right direction. However, there are challenges linked to lack of healthcare infrastructure and Human Resource, that will have to be addressed to cater the large influx of patients. A long term sustainable strategy would be required to overcome these challenges and to make the scheme successful. Given the mammoth scale of execution, it would be an important and necessary step for government to involve, partner and on-board all stakeholders linked to PMJAY delivery.

**Badhri Iyengar**

Managing Director - South Asia and South East Asia Smith and Nephew Healthcare  
Chairman, Medical Devices and equipment, FICCI  
Director, Medical Technology Association of India (MTAI)



India's latest health care mission will provide tremendous benefits and create opportunities within the healthcare ecosystem. The scale of the scheme will lead to innovative solutions and structural changes in the industry over the next decade.

**Probir Das**

Chairman and MD, Terumo Asia Holding  
Adviser - Medical Devices Forum, FICCI  
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The government has an excellent vision and well-defined objectives. The implementation approach has also become pragmatic and mindful of views from all the stakeholders. However, the premium amounts and the procedure costs are conservative and will have to be rationalized. Allowing portability across states and retaining higher package rates of existing schemes are steps which demonstrate the government's flexibility.

**Rohit Gulati**

Head Strategy and Group Marketing,  
Karl Storz Endoscopy India Pvt. Ltd.



The coverage of the scheme is substantial and will be a game changer for the healthcare companies, hospitals, doctors, and other impacted sectors. This Mission will open new avenues of business for Logistics Service Providers. Those who already understand challenges and nuances of this business will be able to expand quickly to provide distribution arrangements at Tier III and IV cities.

**Sandeep Aggarwal**

Director and COO  
Parekh Integrated Services Pvt. Ltd.

## Our Healthcare Practice

Healthcare is a focus industry for Nexdigm (SKP), and we have considerable experience in supporting industry leaders. We help organizations implement their strategy through a suite of targeted services ranging from market entry support, ensuring compliances, business process improvement, and outsourcing. Guided by specialists and leaders from the industry, our team has handheld several clients on their Indian growth journey.

### Thought Leadership

Over the last few years, the Medical Device Industry in India has gone through a phase of transformation. The sector is witnessing change at a policy and regulatory level from the government pushing industry players to bring structural and operational transformation in the industry. These changes are expected to usher the industry into a new era of strong, sustainable growth.

With more investments, modern technology and growing medical reach, the industry is expected to evolve on (1) Affordability to cover broader market (2) Innovation to cater to the demographic needs and (3) Reputation of compliance and high ethical standards.

Our thought leadership initiatives are a mode to observe and reflect on the industry modulations, including policy efforts by government, market actions (mergers and acquisitions) and business evolution as it happens.



## Our Select Credentials

### Performance Improvement Projects



**Review of Arrangement with Limited Service Provider (LSP)**

**Client:** US-headquartered healthcare company

**Impact:** Optimized processes, Enhanced dashboard, and 33.3% Annual LSP cost savings



**Standardized Contract Templates**

**Client:** APAC operations healthcare company

**Impact:** Simplified, efficient, and agile processes

### Strategic Initiatives and Special Projects



**Greenfield - Manufacturing Setup**

**Client:** US healthcare product/service company

**Impact:** Integrated, cross-functional support and efficient project management



**Post Merger Integration**

**Client:** Fortune 500 healthcare company

**Impact:** Successful transition without disruption and extensive support across 21 countries

### Ongoing Operations Support



**Dealer-Distribution Management**

**Client:** Indian entity of leading conglomerate

**Impact:** Enhanced working capital efficiency, which enabled increase in sales by 4%



**Warehouse Network Optimization**

**Client:** Global Manufacturer of Rapid Diagnostics

**Impact:** 27% supply chain cost savings by adding another warehouse

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## About Nexdigm (SKP)

Nexdigm (SKP) is a multidisciplinary group that helps global organizations meet the needs of a dynamic business environment. Our focus on problem-solving, supported by our multifunctional expertise enables us to provide customized solutions for our clients.

Our cross-functional teams serve a wide range of industries, with a specific focus on healthcare, food processing, and banking and financial services. Over the last decade, we have built and leveraged capabilities across key global markets to provide transnational support to numerous clients.

We provide an array of solutions encompassing Consulting, Business Services, and Professional Services. Our solutions help businesses navigate challenges across all stages of their life-cycle. Through our direct operations in USA, India, and UAE, we serve a diverse range of clients, spanning multinationals, listed companies, privately owned companies, and family-owned businesses from over 50 countries.

Our team provides you with solutions for tomorrow; we help you think next.

## Global Partner. Integrated Solutions.

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Merger Integration  
Greenfield

#### Operations Transformation

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Intelligent Automation and  
Accelerated Analytics (IA<sup>3</sup>)

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Merger and Acquisitions

Joint Venture Support

Due Diligence

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#### Business Process Management

Shared Services

Process Management

Contract Management

Global Payroll and Compliance

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CFO Services

### Professional Services

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Indirect Tax

Transfer Pricing

International Tax

Foreign Portfolio Investors

Private Client

#### Assurance and Risk Advisory

Forensics

Risk Advisory and Internal Audit

IT Risk Advisory

Accounting Advisory

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