



# India Life Sciences Report 2019

Partnering to improve India's health

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Confederation of Indian Industry

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## Introduction

A combination of demographic, regulatory and technological changes sweeping the Indian life sciences industry has created an inflection point, which is set to alter its future direction.

We believe that it is not just important for companies to innovate to serve the peculiarities of this new environment, but also to support doctors in their ability to provide quality and cost-effective patient care and treatment.

This research focusses on key trends affecting Indian life sciences as well as the doctors who lead the change in healthcare delivery at the front line. The insights are designed to:

- Understand key existing trends at play that are changing the life sciences ecosystem.
- Amplify the voice of doctors—their challenges, expectations and opportunities and how life sciences companies can support them.
- Highlight implications for life sciences companies and the industry at large.

## Executive summary

Indian life sciences is on the cusp of significant change. Several locked-in trends—demographic, regulatory, technological and financial, are shifting the trajectory of the industry. With a record 140 million households expected to enter the middle class in the next decade, consumption of healthcare services is set to increase. The Indian government's thrust on universal healthcare through Ayushman Bharat will also increase healthcare demand and drive up patient volumes. However, this high volume environment will be accompanied by pricing and margin pressures as regulations continue to focus on enabling access to low-cost drugs and services.

Meanwhile, life sciences players will continue to witness shifts in the relative attractiveness of global geographies and product segments. The focus on India and other emerging markets will grow, with the US market becoming less attractive compared to five years ago. Complex generics and biosimilars will be the key growth drivers marking a shift away from the more commoditised generics that have historically dominated Indian life sciences. Further, seismic technological shifts towards digital will affect the industry.

India's success in driving widespread improvements in healthcare access and quality will hinge on doctors at the front line of care, but they remain apprehensive about the future. They allude to the rise of chronic and lifestyle diseases, more informed and demanding patients, a growing focus on wellness and prevention, and advances in health information technology as the most important trends which will shape their jobs in the next five years. These changes are transforming their approach to patients, practice and ways of working. Doctors believe that they have the right skills but require additional support to provide high-quality patient care while keeping up with the rapid evolution of medicine.

Consequently, all ecosystem stakeholders need to redefine their operating model and offerings to provide the right doctor support to manage the future. With the right changes in commercial and operating models, we believe that this moment in the evolution of Indian life sciences holds great potential for innovation and growth.

## Winds of change

### **Rising middle class and growing healthcare coverage drive up sales volume**

India's income profile is changing: the next decade will witness the addition of 140 million new middle-income households which will transform India's income pyramid into an income diamond. These households will drive about two times increase in healthcare consumption, with much of the incremental demand coming from metros and "developed rural", which are villages with a population of 5,000 to 10,000 where awareness and aspirations are at par with urban markets.

Further fueling this consumption is the Indian government's flagship universal healthcare scheme Ayushman Bharat which aims to provide healthcare coverage of up to INR 5 lakh per family to 10 crore families. With a planned coverage of 50 crore beneficiaries, Ayushman Bharat is one of the largest schemes of its kind globally and has the potential to transform Indian healthcare. Even as the scheme matures and ambiguities clear, seven states—Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Tamil Nadu and Telangana are likely to be front-runners and see early volume expansion.

This incremental demand is likely to come through new channels where life sciences companies are currently under-penetrated. Nursing homes are expected to be the largest beneficiaries of increased patient volumes and will become an important institutional sales channel for life sciences companies.

### **Margin pressures driven by regulations**

The life sciences industry has witnessed margin contraction in the last five to six years as a slew of regulations aimed at increasing access to affordable medications have been imposed. Currently, price caps impact more than 820 formulations representing about 18% of the Indian Pharma Market (IPM). Regulatory focus on drug pricing is likely to continue and expert views indicate that 20 to 40% of the IPM could potentially come under price caps in the next five years. Other initiatives like the expansion of Jan Aushadhi stores and competitive licensing could put pressure on drug prices and margins.

Combined with rising demand, these pricing pressures are aggravating a low-margin and high-volume environment that requires life sciences companies to re-evaluate their cost curves. It is critical for Indian life sciences to build a "future-ready" business model in order to thrive in this new environment.

### **Shifts in the life sciences industry**

Life sciences companies are witnessing a shift in the relative growth and profitability of different product and market segments. Beside the rise in chronic drug sales, robust growth is expected in the biosimilars market driven by several biologics patent expiries in the coming years and favourable government regulations for automatic biosimilar substitution. These products are projected to grow to nearly \$25 to 30 billion globally in 2024 up from about \$7 billion today, clocking a 30% annual growth, approximately.

From a geographical perspective, US headwinds are likely to continue. Generics prices have already seen 4 to 6% deflation since 2017 and a growing buyer consolidation will continue to put further pressure on prices and margins. Complex generics offer a path to win in the US market, registering more than 10% growth between 2014 and 2019. Strong growth is expected to continue, with complex generics projected to reach about \$42 billion by 2024.

### **Digital health ecosystem**

New digital models are emerging across the healthcare and life sciences value chain, shifting profit pools and patient behaviours. Digital health is the intersection of digital technology with healthcare and wellness sectors with the primary aim of enhancing the delivery of care. The digital health segment saw more than \$500 million of venture capital investments in 2018.

A shift in patient attitudes and behaviours is driving the growth of digital health. India has the second-highest base of active internet users globally, with about 500 million people who use the internet at least once a month. The country has also experienced the highest leap in internet users, with an average of 40 million people gaining access each year. Further, mobile data use, which stands at about 10 gigabyte per subscriber each month, has reached the level of developed markets. Amongst internet consumers, currently 140 million individuals are healthcare browsers while only 10 to 20 million are online health buyers. These numbers will increase significantly in the coming years as the number of users of online services grow and they become comfortable with digital transactions.

Life sciences incumbents have been slow to respond to this trend, and will need to evaluate how to effectively play in this new digital ecosystem.

## The doctor of the future

In this changing paradigm, India's doctors hold the key to successfully driving large-scale improvements in health. However, India has a significant shortage of doctors—with just 0.8 doctors per 1000 population, significantly lower than World Health Organization's recommendation. The current government's thrust on AYUSH can partially mitigate this shortage, especially outside the metros. However, specialist shortages are likely to persist and pose a serious threat to the effective expansion of care.

In our survey of 325 doctors, we found that 28% of them feel apprehensive about the future, believing that it will become more difficult to deliver high-quality care in the next five years. Six key trends affecting patients, the practice environment and ways of working will shape doctor behaviour in the future.

### Patients

**Increasing complexity of diseases:** In addition to the existing burden of infectious diseases, India's tsunami of Non-communicable Diseases (NCDs) is being felt on the ground with more than 85% of doctors saying that a greater proportion of their patients have chronic diseases compared to five years ago. This is also leading to increasing complexity with 81% of Consulting Physician/General Physicians (CP/GPs) and 85% of specialists treating more complex cases today compared to five years ago. As a result, a striking majority of 79% doctors report that they find it challenging to keep pace with the breadth and evolution of disease and treatment protocols.

Doctors are looking for multiple types of support to manage this complexity—85% of doctors rank upgrading their clinical skills as the most important. Additionally, 62% of doctors believe upgrading the skills of their staff is critical. Doctors also suggest that using practice management and disease management tools can help them deal with the increasing complexity of diseases and patient care in India.

**Informed, demanding and proactive patients:** As digital devices integrate in the lives of more Indians, the evolution of patient behaviour is leading to a fundamental shift in the doctor-patient relationship. Patients are well informed, can research any disease with the touch of a button and expect on-demand care from their doctor. A majority of doctors which is around 83%, say that their patients are more informed about their disease and treatment options compared to five years ago, and nearly 92% of doctors surveyed, expect awareness in patients to further increase in the next five years.

Not only are patients today more informed, they are also more demanding. About 86% of doctors surveyed say that patients value convenience more than they did five years ago and 80% report that their patients expect them to answer queries through messages on phone and messaging apps.

Patients are also more actively managing their health, using digital tools for fitness & prevention, doctor search & scheduling, drug & diagnostic purchase, and ongoing disease monitoring and management.

Today, about 31% of patients use digital tools for search and scheduling and about 27% patients use online booking of diagnostic services. These numbers will continue to grow to more than 50% in the next five years. These trends signify how the profile of the average patient is changing and doctors need to adapt to the demands of the new age patient.

### Practice environment

**Dispersion of prescription influence:** The prescription autonomy of doctors is gradually being curtailed. About 46% and 44% of doctors report that drug formularies and insurance restrictions respectively, influence their prescribing decisions. Additionally, 54% of all doctors say that a pharmacist often substitutes the brand that they prescribe. These findings reflect a new and broader ecosystem of prescription influencers, with which life sciences companies must proactively engage.

**Doctors for cost optimisation:** An overwhelming 80% plus doctors believe it is part of their responsibility to bring healthcare costs under control. However, about 47% of doctors—CP/GP, specialists and surgeons feel that they are forced to make cost-quality tradeoffs, which are not aligned with the best patient care. In light of this tradeoff, it is crucial for providers and life sciences companies to help doctors make the most optimal choice. Towards this, 90% of doctors mention “outcomes and real world evidence data”, and 75% mention “cost-benefit assessments” as information they could use to optimise quality and cost.

### Ways of working

**New digital sources:** While medical representatives (MRs) were historically an important source of information for doctors, their relevance is now diminishing as digital sources become more important. In our survey, we find that doctors on an average spend about 40 hours a week acquiring information, out of which only 35% is spent with the MR. The primary sources of information used by doctors today include digital channels at 83%, peer discussions at 73% with MRs a distant third at 62%. This is more pronounced in younger doctors where 85% use digital channels and only about 60% consult MRs, indicating that the future will see this trend play out in an even stronger manner. Further, about 90% doctors across the board expect to increase their usage of digital sources in the next three to five years while MRs will continue to lag at 68%.

**Growing use of clinical tools:** The use of clinical tools and technology to improve the quality of patient care is growing with large hospitals leading the charge. While doctors believe, that standardised treatment protocols and electronic medical records (EMRs) continue to remain the most valuable tools to improve care quality, the survey suggests a definite uptick in interest for more complex tools like robot-assisted medicine and remote patient monitoring. This trend suggests a significant opportunity for ecosystem stakeholders to step in and support the use of these tools and technologies. Our survey shows that doctors expect manufacturers to provide high impact services including training support for nurses and paramedical staff, described as high-value by 53% of specialists and surgeons and 49% of CP/GPs mention. Similarly, 47% of specialists and surgeons and 40% of CP/GPs highlight the importance of automation tools for improving practice productivity whereas 43% of specialists and surgeons and 51% of CP/GPs emphasise on the need for chronic disease management tools from manufacturers.

## Implications

The Indian life sciences industry is at an inflection point. The wave of digital disruption, rise of a high-volume low-cost environment with new sales channels and buying processes are all calls for action for the life sciences industry. Besides, it also needs to address the growing influence of a broader stakeholder group in prescription decisions coupled with a changing role for the medical representatives.

### For life sciences companies

**Win with the next 100 million customers:** The coming years will witness the rise of new channels and stakeholders that life sciences companies will have to engage with to remain relevant. Organised pharma retail is an under-penetrated and rapidly growing channel currently valued at \$1.5 billion and projected to grow at about 20% annually over the next four years. This will be further aided by online pharmacy growth of more than 25%. Moreover, nursing homes are likely to emerge as an important institutional sales channel as Ayushman Bharat gains momentum, and we estimate an additional \$1 billion opportunity for life sciences companies coming from increased nursing home sales by 2024. Life sciences companies must set up the right distribution, sales and marketing structure to tap into this opportunity, adequately.

Even within the traditional channel, the role of stakeholders is evolving. Our findings suggest that formularies, insurers and pharmacists influence 76% of the total prescriptions. This creates a clear imperative for life sciences companies to engage with this broader stakeholder set in a meaningful manner to drive prescriptions.

**Omni-channel outreach to transform the front end:** The growing availability of tools to capture, integrate, visualise and analyse large amounts of data today mean that life sciences companies can become more effective in generating and targeting demand (e.g. at a micro-market level). Additionally, digital supplementation of MRs by life sciences companies can dramatically increase doctor reach while providing more customised information based on individual doctors' information-seeking behaviour. Life sciences companies can also build and deploy value-added services like disease management and practice productivity tools, which doctors call out as a clear unmet need today.

In addition to fostering higher doctor engagement and advocacy, such tools have the potential to drive up drug sales. For example, medication adherence rates in India for chronic disease treatment is estimated at a mere 7% compared with more than 20% in developed markets like Europe. Disease management tools can help drive up this rate—an increase in drug adherence to about 10% can result in \$8.5 billion in additional drug sales by 2024.

**Invest in Engine 2.0:** The full set of adjacent businesses that a company might pursue as it searches for new models capable of taking over is referred to as Engine 2.0. In this context, the life sciences industry will be disrupted and transformed by new digital players emerging across the value chain from R&D and manufacturing to analytics and front-end tools. Additionally, the surrounding

ecosystem (providers, pharmacies, diagnostic centres, etc.) is also witnessing a rapid growth of digital insurgents. The growth in VC investments to more than \$500 million in 2018 in emerging digital models and tools, bears out this trend. Thereby, life sciences companies must seriously evaluate how to play in this emerging digital landscape in a way that allows them to remain relevant and build the next engine of growth.

**Disrupt the cost curve to build a “future-ready” operating model:** Current trends point to an industry that is going to evolve into a high-volume, low-margin market. Incremental efficiency gains will not be enough—life sciences companies must zero-base and aggressively remove costs from the system. Bain & Company’s experience suggests that when properly done, zero basing can result in a 10 to 15% improvement in profitability.

### **For the industry**

**Shape Ayushman Bharat 2.0 for quality and access:** While Ayushman Bharat has the potential to drive dramatic healthcare access, efforts must be made to have a quality lens on it as well. The industry must work with the government to deliver comprehensive and high-quality care through co-development of protocols, standard treatment guidelines and coverage inclusions based on a holistic evaluation of clinical and economic benefits.

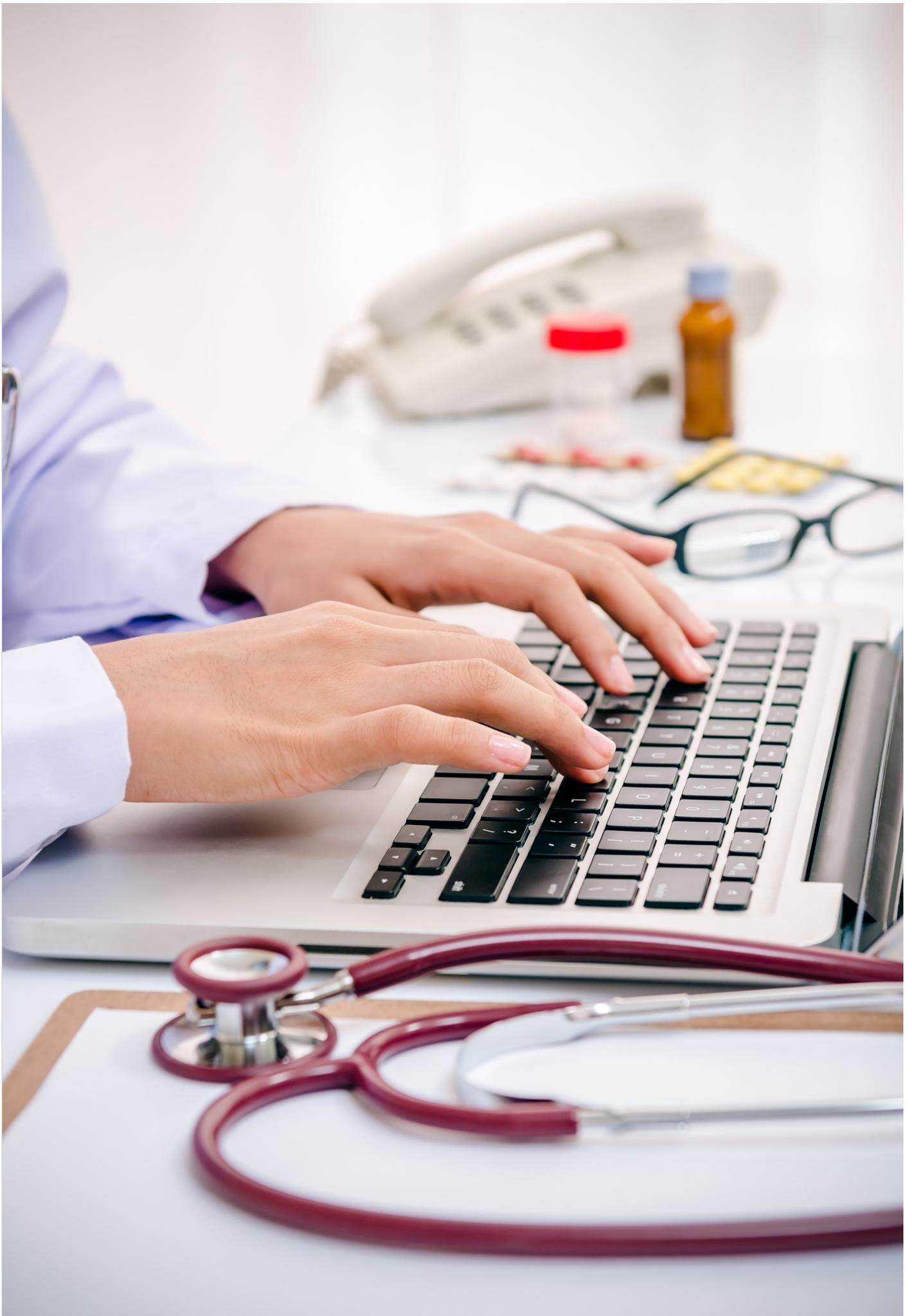
**Pay for quality, services and outcomes:** Public procurement today largely revolves around lowest price tendering without taking into account post-tender outcomes. The industry must work with the government to bring in more holistic procurement models, which evaluate quality, beyond-the-pill services and outcomes of care in addition to price. This will enable the government to maximise patient outcomes, while allowing the industry to participate as true partners in improving India’s health.

**Help shape digital health policy:** The boom in digital health in India presents a unique opportunity for the industry to steer its evolution, set guardrails and amplify its positive impact on the quality of care. However, there is much ambiguity around the legality of business models and few widely accepted protocols and standards are available. The industry must take the lead to help demystify this ambiguity, and help the government craft forward-looking regulations and policies governing digital health that will further fuel innovation (e.g. refining of the National Digital Health Blueprint, guardrails around National Health Stack).

## Conclusion

The world of Indian life sciences is changing rapidly. Doctors today are as challenged with rapid increase in patient volume and complexity as they are restrained by cost and quality considerations. To respond to these challenges, life sciences companies must react promptly to meet the needs of the future by revamping their commercial and operating models to safeguard future profitability. Moreover, all ecosystem stakeholders must proactively come together to shape the future direction of the industry in a way that allows them to support broad-based health improvement in India while enhancing the ease of doing business.





# 1.

## Winds of change in the Indian life sciences market

- The Indian life sciences industry is at an inflection point. Several factors are at play including the government's thrust on universal health coverage, regulatory stringency, channel disruption, patient engagement with health, opportunities in the mass market and private insurance penetration.
- By 2030, India will have a growing number of middle-income and high-income households driving incremental consumption and doubling the healthcare spending.
- The Ayushman Bharat programme will drive massive volume expansion. As the scheme matures and ambiguities are cleared, seven states—Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Tamil Nadu and Telangana—are likely to be front-runners.
- Pricing pressures are likely to persist with continued regulatory focus on drug prices while infrastructure and talent shortages will pose challenges. But government policies are paving the way for AYUSH doctors to clear talent bottlenecks.
- We will see a significant growth in biosimilars driven by patent expiries and favourable regulations.
- US headwinds are likely to continue and a growing buyer consolidation will put further pressure on prices and margins of generics. Complex generics offer a path to win in the US market.
- New digital models are emerging across the healthcare and life sciences value chain, shifting profit pools and patient behaviours. Online engagement and transactions in healthcare are poised to increase and as total internet users scale, healthcare browsers and transactors will rise.

**Figure 1:** Indian life sciences is on the cusp of significant change: 8 major trends expected to shape the future

<b>Macro and regulatory</b>	①	Massive middle class with rural expansion	140 million new households with an almost two times increase in healthcare consumption
	②	Ayushman Bharat drives volume increase	Seven states will drive volumes, health is a government agenda
	③	Pricing pressure continues	More than 18% to 30% of IPM has drugs capped
	④	Infrastructure challenges; talent constraints	~800,000 AYUSH doctors added
<b>Life sciences industry</b>	⑤	Biosimilars drive growth	30% CAGR
	⑥	US market slowdown; complex generics key to win	3–4 percentage points lower margins compared with last 5 years
<b>Broader ecosystem</b>	⑦	New digital models emerging, increasing investments in healthcare	More than \$500 million VC funding in digital health in CY18
	⑧	Evolution of consumers and patients' attitude	15–20 million digital health transactors

Note: Indian Pharma Market (IPM)  
Source: Bain & Company

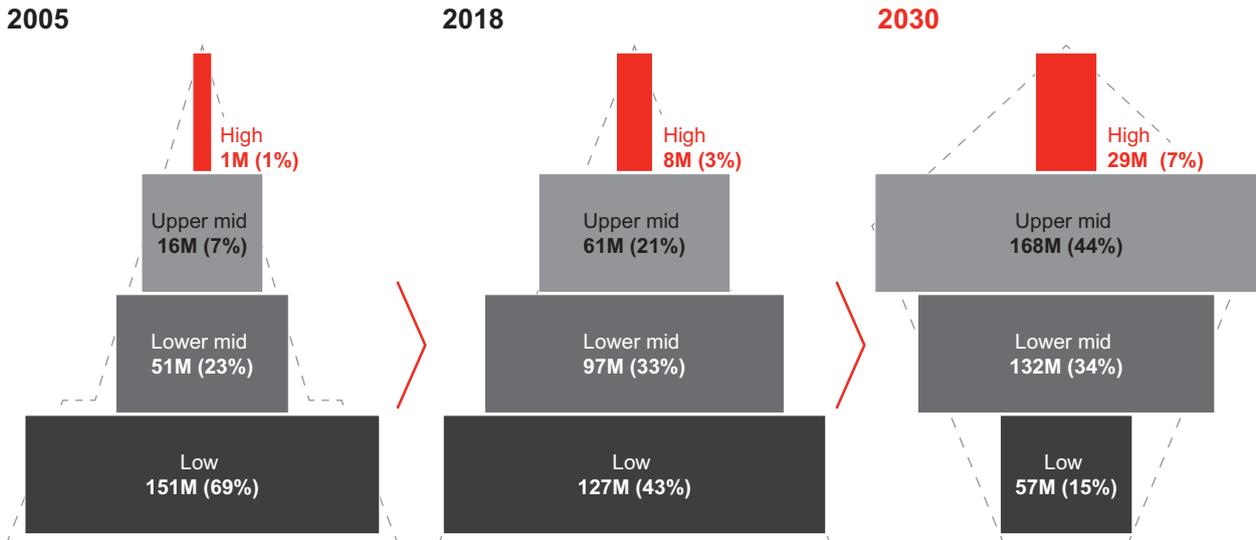
**Figure 2:** However, critical uncertainties remain and can result in alternate market scenarios depending on how they play out

Limited scale-up of Ayushman Bharat; Coverage <500M lives	← <b>Government thrust on UHC</b> →	Expanded Ayushman Bharat coverage inclusive of lower middle class (>500 M lives)
Incremental NLEM expansion; (~30% of IPM) encourages FDI	← <b>Regulatory stringency</b> →	Aggressive NLEM expansion (~50% of IPM); harsher trade margin caps; INN implemented
Still largely fragmented and offline in 5–7 years	← <b>Channel disruption</b> →	Heavy disintermediation; disruptors scale
Marginally more engaged; doctor is still the predominant driver of choices	← <b>Patient engagement with health</b> →	Heavily engaged, preventive bias; seeking integrated care
Demand and supply continue to remain a constraint	← <b>Opportunity in mass markets</b> →	Supply aided; models emerge to profitably serve at scale
Continues to grow at 20%; penetration reaches 15–17%	← <b>Private insurance penetration</b> →	Disruptive growth with new products; penetration increases to ~30%
Resurgent India focus; clear doubling down on India	← <b>Relative attractiveness of India</b> →	Limited investment; exports remains centre of gravity

Notes: Scenarios are hypothetical based directional trends and possible evolution trajectories. NLEM is the National List of Essential Medicines; International Non-proprietary Name (INN)  
Source: Bain & Company

**Figure 3:** By 2030, India will have 140 million more middle-income and 20 million more high-income households

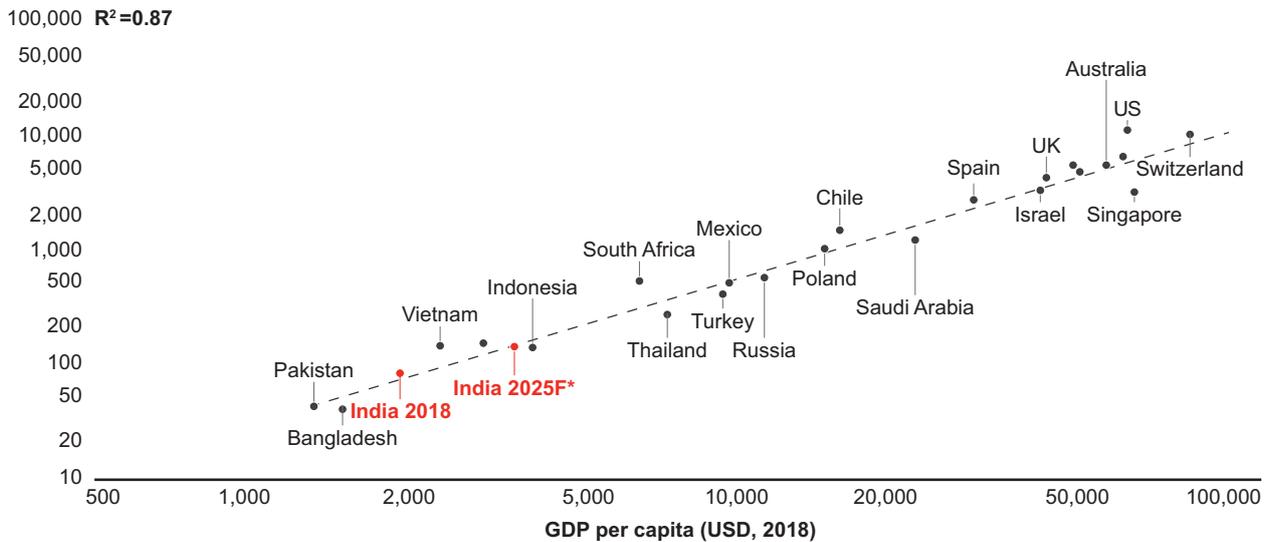
India's income pyramid will transform into an income diamond



Notes: Low income: <\$4k, lower-mid: \$4-8.5K, upper-mid: \$8.5-40K, high income: >\$40K basis income per household in real terms; Projections: If GDP growth is assumed to be 7.5% @ 2017-18 prices;  
Sources: PRICE projections based on ICE 360o Surveys (2014, 2016, 2018); International Monetary Fund; World Bank; Euromonitor

**Figure 4:** This income growth will lead to two times more healthcare spending

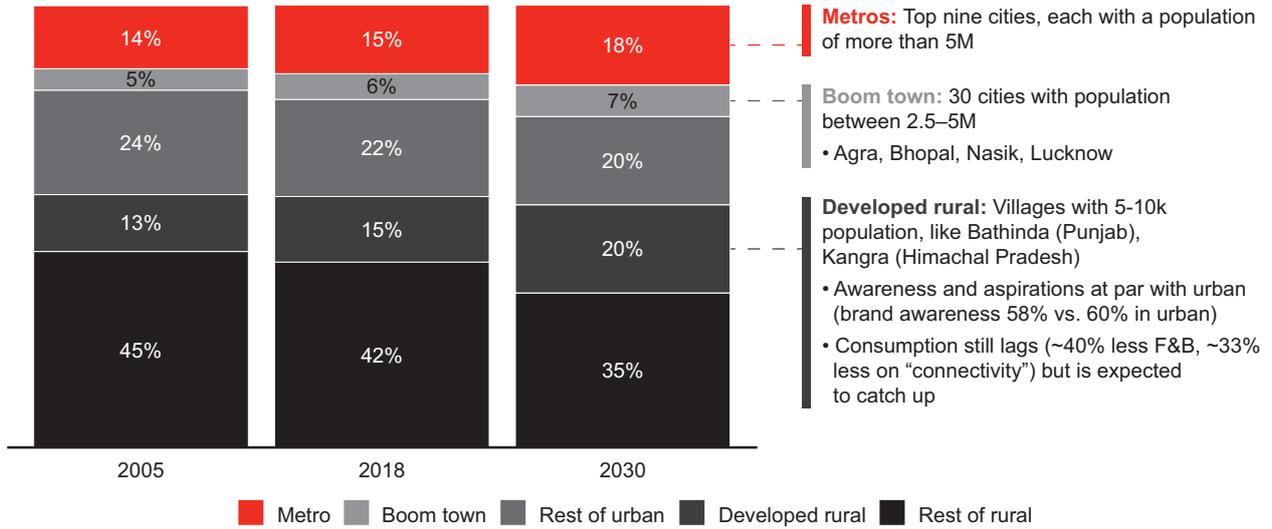
Healthcare spending per capita (USD, 2018)



Notes: 2025F\* is 2025 forecast figure; \*India 2025F\* estimated based on regression fit analysis of GDP projections of \$3585 per capita in 2025 (from Euromonitor)  
Sources: Euromonitor; BMI Research; Bain analysis

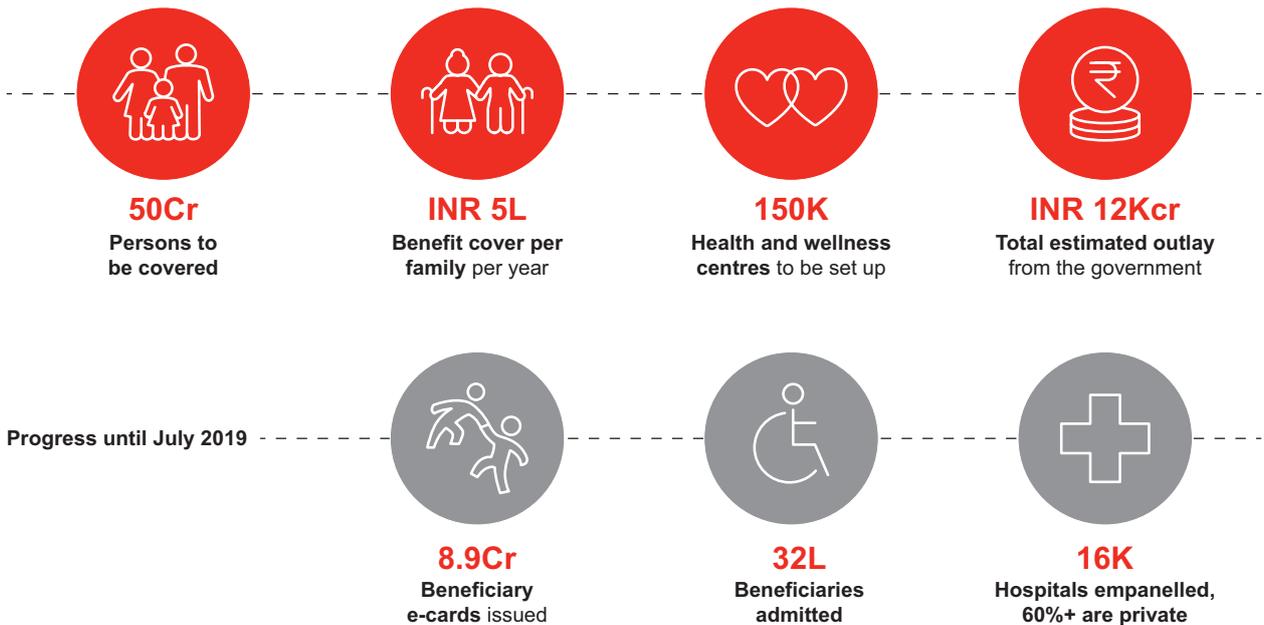
**Figure 5:** Metro and “developed rural” areas will drive the incremental consumption

**Consumption expenditure  
(% of total)**



Notes: Low income: <\$4k, Lower-mid: \$4-8.5K, Upper-mid: \$8.5-40K, High income: >\$40K basis income per household in real terms; Projections: If GDP growth is assumed to be 7.5% @ 2017-18 prices; Top 25% most developed rural areas measured basis the composite district development index consisting 21 indicators (2011 census) like demographics, literacy rate, financial inclusion, etc.  
Source: Future of Consumption in Fast-Growth Consumer Markets: India, 2019.

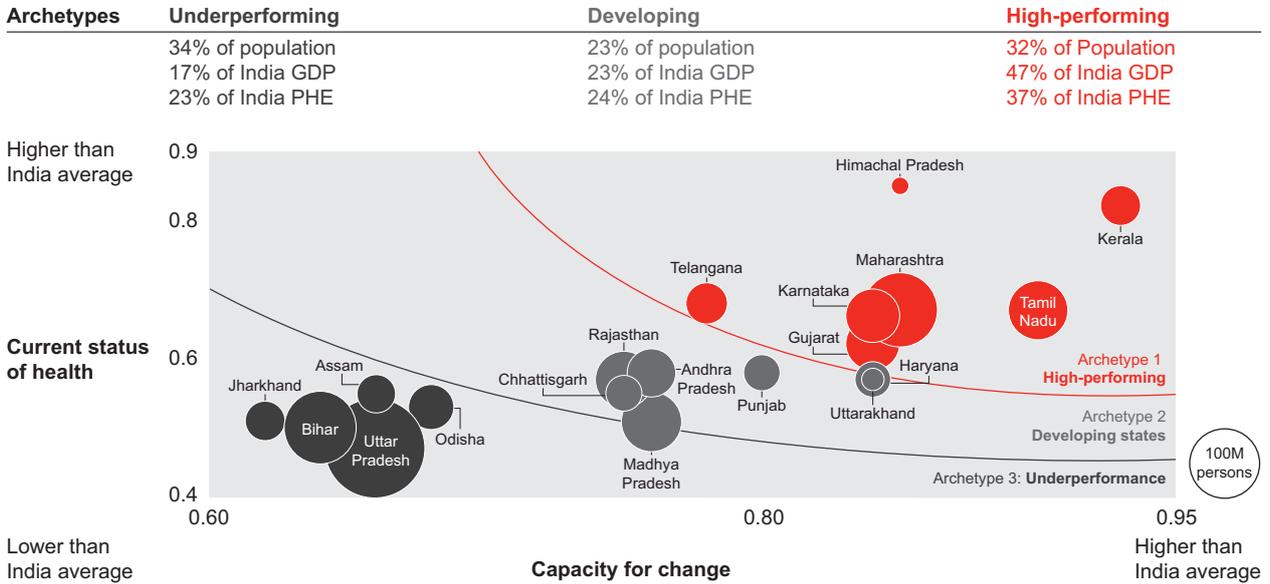
**Figure 6:** Ayushman Bharat, one of the largest programmes of its kind, will drive massive volume expansion



Sources: National Health Portal of India; Bain & Company

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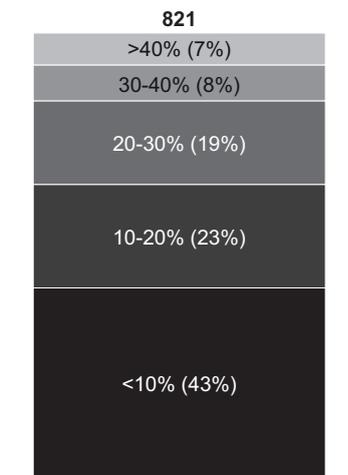
**Figure 7:** The scale of Ayushman Bharat is undetermined, seven high-performing states will be forerunners



Notes: 1. Current Status of Health comprises (Access: Primary Health Care (PHC) density, Human Resource for Health (HRH) density, doctor density; Cost: OOP%, Patient Health Engagement (PHE) per capita; Outcomes: (Infant Mortality Rate) IMR, Maternal Mortality Ratio (MMR), Life expectancy); and Capacity for change comprises (Economic: NDP per capita, debt ration, NDP per capita growth rate; Social: Social progress index, literacy rate; Political: public affairs (governance) index) 2. Totals do not account for 100% as Union Territories, North-Eastern states, Goa, J&K, West Bengal excluded due to insufficient data for analysis; Population data for 2011; GDP data for 2014-15; PHE data for 2014-15  
Sources: NITI Aayog; Census of India; Ministry of Health and Family Welfare; Bain analysis

**Figure 8:** Pricing pressures are likely to persist with continued regulatory focus on drug prices

821 formulations capped, 18% IPM



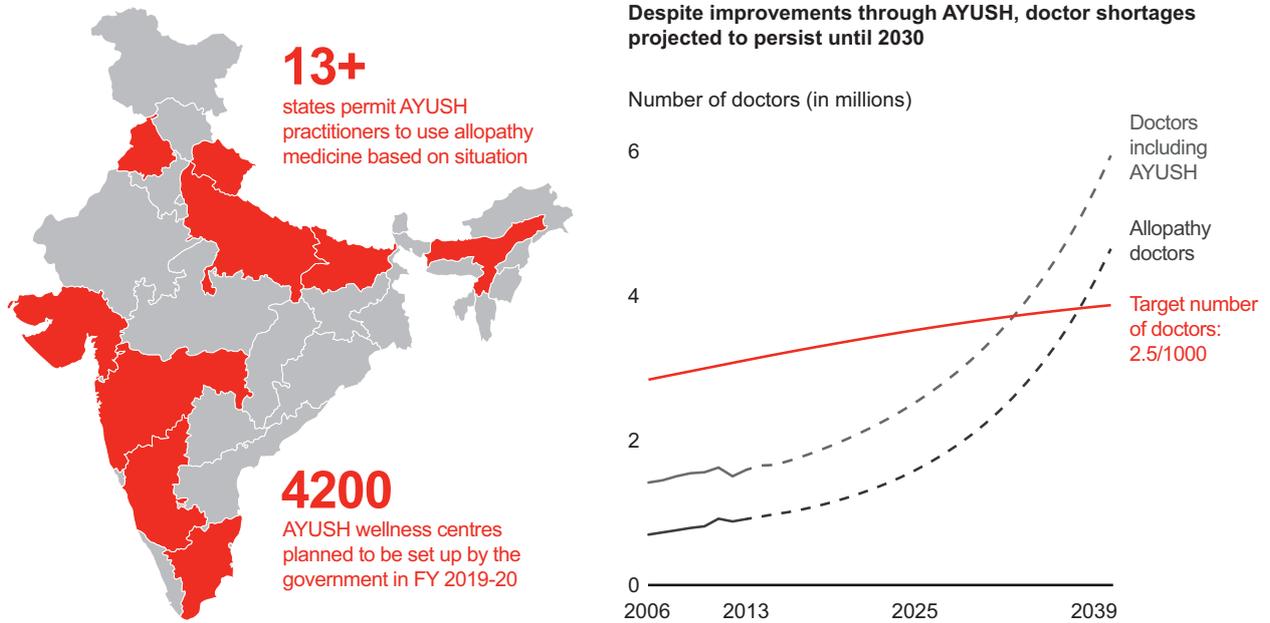
% of all formulations in different price reduction levels (NLEM 2015)

Regulatory focus on pricing expected to continue

Regulatory area	Future outlook
<b>NLEM/ DPCO (National List of Essential Medicines/ Drug Price Control Order)</b>	<ul style="list-style-type: none"> <li>• Clear stated intent to extend pricing caps, part of government manifesto</li> <li>• Extent of NLEM coverage unclear, likely to be in 20-40% range</li> </ul>
<b>INN (International Non-proprietary Names)</b>	<ul style="list-style-type: none"> <li>• Compliance challenging in near to mid-term, even if legal framework is developed</li> </ul>
<b>Jan Aushadhi</b>	<ul style="list-style-type: none"> <li>• Initial traction has been slow (~5k stores). However, significant push expected to ramp-up rollout and drive generics</li> </ul>
<b>GMP (Good Manufacturing Practice)</b>	<ul style="list-style-type: none"> <li>• Challenging to implement, but will follow pricing measures</li> </ul>
<b>UCPMP (Uniform code for life sciences marketing practices)</b>	<ul style="list-style-type: none"> <li>• Voluntary guidelines have low compliance, government, considering mandating UCPMP but compliance will remain a challenge</li> </ul>
<b>Compulsory licensing</b>	<ul style="list-style-type: none"> <li>• Licensing likely to continue to improve affordability and access to drugs</li> </ul>

Sources: Industry participant primary interviews; Secondary research; Department of Pharmaceuticals/NPPA Annual Report 2017-18; Bain analysis

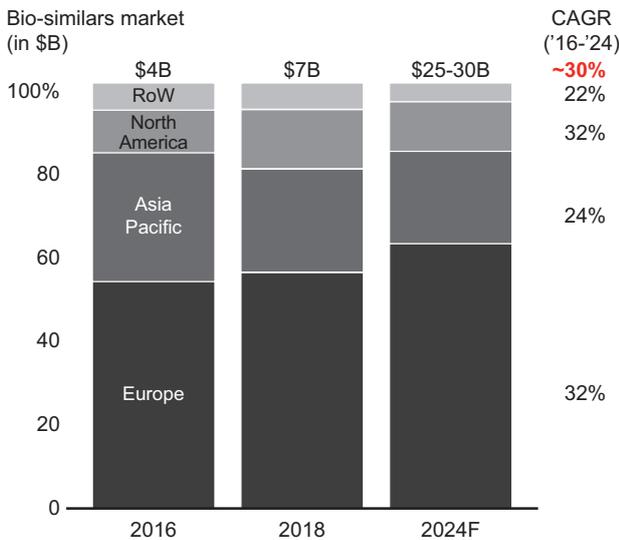
**Figure 9:** Infrastructure and talent shortages will pose challenges, but government policies are paving the way for AYUSH doctors to clear the bottlenecks



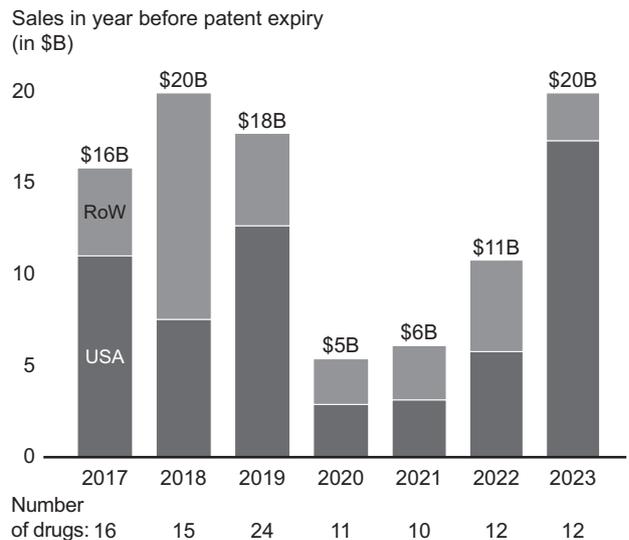
Note: Number of doctors projected assumes the increase in number of seats to be same as in the past seven years; Doctors/1000 doesn't include Ayush doctors  
Source: Bain Nathealth report 2014; Secondary Research; Bain analysis

**Figure 10a:** We will see a significant growth in biosimilars driven by patent expiries

**Global biosimilars market projected to grow to \$30B by 2024**



**Robust period of patent expiries for branded biologic products**

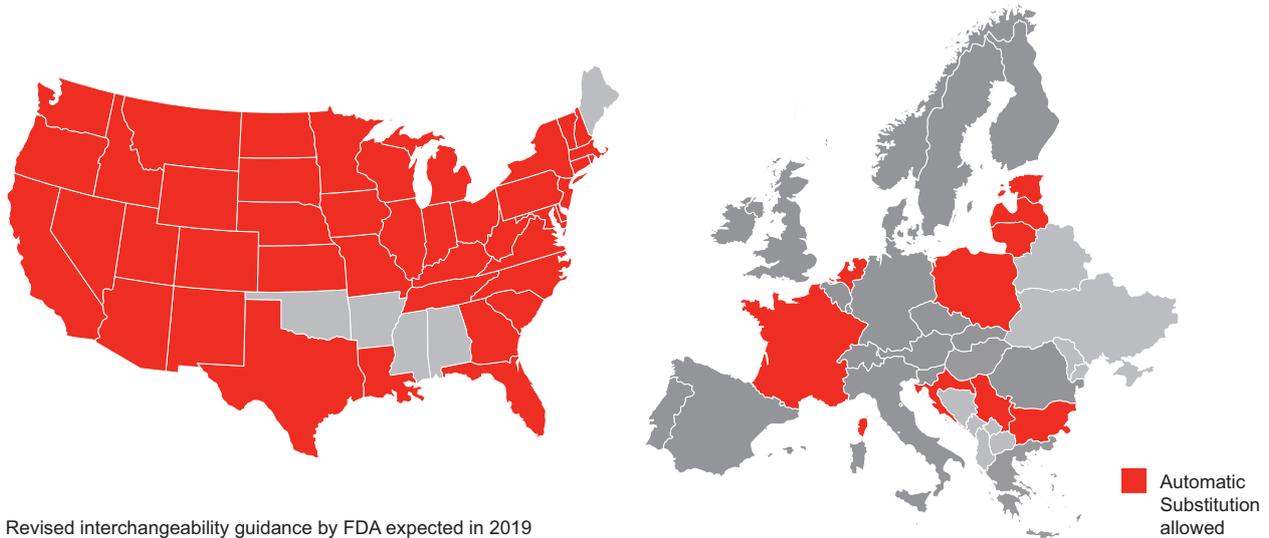


Note: RoW is Rest of the World  
Sources: Biosimilars Market-Growth Trends and Forecast (2019-2024), Mordor Intelligence; Global Pharmaceuticals (April 2019), Credit Suisse

**Figure 10b:** Legislation-led biosimilar interchangeability expected to be the next step in evolution

Majority US states have enacted biosimilar substitution laws to save on drug spending

Stricter regulation on EU on automatic substitution, but allow prescribers to substitute



Revised interchangeability guidance by FDA expected in 2019

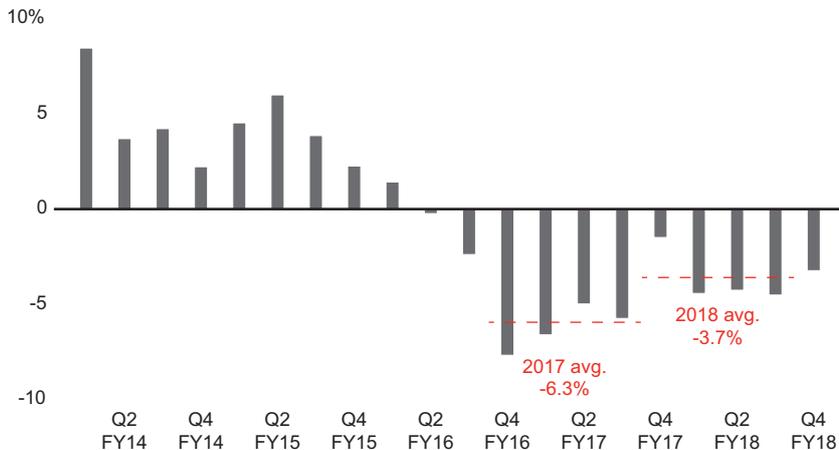
Sources: Biosimilars Market—Growth Trends and Forecast (2019-2024), Mordor Intelligence; Global Pharmaceuticals: Keeping Up With the Biosimilars (April 2019), Credit Suisse; Global Pharmaceuticals (April 2019), Credit Suisse

**Figure 11:** The US market will be less attractive in the next five years than in the preceding five; complex generics represent a bright spot

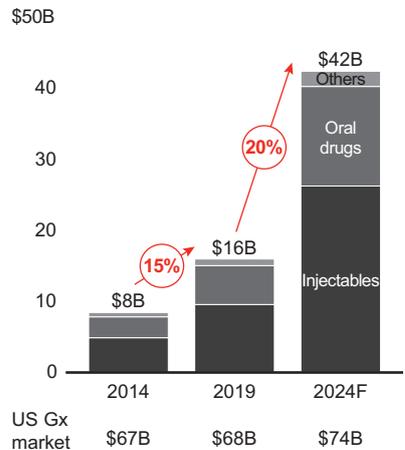
Price of mature Gx drugs in the US has deflated in the last 2 years

Complex generics in US growing at 10%+ vs. generics growing at 1-2%

US mature Gx drug average price YoY change (%)

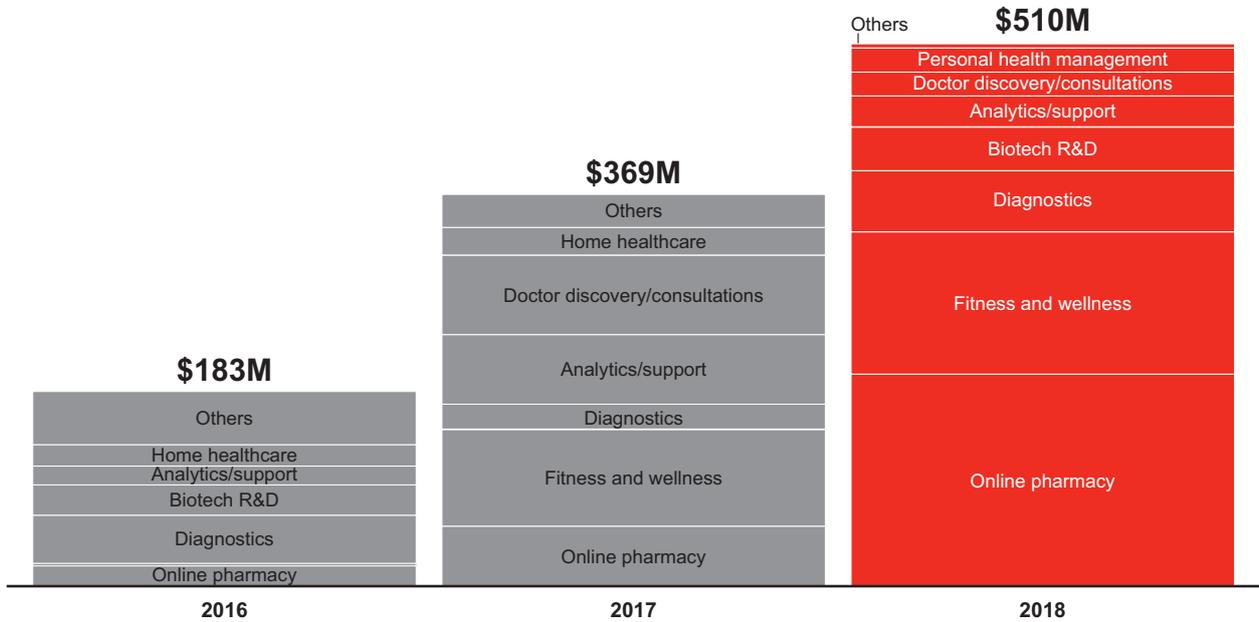


US Complex (Specialty only) Generics market (\$B)



Note: Includes IQVIA drugs categorized as Generic and Branded Generic; mature drugs defined as launch of the specific molecule/form/strength combination 12 months prior to inclusion in analysis; Quarterly YoY change in price calculated as average of month-wise YoY price change (%); Other buyers include VA, regional chains and distributors, hospitals, and other institutions; Fiscal year defined as April of given year to March of the following year  
Sources: IQVIA data; The 2018 Economic Report of U.S. Pharmacies Benefit Managers; Drug Channels Institute 2018; Market participant interviews; Bain analysis; GVR Specialty Drugs Market Analysis and Segment Forecast 2017; Fitch Solutions US generic market size

**Figure 12:** Digital models in health continue to be backed by capital and interest with VC investments of more than \$500 million in 2018

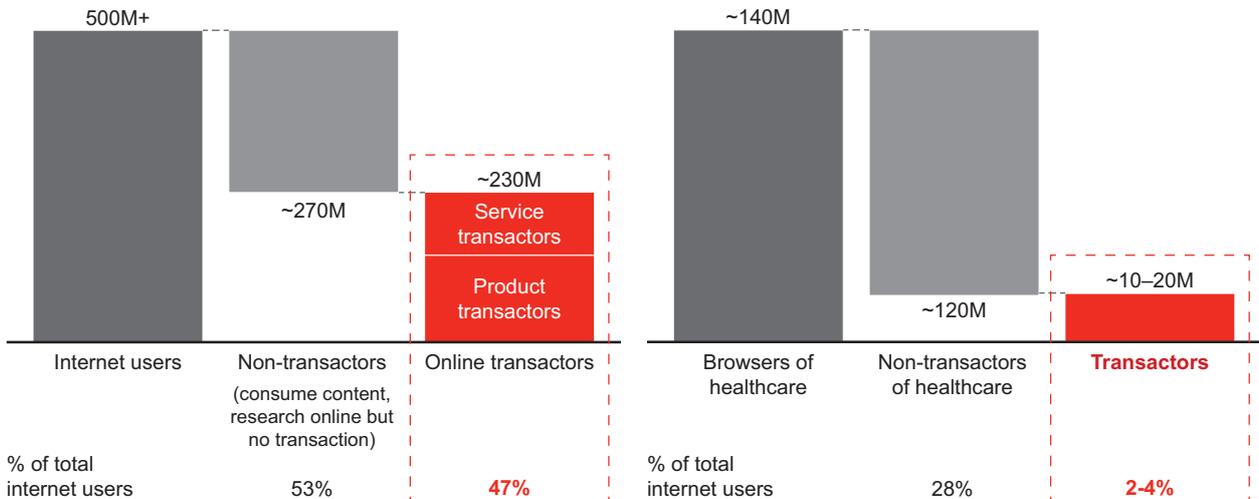


Note: Personal health management includes health advisory content aggregators, and personal health tracking apps  
 Sources: Inc42; Crunchbase; VCC Edge; VC Circle; Tracxn; Bain analysis

**Figure 13:** Online engagement and transactions in healthcare are poised to increase

Of the more than 500M Internet users about half are e-commerce transactors

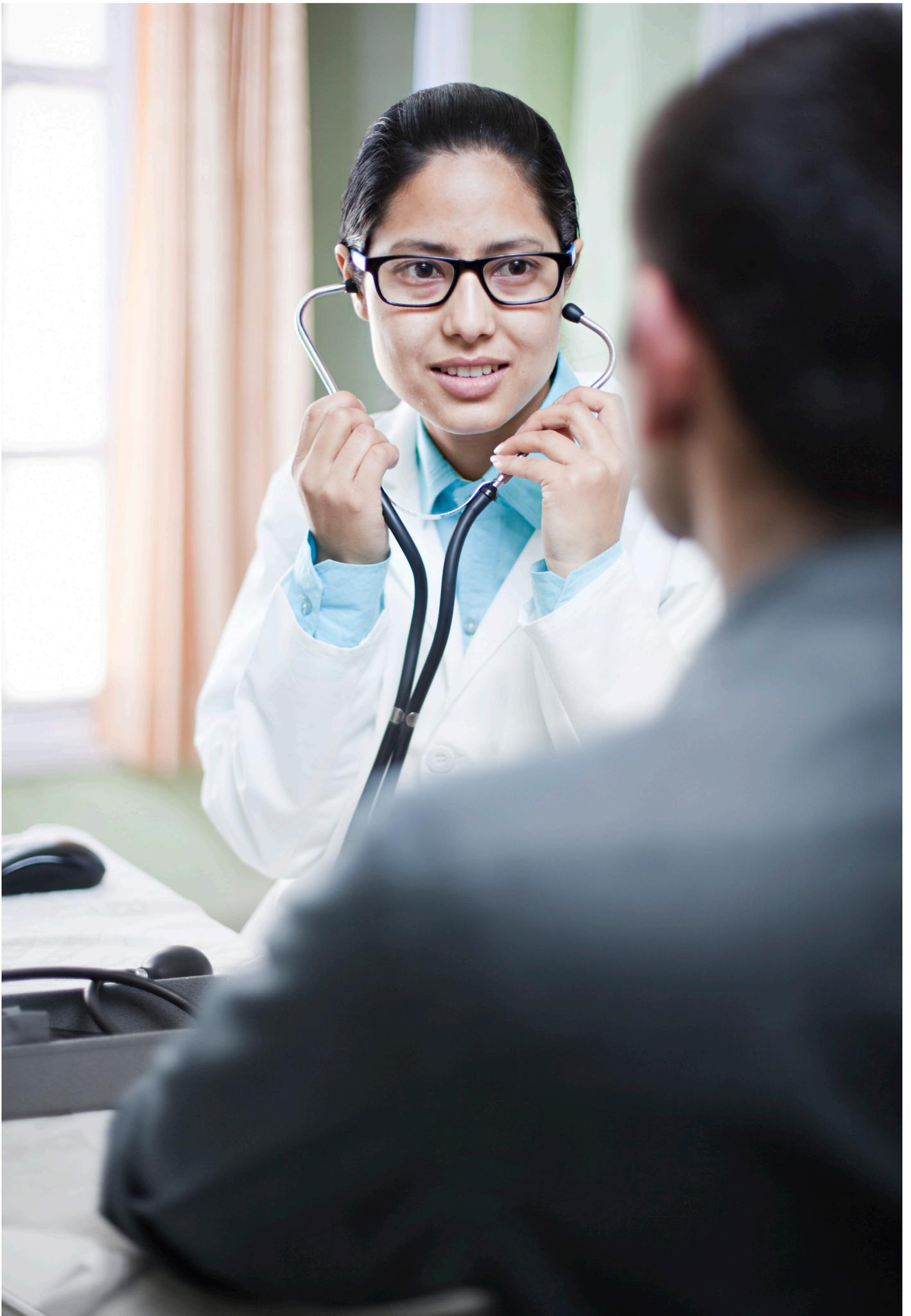
Of ~140M healthcare browsers, only 10–15% do healthcare transactions



**As total internet users scale, healthcare browsers and transactors will rise**

Sources: Unlocking Digital for Bharat: \$50 billion opportunity, 2018; Industry participant interviews; Bain analysis





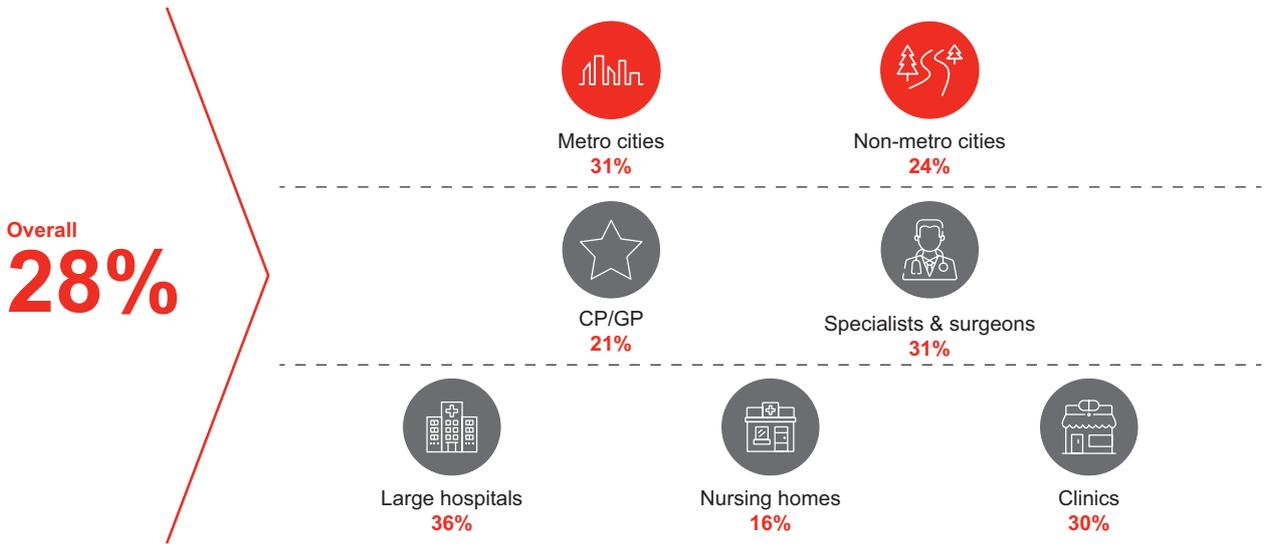
# 2.

## The doctor of the future

- More than one-fourth of doctors believe delivering high-quality care will become difficult in the next five years. Shortage in specialist doctors, nursing and support staff coupled with exploding patient volumes pose a stress on the system.
- Chronic diseases, more informed patients and a focus on wellness will shape healthcare over the next five years.
- Doctor behaviour will be driven by six factors across patients, practice and ways of working
  - In addition to the existing burden of infectious diseases, India's tsunami of NCDs is being felt on the ground. Almost 80% of doctors report that they find it challenging to keep pace with the breadth and the evolution of diseases and treatment protocols.
  - Patients today are more proactive, informed and seek on-demand care: around 83% doctors say that their patients are more informed about their disease and treatment options compared to five years ago, and nearly 92% of doctors surveyed, expect awareness in patients to further increase in the next five years.
  - Doctors' prescription autonomy is gradually being curtailed by drug formularies, insurance restrictions and substitutions by pharmacists.
  - Doctors believe it is their responsibility to bring healthcare costs under control, but almost half feel forced to make cost-quality trade-offs.
  - While medical representatives were historically an important source of information for doctors, their relevance is now diminishing as digital sources become more important.
  - While doctors believe, that standardised treatment protocols and electronic medical records (EMRs) continue to remain the most valuable tools to improve care quality, the survey suggests a definite uptick in interest for more complex tools like robot-assisted medicine and remote patient monitoring. Life sciences companies can support physicians by providing high-impact tools to improve quality of patient care and productivity.

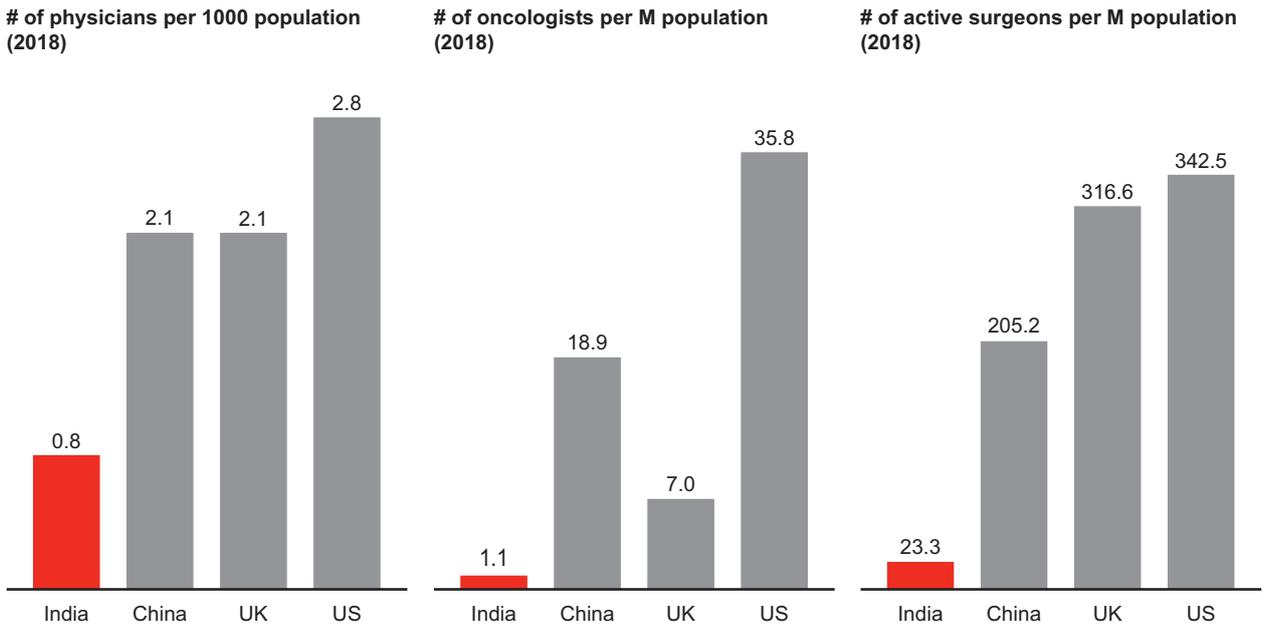
**Figure 14:** 28% doctors believe their job will become more difficult over the next five years

Percentage of physicians who believe it will become more difficult to deliver high-quality care in the next five years



Note: Difficult implies responses rated < 3 where 1 - Much more difficult, 2 - Somewhat more difficult over the question – “Overall, do you think it will be more difficult, the same, or easier for you to deliver high quality care to patients in 3-5 years?”  
Source: Bain June 2019 Survey; N = 325 respondents

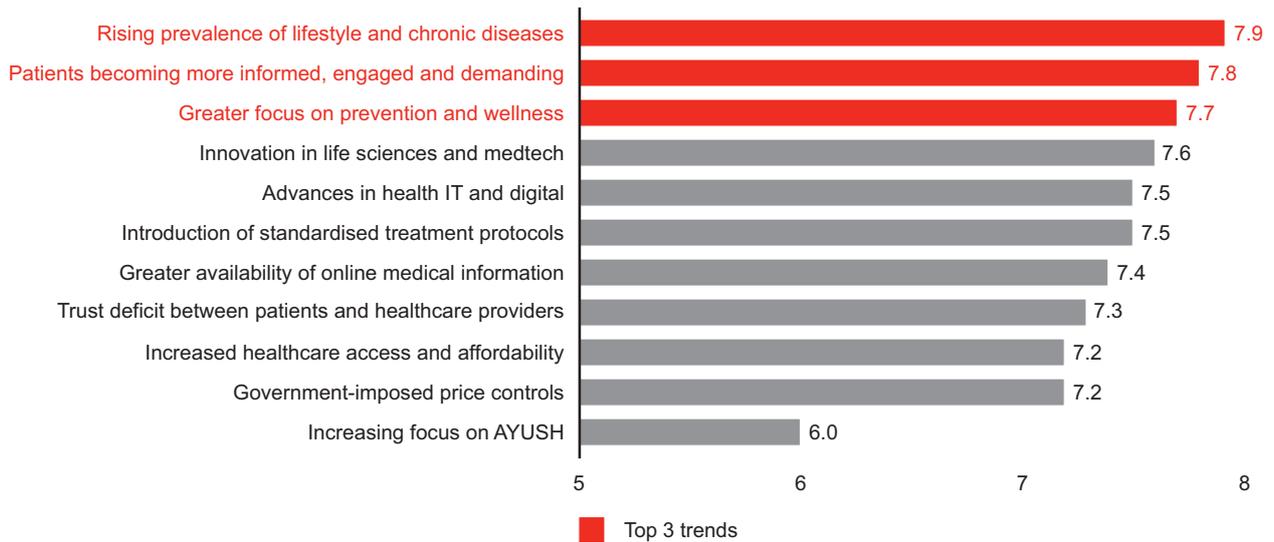
**Figure 15:** Doctor, nursing and support staff shortages coupled with exploding patient volumes will stress the system unless addressed



Sources: Fitch Solutions; Euromonitor; Business Monitor International; World Bank; Bain analysis

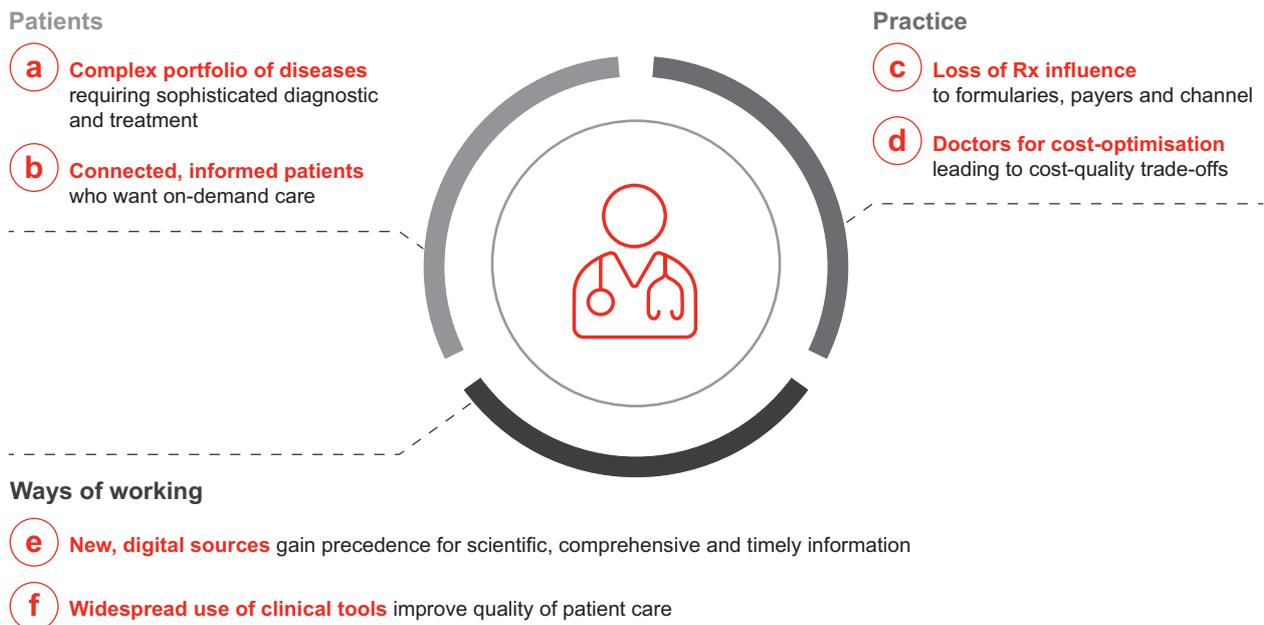
**Figure 16:** Chronic diseases, more informed patients and a focus on wellness will shape healthcare over the next five years

Trends that will affect doctors (scored out of 10)



Note: Question – “To what extent do you expect the following trends to shape your job in the next 3-5 years? Please rate the attribute on a scale of 0 to 10”  
 Source: Bain June 2019 Survey; N = 325 respondents

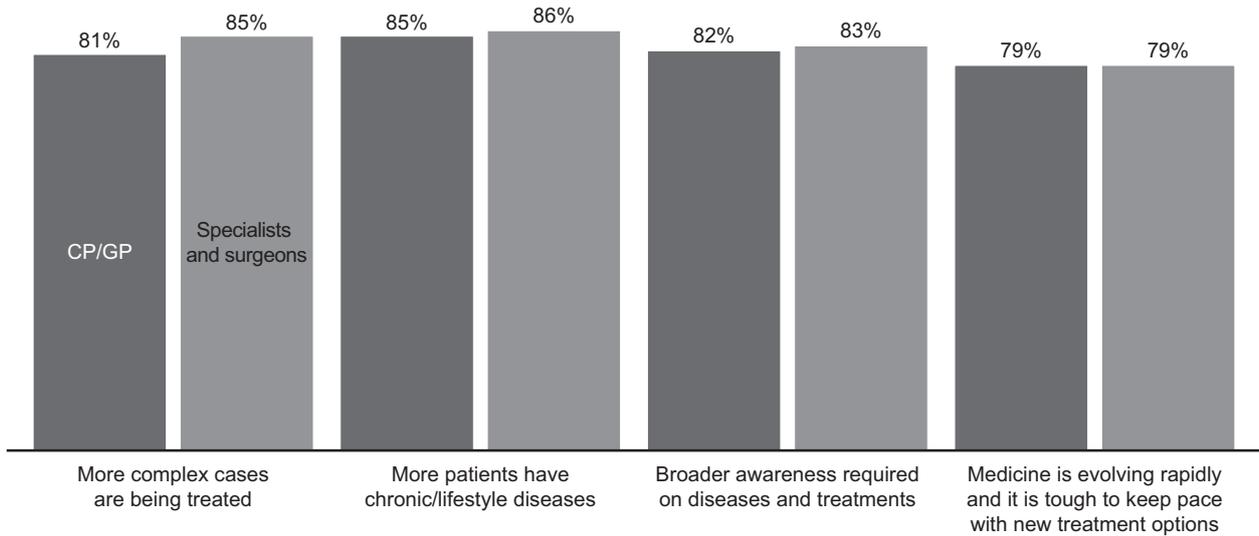
**Figure 17:** Doctor behaviour will be driven by six factors across patients, practice and ways of working



Source: Bain & Company

**Figure 18:** India’s tsunami of non-communicable diseases is being felt on the ground

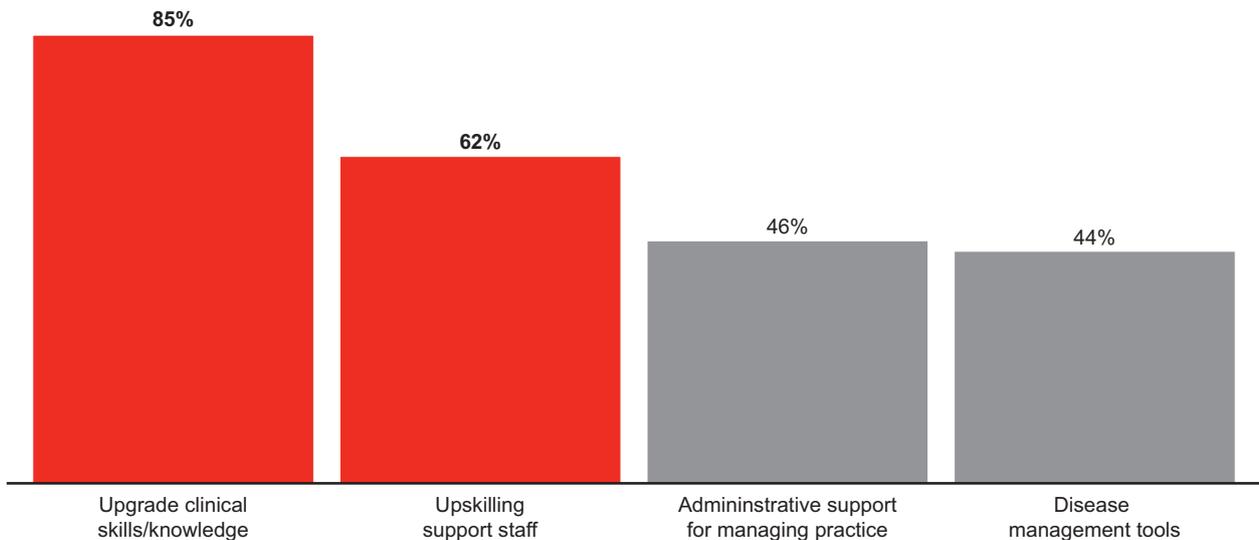
Percentage of physicians who believe the following, compared with 3–5 years ago



Note: % physicians who believe implies respondents who responded with 4 or 5 (4-Somewhat true, 5-Mostly true) over the question “To what extent are the following statements about your practice true today?”  
 Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 19:** Upskilling themselves and their support staff are top-of-mind for physicians

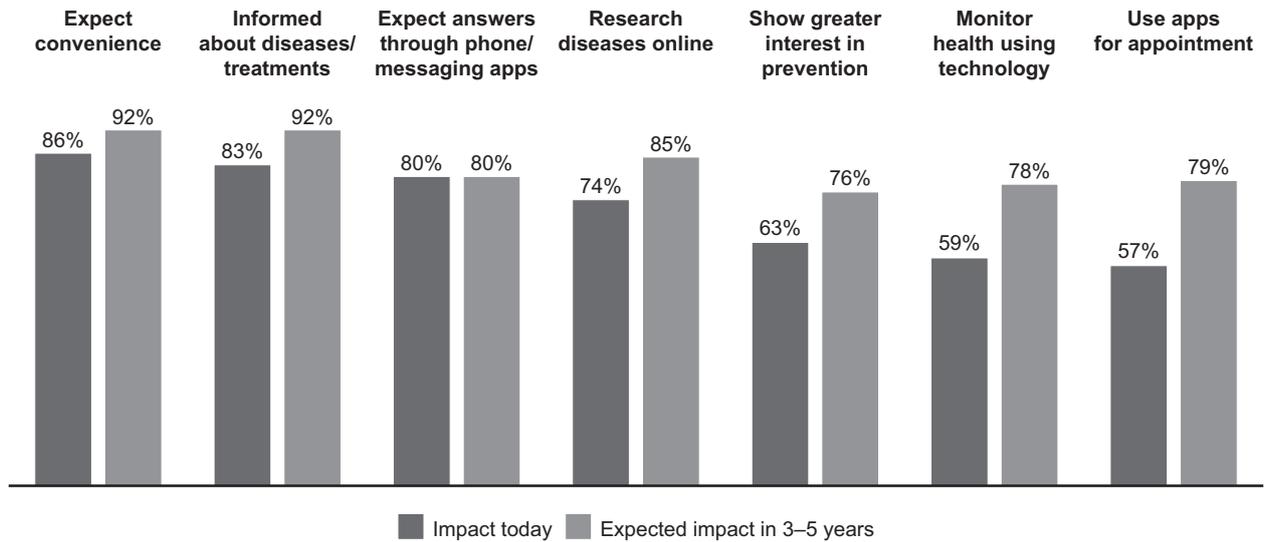
Percentage of physicians ranking various initiatives as highly important to deliver quality care in the next 3–5 years



Note: % responses ranked in top 3; Question “What are the biggest areas of support needed in order to maximize the quality of care and your professional fulfillment in the next 3-5 years? Rank top 3, where 1 being the highest and 3 is the lowest”  
 Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 20:** Patients today are more proactive, informed and seek on-demand care

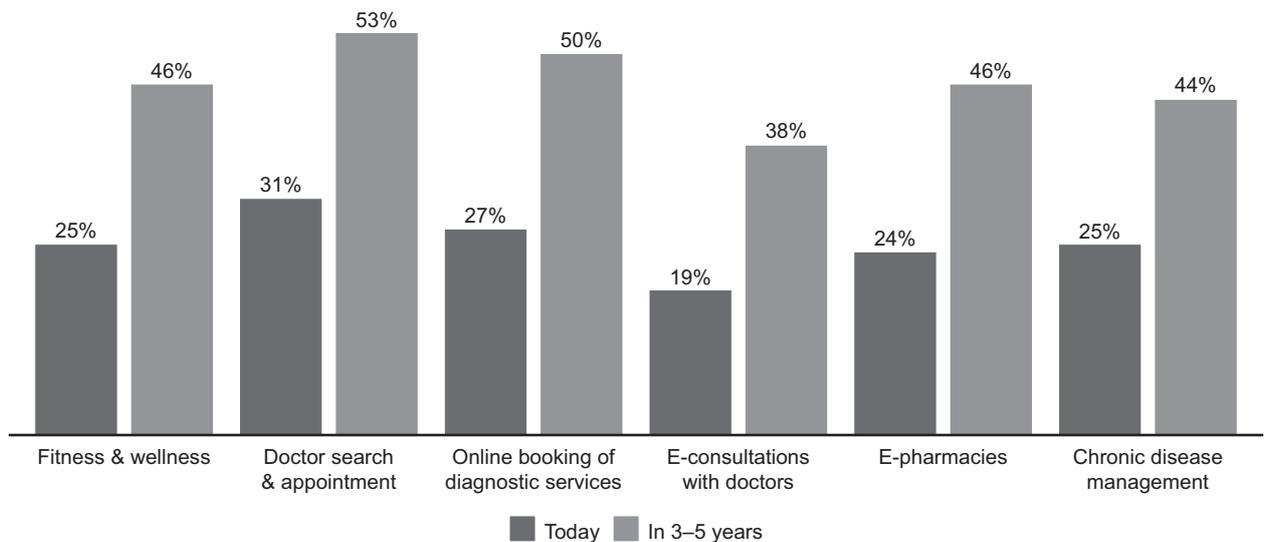
Percentage of physicians who believe the following for patients



Note: Response rated >3 counted; 4-Somewhat true, 5-Mostly true. Question—"To what extent are the following statements about your patients true today?"  
 Source: Bain-CII Doctor Survey, June 2019 (n=325)

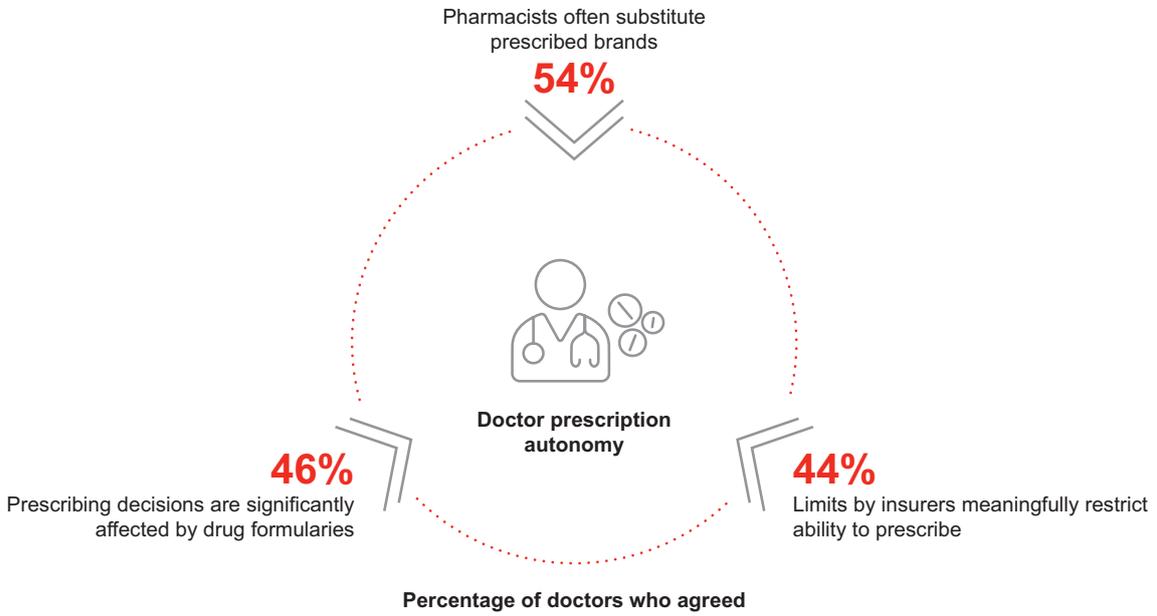
**Figure 21:** Patients are also increasingly using digital tools to monitor and manage their health

Percentage of patients using various digital tools



Note: Weighted average calculated using mid-points. Question "On average, what % of your patients use digital tools for the following and what % of your patients do you expect to use these types of digital tools in the next 3-5 years"  
 Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 22:** Doctors’ prescription autonomy is gradually being curtailed by formularies, insurance restrictions and substitutions by pharmacists



Note: Agree implies a score more than 3 i.e. 4–Somewhat agree or 5–Strongly agree over the question “To what extent do you agree or disagree with the following statements about your prescribing situation?”  
Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 23:** Doctors believe it is their responsibility to bring healthcare costs under control, but almost half of them feel forced to make cost-quality tradeoffs

Percentage of physicians who agree with the following statements on cost measures



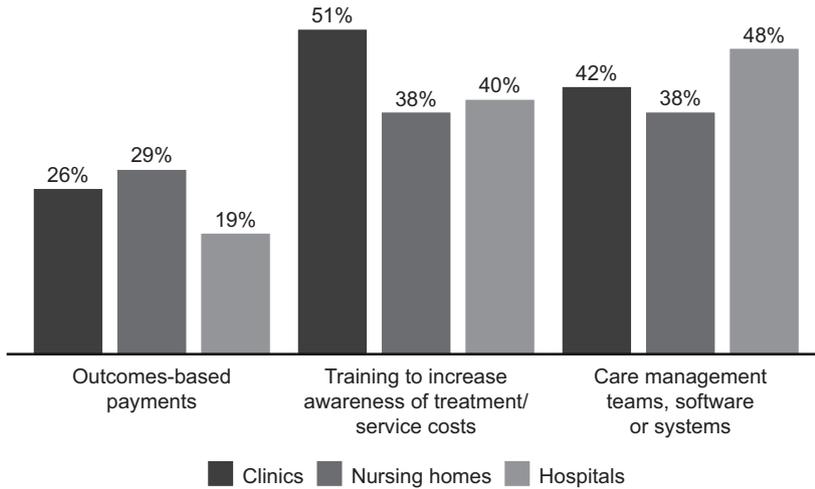
Note: Responses rated >3; 4–Agree, 5–Strongly agree; Question “Please indicate the extent to which you agree or disagree with the following statements about your clinical decisions”  
Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 24:** Life sciences companies can help doctors improve quality while optimising costs

Life sciences companies can direct efforts to assist healthcare providers on high-priority cost reduction initiative

High-value information should be supplied to help optimise cost/quality trade-off

Percentage of respondents rating various cost-saving initiatives as high priority



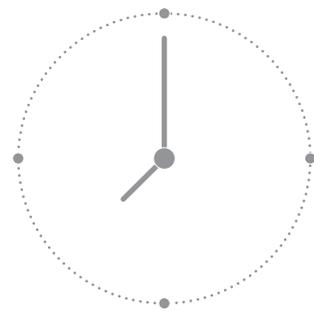
**90%** Doctors want outcomes and real-world evidence data

**75%** Doctors prioritise cost-benefit assessment as information they require from life sciences companies

Note: Responses counted if >3; Scale 1 (Not at all) to 4 (High Priority); Question "To what extent are the following cost saving initiatives a priority for your hospital?"; Scale-1 (least important) to 5 (most important); and "What kind of information do you expect a manufacturer of pharmaceuticals to provide you with?"  
Source: Bain-CII Doctor Survey, June 2019 (n=325)

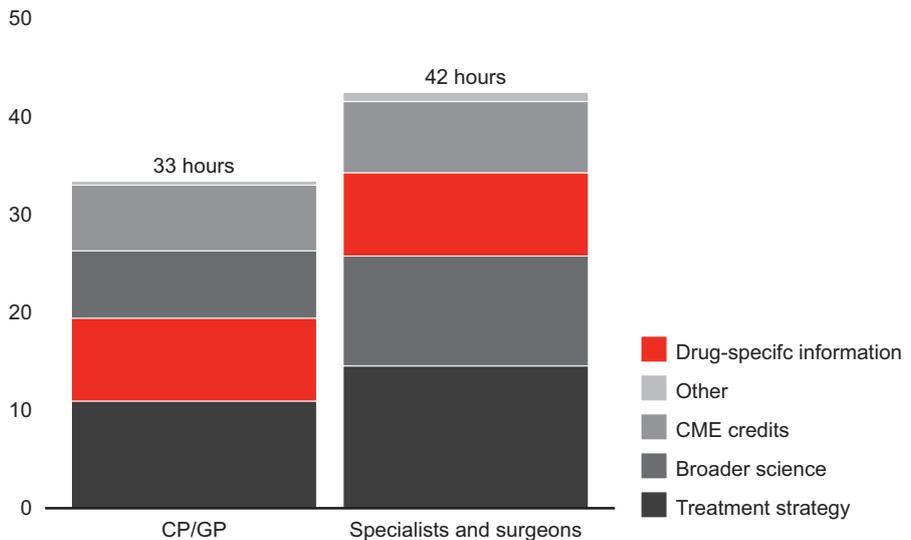
**Figure 25:** Doctors spend more than 75% of their information-seeking time on issues which are not drug-specific

Hours spent acquiring information per month



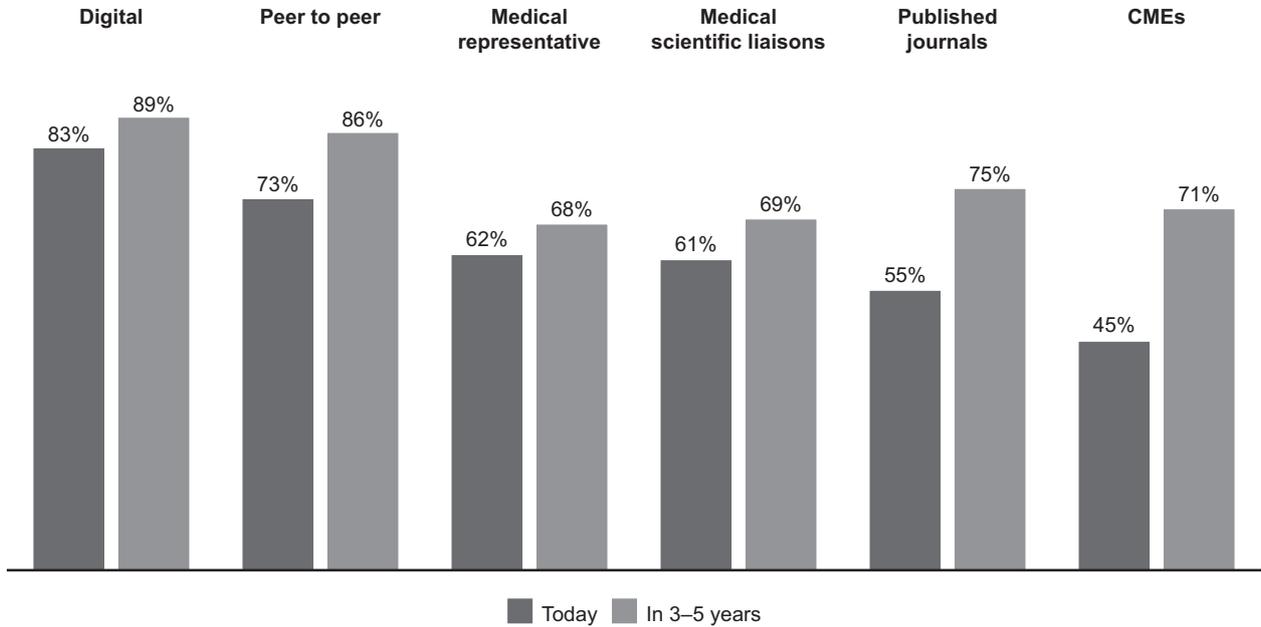
**~40h**

Time doctors spend acquiring information per month



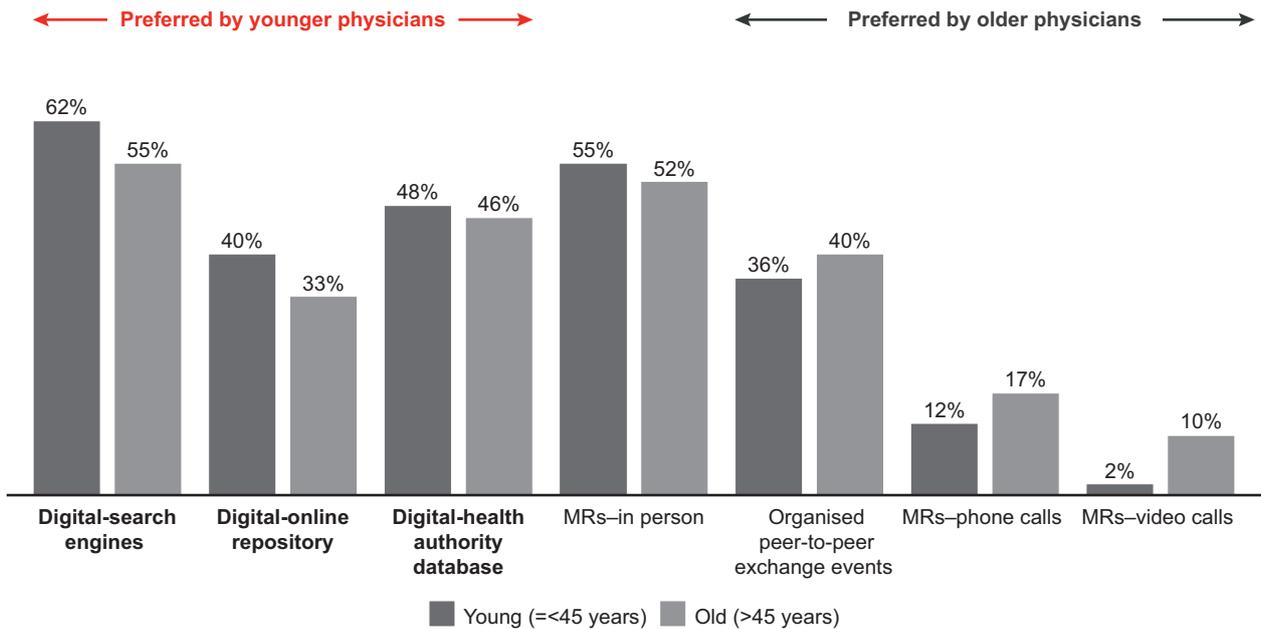
Note: Average time calculated; Question "How much time in an average week do you dedicate to acquiring information? Please indicate an approximate time for each type of information (average hours per month)"; Continuing Medical Education (CME)  
Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 26:** Digital sources are the most widely used information source for doctors today, and this is expected to grow in the future



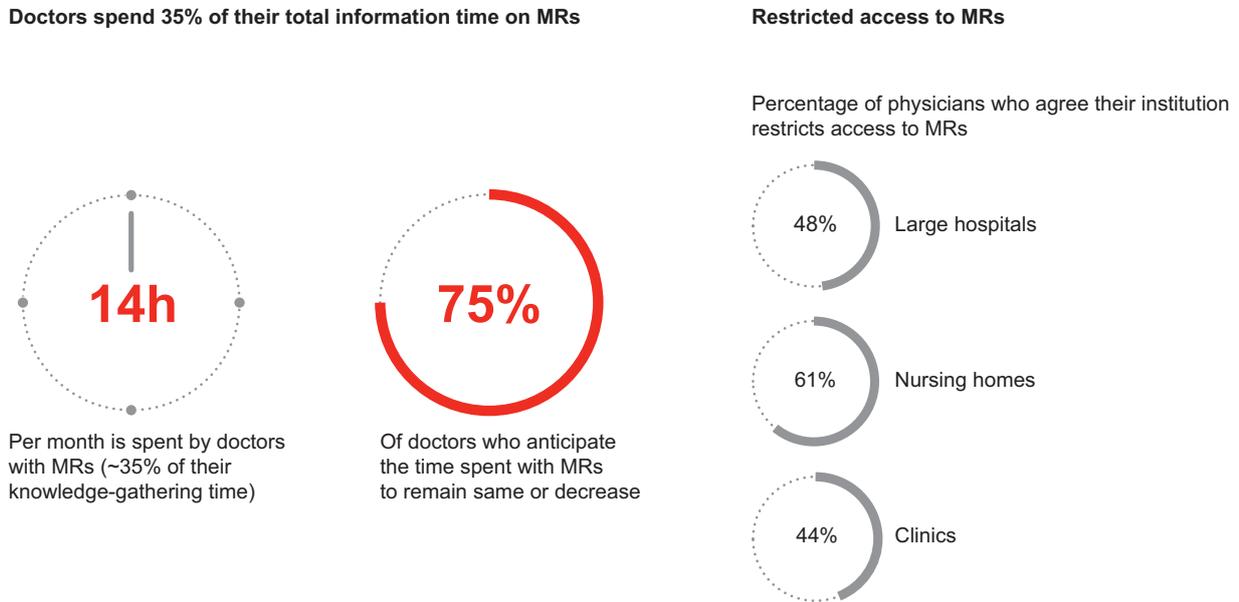
Note: Responses rated >3 counted; Scale of 1 to 5 where 1–Least utilized and 5–Most utilized; Question “Which of the following sources doctors utilise most to get information about pharmaceutical products? Indicate your response for your current situation, and your expectation for the next 3-5 years”; Continuing Medical Education (CMEs)  
Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 27:** Digital-savvy younger physicians add momentum to the use of digital channels



Note: Responses rated >= 4 counted; Scale of 1 being least utilized to 5 being most utilized; Question “Which of the following sources do you utilise the most to get information about pharmaceutical products?”  
Source: Bain-CII Doctor Survey, June 2019 (n=325)

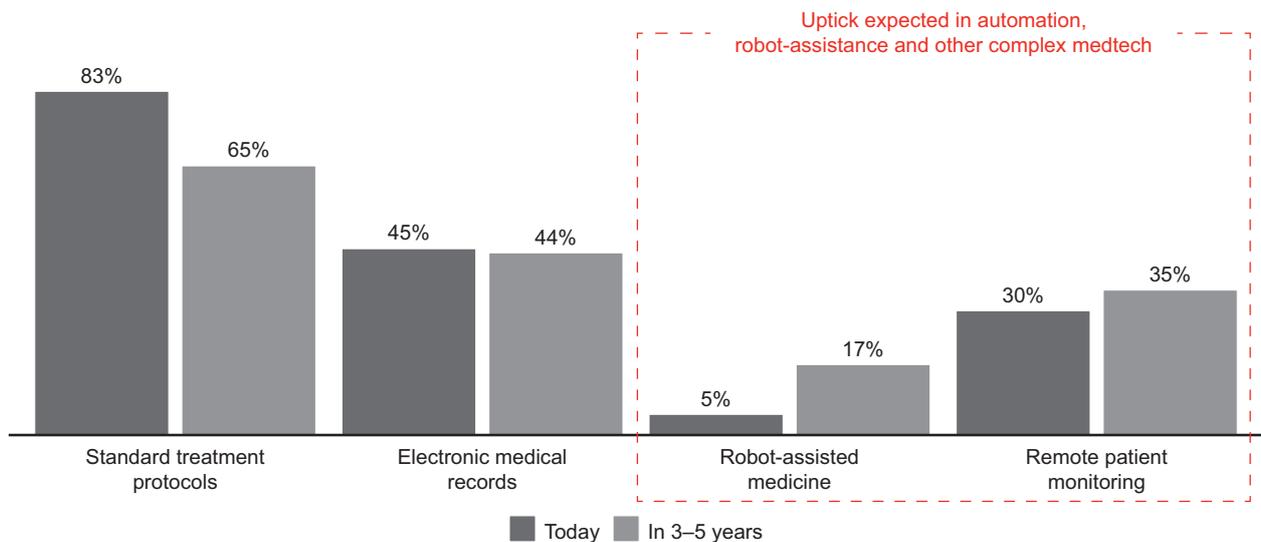
**Figure 28:** Growing restrictions on MR access is further reducing doctors' dependence on MRs for information



Note: Responses rated >3 counted; 5–Strongly agree, 4–Somewhat agree; Statement “My hospital restricts my access to medical representatives” in question “To what extent do you agree or disagree with the following statements about your prescribing situation?”; Average time calculated; Question - “How much time do you spend with medical representatives today? How do you expect this to change in the next 3-5 years”  
 Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 29:** Physicians believe that clinical tools will become increasingly important to quality of patient care in the future

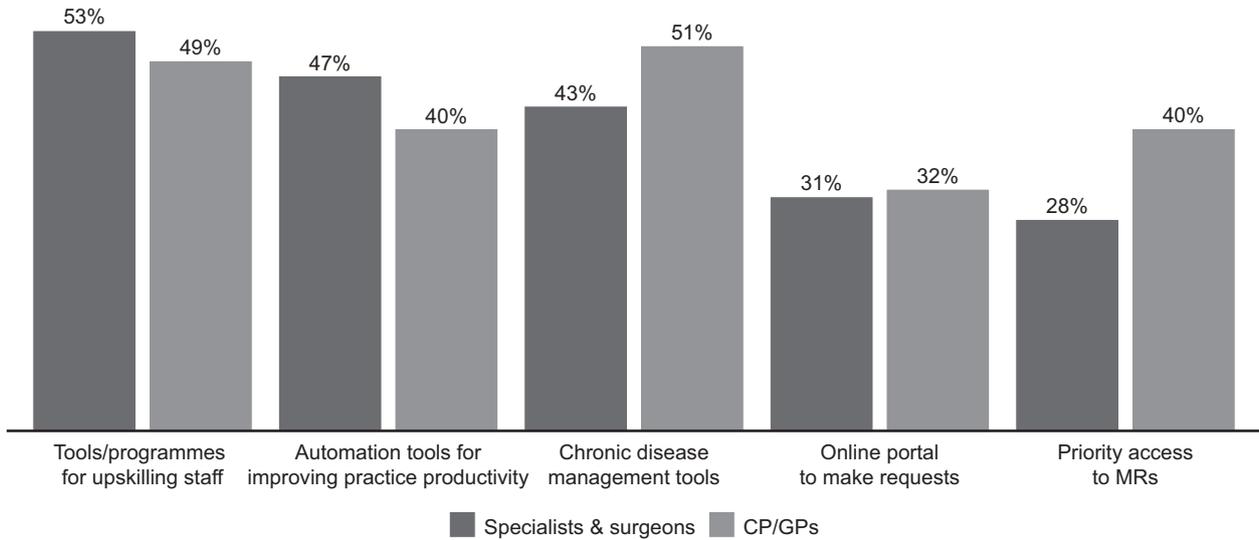
Percentage of physicians ranking various tools as highly impactful to quality of care



Note: Top 3 ranked tools counted; Question “Which tools or programs have the most significant positive impact on quality of care delivered in the healthcare environment in which you work? Please indicate your response for today and your assessment of the next 3-5 years. Rank top five”  
 Source: Bain-CII Doctor Survey, June 2019 (n=325)

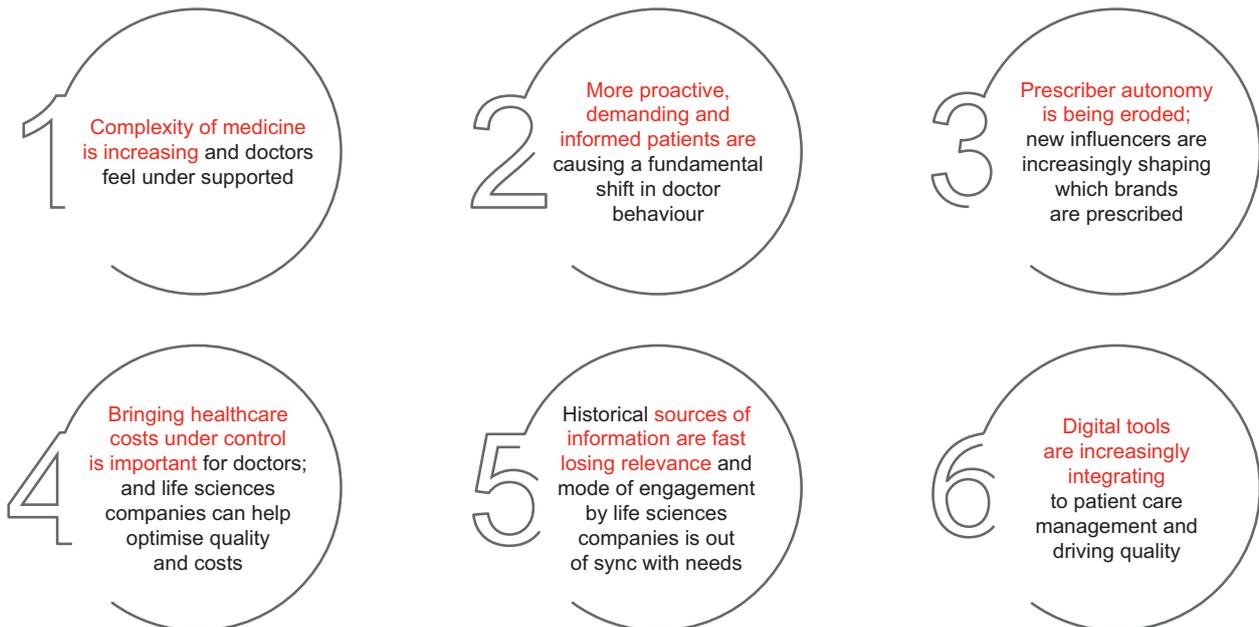
**Figure 30:** Life sciences companies can support physicians by providing high-impact tools to improve quality of patient care and productivity

Percentage mentioned by physicians as top 3 high-value services they want from manufacturers



Note: Respondents indicating service in their top three counted; Question "Which of the following value-added services would you most appreciate from a manufacturer, if they were offered?"  
Source: Bain-CII Doctor Survey, June 2019 (n=325)

**Figure 31:** In conclusion, six factors are changing doctor behaviour in India



Source: Bain & Company



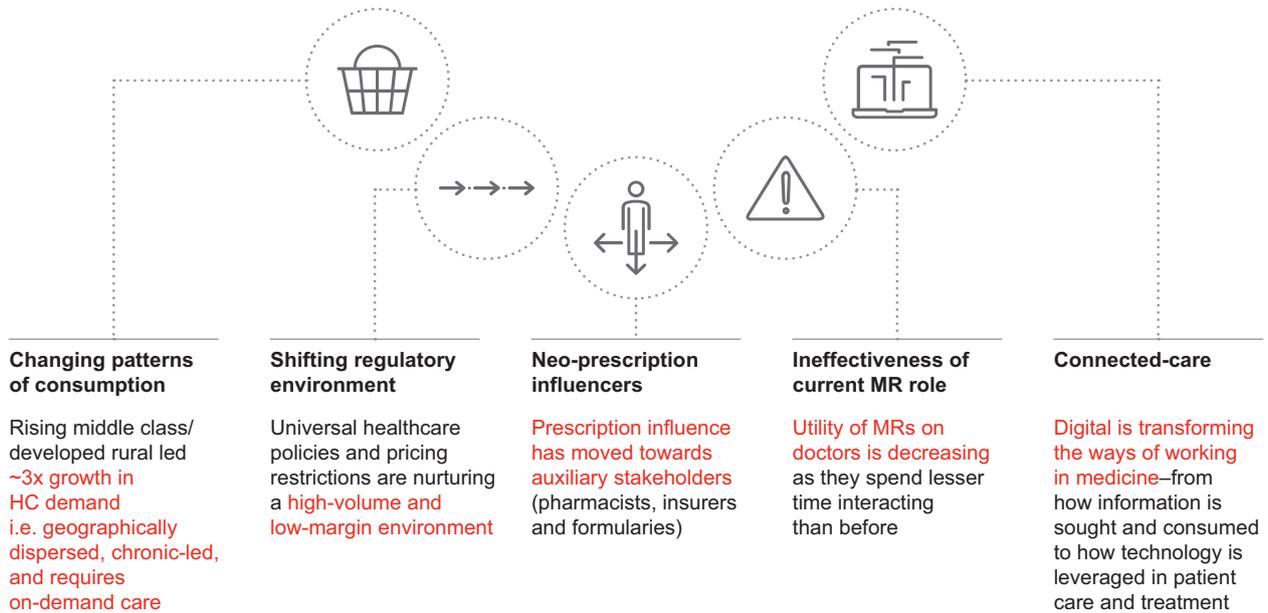


# 3.

## Implications for life sciences companies and the industry

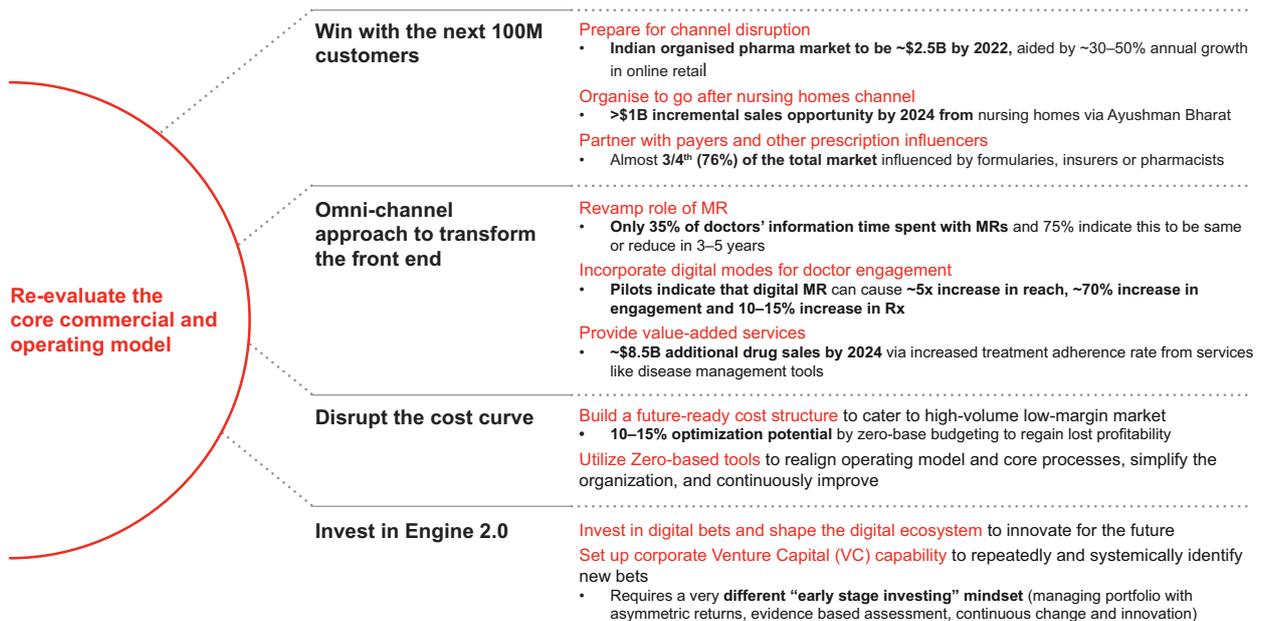
- Life sciences companies need to evolve their commercial and cost models to stay ahead of the curve. They can achieve this by:
  - Preparing themselves for channel disruption, organising to tap into nursing homes and partnering with insurers and other prescription influencers.
  - Revamping the role of the MR by incorporating digital modes of engaging with doctors. Life sciences companies can build and deploy value-added services like disease management and practice productivity tools, which doctors call out as a clear unmet need today.
  - Investing in Engine 2.0 by shaping the digital ecosystem to innovate for the future.
  - Disrupting the cost curve to build a “future-ready” operating model and utilising zero-based tools to realign operating model and core processes, simplify the organisation, and continuously improve.

**Figure 32:** Five reasons why Indian life sciences companies should get ahead of the coming changes



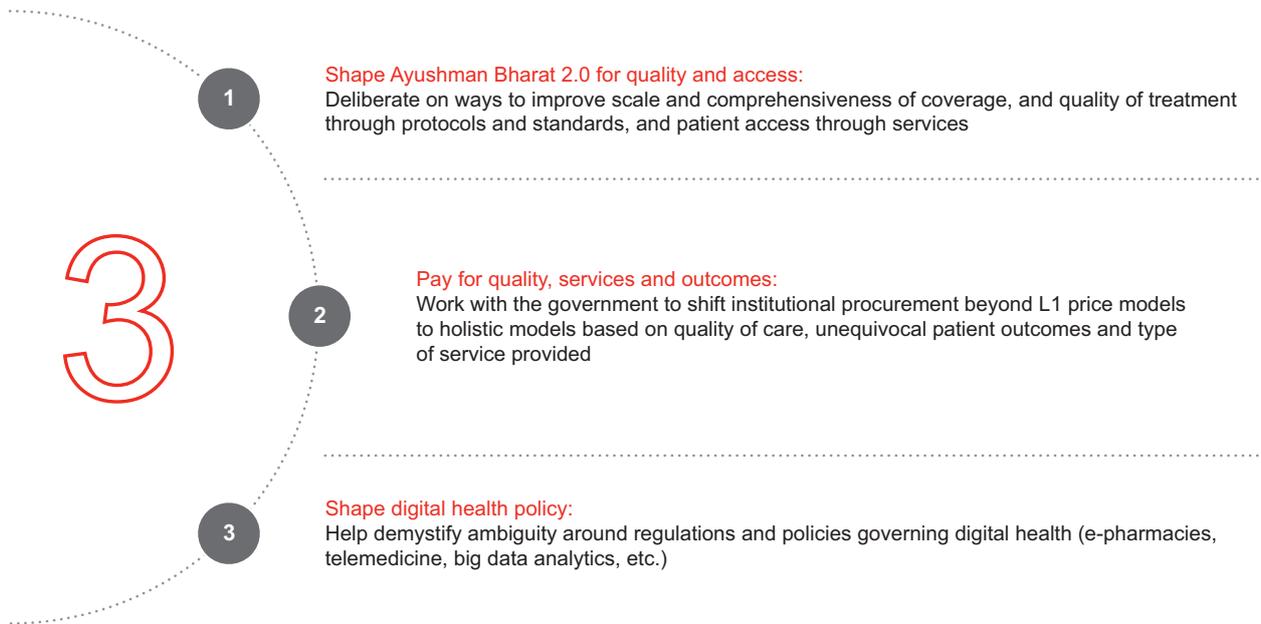
Source: Bain & Company

**Figure 33:** Life sciences companies need to evolve their commercial and cost models to stay ahead of the curve



Note: Aspirational adherence rate taken as 10%  
Source: Bain & Company

**Figure 34:** There are three main areas for the industry and government to work together



Source: Bain & Company



## Appendix: Methodology and survey questions

Bain CII India Doctor Survey was conducted in June 2019 including 325 physicians from metros (n=212) and tier 1+ (n=113) with 96 CP/GP, 148 specialists and 81 surgeons, across clinics (n=118), nursing homes (n=89) and large hospitals (n=118). The surgeons included orthopaedic, gynaecologist, and general surgeons while non-surgical specialists included cardiologists, diabetologists/endocrinologists, pulmonologists, and neurologists (Figure 35).

The survey was conducted in English and focused on questions to understand changes in the healthcare environment and how those changes are influencing treatment and purchasing or prescribing patterns. Several quality control measures were included both pre-launch and during data analysis to ensure maximum data integrity (Figure 36).

### Survey questions

**Figure 14:** Overall, do you think it will be more difficult, the same, or easier for you to deliver high quality care to patients in 3–5 years? Please rate on a scale where 1-much more difficult, 2-somewhat more difficult, 3-the same, 4-somewhat easier, 5-much more easier

**Figure 16:** To what extent do you expect the following trends to shape your job in the next 3-5 years? Please rate the attribute on a scale from 0-least to 10-maximum

**Figure 18:** To what extent are the following statements about your practice true today? Please rate the attribute on a scale where 1-mostly false, 2-somewhat false, 3-neither true nor false, 4-somewhat true, 5-mostly true

**Figure 19:** What are the biggest areas of support needed in order to maximize the quality of care and your professional fulfilment in the next 3–5 years? Rank top three, where 1 is the highest and 3 is the lowest

**Figure 20:** To what extent are the following statements about your patients true today? Please rate the attribute on a scale where 1-mostly false, 2-somewhat false, 3-neither true nor false, 4-somewhat true, 5-mostly true

**Figure 21:** On average, what percentage of your patients use digital tools for the following and what percentage of your patients do you expect to use these types of digital tools in the next 3–5 years? Answer in percentage.

**Figure 22:** To what extent do you agree or disagree with the following statements about your prescribing situation? Please rate the attribute on a scale from 1-strongly disagree to 5-strongly agree

**Figure 23:** Part I-Please indicate the extent to which you agree or disagree with the following statements about your clinical decisions. Please indicate your rating on a scale from 1-strongly disagree to 5-strongly agree

Part II-To what extent do you agree or disagree with the following statements about the hospital in which you work? Please indicate your rating on a scale from 1-strongly disagree to 5-strongly agree

**Figure 24:** Part I-To what extent are the following cost saving initiatives a priority for your hospital? Please rate on a scale of 1-not at all to 4-high

Part II - What kind of information do you expect a manufacturer of pharmaceuticals to provide you with? Please rate the following aspects according to importance to you. Please rate on a scale where 1-least important and 5-most important

**Figure 25:** How much time in an average week do you dedicate to acquiring information? Please indicate an approximate time for each type of information (average hours per month)

**Figure 26, 27:** Which of the following sources do utilise most to get information about pharmaceutical products? Please indicate your response for your current situation, and your expectation for the next 3-5 years on a scale from 1-least utilised to 5-most utilised

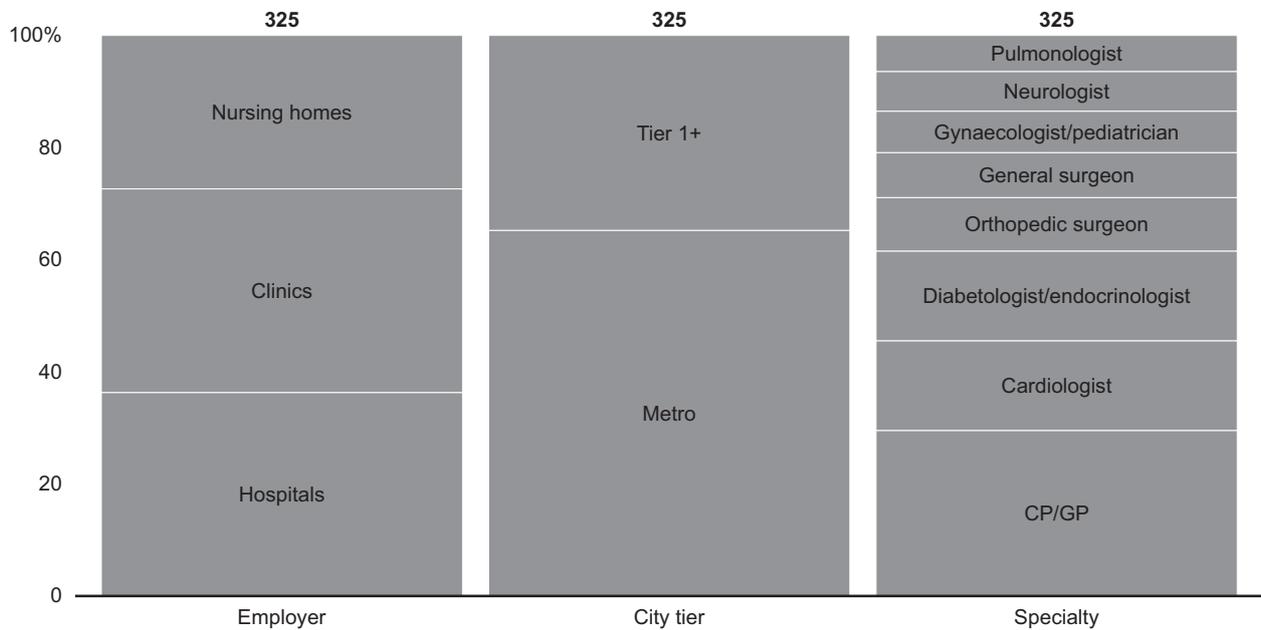
**Figure 28:** Part I-How much time do you spend with medical representatives today? Answer in hours per month. Compared to today, how do you expect this to change in the next 3-5 years, do you expect to spend more, the same, or less time with medical representatives?

Part II-To what extent do you agree or disagree with the following statements about your prescribing situation? Please rate the attribute on a scale from 1-strongly disagree to 5-strongly agree

**Figure 29:** Which tools or programmes have the most significant positive impact on quality of care delivered in the healthcare environment in which you work? Please indicate your response for today and your assessment of the next 3-5 years. Rank top five.

**Figure 30:** Which of the following value-added services would you most appreciate from a manufacturer, if they were offered? Please select the top three services.

**Figure 35:** Profile of survey respondents



Source: Bain & Company

**Figure 36:** Guardrails and quality checks for the survey

**Pre-launch quality control measure**

- **Preliminary testing:** Conducted field tests through pilots for validity of questions, completeness of responses and check for technical glitches
- **Red-herring questions:** Used trap questions to check the engagement level of respondents
- **GPS tracking:** Captured GPS locations of each response to ascertain location accuracy

**Post-launch validations**

- **Overall response speed test:** Quarantined and removed responses that fell significantly below the median response time
- **Section speed test:** Removed responses where important questions and or sections were completed in a very short time
- **Straight-lining and pattern checks:** Responses where the same option number has been selected or answers follow a specific pattern have been purged
- **Unclear answers:** Inappropriate responses to open ended questions which indicate poor engagement level of respondents have been purged
- **Respondent call back:** Checked validity of the interview through call-backs
- **Low incidence test:** Screened questions with list of unlikely events. Responses with multiple or conflicting low incidence options selected have been removed
- **All or single checkbox answers:** Removed responses with checkbox questions where a single option is selected in specific scenarios that indicated poor quality of data
- **Linked set of questions:** Removed responses where conflicting answers were selected for questions where responses should have logically supported each other

Source: Bain & Company





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Confederation of Indian Industry

## About Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has more than 9100 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 291 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

India is now set to become a US\$ 5 trillion economy in the next five years and Indian industry will remain the principal growth engine for achieving this target. With the theme for 2019-20 as 'Competitiveness of India Inc - India@75: Forging Ahead', CII will focus on five priority areas which would enable the country to stay on a solid growth track. These are - employment generation, rural-urban connect, energy security, environmental sustainability and governance.

With 68 offices, including 9 Centres of Excellence, in India, and 11 overseas offices in Australia, China, Egypt, France, Germany, Indonesia, Singapore, South Africa, UAE, UK, and USA, as well as institutional partnerships with 394 counterpart organizations in 133 countries, CII serves as a reference point for Indian industry and the international business community.

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## Notes

## Notes

## Notes

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