This paper summarizes the changes taking place in China’s hospital payment and medical insurance arena in recent years, with analysis of implications for patient affordability and healthcare company priorities.

**China’s healthcare market is maturing, but rapidly increasing healthcare expenditures are a concern**

China’s healthcare market has advanced at an astonishing pace over the past decade, propelling China to its current position as the largest healthcare market in the world by most volumetric measures, and it has rapidly advanced to become the second-largest pharmaceutical market by value — at US$123 billion in 2017, second only to the United States — and a top-five medtech market. China alone is expected to contribute $37 billion of the global prescription growth in the next five years, representing 13% of the global growth total.¹

Behind this rosy picture hides the tremendous pressure borne by China’s taxpayers, patients and their families. Total healthcare spending per person in China has been increasing at concerning levels, reaching 15% compound annual growth rate (CAGR) between 2000 and 2016, now representing 6.2% of GDP.

**China further improving affordability of high-quality care, at a cost**

China’s government has made — and continues to make — major strides in expanding medical insurance coverage to avert catastrophic healthcare costs that can sink families into poverty. Between 2004 to 2017, basic medical insurance (BMI) coverage was expanded to cover 99% of the population, including urban and rural residents and employees, creating a large base volume for the public medical insurance fund.

Socially funded healthcare costs are expected to further outpace GDP growth with labor cost increases and the expansion of the reimbursable drug and device lists. For example, the latest major update to China’s National Reimbursement Drug List (NRDL) released in February 2017 included an additional 339 drugs over the 2009 version (a 14.5% increase), bringing the number of drugs that must be reimbursed anywhere in the country to 2,535. Furthermore, the newly added drugs are primarily newer (and more expensive). As the NRDL moves on a rolling basis rather than once every eight years, the public medical insurance fund, inevitably, will face growing pressure.
Although public medical insurance emerged as the leading source of healthcare funding, patients’ out-of-pocket expenses are significant, still accounting for 29% of the total expenditure in 2016, down from more than 50% over the past decade. Facing such challenges, China’s government has pushed forward on a number of fronts to improve patient affordability and ensure social stability, with sponsorship from the most senior levels:

"the key objective of deepening medical system reform is to ensure patients’ accessibility to medical services and equal medical treatment."

President Xi Jinping

Social insurance expansion

China’s core public medical insurance comes in three main types: i) urban employee basic medical insurance (UEBMI), ii) urban resident basic medical insurance (URBMI) and iii) new rural cooperative medical insurance (NRCMI). These schemes have been in place for more than a decade and collectively provide coverage for almost the entire population. However, recently enacted changes are delivering benefits for patients (and increasing funding challenges).

For one, there is the ongoing merger of URBMI and NRCMI. This program was initiated in 2016, and though 283 out of 337 cities have now issued detailed implementation plans, the actual mergers will primarily take place through 2018 and 2019. The alignment between URBMI and NRCMI requires an all-round consolidation including coverage scope, fundraising, treatment levels and RDL (see Figure 1).

<table>
<thead>
<tr>
<th>Program name</th>
<th>Qualified individuals</th>
<th>Coverage plan</th>
<th>Typical maximum coverage (2018, USD)</th>
<th>Total government spending (2016, USD)</th>
<th>Reimbursement drug coverage</th>
<th>Reimbursement rate for inpatients%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Employee Basic Medical Insurance (UEBMI)</td>
<td>Urban workers</td>
<td>Basic medication, hospitalization, in-patient expenses</td>
<td>$33k-75k</td>
<td>$118bn</td>
<td>NRDL</td>
<td>80-95%</td>
</tr>
<tr>
<td>Urban Resident Basic Medical Insurance (URBMI)</td>
<td>Urban non-workers (incl. children)</td>
<td>Hospitalization and major illnesses</td>
<td>$15k-40k</td>
<td>$80bn</td>
<td>NRDL</td>
<td>60-70%</td>
</tr>
<tr>
<td>New Rural Cooperative Medical Insurance (NRCMI)</td>
<td>Rural residents</td>
<td>Hospitalization and in-patient expenses</td>
<td>$12k-25k</td>
<td>$20bn</td>
<td>Local NRCMI drug list, primarily based on EDL</td>
<td>20-60%</td>
</tr>
</tbody>
</table>

URBMI and NRCMI were mandated to merge in 2016. By 2017, 283 of 337 cities issued detailed implementation plans. The merger is expected to start in 2019 as instructed by the State Medical Insurance Administration. But it still takes time to align all standards, including coverage scope, fundraising, treatment, RDL and fund management.

Figure 1: Overview of China’s public basic medical insurance programs

This will significantly improve the affordability of medical treatment for rural residents, with lower copays and higher caps. Access to care will also improve with an expanded reimbursable drug list and simplified reimbursement procedures. Previously, rural residents had access to only 1,127 drugs, but now this has more than doubled. With affordability comes demand, so there is a stronger platform on which providers can serve this more remote/dispersed population.

Critical illness insurance (CII) exists as an important supplement to the BMI system mentioned above. While originally only intended for the benefit of URBMI members on a voluntary basis, now approximately 80% of the population now benefits from coverage. These CII schemes are also under continual change:

1. Further expansion to include urban employees in cities/provinces with sufficient medical funding (e.g., Yunnan, Guangdong, Xiamen)
2. Wider disease coverage (e.g., Shandong, Anhui, Liaoning, Ningbo)
3. More high-value specialty drugs covered (e.g., Beijing, Jiangxi, Hunan, Jilin, Shandong)
4. Rising caps and reduced copayment rates (e.g., Beijing, Xinjiang, Putian)

Given the very broad reach of these schemes and the significant ongoing changes at national, provincial and municipal levels, the effects of reform will be felt by healthcare / service providers, pharmaceutical companies and medtech firms, and will change demand dynamics for years to come.

**Cross-city/cross-province settlement**

China’s social medical insurance schemes have typically provided coverage only for care delivered in the official location of residence of the patient. With China’s highly flexible workforce, this means that it is common for employees to have to return to their hometown even for urgent medical treatment, adding to cost and providing a further barrier to access. That is now changing, with the BMI settlement of medical expenses incurred outside of where the resident is registered.

By September 2018, 13,995 medical institutions had been connected in the cross-city BMI system, in which 81.9% are medical institutions covered by BMI that are Level 2 or below (i.e., middle and lower-level healthcare tiers). Data shows that 1.06 million patients have used this system, involving RMB26.6 billion in medical spending, 58.6% of which is covered by the medical fund. Once completed, Chinese patients will have access to more abundant healthcare resources nationwide.

China’s large “migrant” population (i.e., those working away from their ancestral place of official residence) will benefit especially, with reimbursement based on the ratio of where they are insured and the RDL where the hospital they visit is located. These changes will
greatly improve the affordability and quality of their care and quality of life, not least by avoiding the need to travel across the country to benefit from insurance coverage.

**Support for private medical insurance (PMI) development**

Besides BMI and CII programs in China, private medical insurance (PMI) is evolving as a supplement to China’s social insurance system.

PMI is commonly bought for critical illnesses, in which the patients can have some backup when facing a fairly large treatment fee. Large insurance companies usually set a RMB200,000-500,000 reimbursement cap and pay between one and three times according to different disease groups.

“In insurance companies to provide customized and differentiated commercial insurance products for individuals and families.”

Premier Li Keqiang

In 2016, the government also extended pilot tax incentives to companies or individuals who purchase PMI, allowing individuals to deduct a maximum of RMB2,400 from taxable income. Though relatively limited in scale to date, PMI is expected to cover 10% of China’s population in 2020, up from around 3% in 2015.

**Government attacking cost and seeking efficiency**

China has made incredible progress through the expansion of access and improvement in affordability of care for patients. In the future, China’s healthcare system will need to continue to reform on many fronts in order to secure and sustain these gains and ensure the system’s financial sustainability. In order to do so, the government is moving ahead on many fronts.

**National price negotiation**

The three rounds of national negotiations on high-value drugs in 2016, 2017 and 2018 have reduced the prices of 56 drugs and are in the process of provincial RDL (PRDL) inclusion, cutting headline pricing by 50-70% (e.g., 72% for AstraZeneca’s recently approved Tagrisso in the autumn 2018 round).

**Tiered healthcare system**

The tiered medical system and hospital alliance program together are two major initiatives encouraging large urban hospitals to team up with lower-tier medical institutions to provide integrated care and balance capacity utilization across the alliance. This aims to increase efficiency and effectiveness in the provision of care by reducing the use of top acute (and costly) facilities and bolstering trust/demand for lower-tier, cheaper care settings.

**Bureaucratic alignment**
In April 2018, the state level departmental reshuffle combined all health economic decisions, such as procurement, tendering, listing and reimbursement, under a single department, the State Medical Insurance Administration (SMIA). This concentration empowers SMIA in negotiations with drug and device firms.

**Digital and telehealth**

China is a world leader in adopting telehealth and has laid a strong foundation for further digital health growth, including internet and mobile-based technology, regulatory support from governments, and consumer app culture. Digital technology is transforming the methodology and efficiency of healthcare delivery in China, from the design of healthcare infrastructure to the allocation of resources. People have used digital technology for chronic disease management (e.g., diabetes, sleep quality and heart condition recording), as well as hospital registrations, medical fee payments and many other applications.

**Payment reform**

After more than a decade of preamble, China is now radically and rapidly adjusting the way that it regulates payments to healthcare providers. In so doing it is overhauling fundamental incentives and behaviors across its vast healthcare system.

Fee for service (FFS) has long been the dominant payment model in China. It reduces financial risks and costs for healthcare providers, as the government will reimburse each treatment act or product provided accordingly. This has encouraged hospital access to innovative technologies and products and thus incentivizes care. FFS will continue to play a critical role in paying for complicated diseases that are interrelated with other diseases or those having comorbidities.

FFS, however, tends to incentivize over-diagnosis and create an excessive burden on the medical insurance fund, pushing China to transition to case-based payment approaches (see Figure 2) that have the opposite incentive by putting a limit on the funding a provider can receive for a particular patient.

**Figure 2: China is moving to case-based payment**

<table>
<thead>
<tr>
<th>Fee for Service (FFS)</th>
<th>Single Disease Payment (SDP)</th>
<th>Diagnosis-Related Groups (DRG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFS reimburses healthcare providers for each treatment act or product they provide, such as doctor consultations, medical products and drugs</td>
<td>SDP is a type of disease-based payment model, with disease groups unsystematically and narrowly defined</td>
<td>DRG classifies patients on the basis of their clinical diagnosis and assigns them to a case group where costs of treatment are broadly similar</td>
</tr>
<tr>
<td>Current default payment model used in China, with prices set via tendering or the health bureau</td>
<td>Most cities are using SDP as a bridging system to DRG due to lack of information technology and limited management experience</td>
<td>Substantially all Class 2+ public hospitals were required to use SDP or DRG payment for at least 100 diseases by end of 2017</td>
</tr>
<tr>
<td>2020 target for all institutions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
These case-based payment approaches include diagnosis-related groups (DRG), single disease payment (SDP) and capitation, where a suggested charging rate will be set based on sophisticated health economic analysis. This will effectively change the incentives for providers and — it is hoped — raise the efficiency of resource utilization and reduce waste. Beijing, for example, realized a savings of 14% observed in pilot studies.

As of October 2018, all prefecture-level cities in mainland China have participated in the payment reform (see Figure 3), and almost all provinces (Tibet is not yet released the specific implementation guideline by the time we issued this report) have issued SDP policies with definite implementation timelines.

**Figure 3: Pilot cities moving to case payments in batches**

However, the SDP models now being deployed vary significantly across provinces in terms of the minimum numbers of SDP-covered diseases, types of hospitals and specificity on disease inclusion. For example, there is no single disease that is covered in every list nationally.

Though the SDP/DRG implementation is making progress, many challenges persist as the payment reform moves forward. The wide application requires sophisticated information technology and assessment tools, a set of scientific and measurable standards, and stakeholder support from across the entire healthcare system. Wider implementation remains a work in progress.
Conclusion

China has already developed into a critical part of the global market for pharmaceuticals and medical devices, and healthcare demand and government investment will continue to grow given the increasingly aging population, coupled with the rise of noncommunicable and chronic diseases.

China’s government has introduced a wide range of healthcare reforms including product registration acceleration, procurement evaluations, management of the distribution channel, pricing and payment. Among these, payment reform is a critical driver of incentives, and its impact extends to prioritization, standardization of clinical pathways, changes to purchasing criteria and pricing.

These changes in financial flows and incentives are fundamental to all healthcare businesses and will affect providers, pharmaceutical companies and medtech firms in the short and long term. To respond appropriately, firms need to consider a range of issues, including:

What is your plan for improving reimbursement/affordability of your products for China’s patients?

How do ongoing changes to the medical insurance landscape change the outlook for your product/portfolio?

How will the transition to case payment affect the incentives across the health economics ecosystem in which your products are used in China today and in the future?

How quickly and where will those changes happen?

Given the dynamic environment, how can you influence these changes to the benefit of your firm?

Endnotes:

1 2018 and Beyond: Outlook and Turning Points, IQVIA, March 2018.
2 Once the merger is complete, the system will be called urban and rural resident basic medical insurance (URRBMI).
5 Prefecture-level cities here include 334 prefecture divisions plus 4 centrally administered municipalities.
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