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How COVID-19 is reshaping China's medtech industry

With COVID-19 accelerating the underlying trends in China's medtech industry, new business models are likely to emerge.

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As the COVID-19 pandemic sweeps across the globe, it is leaving few industries untouched. In China, as the medtech industry starts to emerge from the crisis, leaders are anticipating and preparing for the trends that will reshape the sector.

This article draws on McKinsey's experience helping clients navigate the international medtech landscape, as well as conversations with company executives and a survey of around 23 general managers (GMs) leading medtech businesses in China.[1]

Medtech companies still find China an attractive market and are confident in its growth outlook. But many aspects of the way in which they operate have changed profoundly, and perhaps permanently. These key themes are set out below, together with McKinsey's views on what it will take to succeed.

A different outlook

The global COVID-19 outbreak is firstly a humanitarian challenge, but it is also having a marked and growing impact on the world economy. Many forecasters say the global economy is already in recession and policymakers in multiple countries are taking steps to support industries and job markets.

While China is in a stronger position than many, as the world's largest exporter of goods, it will feel the impact of the downturn. As it emerges from the pandemic, China GDP is forecast to grow at a rate of between 1.0 percent and 2.3 percent this year, down from 6 percent in 2019, according to analysts' consensus.[2]

Contracting government funds will affect healthcare spending. Among the China medtech GMs that we interviewed, a clear majority expects a near-term decline in healthcare budgets, with price pressure on medical products likely to exert a direct knock-on effect.

Looking at events from a healthcare provider's point of view confirms this notion. Most hospitals we surveyed expect a reduction in their procurement budgets this year, and there are anecdotal reports of freezing capital equipment procurement for 2020. Physicians also said usage of high-value consumables would be negatively impacted this year.

The outbreak is affecting medtech companies in different ways. On one hand, it generated high demand for related products, such as CT and Ultrasound, ventilators, Extracorporal Membrane Oxygenation (ECMO) equipment, and nucleic acid detection kits. Unsurprisingly, manufacturers of such devices saw high demand and turnover in the first quarter, and are anticipating a similar effect throughout 2020.

On the other hand, a sharp decline in elective medical procedures has caused disruption in many other areas. According to the GMs we interviewed, demand for interventional devices has contracted by between 40 percent and 80 percent in the first quarter. While a gradual recovery for elective procedures is anticipated, this will be constrained by hospital and physician capacity, meaning a "catch up" of lost volumes is unlikely to occur. Even companies making high-volume consumables expect a volume contraction of around 20 percent for their products in 2020.

China's response

Tightening healthcare budgets will coincide with a shift in priorities for healthcare spending. For example, in response to the COVID-19 pandemic, China is now pondering the need for healthcare infrastructure that can serve as a first line of defense during communicable disease outbreaks, including in-patient care.

In other words, there will be less money to spend, while the allocation of budgets will change at the same time. As a result, the net impact will range

[1] Survey carried out during the early recovery phase in mid-March
[2] Analyst forecasts from UBS, Bloomberg, Barclays, Deutsche Bank, BAML, and World Bank in March

from increased demand for certain types of medical equipment to steeply accelerated price erosion on commoditized consumables. Data connectivity will also be a key spending priority to build a system that creates first alerts on pandemics and real-time visibility into medical data.

Considering these effects in greater detail, there are four policy trends that were already in train prior to COVID-19, and will likely speed up as a result of the outbreak:

1. Volume-based procurement (VBP)

Leading up to 2020, VBP had made it to the top of the agenda of China's medtech leaders. In January 2020, the scope and impact led many to wonder if established business models were still sustainable. Nine regions had piloted tenders—implemented at both city and province level—while 16 had ongoing or announced tenders.

The average price cuts brought about by the tenders were steep, with many categories having price cuts between 30-50 percent (and some up to 80 percent). A host of products were affected, from high-value consumables like orthopedic implants and cardiovascular stents to high-volume consumables like infusion sets and intravascular catheters.

With the arrival of COVID-19, priorities shifted sharply as the response to the outbreak took center stage. The clinical management of patients relies first and foremost on medtech, highlighting the importance of high-quality products and resilient supply chains to manufacture and deliver them.

Some observers reckoned that this would result in the Chinese government easing off the VBP agenda. However, the latest announcements suggest the opposite: a more nationally endorsed push on VBP, with an expanded product scope.

On March 5, 2020, China's State Council announced guidance on deepening reform in the healthcare security system, pushing for a more comprehensive implementation of VBP. On March 18, the National Healthcare Security Administration (NHSA) encouraged exploration of VBP on high-value consumables at the provincial level.

Around 80 percent of the medtech leaders surveyed believe the scope of the program will be expanded (Exhibit 1). And while most said they think the VBP will come back at its previous speed, evidence suggests the pace might be faster, as the government reinforces its determination to decrease prices.

2. Provider reforms

China's government has been investing in tiered healthcare for some time, but with limited success. More than half of the patient flow is still in large class III hospitals. Bed utilization numbers are revealing, with class III hospitals consistently over 90 percent and class I hospitals under 60 percent.

As COVID-19 took hold, travel restrictions and healthcare resource redistribution forced patients into local and lower-tier healthcare facilities. With travel restrictions between cities, patients could no longer seek treatment in leading hospitals in big cities.

While it will take some time to shift patients' perceptions of the superior medical capabilities of top hospitals, there are many reasons to believe that we are at a crossroads with regards to tiered healthcare.

First, there is evidence that lower-tier hospitals returned to normal operations faster than large hospitals in March. This may be partially due to the larger drain of resources to COVID-19 care in class III hospitals as most of the 40,000 healthcare professionals deployed to Hubei originated from class III facilities, and their full return to work will be gradual. Also, class III hospitals are in the middle of the still-ongoing attempts of treating and quarantining suspected and confirmed COVID-19 cases.

Exhibit 1

Healthcare budget is negatively impacted by COVID-19 and price pressure remains post-outbreak

% of medtech GMs interviewed

What is the impact of COVID-19 on government's funding of healthcare in 2020? (N=23)

~80%

expected **short-term government funding constraint** due to slowdown of GDP

~60%

expected **positive or neutral impacts on investments on critical areas**, such as ICU and infectious disease related facilities

How will VBP implementation be impacted by COVID-19? (N=23)

~80%

expected **VBP would come back** at previous speed post-COVID-19 outbreak

~80%

mentioned that **the scope will be expanded in VBP and expect larger price pressure**

Source: McKinsey China medtech GM Survey, 2020

Healthcare officials have also taken note of the limitations—even risks—of class III hospitals being the frontline of primary patient care, which led to quick exhaustion of capacity and perhaps also challenges to contain in-facility spread in an epidemic situation. The government is now encouraging patients to get treatment in Community Health Centers (CHCs). For example, Shanghai is going to establish more than 180 fever clinics, and Beijing required advance appointments for visits to class II or class III hospitals except for emergency care. Overall, the government will very likely use the pandemic to double down on tiered healthcare, establishing more mechanisms to make such treatment a reality. In parallel, healthcare is going online, with digital platforms such as online consultation and internet hospitals being endorsed during the pandemic and further built out in the aftermath.

3. Greater localization

A full-fledged localized medtech supply chain was already one of the government's priorities. COVID-19 has likely heightened the concerns around dependency on global supply chains for medical products. For example, the absence of local manufacturers of ECMO was seen as a supply risk by many observers.

China will potentially increase its efforts to localize manufacturing of medical products. Local companies will be beneficiaries, but multinationals may likewise see policies designed to make it easy for them to localize manufacturing in China.

While in the past it could take years to register new products after transferring manufacturing lines to China, the National Medical Products Administration (NMPA) has issued a draft regulation to fast-track

the process: multinationals can locally manufacture products that are already approved for import, with drastically shortened timelines for re-registering such products.[3] As an example, the manufacture of imported products could then be registered using materials that have undergone prior clinical trials or assessments for imported product registration.

Preferred market access for locally made products, for example in public tenders, has been common practice in the past and such rules could get even stricter for products that are perceived as strategic in nature.

Of course, many nations around the world are facing similar challenges, and the dependence on global supply chains for a range of medical products such as protective gear and ventilators caught healthcare systems around the globe off guard. Calls for localized production of essential medical products are the unsurprising consequence. If this is followed through, it might lead to a de-globalization of medtech in some categories.

For the time being, those medtech leaders that are operating in China take the view that localization of manufacturing will be accelerated in the wake of COVID-19, and that it will become even more important as a success factor in the market. Moreover, local innovation through R&D or partnerships will unlock new ways to serve the needs of the local market. (Exhibit 2)

4. Digital health

Online consultations and a digital schedule of appointments were already becoming commonplace in China, but the rise in the use of digital platforms has been one of the defining

[3] Draft policy announced on March 5, 2020:《已获进口医疗器械注册证的产品转移中国境内企业生产有关事项公告（征求意见稿）》

Exhibit 2

Localization will likely be on government's top agenda

How will localization in medtech change in the future? How does it impact your strategy? (N=21)

>90% Medtech MNCs expect **greater localization in the industry after the outbreak**

~60% Medtech MNCs mention that **localization of manufacturing will be a key success factor**

~60% Medtech MNCs think **localized R&D or collaborating with local partners** on supply chain will present new opportunities

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China market is large enough to deserve more localization of supply chain. We are considering to expand our footprint here, but the decision will depend on a lot of factors such as costs, IP protection, etc.

- GM of a IVD MNC

We decided to invest in a manufacturing site in China during COVID-19 outbreak, to serve the emerging markets, such as Southeast Asia, South America.

- GM of a device MNC

Source: McKinsey China medtech GM Survey, 2020

characteristics of the outbreak. Visits to NHC hospitals[4] via online channels rose 17-fold during the peak of the crisis. Shanghai launched 11 internet hospitals, affiliated to offline public hospitals, during the outbreak. Total visits for these internet hospitals reached 14,000 and prescription volume exceeded 4,300 in these two months. Local government also ramped up its use of digital: eight provinces[5] implemented online Basic Medical Insurance (BMI) settlement for internet-based medical expenses.

Current applications of internet hospitals only apply to follow-up visits. Patients have to make their first visits offline to get their prescriptions. Later on, they can consult doctors online regarding their symptoms and have their prescriptions refilled. Patients can also obtain a laboratory test referral online, and then visit offline hospitals to conduct the test. The latest announcement[6] by NDRC[7] and CAC[8] encourage exploration of online first visits with BMI coverage, which can further accelerate the pace of development of internet hospitals.

Additionally, digital can be a driver behind tiered treatment. Instead of going to big hospitals, patients can go to peripheral laboratories or imaging centers to do tests, with results being transmitted digitally to the hospital for diagnosis. This may potentially open an exciting new era of offline-online healthcare in China, with established private players such as Ping An and Dingxiangyuan (DXY) likely to find a role as a digital platform partner or front office provider for public hospitals.

The way forward for medtech

Many GMs are predicting a recovery of aggregate healthcare activity to normal levels of demand in the coming months. Indeed, there have been encouraging signs, including in elective surgery volumes. In a physician survey with Yixuejie[9] , outpatient numbers increased at rates of more than 30 percent on average in March compared with February. One class III hospital director mentioned that their hospital had recovered to around half the normal inpatient ward capacity at the end of March.

Even so, the significant impact of the crisis requires leaders to think carefully about how to operate in China after the pandemic. On one hand, the market has been propelled into hyper-maturation, with more VBP and underlying patient flow shifting toward lower-tier healthcare facilities and online channels. There is also strong local competition and a push for more localization.

On the other hand, medtech relies on a legacy business model based on a combination of costly field salesforces, distributors that inflate hospital prices through margins that are higher than most mature markets, and localization efforts that remain a work in progress for most multinational companies.

There are immediate questions around portfolio management, the innovation of business models, and how to develop new capabilities. Focusing strategically on the following areas will help medtech leaders prepare for what lies ahead:

Portfolio optimization

Product portfolios need to be examined with fresh eyes, and if needed, radically overhauled to minimize the impact of intense price pressures. Commoditized and other low-margin product categories may have to be exited or divested to partners such as CSOs. Companies will need to

[4] National Health Commission. NHC hospitals are directly overseen by the NHC, with 44 hospitals in total as of 2018.
[5] Hubei, Shanghai, Beijing, Zhejiang, Jiangsu, Sichuan, Heilongjiang, Guangdong
[6] Policy issued on April 7, 2020: 《关于推进"上云用数赋智"行动培育新经济发展实施方案》
[7] National Development and Reform Commission
[8] Cyberspace Administration of China
[9] April 2020 physician survey conducted in collaboration with Yixuejie (医学界)

focus more on innovative products, while taking risks to make some bold localization decisions, such as establishing manufacturing sites or leveraging contract development and manufacturing organizations (CDMOs) for localization.

Pivoting to an omni-channel model

Medtech businesses had to enact rapid and wide-ranging changes to their models as COVID-19 took hold, keeping their commercial teams out of hospitals and shifting many of their activities online. All of the major medtech players are now acting to address digital challenges to their operations.

Traditional touchpoints like face-to-face sales, offline marketing events, and large hospitals frequented by sales representatives are likely to resume, but the importance of digital will increase. COVID-19 spurred innovation and those changes are here to stay, with more than 70 percent of the companies surveyed considering a hybrid of traditional sales models and digital solutions in the wake of the outbreak (Exhibit 3).

With this dynamic in mind, companies should consider increasing digital investment and developing strategies for online engagement with stakeholders. Digital share of voice will be a vital source of differentiation, and an area of growing competition in omni-channel customer engagement models.

Accelerating reform of the traditional distributor model

China's medtech distributors have been the target of many rounds of policies, since their margins are seen as a key factor in making medical products expensive for hospitals and patients. While VBP was a blow to these margins, COVID-19 may provide the final push in reforming this business model at scale.

Medtech's network of distributors may start to unravel as companies focus on direct distribution to compensate for thinner margins. This change in structure is likely to accelerate as margins are squeezed through increasing price pressure.

Exhibit 3

Digital activities are likely to disrupt go-to-market model for medtech companies

Digital transformation of commercial model is likely here to stay post-outbreak

100%

of companies interviewed are leveraging digital in commercial activities, such as physician education and marketing programs

~70%

of companies interviewed are considering an online/offline healthcare professional engagement model by sales reps post outbreak

We've decided to invest 50% of our sales budget in digital channels, and we have stopped hiring sale reps.

- GM, Medtech MNC

Digital is effective, but traditional face-to-face sales activities will still be important as a way to maintain relationships.

- GM, Medtech MNC

Source: McKinsey China medtech GM survey, 2020

In hindsight, it is likely that the COVID-19 crisis will be an important milestone in China's journey from a distributor-driven model toward a more mature model where commercial activities are owned by companies and executed in a multi-channel way, while distributors will be increasingly confined to the logistics tasks that define them in many other markets.

Investing in new capabilities

Medtech companies can adopt new angles to keep pace with China's healthcare system, which is evolving to be even more digital and data-driven. For example, clinical trials were disrupted during the pandemic, and technology will be a critical tool in enabling virtual trials and digital monitoring. New capabilities, such as Real World Evidence (RWE) and Health Economics and Outcomes Research (HEOR), will become a must for medtech players in order to demonstrate value to the healthcare system, showcase innovation, and justify the price for it. As NMPA[10] continues to explore new regulatory pathways, these capabilities can significantly help companies shorten their registration timeline and expedite product development and approval.

The COVID-19 pandemic has already triggered sweeping and long-lasting changes to China's medtech industry, and many of these are likely to be replicated around the world. The companies emerging from the crisis are likely to be materially different from those that went into it.

That said, our survey showed an upbeat picture, with all general managers predicting continued growth in China. They were also experiencing continued commitment to China and, often, a spirit of "doubling down" from their global leadership. Being aware of the changes afoot—and then pivoting to address them—will help safeguard the industry's future as COVID-19 redefines how we live, and the way we interact with healthcare, forever.

[10] National Medical Products Administration

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