

China as a digital transformation sandbox: A prescription for pharma multinationals



Pharma companies can test their digital commercial engagement models in China—the world's largest digital transformation sandbox—before scaling them for global success.

China's healthcare market is undergoing a paradigm shift. Long term vision and regulatory reform are the catalysts for a more affordable healthcare system, changing the growth prospects for mature, post-exclusivity drugs of multinational companies (MNC) and forcing a shift from hospitals to retail and online channels. Favourable regulatory changes, such as accelerated approval and more frequent and dynamic adjustment of the National Reimbursement Drug List (NRDL), are creating unprecedented opportunities for faster launch of innovative drugs and a significantly larger market potential. The advance of digital technologies and healthcare consumerism are altering the dynamic of China's healthcare system and redefining the path to success for pharmaceutical companies.

At the core of these changes, a digital healthcare ecosystem is emerging in China, empowering innovative commercial models in the pharma industry. Leading pharma companies are capitalising on that. China's technology ecosystem with at the heart engaged and eager consumers, patient embracing digital and mobile technologies is creating a unique base for this change. They expand their influence by partnering with ecosystem players and implement consumer centric care models that leverage digital interaction platforms. New offerings, engagement models, and technologies are being rapidly tested in the Chinese market, and companies are exploring digital solutions to address unmet needs of health consumers.

China's digital transformation brings value to multinational companies beyond solving their growth ambitions in China. They can use China as a testing ground for novel ideas, product launches, and reimagined engagement models. It will enable them to create and test new offerings and services in a swift and agile manner, and accelerate commercialization in China. Done right, it will also enable fast scalability of products and ideas into other markets.



The opportunity in China for digital transformation of pharma models

Several elements make China conducive to the testing of new healthcare products and digitally reimagined commercial engagement models. The increasingly favourable market and regulatory environment enables faster launch of products, greater customer intimacy and better customer engagement, leading to differentiation in a competitive market.

In addition, China is one of the leading countries globally when it comes to digitalizing all aspects of life—from mobile payments and e-commerce to telemedicine—and healthcare is no exception. Chinese consumers are willing to try and test new products and services on their phones². Patients are tech-savvy and hungry as doctors tend to be digitally rather well equipped. Hospitals, pharmacies, and insurers are also changing their operating model to embrace the digital trends to stay equipped for the next growth opportunity. Pharma companies need to do the same.

China is also building the necessary infrastructure to enable the ecosystem digital transformation. China is committed to being at the frontier of 5G development and application, a key enabler for connectivity in the digital age. A recent example is the use of 5G technology in combating COVID-19, with thermal imaging to support contagion monitoring, remote imaging diagnosis platforms, and SMART medical robots for quarantine patient care. With the government's newly announced New Infrastructure Stimulus Plan, 5G network construction will be a focal point for investment across regions, further accelerating digital infrastructure in China.

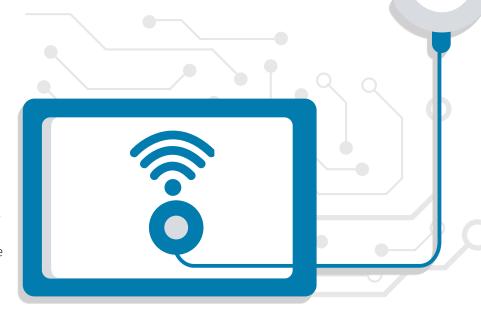
COVID-19 accelerates healthcare system upgrade

The COVID-19 pandemic may have changed forever the ways we receive healthcare in China. Multiple virtual healthcare solutions such as Alibaba's CT Image Analytics and epidemic prediction have been launched to combat the COVID-19 crisis. We observe an accelerated adoption of healthcare technologies, and a much greater interest from pharma companies in enhancing their preventative care offerings. We also expect collaborations between companies looking to exploit business opportunities throughout the healthcare value chain—from prevention and early detection to treatment follow-up and monitoring.

Consumerism and advances in tech drive new commercial engagement strategy

The recent regulatory reforms aimed at increasing accessibility and affordability of healthcare for consumers are creating opportunities for pharma companies along with implications for their commercial engagement strategies. With the new dynamic adjustment of the NRDL, innovative drugs can be included on the list soon after launch. Even those products already in the market could benefit from relaunches once added to the list. Many leading multinational pharma companies have set aggressive launch targets in the next 2-5 years as innovative drugs becoming their growth engine in China. With anticipated intensive competition in a crowded market from their global and domestic peers, pharma companies need to formulate post-NRDL relaunch strategies and rethink their delivery channels and their digital engagement model to maximize launch effectiveness³.

As for the mature products, faced with significant pricing pressure from VBP (Volume-Based Purchasing) and prescription outflow from hospitals, pharma companies have to expand their omni-channel presence to reach the huge lower-tier market and non-hospital channels. They have to deepen their patient-centric engagement with a view to improving patient access and overall outcome to provide value beyond just drugs.



Four areas of digital transformation where pharma companies can create value

Based on our experience from working with pharmaceutical companies in China, we have identified four emerging areas where companies can create value in the healthcare system:

Launch excellence and sales effectiveness

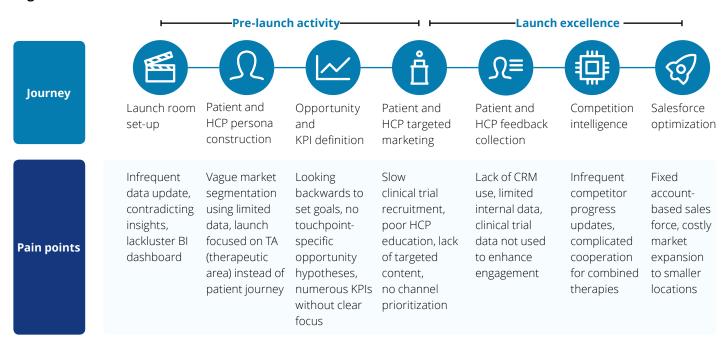
Traditionally, pharma companies in China have relied on representatives to drive sales. Not only was this open to potentially compliance risks, but more importantly it suffered from unclear market segmentation and identification of growth opportunities,

a lack of targeted engagement and low marketing ROI. Having recently come under pressure from an increasing number of approved innovative drugs, pharma companies are in need of a more cost-effective product launch and sales strategy.

They can achieve this by leveraging big data and technology. They can also learn from the success of the retail industry, which puts customer value at the center. For example, the commercialization strategy in China of a leading MNC has been to deploy big

data and advanced analytics to target KOLs (Key Opinion Leaders) more effectively and involve them in their campaigns and conferences. The MNC obtains the data through both its own channels and third party suppliers, including academic publications and citations, EMRs, HCP forums and social platforms. It also partners with one of China's top tech companies to outsource basic data processing in order to focus on selection of data attributes and solution development.

Figure 1. Traditional barriers to launch excellence and sales effectiveness



Pharma companies should not restrict their sources of big data to medical records and HCPs' practice data. They could tap into non-medical data from proprietary channels or third party data sources accessed through partnership or acquisition—for example, doctors' social platforms HaoDaiFu and DingXiangYuan or proprietary WeChat Mini programs and apps. They may consider analyzing data to define different customer personas, and during product launches, they can roll out customized marketing campaigns targeted at different personas4. Consistent analytics such as A/B testing and causality analysis can help companies maximize their marketing ROI.

Pharma companies could also gather and monitor campaign feedback for ROI analysis. Marketing teams

can leverage technologies such as voice recognition CRM tools that enable representatives to log in timely HCP feedback, and can use live interaction technologies during medical conferences. Natural language processing (NLP) techniques can then be used to carry out sentiment analysis.

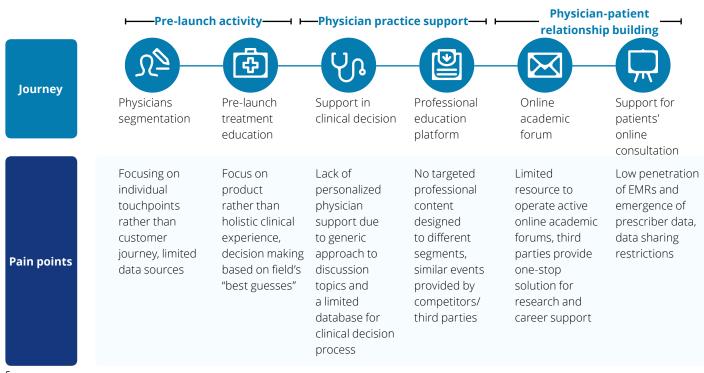
Although gathering market intelligence is common practice in the pharma industry, it is often done either infrequently or non-systematically. Companies learn of major events such as product approvals, launches, and price changes only after competitors' press releases in the media. However, through continuous monitoring and advanced analytics, they can predict the actions of competitors simply by analyzing publicly-available data. For example, the launch date for a new drug can be predicted from

its approval date, which can be obtained from the launch committee's previous success records. In this context, scenario planning and war game exercises are useful tools for predicting the moves of competitors.

Engagement with healthcare professionals

Instead of adopting a systematic, topdown approach, pharma companies in China tend to rely on individual touchpoints and a personal network to build connections with HCPs and doctors. The sales representativedriven culture also results in the efforts at doctor engagement being focused more on the product than on imparting professional education and trust-building measures.

Figure 2. Traditional barriers to engagement with healthcare professionals



The good news is that pharma companies are starting to use new technologies to transform their HCP engagement model. They can leverage cloud computing and the big data advanced analytics services provided by third party platforms such as Ping An and Ali-Health to redesign their incentive system for HCPs and doctors⁵. Some pharma companies are already redefining group segmentation using an academic database, which increases significantly the participation of HCPs in pre-launch education seminars and professional education platforms⁶.

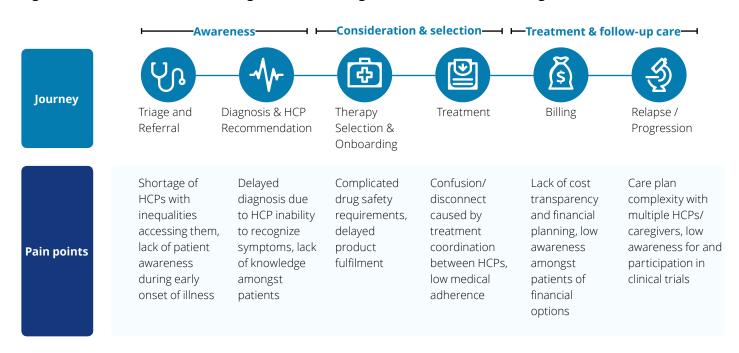
5G and artificial intelligence
(Al) technologies also offer new
opportunities for pharma companies
to build a patient-centric ecosystem for
specific diseases, in collaboration with
KOLs. For example, a leading global
pharma company has successfully
built an ecosystem in China around
diabetes diseases management
through public/company programs
involving KOLs, regulators, physicians,
and communities, to enable seamless
interactions between diabetes patients
and physicians/medical institutions,
and increase its brand exposure in

the community. It is also leveraging its sales networks to promote digital tools nationwide, and using Al to obtain advanced analytics insights from first-hand desensitized data.

Integrated care management and overall wellbeing

The transition from treating disease to managing overall wellbeing was one of the top agenda in the Health 2030 plan of the Chinese government. However, many roadblocks exist to achieve the transition.

Figure 3. Traditional barriers to integrated care management and overall wellbeing



Integrated care management will have a positive impact for patients. Transparency in and accessibility to medical records for stakeholders will help connect every step in the patient journey. Once patients schedule an appointment online, their medical history and needs are sent immediately to all the doctors and hospitals concerned. This access to patient data will enable doctors and pharma companies to provide precise medication and implement digital adherence programs for the patient, thereby improving treatment efficacy⁷.

Doctors can also leverage virtual consultations and Al-assisted diagnosis to improve the efficiency and accuracy of diagnosis in integrated care management. Al will enable electronic medical records (EMR) to be tailored and curated to the setting (such as home, hospital, or hospice), resulting in faster and more accurate care management. In addition, connected apps and wearables will offer endto-end wellness management to the population in general. Face-to-face consultations will not be the only way forward in patient care: integrated and omni-channel care management will help physicians to obtain better patient responses and treatment outcomes over time. Although virtual care is still in its early adoption phase in China, policy changes are sending positive signals in areas such as virtual care reimbursement and online/offline care data interoperability.

Reimbursement and market access

Although it is a new concept in China, outcome-based reimbursement has been implemented successfully in certain therapeutic areas by payers and providers in other countries. Chinese regulators recognize the benefits of outcome-based reimbursement, and will gradually make the regulatory transition from a fee-for-service model to an outcomebased model. The government is also relaxing regulatory constraints to encourage private health insurers to participate in this transition. Even if this reform is not likely to happen in the short term, pharma companies need to prepare for when it is eventually implemented.

To offer outcome-based reimbursements to patients successfully, drug manufacturers and health insurance payers need to be able calculate the value of treatments accurately. For this, they need to collect vast amounts of real-world data, process a large quantity of structured and unstructured data, and conduct big data analytics to assess accurately the benefit of a treatment⁸.

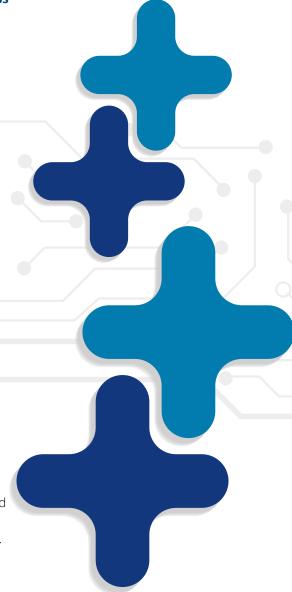


Figure 4. Traditional barriers to reimbursement and market access

Journey RWD collection Multi-source Data Big Data Processing Analytics Difficult to directly Validating similar Access to skilled Increasing collect sensitive pieces of data from data scientists pricing pressure information, challenging different systems, and computation from payers to get access to data processing technology, difficulty that requires sources such as labs, unstructured data, designing health HEOR analysis, **Pain points** connecting various economic models to reimbursement payer networks, EMRs, social media, and sources into one substantiate value amounts not difficult to get data that database linked to clinical story characterizes history outcomes of diseases, patterns of care, etc.

As in other markets, there are regulatory and technical limitations on the collection of patient data by pharma companies. In addition, EMR, patient claims data and social data are fragmented and owned by different stakeholders in various structures, making it difficult to consolidate them and make them interoperable. To utilize the data, some pharma companies in China are leveraging digital tools to build up patient communities to collect both medical and non-medical data. One leading

pharma company uses a virtual care platform to enable physicians to provide cardiovascular disease patients with overall care management covering consultation, prescription, and behavior management. Through the linkage between EMR and patient report data on the platform, real world data is being collected with the potential to explore use cases for more customized patient services or health economics analysis.



Steps that pharma companies can take toward digital transformation

To transform their business model, pharma companies need to establish a clear strategy to strengthen data and ecosystem development capabilities and re-examine their commercial technology operating model.

The strategy: Support digital transformation through ecosystem engagement

Pharma companies seeking to enhance their digital commercial engagement capabilities are in need to embrace two components in their strategy: shaping the ecosystem development and using data as an enabler.

Lead and shape the ecosystem

There is a growing tendency among healthcare ecosystem stakeholders to form multilateral partnerships while keeping patient values at the core. These partnerships are based on the collection and sharing of patient data with the aim of providing end-to-end convenient, customized, and economical digital healthcare solutions.

Active participation in the digital ecosystem can enable pharma companies to get closer to their customers without having to make large investments in technology—as they can use the digital assets and capabilities of their partners. For example, tech companies such as LinkDoc (a leading healthcare big data company), Ali Health (a healthcare platform subsidiary of Alibaba) and Xingshulin (a leading Chinese doctor solution provider) provide core capabilities in cloud-based solutions, construction of applications, and user base data, which pharma companies could supplement with their therapeutic area expertise and channel presence to form a comprehensive solution to consumers.

Pharma companies can play a variety of different roles in the ecosystem, e.g., as an organizer, a service provider, or a data acquirer. They can also gain a competitive edge in creating value from orchestrating the flow of data among solution providers. Over the past several years, tech giants such as Tencent, Alibaba, JD.com, and Ping An have led digital transformation in many aspects of life, including

healthcare and wellness. Despite harnessing a vast amount of data, these companies have not utilized the data to its full potential. This is where pharma companies can step in, with their superior understanding of the patient journey and patient value to really lead in insight generation space.

Use data as an enabler

The importance of data is seen in the drive towards systematic data integrators generating end-to-end patient data, and in the emerging area of prompt intervention. Given the scattered and clustered data players in China and clear cut between medical and non-medical data, some players are trying to break boundaries. Unlike the collection of medical data, the rules around collection of non-medical data are less stringent. Various players such as device providers, tech giants and insurance companies are collecting such data and collaborating with healthcare providers to offer a convenient and better service to patients, for example online consultations.

In addition, some companies focus on the data analytics part of the data value chain to meet the needs for more accurate analysis or personalized treatment. With government's encouragement to develop digital healthcare and investment in the country's 5G and AI technologies, development of therapeutic area focused analytic offerings or specific algorism focused companies have gained significant growth in the last several years.

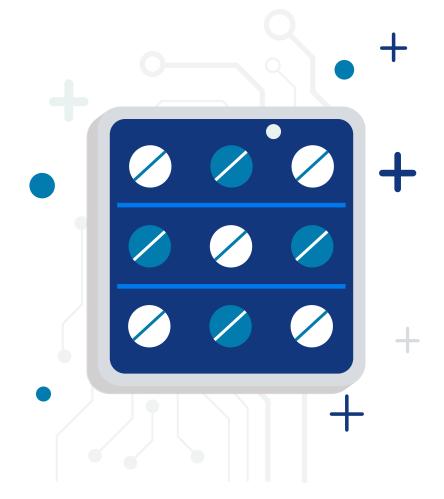
For pharma companies, they don't necessarily need to build internal capabilities across the entire data value chain. They could simply play the role of a connecter and convenor in the ecosystem for data collection. Complementing that with their own analytics capabilities, they could build a defensible data and analytics infrastructure that enables their digital health ambitions.

While building the data capabilities, multinationals need to reassess existing data infrastructure and governance against China healthcare related cybersecurity regulations. Under current foreign investment regulation, investing in data collection and analytics generally is not prohibited. However, execution of policy in reality is relatively

conservative with foreign investors typically excluded from direct investment projects involving public hospital health records. In addition, data compliance at operational level needs to take into account interests and regulations in multiple dimensions. Multinationals need to take a holistic approach to develop the data infrastructure enabling their strategic ambitions and build a roadmap that is most feasible given China's cybersecurity outlook⁹.

The tactics: Build digital transformation capabilities customized to needs and goals

Given the rapid pace of technological advance, pharma companies need to re-examine their technology or digital teams' operating and engagement models. While designing their commercial engagement model, they need to consider three aspects—enabling platforms, user relationships and data insights—that are driving multinationals' digital investment in the Chinese technology market¹⁰.



	Definition	Examples of commercial engagement solutions
Enabling platforms	Platforms and systems to support the value chain (incl. third parties) by creating a central source	enhancement; Live interaction and virtual
User relationships	Touchpoints that collect data from users and engage users to deliver content and value	Online physician community; HCP education; Medication reminder apps
Data insights	Data analytics and insight generation to improve decision-making, e.g., from data providers	HCP and patient persona construction; Launch performance BI dashboard; Market sentiments analytics

To realize successful commercial engagement solutions, pharma companies need to establish their goals in each of the three areas. They then need to prioritize initiatives in each area, based on the capabilities they already have in place, the most important gaps they need to narrow, and their available resources.



Setting up for global success

Trends indicate China is becoming a major growth engine for multinational pharma companies—some of them are increasingly using commercial and engagement models developed in China to infuse back into other markets and we likewise see such an opportunity to explore a digital sandbox model that would harness the potential for innovation in China and beyond—and to create business value by significantly redefining how multinationals will be driving and interacting with the healthcare ecosystem in the commercial area. To get started, companies can build a local innovation model with the following elements in place:

- A clear innovation strategy that involves pursuing thematic opportunities and advancing the business strategy
- Leadership endorsement and support for experimentation with novel solutions
- A simple and robust innovation process from ideation to minimum viable product to scaling up
- A talent management approach catering to the digital environment, coupled with tailored performance measurement
- For scaling up, a market engagement framework to allow coordinated exchanges between China and other markets

Multinational pharma companies operating in China should expect rapid innovation, building customer-centric solutions such as HCP engagement tools or data analysis solutions for hospitals, and creating a digital culture in their organization. But they need to be clear about the value contributed by this new model—in China, and also in other parts of the world.

From 'doing digital' to 'being digital'

Every organization recognizes the importance of digitalization but many of them are just 'doing digital' not 'being digital'—meaning they' ae not transforming themselves from within. Successful digital transformation begins with a change in culture. Leaders need to shape behaviours and create an environment for migrating successfully to an effective digital business¹¹.

A digital DNA values collaboration, agility, risk-taking, and continuous learning. Companies need to clearly articulate their vision and ensure that their leaders 'walk the talk'. However, responsibility and accountability for the success of digital projects should not be just restricted to executives but should be shared across all levels involved.

Accelerated change through COVID-19

COVID-19 appears to accelerate change of the Chinese healthcare ecosystem, and new value generation opportunities could present themselves for pharmaceutical companies.

Impact on wider healthcare ecosystem in China as we anticipated in Six Predictions for 2020 China Pharmaceutical & Health Care:

- Accelerated healthcare system upgrade, with greater focus on public healthcare resource optimization and disease prevention infrastructure setup
- Increasing adoption of healthcare technology, including healthcare big data for disease management, and Al-based tools to support clinical decisions
- Increasing role and decision power of Center of Disease Control (CDC)
- Increasing urge to review existing supply chain model for better visibility and efficiency
- Further investment in digital capabilities for customer engagement
- Greater portfolio interest in enhancing preventative care portfolio, with close ecosystem building to capture business opportunities from early diagnosis to treatment follow-up

For pharma companies, the change requires them to reassess their commercial engagement model across stakeholder groups in the ecosystem and embrace accelerated adoption for patient centric care model and move to overall wellbeing.

The unique characteristics and evolution of the China market require companies to embrace innovative technologies and novel service models in order to capitalize on the opportunities at hand. However, potential pitfalls we typically see from multinationals are controlling too much, valuing and investing too little, and removing borders too hesitantly¹². To mitigate the pitfalls, companies need to create a bespoke blueprint for building effective operating models, considering the competitive advantages of their presence in China. In addition, companies need to be clear on the value contribution of the new commercial model—not only in China, but how China can benefit the organization globally, design a value capture function and scale it up from the beginning with the tech transfer capability in mind. Lastly, companies need to implement an approach that allows collaboration and transparency across borders while harvesting the agility, speed and dynamic China as a market can provide.



Endnotes

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