The information and statistics set out in this section and other sections of this prospectus were extracted from the report prepared by Frost & Sullivan, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged Frost & Sullivan to prepare the Frost & Sullivan Report, an independent industry report, in connection with the Global Offering. The information from official government sources has not been independently verified by us, the Joint Sponsors, the Joint Global Coordinators, the Joint Bookrunners, the Joint Lead Managers, the Underwriters, any of their respective directors and advisers, or any other persons or parties involved in the Global Offering, and no representation is given as to its accuracy.

### Overview of the Healthcare Industry in China

China is the second largest healthcare economy with sizable and steadily increasing healthcare expenditure. Healthcare expenditure (HCE) refers to the total costs expended across the entire country on healthcare-related services and products over a period of time, normally a year. According to Frost & Sullivan, China recorded total healthcare expenditure of RMB7,231 billion in 2020, and it is forecasted to reach RMB11,486.0 billion by 2025, representing a CAGR of 9.7% from 2020 to 2025, and further reach RMB16,642.5 billion by 2030. Along with the trend of China's GDP growth declining, the growth rate of the total healthcare expenditure in China is expected to encounter a decreasing trend. The growth rate of a market tends to naturally slows down as it expands in size and enters a more mature phase, and the total healthcare expenditure in China has been growing at a high CAGR historically in recent years.

### Total Healthcare Expenditure in China, 2016-2030E



Source: The Frost & Sullivan Report

According to Frost & Sullivan, the number of individuals in China aged above 65 reached 190.6 million in 2020 and is forecasted to continue to reach 247.4 million in 2025 and 318.1 million in 2030. The "Health China 2030" promulgated in 2016 and "14th Five-Year Plan" promulgated in 2021 both emphasized the strategic importance of the healthcare industry in China's development plan. Innovations in the healthcare industry have been continuously enhancing the medical capabilities of service providers and the experiences of the service receivers, which increases the customers' willingness to pay. Therefore, the accelerated aging population, along with favorable policies and technological advancements, indicate a growing market for the healthcare industry.

With substantial rising demand for healthcare, China's healthcare industry is undergoing unprecedented supply-side reforms, which are expected to profoundly influence the industry by promoting the development of out-of-hospital channels and accelerating the digitalization penetration in the industry. The PRC government has introduced multiple policies favorable to "Internet + healthcare" in recent years, propelled by the COVID-19 pandemic to further accelerate the implementation of these policies, including:

- Policies to encourage doctors' multi-site practice in order to alleviate uneven distribution of medical resources, such as "Notice on Issues Related to Physicians' Multi-site Practice" announced in 2009, "Notice on Further Expanding the Scope of the Pilot Multi-site practice of Physicians" in 2011, and similar policy, pronouncements. These policies have provided the basis for the accelerated development of services such as internet hospitals and other online healthcare solutions.
- Policies to promote online healthcare services, including the legalization and standardization of online consultation platforms, and policies to encourage offline hospitals to set up internet hospitals, such as "Opinion of the General Office of the State Council on Promoting the Development of Internet + Healthcare", where doctors are allowed to prescribe medicines for some common and chronic diseases online on the basis of read access to the patient's medical records, which has been alleviating the pressure of offline healthcare system.
- Policies to encourage the separation of issuing prescriptions and dispensing of drugs and promoting prescription outflow, including the introduction of centralized procurement processes for hospitals using a volume-based procurement (VBP) approach. Such policies include "Policies and Measures to Further Deepen the Reform of the Healthcare System Using VBP as a Breakthrough Point" issued by the State Council medical Reform Team in 2019, which encourages medical insurance agencies to directly settle payments with manufacturers and circulation companies, largely improving their accounts receivable turnover and supply chain efficiency.
- Policies that demonstrate government recognition of online retail pharmacies as an important channel, including permitting online consultation and prescription and online sales of prescription drugs, including the new "Drug Administration Act" announced in 2019, which allowed for the online sales of major prescription drugs excluding vaccines, narcotic drugs, and other drugs subject to special management by the state.
- Policies to continuously refine the medical insurance system and support reimbursement of online consultation for common and chronic conditions, including "Opinions on supporting the healthy development of new business formats and new models, activating the consumer market and driving employment expansion" announced by National Development and Reform Commission in 2020. The opinions proposed to include certain "Internet+" healthcare service fees under insurance coverage, aiming to promote internet based healthcare services.
- Policies to establish and standardize EMR (Electronical Medical Record) systems gradation and evaluation in hospitals in order to maintain consistent EMR for long-term care or chronic condition management, such as "Notice on Future Promoting the Informatization Construction of Medical Institutions with Electronic Medical Records as the Core", which aims to establish and improve the electronic medical record system and provide a wider coverage of such system to form a basis for long-term enhancement of the medical system.

These policies can transform the structure of the healthcare industry, by transferring a portion of healthcare services originally provided in traditional offline medical institutions to online scenarios by making online consultations and online sales of medicines easily accessible.

Driven by favorable policies and continued technology advancement, there are clear trends of accelerating digitalization across different sectors of the healthcare industry, which has led to the fast growth of the digital health and wellness market in China. The size of China's total digital health and wellness market is expected to reach RMB1,511.6 billion in 2025, representing a CAGR of 37.5% from 2020 to 2025, and further reach RMB4,165.2 billion in 2030, representing a CAGR of 22.5% from 2025 to 2030.



### China Digital Health and Wellness Market Size, 2016-2030E

### Overview of China's Chronic Condition Management Market

China's chronic condition<sup>1</sup> management market, with a massive patient population and high growth potential, is one of the most important segments of the country's healthcare market. As of December 31, 2020, there were 133 million, 324 million, and 89 million patients in China with diabetes, hypertension, and hypercholesteremia conditions, respectively, and these patient populations are expected to grow continuously.

According to the Frost & Sullivan Report, healthcare expenditure for chronic conditions in China is expected to grow from RMB4,100.6 billion, representing 56.7% of total healthcare expenditure in 2020, to RMB12,479.9 billion, representing 75.0% of total healthcare expenditure in 2030. Furthermore, prescriptions for chronic conditions accounted for 87.0% of all prescriptions in 2020, and they are expected to constitute 90.0% in 2030.

Source: The Frost & Sullivan Report

<sup>&</sup>lt;sup>1</sup> Chronic conditions are defined broadly as conditions that last for a year or more and require ongoing medical attention or limit activities of daily living or both, including cardiovascular diseases, metabolic diseases, psychiatric diseases, renal diseases, respiratory diseases, gastroenterological diseases, and others.



## Breakdown of China Healthcare Expenditure Breakdown by Chronic Condition and Other Condition Related Expenditure, 2016–2030E

Source: The Frost & Sullivan Report

Chronic condition management in China is concurrently facing multiple challenges:

• Low level of digitalization. The overall chronic condition management segment is still in the early phase of digitalization. Chronic condition management in China centers on in-hospital healthcare services. Typically, chronic condition management procedures include in-hospital diagnosis, treatment, rehabilitation care and patient follow-up visits. After patients receive diagnosis, treatment and prescriptions in hospitals, their health data are recorded in their medical records for following assessment and health status monitoring. Once a patient with chronic conditions leaves the hospital, except for weekly or bi-weekly in-hospital follow-up visits or medicine refilling, he or she has to manage their own care.



Source: The Frost & Sullivan Report

The absence of automated EMR generation and updating, in- and out-of-hospital medical condition tracking, and systematic patient data analytics have resulted in significant inefficiencies in chronic condition management. In addition, China does not have a national patient database to support digital chronic condition management. Individual patient data are primarily collected and maintained manually in most hospitals, leaving significant opportunities for digitalized solutions to make improvements in efficiency, accuracy and effectiveness of chronic conditions

management. Meanwhile, there is a lack of one-stop solutions to monitor patients' situations and manage their chronic conditions out of hospitals, which are crucial to medical treatment effectiveness.

- Massive patient base and increasing prevalence of chronic conditions. China is facing an aging population, with the portion of the population aged 65 and above expected to reach 318.1 million, or 21.9% of the total population, in 2030, from 13.5% in 2020. China's demographic shift is expected to create significant demand for chronic condition management. Along with the increasing prevalence of chronic conditions, age-related chronic condition spending has consistently taken up a significant portion of China's total healthcare expenditure. This trend is predominantly driven by a fast-growing underlying patient pool and significant direct spending on chronic conditions, as exemplified by the following typical chronic conditions.
  - The number of patients with hypertension in China was 324.4 million in 2020, and is expected to increase to 357.9 million and 388.0 million in 2025 and 2030, respectively; the direct spending for hypertension was approximately RMB429.4 billion in 2020.
  - The number of patients with diabetes in China was 133.1 million in 2020, and is expected to increase to 151.7 million and 170.3 million in 2025 and 2030, respectively; the direct spending for diabetes was approximately RMB752.1 billion in 2020.
- Scarcity and uneven distribution of quality medical resources. China's high-quality medical resources are concentrated in large Class III and Class II hospitals, which represented 37.9% of the total number of hospitals nationwide but provided 89.2% of healthcare services that were provided through outpatients visits in 2020, according to Frost & Sullivan. This uneven distribution of medical resources makes quality diagnosis and medical services scarce and not easily accessible to people in need.
- **Inferior medical service experience.** Scarcity in quality medical resources has resulted in poor patient experiences. According to the Frost & Sullivan Report, in 2020, on average, patients in China spent approximately 3 hours on an offline outpatient visit, of which only around 8 minutes were spent on diagnosis. The inefficient and unpleasant outpatient visit experience discourages chronic condition patients from maintaining the regular touchpoints with doctors, even if their conditions require them to do so.
- **Limited insurance coverage for chronic condition management.** China's healthcare expenditure on chronic conditions can be divided into four categories:
  - Basic medical insurance expenditures, expenditures that are paid by national medical insurance.
  - Commercial medical insurance expenditures, expenditures that are paid by commercial health insurances which are provided and administered by non-governmental entities.
  - Out-of-pocket payments, expenditures that are directly borne by patients, including cost-sharing, self-medication and other expenditure paid directly by private households.
  - Other expenditures including government fiscal payments other than health insurance payments, social charity payments, and donations.

The following chart sets forth the breakdown of chronic condition-related expenditure by payment types:



Breakdown of China Chronic Condition Healthcare Expenditure, 2016–2030E

Note: Others include government non-insurance financial input, social charity donations, etc.

#### Source: The Frost & Sullivan Report

The first three of these four categories, namely the total expense of basic medical insurance expenditures, commercial medical insurance expenditures and out-of-pocket payments, are defined as healthcare spending according to the Frost & Sullivan Report. In 2020, the chronic condition healthcare spending reached RMB2,994.9 billion. Out-of-pocket chronic condition management expenditure in China is significant, reaching RMB1,364.8 billion in 2020 and accounting for 45.6% of the chronic condition healthcare spending. Basic medical insurance expenditure and commercial healthcare insurance accounted for 47.8% and 6.6% of the chronic condition healthcare spending, respectively.

Chronic condition management is the most suitable for adopting digital solutions among all health conditions, given the need for long-term care, recurring diagnosis and treatments, requirement of systematic record of medical data, and relatively low medical risk profile. Patients with chronic conditions typically need routine follow-ups, continuous prescription renewals and treatment over long periods of time. Therefore, the doctor-patient interaction is more frequent and patients' medical records need to be periodically updated and reviewed. Specifically, patients not only demand efficient diagnosis and in-hospital medical care, but also need continuous out-of-hospital management. In addition, the risk of mistreatment of chronic conditions is relatively manageable and potential negative consequence of medical error is relatively limited. Digital chronic condition management solutions consequently are characterized by the following core value propositions.

- **Provide long-term care:** Digital chronic condition management solutions can trace a patient's health condition and records over a long period, which satisfies the requirement for long-term care.
- Allow recurring diagnosis and treatment: Digital chronic condition management solutions can efficiently facilitate recurring diagnosis and treatment, and allow patients to communicate with doctors remotely to receive diagnosis and treatment anytime and anywhere. As a result, patients can save the time and cost as compared with in-hospital visits.

- Store systematic record of medical data: Digital chronic condition management solutions enable health condition tracking and recording through the usage of AIoT medical devices, both in and out of hospitals, including at home. After each time of diagnosis and treatment, internet-based medical records including health condition, disease progression condition, medication, treatment means, and allergic reactions are electronically stored to provide substantial convenience for the patient's next diagnosis and treatment.
- Solve limited and unequal access to medical resources: Digital chronic condition management solutions also solve the pain points of limited and unequal access to medical resource such as hospitals. Medical resources are unevenly distributed in China and concentrated in municipal hospitals compared to county hospitals. A significant portion of county hospitals (Class I, II) still lack the capabilities necessary for chronic condition treatment and prevention. With internet-based platforms, patients can access to doctors from higher-tiered hospital and conduct chronic condition treatment and prevention through internet hospitals beyond physical constraints.
- Facilitate easier purchase of prescription drugs: Traditionally it is not convenient to purchase prescription out of hospitals. Chronic condition patients often have to repeatedly go through unpleasant and inefficient outpatient visits to renew their prescriptions and receive their regular medications. Internet-based platforms enable online medications ordering after doctors' review and prescription and delivery at their doorway. In particular, recent policy guidelines in China are promoting prescriptions outflow, making prescription drugs more accessible out of hospitals.

Digital chronic condition management market in China consists of chronic condition management service and relevant product sales revenue. Digital chronic condition products include pharmaceuticals, consumables, medical devices, nutrition and supplements, and others for chronic condition. The market size of the digital chronic condition management market in China grew from RMB57.8 billion in 2016 to RMB176.1 billion in 2020, with a CAGR of 32.1% over the period. This is expected to further grow to RMB800.1 billion in 2025 and RMB1,808.5 billion in 2030, representing CAGRs of 35.4% from 2020 to 2025 and 17.7% from 2025 to 2030.



China Digital Chronic Condition Management Market Size, 2016-2030E

Source: The Frost & Sullivan Report

### Entry Barriers of Chronic Condition Management Market

**Talent barrier:** The chronic condition management industry is a technology-intensive market. The professional qualifications require accumulated experience in the healthcare field and the integrated application of various cross-sector technologies. Therefore, this industry requires compound talents with multi-disciplinary background. This is an applied industry that needs to develop products with different characteristics for specific application fields. That requires the professionals with strong knowledge and innovation abilities. It is difficult for new entrants to acquire professionals with rich industry experience.

**Regulatory barrier**: The healthcare industry is a highly regulated industry with license requirements in various areas. For instance, Good Supply Practice (GSP) is a guideline designed for quality assurance in transportation, storage, and sales of pharmaceuticals, which the distributors need to strictly follow to become GSP certified. Moreover, companies using the internet to create value-added services need to be licensed before relying on these services to generate revenues. For instance, services involving online consultation that generate revenues need to acquire the Internet Content Provider (ICP) certification to operate.

**Capital barrier:** In order to enhance their core competitiveness, chronic condition management enterprises may need to invest a large amount of capital in R&D, brand promotion, channel construction and product services. It is difficult for the enterprises with limited financial capabilities to operate their funds efficiently and achieve further development in the industry.

**Relationship barrier:** The supply of chronic condition solutions, including SaaS platforms, pharmaceuticals and medical devices is at the core of chronic condition management businesses as it may contribute a large portion of the revenue of chronic condition management companies. The capability of businesses to maintain relationships with both upstream suppliers and downstream medical institutions and pharmacies is vital but difficult for new entrants to acquire.

### How We Serve the Chronic Condition Market

**Promote digitalization of in-hospitals scenarios**: We provide our hospital SaaS to hospitals to digitalize and standardize the in-hospital chronic condition management process, which not only centralizes, streamlines, and automates their workflows, but also facilitates the creation, management, analysis of EMR. Our solutions to hospitals are designed for chronic condition management to improve hospitals' operational efficiency and treatment effectiveness. Through empowering the hospitals with digitalization solutions, we build sticky relationships and are able to seek monetization through hospital supplies, digital marketing services and hospital SaaS.

**Comprehensive offerings covering full life cycle:** With an aim to cover the entire patient journey, we have strategically developed our offerings to cover the full life cycle of digital chronic condition management in and out of hospitals. We understand that chronic condition management is a complex process, with long-term and regular visits, requiring frequent interactions between patients and medical service providers including doctors, hospitals and pharmacies. To make quality healthcare services accessible at out-of-hospitals setting, we have launched our pharmacy solution and individual chronic management solution to enable in-pharmacy and at-home consultation and prescription. This approach has also enhanced our engagement with such stakeholders and positioned us for monetization opportunities.

## Key Trends in Chronic Condition Management

### Expanding the outflow of prescription drugs

Prescription outflow is an important and emerging trend. The potential penetration of prescription drugs outflow is expected to increase to maximum 87.6% of out-patient drug sales in China, according to the Frost & Sullivan Report. A number of policies have been promulgated to support prescription outflow:

- According to The Thirteenth Five-Year Plan in Deepening the Reform of the Medical and Health System (《"十三五"深化醫藥衛生體制改革規劃》), public hospitals will undergo comprehensive reform, and public hospitals are prohibited from charging mark-ups on the drugs they sell. Amid this policy trend, public hospitals can no longer generate profits from pharmaceutical sales, which has reduced incentives for pharmaceutical sales. With more stringent supervision and assessment on revenue contribution from hospitals' pharmaceutical sales, hospitals are more willing for patients to purchase pharmaceutical products through out-of-hospital channels, including online and offline retail pharmacies
- A series of supportive policies have been introduced and become effective, providing guidance on the reform of the out-of-hospital distribution of prescription drugs, including Guiding Opinions on Classification and Management of National Retail Pharmacies (Draft for Public Comments) (全國零售藥店分類分級管理指導意見(徵求意 見稿)) and Several Opinions on Further Reforming and Improving the Policies on the Production, Circulation and Use of Pharmaceuticals (關於進一步改革完善藥品生產流通 使用政策的若干意見).

Driven by the expanding outflow of prescription drugs, the proportion of pharmaceutical sales made through out-of-hospital channels is expected to continue to increase. Amid this secular trend, pharmacies and other out-of-hospital platforms demand for a broader customer base, supply chain capabilities, and prescription circulation capabilities. The below diagram illustrates that sales of pharmaceuticals through out-of-hospital channels in China is expected to grow at a CAGR of 17.5% from 2020 to 2025, faster than those sold in hospitals, which is expected to grow at a CAGR of 4.1% during the same period.



### Breakdown of China Pharmaceutical Market by In and Out of Hospitals Scenarios, 2016-2030E

## Digital infrastructure empowering chronic condition management

As chronic conditions require both in- and out-of-hospital management, a seamlessly solution, whereby patients can conduct routine online visits and seek offline physical examination and diagnosis if circumstances require, can effectively address patient needs. In order to offer such solutions for patients, digital infrastructure need to be designed to connect stakeholders such as hospitals, pharmacies, insurance companies and other participants across the value chain. Below illustrates the key benefits of digital infrastructure.

- **Integration of healthcare resources:** Unlike traditional chronic condition management, which separates the in-hospital diagnosis and day-to-day treatment, digital chronic condition management solutions integrate the medical resources that are available only in hospitals with out-of-hospital healthcare resources enabling patients to receive integrated medical services wherever they are.
- **High efficiency empowered by technology:** Advanced technologies, such as AI and medical big data, enable digitalized chronic condition management platforms to work much more efficiently. A doctor can respond to nearly 2,000 queries per day when backed by advanced technologies on a digital chronic condition management platform. In contrast, a doctor can only deal with 100 queries per day in a traditional hospital.
- **Improving patient-centric management:** Digitalization of chronic condition management has great value in improving service quality for the healthcare system by conveniently connecting major stakeholders, simplifying the consultation, prescription, and treatment process, forming a patient-centric ecosystem, and strengthening access to more medical resources.
- Seamless collaboration of industry stakeholders: The digital platforms for chronic condition management build up an ecosystem, in which all stakeholders in health system, such as hospitals, pharmacies, pharmaceutical companies, patients and doctors, are deeply involved, which facilitate inter-system communication and interaction with one another.

Source: The Frost & Sullivan Report

We are a pioneer in in digitalizing chronic condition management in China. Our hospital SaaS is the first one of its kind to digitalize and standardize the chronic condition management process for hospitals in China, and we are the only industry player whose self-developed AIoT devices can connect to China's NMPA certified medical devices used in hospitals. We have established market leadership in the digital chronic condition management market. We are China's largest digital chronic condition management solution provider in terms of numbers of SaaS installations in hospitals and pharmacies in China, each as of December 31, 2021, and number of online prescriptions issued through our services in 2021. We strive to provide distinctive solutions which could serve as infrastructure connecting a variety of stakeholders within the healthcare system. Compared to other peers, we differentiate ourselves by providing digital solutions covering the entire patient journey, aiming to make the overall chronic condition management more efficient and make high-quality healthcare services more easily accessible for patients. In particular, we have adopted a hospital-first strategy and have relentlessly made investments to expand our hospital network as we understand that chronic condition management in China centers on in-hospital healthcare services. We believe that by leveraging our success in serving hospitals, we are able expand our solutions to more stakeholders and provide valuation propositions to pharmacies, patients and pharmaceutical companies.

## Key Use Cases of Digital Chronic Condition Management

### In-hospital chronic condition management

Digital solutions allow hospitals to enhance their information technology capabilities to improve operating efficiency and reduce human error. The development of hospital digitalization is primarily implemented through (i) the installation and upgrading of hospital information system ("**HIS**") and (ii) SaaS-based solutions focused on automating and optimizing daily workflow to improve efficiency.

Hospitals adopt HIS to help them collect, store, manage and transmit a patient's records. Especially for chronic condition management, it is critical to maintain consistent EMR after the completion of in-hospital treatment, as chronic conditions are characterized by the need for continuous self-management and long-term care. Establishing EMR systems is also one of the key steps hospitals need to undertake to achieve digitalization. China's National Health Commission has repeatedly stressed the importance of EMR in hospital assessment. According to *Circular on the Administrative Measures for Grading and Evaluating the Application Level of the Electronic Medical Record System (for Trial Implementation) and The Evaluation Standards (for Trial Implementation)* policy (《關於印發電子病歷系統應用水平分級評價管理辦法(試行)及評價標 i(iff))的通知》), EMR is a key determinant factor in terms of the assessment of hospital classification as it requires EMR of all Class III hospitals to be rated at above 3 (on a scale of 0 to 8) by 2019 and 4 by 2020. Failure to achieve such rating can negatively affect the classification of hospitals, especially for Class III hospitals.

These types of improvements cannot be achieved by legacy HIS systems. According to Frost & Sullivan, HIS is typically a customized on-premise system which requires months to develop, test and deploy to fit to each hospitals specific needs, in general difficult to revamp once deployed. SaaS-based solutions, in contrast, are much easier to deploy as they often act as "plug-ins" or extensions of hospitals' existing HIS. Therefore, SaaS-based solutions are a more time-saving and cost-effective option to drive improved operating efficiency.

Traditionally, data within a Chinese hospital have been highly fragmented. Most departments have historically hosted their own data on-premises, leaving the data relatively isolated. Lacking data integration and a low degree of compatibility between systems hinder uniform monitoring and efficient use of medical data, making it challenging for continuous patient condition monitoring

and management. Although most HIS systems have been equipped with data storage and collection functions, manual input for clinic data entry is still required, which lead to inefficiencies and operational errors.

To solve the data isolation problem, SaaS-based solutions enable data sharing among different HIS sub-systems such as the mobile workstation and the cloud-based management platform. SaaS-based solutions that integrate with the Internet of Things (IoT) prevent the isolation and dispersion of health data, to the extent permissible by laws and regulations. SaaS-based solutions save doctors' and nurses' time, improve work efficiency and reduce manual data input error.

#### Out-of-hospital chronic condition management

#### Pharmacies

Offline retail pharmacies are the predominant out-of-hospital channel for patients to purchase pharmaceuticals and consumables. Patients are only allowed to purchase prescription drugs with a prescription. However, most patients do not have a prescription in hand when stepping into a pharmacy and it would take much longer to pay an in-person doctor visit and get prescription. As a result, offline retail pharmacies are inclined to adopt digital solutions to fulfill customers' increasing needs for online consultation and prescription services during offline drug purchases, in compliance with regulatory requirements. Digital capabilities also enable pharmacies to better manage medicine inventory to meet patients' on-demand needs.

#### Online healthcare platforms

To address the full cycle of chronic condition management, online healthcare platforms, usually powered by internet hospitals, have been providing online consultation and online prescription issuance and fulfillment.

Moving the consultation, diagnosis and prescription processes online has significantly increased the utilization efficiency of medical resources. For example, people spent 3 hours on average on an outpatient visit in 2020, although actual consultation and diagnosis time only accounted for 4.4% (8 minutes), according to the Frost & Sullivan Report. In contrast, online consultation and diagnosis are highly efficient and can offer patients easily accessible quality medical resources regardless of where they are. As online consultation and diagnosis are gaining popularity, it is expected to become an indispensable component of China's healthcare system by effectively channeling patients to online or offline channels depending on their needs, as a way to further alleviate the current burden on China's healthcare system.

China's market for internet hospitals and digital consultation has been expanding rapidly and is expected to further expand. According to NHC, the number of Internet hospitals increased over 800% from 119 as of December 31, 2018 to more than 1,600 as of June 30, 2021. The online consultation volume was 148.4 million times in 2016, and it increased to 862.5 million times in 2020 with a CAGR of 55.3%. It is expected to further increase to 3,460.8 million times in 2025 and 5,276.3 million times in 2030, with a CAGR of 32.0% and 8.8%, respectively. The penetration rate of online consultation volume among all consultations was 1.9% in 2016. It increased to 11.5% in 2020 and is expected to increase to 35.9% in 2025 and eventually reach 50.0% in 2030.

By integrating online and offline medical resources, online platforms have extended their service spectrum beyond consultation, to include prescription issuance and fulfillment. This integrated model offers superior experience and makes quality products easily accessible to patients, which helps them with self-management of their conditions.

Driven by the secular trend of expanding outflow of prescription drugs and supported by digitalization of offline pharmacies and emergence of internet hospitals, the out-of-hospital market of chronic condition management is expected to continue to outgrow. The market size of out-of-hospital chronic condition management market in China, including sale of medical devices, consumables and pharmaceuticals and provision of management services, will increase from RMB904.9 billion in 2020 to RMB1,883.3 billion in 2025, and is expected to increase to RMB3,107.3 billion in 2030, with a CAGR of 15.8% from 2020 to 2025 and a CAGR of 10.5% from 2025 to 2030.



### Breakdown of China Chronic Condition Management Market by Distribution Channels, 2016-2030E

Source: The Frost & Sullivan Report

Chronic condition management market can be further broken down by types of services rendered into management services and product sales. Chronic condition management services refer to services including chronic condition consultation, regular checkups, risk assessment, integrated intervention and management provided by professional medical staff. Chronic condition products include pharmaceutical products, medical devices, and other products related to chronic condition management. Both segments are expected to continue to grow at a considerable rate with CAGRs of 13.3% and 10.7% during 2020 to 2025 for management services and products respectively.



## China Chronic Condition Management Market, Breakdown by Types of Services Rendered, 2016-2030E

Source: The Frost & Sullivan Report

## Major Costs

The costs for providing digital chronic condition management services primarily include (i) supply cost, such as the cost for pharmaceutical products, medical devices, and other chronic condition related products, and cost to acquire exclusive distribution rights, (ii) development cost, such as salaries and benefits for software and application developers, and (iii) technology service fees incurred to operate an online platform, such as service fees relating to cloud and telecommunication services.

Supply costs are expected to remain relatively stable in the industry in the foreseeable future. Chronic condition management players, such as the Company, procure the products and then resell to downstream customers. The cost per product is expected to remain relatively stable in the foreseeable future.

Development costs are expected to increase at a relatively steady pace. Product and software development cost for a specific project is largely attributable to the associated labor cost, which is calculated taking into account the number of developers involved, their daily rates and the total time spent. The number of developers required and time spent for a specific project is dependent on the complexity of the product and the amount of medical information such project requires, which are not affected by market conditions. As such, future trend of content development cost largely depends on the daily rates of research and development personnel, which are closely related to the average wage in the industry. As the average wage in China continues to rise, daily rates have been increasing slightly over the past few years and are expected to be increasing at a relatively steady pace in the coming years.

Technology service fees, including cloud services and telecommunication services, are expected to remain stable in the foreseeable future. China's Cloud services market is relatively competitive, with many cloud service providers competing. As a result, the rates of cloud services is expected to be stable due to price competition. Telecommunication services market in China is dominated by the Chinese state-owned telecommunication companies. As all internet verticals rely on telecommunication services, telecommunication services are charged with stable rates.

## **Digital Healthcare Marketing**

#### **Overview**

Digital marketing services are a marketing method that makes use of the internet and digital technologies, and extensive technology-empowered network, to conduct omni-channel promotion of medical products and services. The Chinese government has implemented regulations regarding reducing prices of medical products and layers of distribution channels, motivating pharmaceutical and medical device companies to widely adopt digital healthcare marketing to improve sales and marketing efficiency. Digital healthcare marketing incorporates services such as digital promotion, marketing analytics and strategy and technology services. With the feature of digital healthcare marketing, pharmaceutical and medical device companies piloted to incorporate digital tools and leverage external platforms to establish omni channel marketing capabilities to advocate their products.

Digital marketing services providers have established deep interaction with hospitals, doctors and pharmacies, and have accumulated medical care know-how. With such technology insights and network of stakeholders, they offer digital marketing services to pharmaceutical and medical device companies, helping them expand promotional outreach and elevate product awareness.

## Market Opportunity

In 2018, digital marketing services started to flourish in China due to the implementation of multiple government regulations such as the "two-invoice" system and the national pilot program of the centralized procurement using a VBP approach aiming to reduce in-hospital medicine prices and layers of distribution channels. Such downfall in sales revenue caused pharmaceutical companies to reallocate the resources between the traditional marketing methods and digital marketing services. Enterprise spending on healthcare marketing increased from RMB301.5 billion with a digital marketing services penetration rate of 0.5% in 2016 to RMB466.3 billion with a digital penetration rate of 3.3% in 2020. Such spending includes marketing and promotional activities targeting primarily hospitals, doctors and pharmacies. It is expected that these enterprises would spend approximately RMB757.5 billion in 2025 with a digital marketing services penetration rate of 14.7%. The market of digital healthcare marketing is expected to further expand to RMB363.3 billion in 2030 among the RMB1,101.0 billion healthcare marketing market and its penetration rate is expected to be 33.0% in 2030. The illustration below presents the size and forecasted growth of overall spending in China on healthcare marketing along with the penetration rate from 2016 to 2030.



#### Enterprise Spending on Healthcare Marketing in China, 2016-2030E

Source: The Frost & Sullivan Report

Companies in the digital healthcare marketing market primarily generate revenues through two channels, namely, the provision of services and sales of products. Digital healthcare marketing companies generate revenues from the provision of services primarily from three sources, namely, services for pharmaceutical and medical device companies, services for complementary healthcare product companies, and others. The Company is a player in the digital marketing services market for pharmaceutical and medical device companies. The digital marketing services market for pharmaceutical and medical device companies grew significantly from RMB0.1 billion in 2016 to RMB1.4 billion in 2020, representing a CAGR of 74.4%, and is expected to further grow to RMB29.6 billion in 2025 and RMB163.3 billion in 2030, representing CAGRs of 84.9% from 2020 to 2025 and 40.7% from 2025 to 2030, respectively. The diagram below illiterates the size and forecasted growth of the digital marketing services market for pharmaceutical and medical marketing services market for pharmaceutical marketing in China.



Market Size of China Digital Marketing Services Market for Pharmaceutical and Medical Device Companies, 2016-2030E

Source: The Frost & Sullivan Report

#### Key benefits brought by digital marketing services

- **Extensive and effective coverage:** By providing digital infrastructure for hospitals and pharmacies, digital marketing service providers can build national coverage network in an efficient manner. The technology-enabled solution has also contributed to deep and frequent customer engagement as such service needs to be timely updated to address the evolving needs from hospitals and pharmacies. For example, SaaS provider with their product integrated into hospital incumbent HIS system, have maintained close collaboration with hospitals and can promote relevant content through regular system update.
- **Increased effectiveness to doctors:** The new-generation digital marketing capabilities enable better reach to doctors for pharmaceutical companies. Doctors are made aware of what are available and suitable based on patients' health condition and needs, and able to make better-assisted prescription decisions. As a result, the marketing effectiveness are improved for pharmaceutical companies.

- **Improved efficiency:** Unlike traditional marketing that is time-consuming, digital marketing services provide a more efficient option and a broadened outreach. Specifically, marketing campaigns can be performed more quickly compared to traditional ones that require face-to-face interactions; and the digital feedbacks could be instantly gathered and analyzed.
- **Growing needs for advanced treatments:** Hospitals as the essential stakeholder providing medical care to patients, have been always trying to stay forefront of medical care technology and seek to provide better treatments for patients. In order to provide patients with more advanced treatments, doctors also demand the latest information related to patients' conditions. And digital marketing services platforms allow doctors to have access to a large variety of most up-to-date medicines and medical devices information and help them make more informed clinical decisions. With the growing need for novel treatments, the demand for digital marketing services will continue to grow.
- Superior marketing analytics and insights: Digital marketing services provide channels for pharmaceutical and medical companies to reach targeted hospitals through its powerful network. The data feedback from digital marketing services could provide medical companies with meaningful insights regarding their campaigns and allow them to market their products to specific demographics.

## **Competitive Landscape**

Digital healthcare marketing in China is an emerging market, and there are estimated to be over 200 participants focusing on different aspects of the market with various business models. Digital healthcare marketing services providers can typically be categorized into six segments that represent different application scenarios including (i) digital solution developers, (ii) virtual visit providers, (iii) Internet hospitals, (iv) pharmaceutical e-commerce platforms, (v) online conference vendors, and (vi) digital physician platforms. Major digital solution developers include Maichuan, Softium (an affiliate of Taimei Technology), Forceclouds, and 100doc, with revenues from healthcare marketing estimated to range from RMB50 million to RMB300 million in 2020. Major virtual visit providers include Naxions and Shanghai Qingyun Technology, with revenues from healthcare marketing estimated to range from RMB50 million to RMB100 million in 2020. Major internet hospitals include Ping An Good Doctor and Hao Dai Fu, with revenues from healthcare marketing estimated to range from RMB50 million to RMB500 million in 2020. Major pharmaceutical e-commerce platforms include JD Health, Ali Health, and Dingdang Express, with revenues from healthcare marketing estimated to range from RMB50 million to RMB500 million in 2020. Major online conference vendors include Mediwelcome, BizConf Telecom, and eDoctor Healthcare Communications, with revenues from healthcare marketing estimated to range from RMB100 million to RMB500 million in 2020. Major digital physician platforms include Medlive, MedSci, and DXY.cn, with revenues from healthcare marketing estimated to range from RMB50 million to RMB300 million in 2020. As the digital healthcare marketing market is very fragmented and diverse, players in this market do not always perfectly fall under one specific category. The Company provides comprehensive digital healthcare marketing services that share similar features with service providers in each of the six categories and cannot be strictly classified under any of the categories above.

Alternatively, the digital healthcare marketing market can be categorized by revenue channels, namely, the provision of services and sales of products. The digital healthcare services market can be further categorized into three segments, namely, services for pharmaceutical and medical device companies, services for complementary healthcare product companies, and others. The Company is a player in the market of digital marketing services market for pharmaceutical and medical device companies. In 2020, the Company ranks the second in terms of revenue in the market of digital marketing services market for pharmaceutical and medical device companies in China, with a market share of 10.9%. The diagram below illustrates the market shares of the major players in terms of revenue in the market of digital marketing services market for pharmaceutical and medical device companies in China in 2020.



#### Market Share of Digital Marketing Services Market for Pharmaceutical and Medical Device Companies, Breakdown by Service Providers, 2020

Source: The Frost & Sullivan Report

Note:

Company L is a private company headquartered in Shanghai, established in 2008, with approximately 4 million registered users, that connects physicians, pharmaceuticals, biotech and patients through digital platforms and events to promote professional information sharing among all stakeholders in the healthcare services industry.

Company M is a private company headquartered in Beijing, established in 2014, with over 1,000 employees, that developed a SaaS platform to provide real time data analysis, progress visualization, results digitization and marketing services, improving pharmaceutical sales management and helping pharmaceutical enterprises develop brand image and awareness.

China's chronic condition management market, is facing challenges including unbalanced medical resource allocation, operational inefficiency, a lack of digital infrastructure and unsatisfactory patient experience.

China's healthcare system involves a variety of stakeholders and is poised for tremendous disruption opportunities. Integration of healthcare resources and enabling seamless collaboration among industry stakeholders are essential to delivering better medical care for end users. Leading players are expected to continue to enjoy significant first-mover advantages in terms of powerful network effects, in-depth and valuable doctor-patient relationship, active user base, innovative technologies and in-depth insights.

We focus on leading the digitalization of China's chronic condition management segment through our distinctive SaaS-based solutions and have achieved market leadership.

• According to Frost & Sullivan, there were 37,000 hospitals in China, among which 14,076 are Class III and Class II hospitals as of December 31, 2021. We ranked the first among hospital SaaS solution providers who focus on chronic condition management in China in terms of number of hospitals installed or hospital SaaS in 2021, representing a Class III and Class II hospital penetration rate of approximately 11.9%, according to Frost & Sullivan. The overall digital chronic condition management hospital SaaS penetration in China is approximately 17.5% in 2021. Please see below the competitive landscape of digital chronic condition management hospital installation volume as of December 31, 2021.

Company	Listing Status	Hospital Coverage, Dec. 31 2021	Hospital Penetration	Customization	Product & Services	Core Features
The Company	Unlisted	2,369	6.4%	Standard • product •	Chronic condition management software for doctors and nurses Plug-ins and extensions to connect to HIS and EMR In-hospital multi-department virtual consultations and inter-hospital referral services	<ul> <li>Fast installation</li> <li>Patented AIoT to enable automatic data synchronization to replace the manual data inputting process to minimize data mismatches and enhance efficiency</li> </ul>
Е	Unlisted	900	2.4%	Customized • product	Hardware for self health monitoring Health evaluation system to analyze patients' health conditions and provide customized intervention and treatment plans	<ul> <li>AI-empowered analysis tool</li> <li>Construction of personal health records</li> <li>Remote patient monitoring</li> </ul>
F	Unlisted	800	2.2%	Customized • product •	Regional chronic condition management platform HIS+EMR+CIS Full-cycle services including data collection, profile construction, evaluation, intervention, and follow-ups	<ul> <li>A three-in-one chronic disease management service model (Hospital + Community + Family)</li> <li>Reliance on community health checkups</li> <li>Focus on elderly chronic condition management solutions</li> </ul>
G	Unlisted	550	1.5%	Customized • product	Mobile APP for physicians and data retrieval on the cloud Open platform for smart devices and real-time reports	<ul> <li>Doctors can provide services such as online consultation, audio consultation, registration reservation through the APP</li> <li>Hierarchical alert and management and blood glucose level analysis for diabetic patients</li> </ul>
Н	Unlisted	325	0.9%	Customized • product	Wearable devices for real-time continuous blood glucose monitoring (rtCGM) Information system for diabetes management	Real-time continuous blood glucose level monitoring

<sup>1</sup> Hospital SaaS penetration rate refers to the proportion of hospitals covered by the hospital SaaS of the respective company among all hospitals in China as of December 31, 2021.

Company E is a China-based intelligent medical information service company providing services in medical intelligence, medical informatization, health informatization, regional health informatization, and intelligent detection equipment. Company F is a

<sup>2</sup> Hospital SaaS penetration is calculated based on the number of hospitals in 2021 from the National Bureau of Statistics, which is 37,000. The number of Class III and Class II Hospitals in China in 2021 is calculated based on the NHC's announcement on the situation of medical institution services in the country as of July 31, 2021.

China-based healthcare information technology company providing smart hospitals solutions, smart medical community solutions, smart elderly care solutions, and smart manufacturing solutions. Company G is a China-based chronic disease management platform, offering expert consultation, cloud medical records, and medication management. Company H is a China-based smart chronic disease telemedicine platform, providing chronic disease monitoring, online nutrition assessment and online consultation.

• According to Frost & Sullivan, there were in total 604,500 pharmacies in China as of December 31, 2021. We ranked first among pharmacy SaaS solution providers in China in terms of number of pharmacies installed our pharmacy SaaS in 2021, representing a penetration rate of 28.5%, according to Frost & Sullivan. Pharmacy SaaS refers to software with online prescription and inventory management capabilities. Please see below the competitive landscape of pharmacy SaaS in terms of pharmacy installation volume as of December 31, 2021.

Company	Listing Status	Pharmacy Coverage, Dec. 2021	Pharmacy Penetration	Features		Business Model
The Company	Unlisted	172,000	28.5%	Flexible consultation mode including text and photo-based and video-based consultation sessions	•	Freemium model for SaaS
				• Algorithm enabling precise matching with prescribing physician to reduce waiting time	•	Annual subscription fee
				Automatic scrutinization of prescription mistakes		
				• Compliance in prescription ensuring safety and trust		
				• One-stop inventory, orders, customers, and staff management		
Ι	Unlisted	75,000	12.4%	• Online consultation and prescription services	•	Free SaaS as a means to
				• Connect upstream manufacturers and downstream pharmacies		channel
				• Integrate pharmacies to systematically enhance their inventory management capability, membership marketing capability, chronic disease management capability, network collaboration capability		
D	Unlisted	40,000	6.6%	• Pharmacy SaaS is installed to enable online medical consultation, which can help prescribe drugs	•	Pharmacies are charged technical service fees of SaaS and online
				• Inventory management		consultation fees

Company	Listing Status	Pharmacy Coverage, Dec. 2021	Pharmacy Penetration	Features		Business Model
J	Unlisted	35,000	5.8%	Remote diagnosis and medication guidance from doctors via the SaaS terminal installed at pharmacies	•	Pharmacies are charged technical service fees of SaaS and online
				Remote prescription review platform		consultation fees
				• Diagnosis — Prescription — Review — Purchase in pharmacies		
				Inventory management		
К	Unlisted	15,000	2.5%	• ERP software with features including medical insurance connection, supply chain and inventory management, customer relation management, etc.	•	SaaS with various features are often sold in bundles
				Online consultation and prescription services		
				• Remote prescription audit services		

1 Pharmacy SaaS penetration rate refers to the proportion of pharmacies covered by the pharmacy SaaS of the respective company among all pharmacies in China as of December 31, 2021.

2 Pharmacy SaaS penetration is calculated based on the number of retail pharmacies forecast based on information from the historical figures from Statistical Reports on Drug Supervision and Administration published by NMPA.

Company I is a China-based digital pharmacy platform, with B2C pharmaceutical e-commerce as its main development business providing drug consultation and disease consultation. Company J is a China-based online medical care platform offering remote pharmaceutical and medical service, remote consultation and prescription. Company K is a China-based retail pharmacy management platform, mainly providing pharmacy supply chain and service management, online prescription service, and remote prescription audit service.

We bring hospitals, pharmacies and doctors onto our platform where they can effectively deliver integrated services through both in- and out-of-hospital patient journey. We are the largest digital chronic condition management platform in China, both in terms of numbers of hospital and pharmacy SaaS installations, each as of December 31, 2021, and number of online prescriptions in 2021, according to Frost & Sullivan.

Ranking	Company name	Listing status	Average daily online effective prescriptions in 2021	Number of 2021 total online effective prescriptions (million)	Market share of 2021 total online effective prescriptions	
1	The Company	Unlisted	approximately 420,000	153.4	10.2%	
2	A	Listed	approximately 320,000	116.8	7.7%	
3	В	Listed	approximately 145,000	52.9	3.5%	
4	С	Listed	approximately 120,000	43.8	2.9%	
5	D	Unlisted	approximately 80,000	29.2	1.9%	

In 2021, the number of total prescriptions including offline and online is 14.1 billion. Over the same period, the number of online prescriptions is 1,511.3 million. The penetration of online prescriptions reached 7.7% in China in 2020 and is forecasted to further increase to 26.1% in 2025 and 37.7% in 2030. The Company has 58.2 million online prescriptions in 2020, representing 6.7%

of all online prescriptions in China in 2020. In 2021, the number of total online prescription in China is 1,511.3 million. The Company is the largest online medical service provider in China in terms of daily prescription volume in 2021, with approximately 420,000 average daily online prescriptions. The Company has 153.4 million total online prescriptions during the period, representing a 10.2% market share in 2021. Company A is a China-based and Hong Kong listed online healthcare platform engaged in pharmaceutical direct sales, pharmaceutical e-commerce platform, medical and healthcare services, and digital infrastructure businesses, offering prescription drugs, OTC drugs, medical devices, and other health-related products through its online e-commerce platform and offline pharmacy outlets, as well as healthcare services through its online e-commerce platform. Company B is a China-based and Hong Kong listed online healthcare platform engaged in the business of retail pharmacy, which operates through business models such as direct sales and online marketplace, and online healthcare services such as online consultation, hospital or doctor referral, health check-ups, beauty care services. It also offers access to healthcare check-ups, vaccination appointments, and dental care services. Company C is a China-based and Hong Kong listed online healthcare platform that offers an AI-assisted mobile platform for online consultations, hospital referrals and appointments, health management, and wellness interaction services, with the mission to build a healthcare ecosystem and to bridge the communication gap between doctors and patients. Company D is a China-based medical health technology platform offering appointment booking, medical education, online diagnosis, consultations and prescriptions.

## Source of Information

In connection with the Global Offering, we have engaged Frost & Sullivan to conduct a detailed analysis and prepare an industry report on the markets in which we operate. Frost & Sullivan is an independent global market research and consulting company which was founded in 1961 and is based in the United States. Services provided by Frost & Sullivan include market assessments, competitive benchmarking, and strategic and market planning for a variety of industries. We incurred a total of RMB1,350,000 in fees and expenses for the preparation of the Frost & Sullivan Report. The payment of such amount was not contingent upon our successful Listing or on the results of the Frost & Sullivan Report. Except for the Frost & Sullivan Report, we did not commission any other industry report in connection with the Global Offering.

We have included certain information from the Frost & Sullivan Report in this prospectus because we believe such information facilitates an understanding of the markets in which we operate for potential investors. Frost & Sullivan prepared its report based on its in-house database, independent third party reports and publicly available data from reputable industry organizations. Where necessary, Frost & Sullivan contacts companies operating in the industry to gather and synthesize information in relation to the market, prices and other relevant information. Frost & Sullivan believes that the basic assumptions used in preparing the Frost & Sullivan Report, including those used to make future projections, are factual, correct and not misleading. Frost & Sullivan has independently analyzed the information, but the accuracy of the conclusions of its review largely relies on the accuracy of the information collected. Frost & Sullivan research may be affected by the accuracy of these assumptions and the choice of these primary and secondary sources.

In preparing the Frost & Sullivan Report, Frost & Sullivan relied on market information which has a variety of data sources, including external information channels and Frost & Sullivan internal database. External information channels consist of both primary and secondary research, including industry interviews, public information, and annual reports.