
| RESEARCH ARTICLE

Disruptive Innovation in China's Primary Healthcare Market: A Case Study of a Startup to Challenge Incumbent and Business Growth Sustainability

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| ABSTRACT

This article examines primary healthcare reform in mainland China through a private-public partnership approach from a novel angle using disruptive innovation theory. The research is the first of its kind to apply Christensen's disruptive innovation theory to the primary healthcare industry in China. A qualitative single case study was designed to focus on the GBA Healthcare Group Limited ("GBAH"). The disruptive innovation theory was framed under the 3H framework, hence offering managers of healthcare organizations a new holistic management framework for applying disruptive innovation theory in their business initiatives. It is also suggested that due to the highly regulated nature of the healthcare services industry, private organizations should actively engage with the relevant government organizations as core stakeholders in their strategic planning.

| KEYWORDS

Disruptive innovation, sustainability, business growth, strategic management, start-up, health care industry.

| ARTICLE INFORMATION

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1. Introduction

The problems with healthcare reform in Mainland China could be viewed through the lenses of disruptive innovation under the 3H framework (Christensen et al., 2009; Yu, 2020). The overarching goal for any healthcare system, being the heart element of the 3H framework, is to make high-quality care accessible and affordable for as many citizens as possible. Effective leadership, which fits well with the context and strategy of the incumbent organization, serves a vital role in engaging employees to realize the overarching vision. The strategies to achieve this count on the head element, which brings along new innovative solutions that combine new innovative business models to reimagine and re-examine the payment and delivery model for healthcare services. This is an important point to note, as healthcare costs have continued to rise across the globe, notwithstanding the vast array of new technologies that are supposed to help with better patient management and early disease detection. Facing such a headwind, the organization has to count the last H-hand element's role is to develop the workforce with new skillsets and competences to utilize new resources (for example, new technologies, non-healthcare trained workers) to ensure the jobs-to-be-done well in implementing prescribed strategies (Christensen et al., 2016) for specific types of healthcare services. The 3H holistic management framework entails the organizational leader canvassing the synergistic integration of all three H elements to ensure corporate strategic goals can be effectively and efficiently achieved.

The GBA Healthcare Group Limited ("GBAH") was established in 2015 with the mission to give everyone access to trusted and affordable healthcare. GBAH was formed as a wholly owned subsidiary of UMP Healthcare Holdings Limited ("UMP"). Through a series of corporate restructuring, GBAH has evolved to become an independent operating entity and ceased to be a subsidiary of UMP since 2021. It is with this overarching framework that the Chinese healthcare system will be framed as an incumbent that will potentially be disrupted by the proliferation of advancements in the primary healthcare system. Such disruptors, like GBAH, must

critically analyse the three pillars of any healthcare system, being the coordination of resources and processes around the patients (consumers), the providers (healthcare organizations, and more specifically, the doctors) and the payers (being the government or private payers like insurance companies)

Through extensive study of industries and case studies of selected enterprises, Christensen examined the factors required for enterprises to cause disruptive innovations, as well as why enterprises might fail to respond to disruptive innovations coming from smaller competitors. Christensen laid out suggested strategies for how organizations can implement disruptive innovations, including how private enterprises may use disruptive innovation theories to cause changes in the healthcare industry, including causing disruptions to how governments should operate their healthcare services (Christensen et al., 2009).

Central to Christensen's practical implementation of disruptive innovation strategies is the importance of senior executives to motivate their team members to persevere through the journey of disruptive innovations. Other factors required for effective implementation of strategies have also been examined by Yu, where Yu argues, through the metaphorical expression of the Heart, the Head and the Hand (the 3H framework) (Yu, 2020), that organizations must acknowledge, address and integrate these three elements when implementing changes or new initiatives (i.e. disruptive innovations) in an organization.

This article offers first-hand and detailed insights from the CEO and his management team and includes their detailed reflections and thinking that offer both retrospective and forward-looking analysis in regard to how GBAH had planned and executed its disruptive innovation strategies for its expansion into the Greater Bay Area.

To date, there appears to be limited or no research that specifically focuses on the application of the disruptive innovation theory in advancing private-public partnerships in primary healthcare development in Mainland China. The existing literature has continued to provide recommendations to the Chinese government to increase funding for primary care and to reform the insurance payment system. In practice, when these suggestions are pushed into the current healthcare system, they are difficult to implement and could face resistance from the existing stakeholders. This is shown by the various research that has continued to highlight the shortfalls of the Chinese healthcare system as it stands today (Hu et al., 2008; Yip et al., 2019; Li et al., 2020).

These problems need new lenses to offer new solutions. The theory of disruptive innovation offers a potential alternative approach to healthcare reform. Under the disruptive innovation theory, the current Chinese hospital based and specialist centric healthcare system can be defined as an incumbent that is pursuing a path of sustaining innovation, which means potential disruptors, positioned as organizations that offer primary care solutions, could have the potential to serve both the low-end consumption and the non-consumption markets of the patients, providers and payers.

GBAH was founded in Hong Kong in 2015 by a group of family doctors and insurance professionals. GBAH has been pioneering private public partnerships for healthcare services with various regional governments in the Greater Bay Area since its foundation. As of December 31, 2023, GBAH has delivered primary care training and accreditation to over 3,000 doctors and nurses in the GBA, and built over 200 private-public-partnership clinics in partnership with regional governments. Through such a vast healthcare service network, GBAH has created innovative alternative payment models with commercial health insurers, based on family medicine and preventive care practices, to implement value-based health insurance propositions. The goal of GBAH is to make healthcare services more accessible, accountable and affordable to everyone.

Under the disruptive innovation theory framework, GBAH had positioned the Chinese hospital healthcare system as an incumbent that could be disrupted by GBAH's primary healthcare focused business model. GBAH has been one of the first movers to see through the core issues faced by the Chinese healthcare system and has expanded its business into a new undefined market of providing various services and products to both the supplier (i.e., providers, which include doctors and nurses) and user side of the healthcare system (i.e., patients and payers). For example, GBAH had launched many firsts in the Chinese primary healthcare system, including live on demand tele-GP consultations, internationally accredited GP training programs and forming private-public partnerships with government community clinics. GBAH has expanded very quickly since 2018. From an initial yearly revenue of less than RMB200,000, training 11 doctors and co-managing 1 private public partnership clinic in 2018, GBAH now achieved an annual revenue exceeding RMB15 million, training over 2,500 doctors and nurses and co-managing more than 200 private public partnership clinics in 2023.

Christensen, Dillon, Hall & Duncan (2016) introduced the Jobs-to-be-done Theory, which suggests companies look at innovation through the lenses of the customer's jobs to be done. In other words, companies should assert customers purchase and use (also metaphorically referred to as "hire") the products and services that they provide to satisfy the jobs that arise in customers' lives. The term "job" is defined as "the progress that a customer desires to make in a particular circumstance". It is essential to understand a customer's job fully from its functional, social and emotional dimensions. This offers a comprehensive insight into all the information a company needs when designing solutions that help customers complete the "job". To summarize, the Jobs-to-be-

done Theory explains why customers intend to "hire" or to "pull" certain products and services into their daily lives, which gives reasons for why some innovations are successful and others are not.

2. The GBA Healthcare Group Limited ("GBAH")

GBAH offers a comprehensive range of healthcare services to its subscription-based corporate members, such as general outpatient services, specialist services, imaging services, lab services and auxiliary health services, including physiotherapy and health check-ups. GBAH works with members to design outpatient and inpatient service plans that match their required product features and sales/cost budgets. GBAH primarily charges its corporate members based on (i) an annual fee per person or (ii) a fee per usage of services. The covered members and employees can obtain, on credit, healthcare services at providers accredited and verified by GBAH, and GBAH will help the members monitor whether the services provided are within the benefits coverage provided to such covered members.

GBAH plays an important role in helping its members design products that could cover a broad range of healthcare services. At the same time, GBAH plays a critical role in cost containment while ensuring quality healthcare services are provided. GBAH's business model of delivering trusted and affordable healthcare brings significant value to its members, insurance companies' customers and individual patients.

GBAH has invested significant resources to ensure it provides trusted healthcare to its members and patients. Such commitment to trust is illustrated by (i) doctors' and service providers' initial and on-going annual accreditation procedures before they can join GBAH's service network, (ii) independent background checks conducted on such doctors and service providers before they can serve GBAH's members, (iii) regularly conducting medical committee meetings to review GBAH's clinical and administrative service procedures and (iv) to ensure ongoing quality of services, GBAH has developed its own General Practitioner ("GP") training and accreditation program for Chinese doctors, with the goal of setting minimum clinical standards expected from outpatient doctors who provide services to GBAH's members in Mainland China.

GBAH has been formulating health plans based on a primary healthcare referral model, meaning that for patients who might require more expensive specialist services, lab services and imaging services, members are first required to consult their GPs and seek referral letters before using such services. This requirement to seek referral from GPs is not just a cost containment strategy of GBAH. It is also from the perspective of wanting to deliver to patients a holistic care approach, preventing medically unnecessary examinations, and empowering the GP to act as a patient's overall care coordinator for all the medical needs of the patients.

Through such a mandatory GP referral system, GBAH has developed its own know-how and industry knowledge on the pricing and designing of health plans for the appropriate type of members at competitive and yet differentiated pricings. Such a flexible and customized health plans pricing model has enabled GBAH to continue to renew its contracts with an increasing number of members, providing a predictable income stream for GBAH to keep reinvesting back into its business to expand its range of services and strengthen its core capabilities.

GBAH's business model is not rare in the sense that there are at least 4 other competitors in Hong Kong who are also offering similar corporate healthcare solutions services, some of which have an even bigger service network and better servicing capabilities than GBAH. Further, the competitors and GBAH are all contracting with similar service providers in the market to provide healthcare services, meaning that GBAH itself does not have a monopoly on pricing or service delivery model vis-à-vis its affiliated service providers.

However, GBAH's early expansion into the Greater Bay Area, meaning that it could also offer healthcare services in the GBA to members from Hong Kong (i.e. there are many corporates in Hong Kong who also have operations in the GBA), is a rare resource which other competitors currently are not developing. GBAH's combined service network in Hong Kong and in the GBA provides GBAH with a temporary competitive advantage, at least until its other competitors choose to significantly expand their services.

There are generally three categories of reasons why a firm's resources might be difficult for its competitors to imitate. These are (a) the importance of history in creating the resources of the firm, (b) the importance of numerous "small decisions" that a firm makes in exploiting its resources, in other words, the internal procedures developed by the firm in its operating history and (c) the importance of socially complex resources (Barney, 1995).

The importance of history and "small decisions" (i.e. how GBAH administers its more than 1,000 doctors across the Greater Bay Area through its business administration team) make it very difficult for competitors to imitate due to the high cost of building up a vast service network in Hong Kong, as well as the time required for new competitors to become a supplier to members (especially insurance companies) in Hong Kong, as established members and insurance companies generally need to spend a long time to approve new suppliers for healthcare services. Further, healthcare service providers need to have a track record of being able to help insurance companies to contain healthcare costs. The ability to demonstrate such capability only comes with years of clinical

data storage and analysis, which new competitors will likely struggle to accumulate in a short period of time. GBAH has, therefore, established its brand as a trusted partner to members. It will be time consuming and costly for new entrants or competitors to imitate GBAH’s service offerings’ network in the Greater Bay Area.

In short, this paper examines the following research questions:

1. Who are the stakeholders involved?
2. Why do the stakeholders pull GBAH services into their lives to solve their problems?

3. Results

3.1 The struggles of the patients - An example of how consumer’s needs are analyzed under the jobs-to-be-done theory

The struggles and the jobs-to-be-done by the patients (Christensen et al., 2016), when viewed through the disruptive innovation lenses, would include an analysis of the consumer’s emotional, social and functional dimensions:

The Struggles of The Patients		
Emotional Dimensions	Functional Dimensions	Social Dimensions
“I have so many other priorities in my life that the cessation of smoking or controlling my diet is not my priority. I know I am obese, but I just do not have the will to lose weight right now.”	“Please help me to stop becoming sick in the first place.”	“Beyond long waiting time at hospitals, healthcare services are getting more expensive. Perhaps I just skip seeking care even though I should not. I may get better on my own, anyway. I do not have the money or time to go to hospitals.”
“I do not have the privacy I want when speaking with doctors in hospitals in Mainland China. Their doors are always open, with a queue of patients standing outside.”	“Every time I go to hospital in Mainland China, I am given too many advice (which I will likely forget) and too many drugs to take home. I usually only have 2 to 3 minutes of speaking with the doctor. The doctor always seems so busy and do not have time to speak with me. I always end up seeing a different doctor every time when I visit the hospital. This means I must explain everything again about my medical history my background, and by the time I am done with my explanation, the next patient outside the door is already getting annoyed and peeking through the door, giving me pressure to quickly wrap up and leave the consultation room.”	

Table 1. The Struggles of The Patients

When viewed from the lenses of jobs-to-be-done for the patient, it becomes obvious that the current hospital systems in Mainland China are not structured to serve these significant emotional, social and functional needs.

Under the disruptive innovation framework, these would fall into the category of non-consumption, where consumers would prefer to have any kind of solutions that would help them to make progress in these areas. These solutions only need to be good enough and do not need to be perfect from the beginning. These are also the exact areas in which primary care could serve, provided that the primary care providers also see themselves as being capable of learning to do so and willing to reimagine the processes (i.e., fundamentally, community health care service models should not try to mimic hospital service flows) in which care is delivered in community health centers. Potential disruptors can, for example, devise solutions to help patients to have continuity of care by assigning the same doctor for each patient, providing behavioral health management tools to help patients to manage chronic diseases and being brokers in finding the best payment solutions for patients and consumers.

3.2 The struggles of the providers

Under the disruptive innovation framework, what jobs are the providers, and more specifically, primary care doctors, trying to achieve in their lives? What are their emotional, social and functional needs? The following non-exhaustive list of jobs for primary care doctors practicing in Mainland China is waiting for solutions to be hired:

The struggles of the providers		
Emotional Dimensions	Functional Dimensions	Social Dimensions
<p>"I was not able to become a specialist in the public hospital, and I became a primary care doctor that is not respected by the healthcare industry in Mainland China in general. I want to find respect for my professional services."</p>	<p>"My patients do not show me much respect for my knowledge and skills. They usually just come in and ask for referrals to hospitals."</p>	<p>"I am just swamped with administration tasks every day, which leaves me no time to communicate with my patients."</p>
<p>"I do not see my career progressing as a primary care doctor practicing in community health centers. Unlike public hospitals, there are no seniors at my community center to learn from. There is no established community of primary care knowledge or courses for us to keep learning."</p>	<p>"My patients do not listen to me. They do not adhere to our recommendations, which lead to worsening clinical outcomes, and which further leads to these patients thinking that we are not qualified to look after their health and diseases."</p>	<p>"My friends in public hospitals who were lucky to become specialists make much more money than me. Primary care doctors receive low salaries. I am struggling to make a living to support my family, and I do not see how governments are going to fix this. I am thinking about quitting and doing something else."</p>

Table 2. The Struggles of The Providers

Viewed from such angles, it is clear that each of the above "jobs" would require different solutions to be hired. It is clear that these primary care doctors would like to achieve progress in their lives, and if no solutions could be hired, these doctors would likely seek alternatives that may lead them to quit their careers. This is, in fact, happening, with many primary care doctors showing high intention to leave (Li et al., 2017). These struggles present disruptors with potential market entry strategies, and under the disruptive innovation framework, disruptors only need to deliver "good enough" solutions to be hired and then allow the solutions to evolve and improve. Disruptors should define solutions to help doctors realize higher income, help doctors learn their required skillsets in the primary healthcare settings more effectively, and help doctors to better serve their customers (i.e. patients) through providing training and other supporting services and tools such as digital solutions for managing communications with their patients.

3.3 The struggles of the payers

What jobs are the payers, being the government and insurance companies in Mainland China who are paying for the medical expenses of patients trying to achieve? What are their emotional, social and functional needs?

The struggles of the payers		
Emotional Dimensions	Functional Dimensions	Social Dimensions
<p>“As insurance agents, we do not know how to persuade our customers to renew their policies with us. If our customers were healthy, and that is actually what we prefer as it would mean less claims for us, it would mean our customers have no reasons to contact us at all. How can we build better engagement with our health insurance policies holders so that, as an industry, we do not need to compete with each other on pricing of policies?”</p>	<p>“As an insurance agent, I need to sell more insurance policies to complete my sales target, but the products my insurance company is selling is practically the same as every other company.”</p>	<p>“The Chinese government has put the onus of developing the health insurance market to alleviate the burden of payment for the public health medical systems. With ageing population, insurance companies' pay outs for medical expenses keep increasing year on year, and we are not able to contain healthcare costs. That means insurance companies are continuing to be risk adverse and only focused on insuring the healthy customers. With the prevalence of chronic diseases, how can us, as insurance companies, help those chronic disease patients in buying the health protection that they really need, but at the same time will not cause significant future liabilities for the insurance industry?”</p>
	<p>“As an insurance company, we are suffering from a year-on-year increase in the costs of medical claims. We think the providers and the patients are colluding to get payments from our company, yet we do not have any tools to proof them wrong. We have zero control over healthcare providers.”</p>	
	<p>“The medical claims procedures are so complicated. How can we make it simpler for ourselves and for our customers?”</p>	

Table 3. The Struggles of The Payers

Viewed from the above angles, it is clear that the payers in Mainland China have the weakest bargaining power versus both providers and consumers of healthcare services. This means that in Mainland China, most health insurance policies sold are simple critical illness policies (i.e., lump sum payment for specific diseases) and focus less on providing indemnity claims on healthcare services rendered. Most importantly, consumers generally do not see any product differentiation among health insurance companies in Mainland China. Potential disruptors could offer to help insurance companies design products with more healthcare services and offer greater transparency on the costs of medical services. More importantly, disruptors could work with insurance companies to engage with their policyholders better to manage their health, which would ultimately help with cost control for insurance companies in the long run.

4. Discussion

4.1 Why hospitals in Mainland China are not well positioned to develop primary care

The disruptive innovation framework offers different lenses for looking at healthcare systems. At the heart level, the Chinese government is determined to make high-quality healthcare accessible and affordable for everyone. In a recent public media interview, China’s President Xi Jinping stated that “good health is one, everything else is the zeroes after good health. Without good health, no number of any zeros after the one would be worth anything.” The heart element was also aptly described within the 3H framework (Yu, 2020) as being a critical element in contributing to the comparative success of how Mainland China has coped with the coronavirus pandemic (Yu, 2021).

The Chinese government went as far as working closely with the World Bank and the World Health Organization to carefully examine the problems of its healthcare system (Organization, 2019), with one of the major conclusions being that the development of primary care is of paramount importance to achieve accessible and affordable care for all.

For the reasons stated above, asking hospitals to develop primary care is akin to asking a corporation that is continuously generating revenue from higher margin services to consciously deploy its existing resources into lower margin businesses (i.e., primary care), which, understandably, is unlikely to gather support from its stakeholders and fund contributors.

Primary care, when viewed from a fee-for-service model perspective, generates much less revenue for hospitals than specialist and inpatient care for patients. In financial terminology, the development of primary care is also earnings dilutive to public hospitals,

as primary care does not require the performance of many surgical procedures and generates much less revenue from the sale of pharmaceuticals and prescription of diagnostic tests.

Public hospitals are supposed to focus on diagnosing the more complicated diagnosis. The public hospitals would also say it is not their fault that patients and consumers do not trust what primary care physicians can do for them. This is typical of incumbents protecting their territories. It is in the incumbents' interests to maintain the status quo rather than develop primary care, which may potentially disrupt them.

Under current practices, community health centers are often organized by large public hospitals, meaning that the general managers of hospitals would likely continue to see these community health centers as just an extension of their hospital model services, therefore continuing to adopt the processes of hospitals to the management of community health centers. For example, instead of focusing on improving the level of services at the primary care level, public hospitals would rotate their specialists to serve the public on a roster basis in these community health centers. This has the unintended effect on patients continuing to trust specialists from hospitals rather than allowing general practitioners who practice at these community health centers to develop their skills through practices and building relationships with the patients at the community level.

A further unintended consequence is that instead of focusing on building primary care services that fundamentally use different skillsets as those practiced by specialists in hospitals, various regional governments have started bringing advanced medical equipment (such as CT machines) to the community health centers. When this is viewed from the perspective of making better facilities available at the community health centers, such that patients do not need to go to hospitals to use these diagnostics equipment, it is indeed of great social value. But when viewed through the lenses of developing primary care, it means primary care doctors are discouraged from developing other primary care-focused skillsets (such as consultation skills), and instead, primary care doctors are pushed to "hand over" clinical judgments to advanced diagnostic equipment that should not have been used in the primary care settings in the first place.

4.2 Using primary care as a market entry strategy to disrupt the hospital incumbents

A functioning primary care system could potentially dramatically reduce outpatient visits for all hospitals, leading to less revenue and resources for public hospitals. Under the disruptive innovation framework, this would fall squarely to the observation that the public hospitals' capabilities define their dis-capabilities, as their internal resources, processes and priorities are structured around providing specialists with care under a fee-for-service model. Further, the potential revenue from delivering primary care does not solve the revenue growth "required" for public hospitals' administrators in Mainland China, which explains why hospitals are simply not motivated to invest in primary care.

The struggles of the Chinese healthcare system present significant opportunities for disruptors. A new entry strategy using primary care, as predicted by the theory of disruption under the 3H holistic management framework, could potentially chart new paths for growth.

A core "head" element of the disruptive innovation framework is to focus on the jobs-to-be-done (Christensen et al., 2016) as a marketing strategy in guiding organizations in marketing their services to consumers. Disruptive innovations are usually led by companies that target low end disruptions or non-consumption, applying technologies as defined by Christensen (i.e. technology is the process in which a company converts its resources (capital, labor, information) into products and services of ultimately greater economic value), with the appreciation that these technologies, once they are able to have a footing in serving specific consumers' needs, will gradually expand in its functionalities to serve an increasingly larger population.

5. Conclusion

Similar to what Christensen had identified in his research on the applicability of disruptive innovation strategies to the healthcare system in the United States (Christensen et al., 2009), researchers could examine the applicability of disruptive innovation strategies to other elements of the healthcare system in Mainland China. Whilst this case study had focused on primary care development, there are other areas within the Mainland China healthcare system that are worth examining, such as the public health payment system, the development of commercial health insurance, the implementation of nationwide electronic medical records and regulations of online pharmacies, all of which are relevant stakeholders that play a significant role in contributing to the sustainability and affordability of the Chinese healthcare system.

The disruptive innovation framework suggests that, through careful analysis and understanding of the difference between sustaining and disruptive innovations, coupled with the right entry strategy of targeting low end or non-consumption, new companies could very well create a new market by initially offering an inferior product or service, but later on as technology develops, such new product and services would gradually improve, until one day, such new products and services may become mainstream and displace the incumbents.

GBAH adopted the private-public partnership approach by implementing its expansion plan through the application of the disruptive innovation theory and the 3H framework. GBAH had positioned the current Mainland China hospital system as an incumbent that could be disrupted. Through initially providing training services to upgrade the quality of the primary care doctors and building private public partnership clinics with various regional governments, followed by the establishment of its internet hospital to facilitate access to its trained doctors, GBAH had built a strong foundation to develop an alternative for patients to seek good quality healthcare services. Patients of GBAH can avoid the long queuing time in hospitals at a much more affordable cost than seeking services from other private healthcare providers in Mainland China.

While disruptions could lead to new businesses being formed and offering better services for consumers, disruption can also cause discontent with those being disrupted. However, in the case of healthcare services, a primary care service provider disrupting hospitals, in terms of diverting the day-to-day outpatient traffic to primary care centers, is of great social value. Such disruption is a win-win-win for the patients (more timely and affordable care for consultations that do not require specialists at hospitals), for the government (i.e. primary care development helps to drive Mainland China towards a more sustainable healthcare system in preparation for its ageing population) and for the sector (allows development of commercial health insurance as an alternative form of payment, thereby creating a “Mainland China” way to healthcare financing that look to avoid the affordability and accessibility issues faced by other healthcare systems globally).

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