

Discovering opportunities  
in **China's**  
cardiovascular market

*China has one of the world's most complicated and regulated healthcare industries. Jelte Wingender gives insights on China's cardiovascular drug and device market and the outcome of their healthcare reforms.*

China's overall healthcare industry remains robust and has shown positive growth trend over the past years. The total market size of the Chinese healthcare market was USD 350 billion in 2014 and is expected to grow at a Compound Annual Growth Rate (CAGR) of over 19 per cent, reaching a market size over USD 1 trillion by 2020. Today, China spends only around five per cent of its Gross Domestic Product (GDP) on healthcare, a figure that is also likely to grow fast as the population grows older. Tendencies also show that China's population will become significantly unhealthier compared to other developed countries attributable to changes in lifestyle patterns.

### Healthcare reforms and a growing medical tourism

Since the central government rolled out new healthcare reforms in a move to minimize state expenditure and create a more decentralized system, patients who regularly go to grade 3 hospitals are now urged to seek treatment in grade 1 and grade 2 hospitals first. The main goal of the reforms is to develop a more cost-efficient decentralized healthcare system by encouraging the proliferation of general practitioners and private healthcare facilities in grade 1 and 2 hospitals.

However, these hospitals are not equally distributed across regions and provinces as most of the grade 3 hospitals are located in tier 1 cities such as Beijing, Shanghai, and Guangzhou. Patients looking to treat cardiovascular diseases (CVD) require a higher technical standard and specialists, hence are forced to be admitted to third level hospitals which are more resourceful and have the capability to treat more complicated cases.

As a side effect of the current quality and distribution of hospitals in China, a growing medical tourism is also evolving. Chinese patients with middle or high income can afford to go abroad for life-saving treatments. The most affluent Chinese may travel to the U.S. or Europe for even the most minor procedure or an annual check-up. A complicated CVD treatment is a classic example for Chinese medical tourism, as specialists and hospitals are perceived to be much better abroad. Patients' preferred destinations are the U.S., Germany and Japan and they usually come from Tier 1 and Tier 2 cities, which have the highest number of affluent people.

### Factors attributing to cardiovascular diseases in China

As an uprising middle-income country and with an urbanization rate of about 57 per cent, China's urban population is experiencing certain limitations on their opportunity to follow a healthy life. According to the World Heart Federation, CVD is one of the leading causes for deaths globally and has proven a positive correlation between the grade of urbanization and cardiovascular diseases.

The rapid aging population in China is also showing in the

upturn in cardiovascular events, expected to increase by 50 per cent from 2010 to 2030. However, this number is likely to be even much higher, since negative influencing factors in diet or lifestyle are not included in these projections.

Currently, about 17 per cent of China's population is suffering from CVD and every year about half a million people experience cardiac arrest. Even though smoking is a slowly declining habit in China, factors such as an unhealthy diet, physical inactivity, obesity, and especially diabetes are an increasing side effect of accumulative wealth and will add up an additional 23 per cent to the annual increase in cardiovascular events.

### Growth of cardiovascular drugs in the pharmaceuticals market

With an escalating number of patients and the rise of new diseases, a positive trend can also be seen in the consumption of medications. According to a white paper by Solidiance titled "China's Healthcare Reforms: Who Will Survive", pharmaceuticals make up over 40 per cent of total healthcare spending in China, which is more than double compared to the U.S. and four times higher compared to healthcare spending in India.

Aligned with the overall healthcare market growth, the Chinese pharmaceutical market is expected to grow by 18 per cent per year until 2020. By 2020, China is expected to overtake Japan and become the second largest pharmaceutical market in the world after the U.S. Meanwhile, the consumption of CVD drugs in 2015 was USD 39 billion and had grown by 5.5 per cent to USD 41 billion in 2016 (Fig 1). It is estimated that the growth rate of the CVD drug market will likely rise to USD 45 billion in 2018, signifying expansion of the market in the years to come.

China's CVD Drug Consumption (in billion USD)

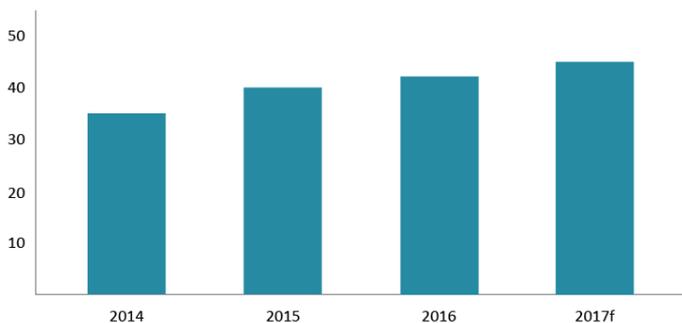


Fig 1. China's cardiovascular diseases (CVD) drug consumption from 2014 to 2017f (in billion USD). Source: Solidiance research and analysis

### New development trends in cardiovascular device market

With a higher tendency towards complicated surgeries and treatments, the Chinese medical device market will constantly grow in the coming decade. The Chinese medical device market, and especially the cardiovascular device market, is expected to

accelerate by double-digit rates and show huge potential for players in the medical device industry. For example, in 2013 about 1000 pacemakers were implanted per 1 million people in the U.S. At the same time, only 50 pacemakers were implanted per 1 million people in China.

The market size for cardiovascular instruments in China grew from USD 40.53 billion in 2014 to USD 56.65 billion in 2017, which is an annual growth of nearly 12 per cent (Fig 2). Unlike already saturated cardiovascular markets like Germany or the U.S., China offers a lot of growth potential for international players in the market.

Market size of Chinese cardiovascular interventional instruments (in billion USD)

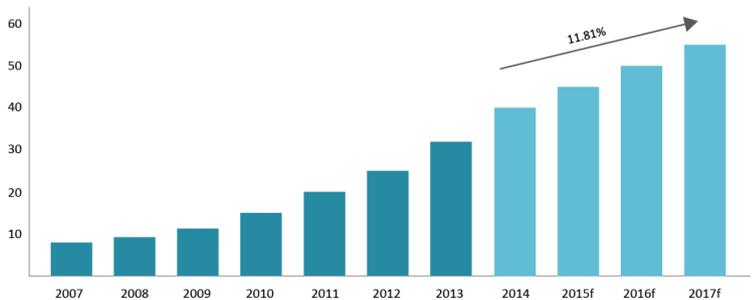


Fig 2. Market size of Chinese cardiovascular interventional instruments from 2007 to 2017f (in billion USD). Source: Solidiance research and analysis

Moreover, the Chinese market for cardiac rhythm management devices as well as implantable and external devices to treat and manage arrhythmia-related diseases is expected to hit USD 1.1 billion by 2022. Other new products are being developed and introduced every day in the Chinese cardiovascular device market, such as that of cardiac resynchronization therapy (CRT) devices – an interesting niche that is still new in the Chinese market. However, the great demand of patients with heart failure for the CRT will be met very slowly, as costs of these devices are high. The CRT market is still expected to be one of the fastest growing segments in the cardiovascular device market in the coming years.

Another promising development trend is seen for the intracoronary stenting market. The segment grew from USD 27 billion in 2014 to USD 40 billion in 2017, which equals an annual growth of 13.3 per cent. However, due to new government regulations in the Chinese medical device market, to increase the competitiveness in this sector, aggregate prices are expected to slowly decline by 2020.

Changes in lifestyles and dietary patterns, high tobacco consumption, and smog all result in a substantial rise of CVD and deaths caused by cardiac disorders. As a natural and dynamic development of the cardiovascular and the overall Chinese healthcare market, an increasing number of patients will also lead to rising healthcare prices.

Market size of Chinese intracoronary Stenting  
(in billion USD)

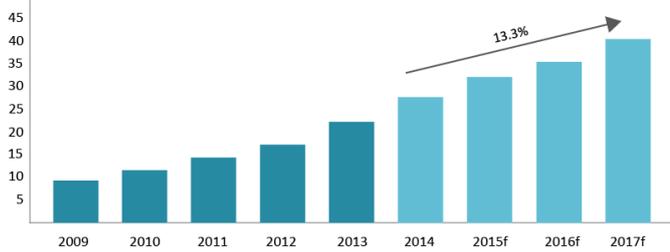


Fig 3. Chinese market size of intracoronary stenting from 2009 to 2017f (in billion USD). Source: Solidiance research and analysis

China has one of the world's most complicated and regulated healthcare industries. It still takes at least two years for most drugs and medical devices to obtain the necessary licenses to be sold nationwide. To mitigate the issue, the Chinese government is constantly improving the healthcare infrastructure and is introducing regulations that will help bring more complicated and expensive procedures faster within reach of a larger proportion of the Chinese population.

The new wave of healthcare reforms initiated in 2015 will add to the existing imposing regulatory environment, greatly impacting the profitability and attractiveness of the Chinese market. Still, despite the existing regulations and proposed reforms, China's overall market size and growth has and will continue to offer great opportunities for healthcare companies.



About the Author



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Jelte is a Manager at Solidiance, an Asia-focused management consulting firm. Jelte has extensive knowledge about the East-Asian region, having lived and worked in China for five years. His professional experience included spearheading the growth strategy and business development in northern China for a German boutique consultancy, where he acted as trusted advisor for large multinational companies and family owned SMEs. His proven track record in the fields of market entry, business transformation, and recruitment further refine his professional skill set in industries such as automation, healthcare, and technology. Jelte would like to give appreciation to Fangdi Pan and Shuhrat for their contribution in the development of this article.