



China Healthcare Series

TAMING THE DRAGON: THE FUTURE OF HEALTHCARE IN CHINA

Executive Summary

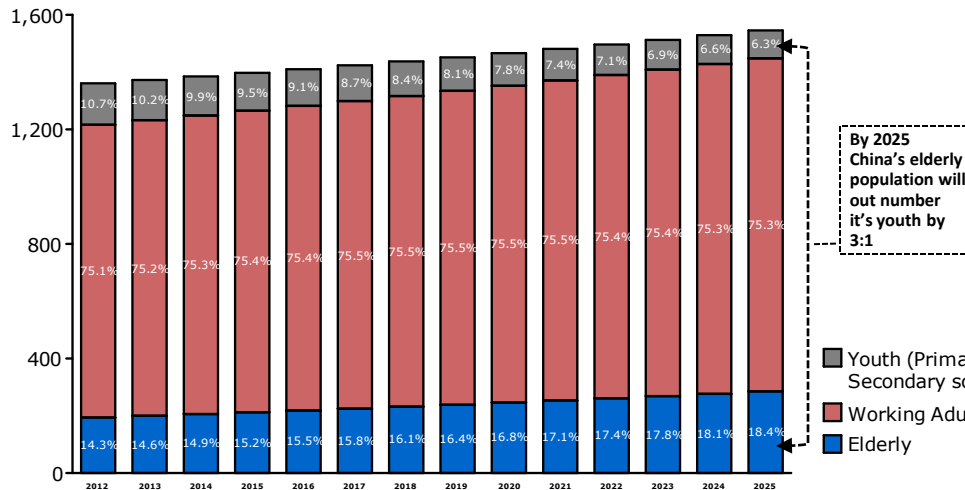
China is currently undergoing unprecedented political, demographic, and economic change. With a government stated goal of providing universal healthcare access to every one of its 1.3 billion people, China's recent efforts to reform and improve the healthcare sector is a topic that will be of special significance. A country of strategic importance in the international community, the future of China's healthcare system will be closely watched by political insiders, corporate leaders, and investment professionals alike.

This report aims to provide a macro view of China's healthcare system and examines political and demographic trends currently taking place, analyzes the economic impact of these trends and decisions, and finally explores potential investment themes arising from these future trends.

China's shifting demographics is a significant event that will impact the country for the next decade

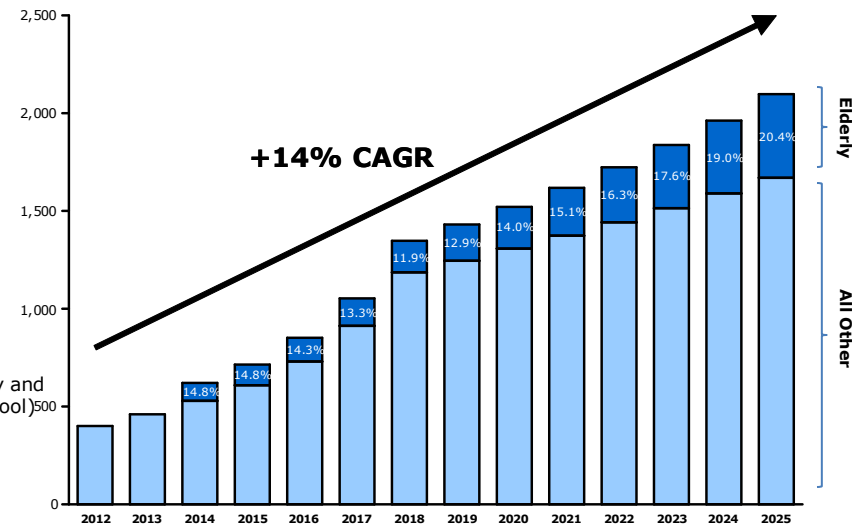
China Population Projection

Millions of persons



Projected Additional Healthcare Spend due to increase in Elderly Care

\$ Millions

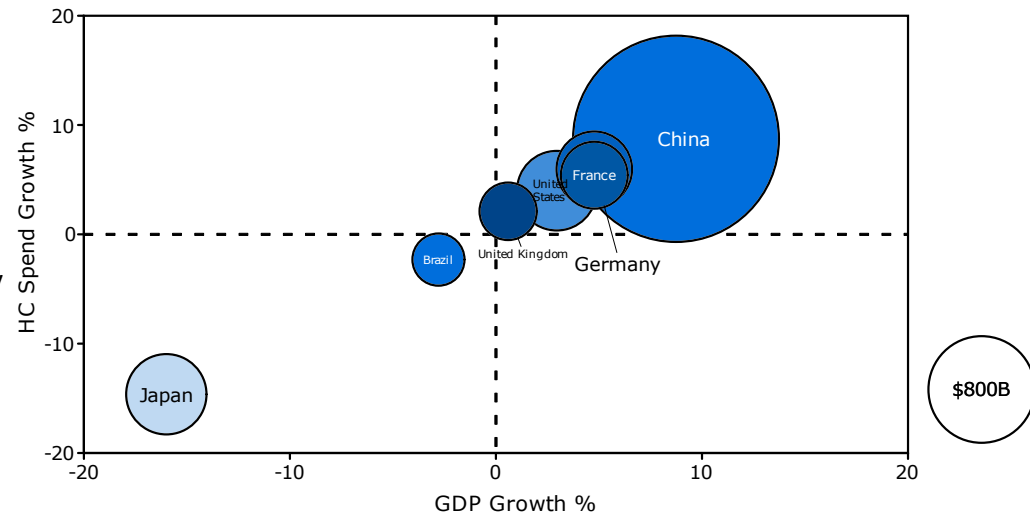


This unprecedented pace of population aging, along with prevailing diet habits, is fueling the growing burden of Noncommunicable diseases in low- and middle – income countries such as China

1. "In China, an Unprecedented Demographic Problem Takes Shape", Stratfor Global Intelligence, August 2013
2. "Noncommunicable Diseases Among Older Adults in Low-and Middle-Income Countries", Population Reference Bureau, August 2012
3. Projected Additional Healthcare Spending due to elderly care assumes 35% change in health expenditures for East Asian and Pacific countries per World Bank Estimates

China's healthcare spending is growing fastest amongst the largest economies

- The RMB 850 billion Healthcare Reform stimulus plan of 2009-2011 demonstrated the Government's fiscal resolution and willingness to tackle large healthcare related issues
- With the shifting demographics and rising mortality rates attributable to Noncommunicable Diseases, addressing healthcare will come to the forefront of government policy decision making

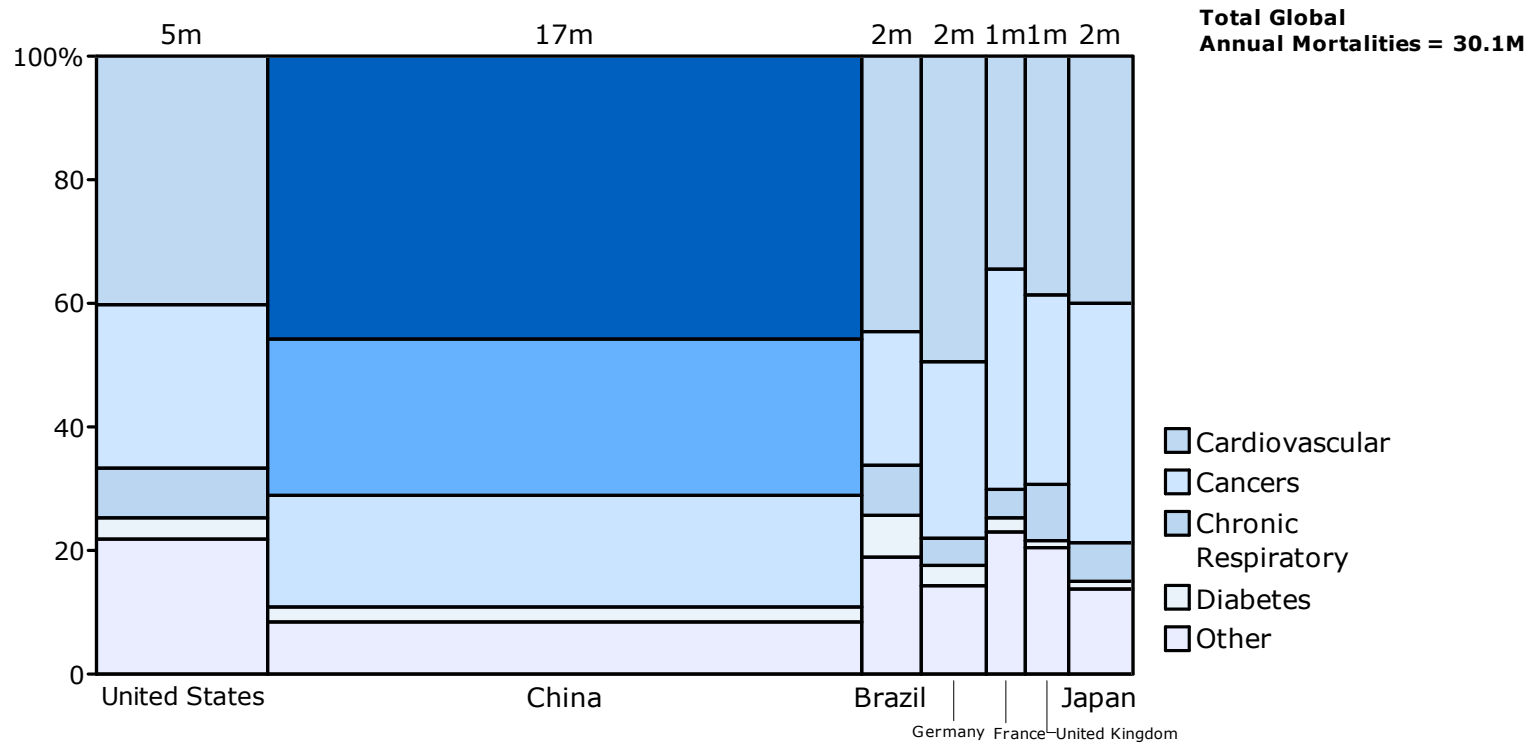


1. The World Bank
2. International Monetary Fund, World Economic Outlook Database, October 2013

China has the leading noncommunicable disease patient population amongst the largest economies

Noncommunicable Disease Mortalities by Country

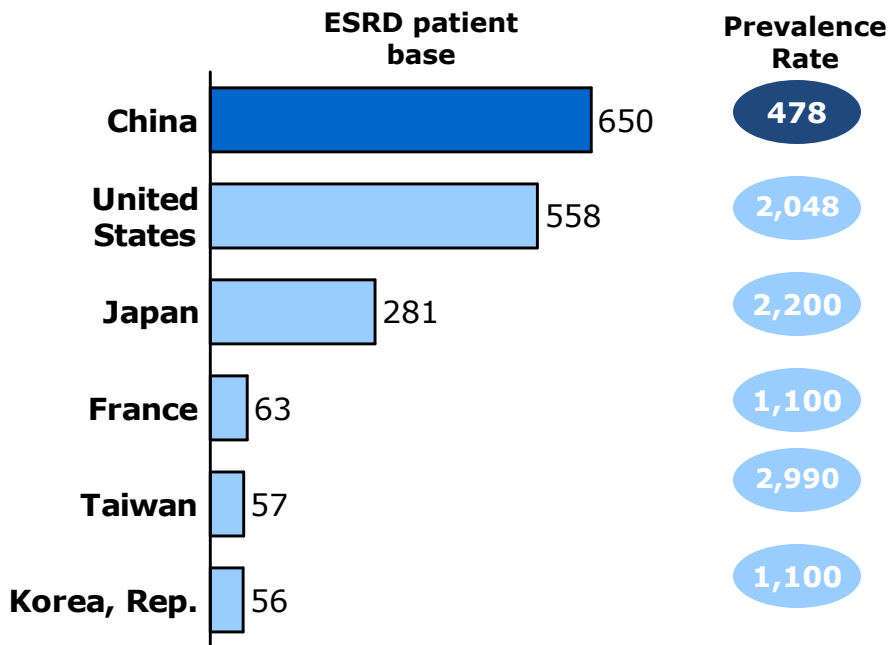
Annually, Millions



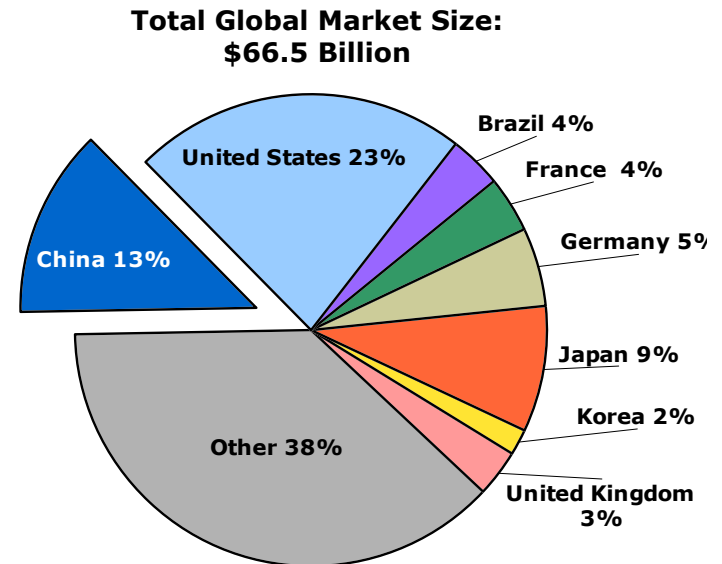
1. Estimates based on Noncommunicable Diseases Country Profiles, World Health Organization

...and one of the most attractive Dialysis markets for healthcare service providers

China already has the largest ESRD patient base in the world
Thousands, pmp, 2012



Global Dialysis Services Market
Estimated Market Share %

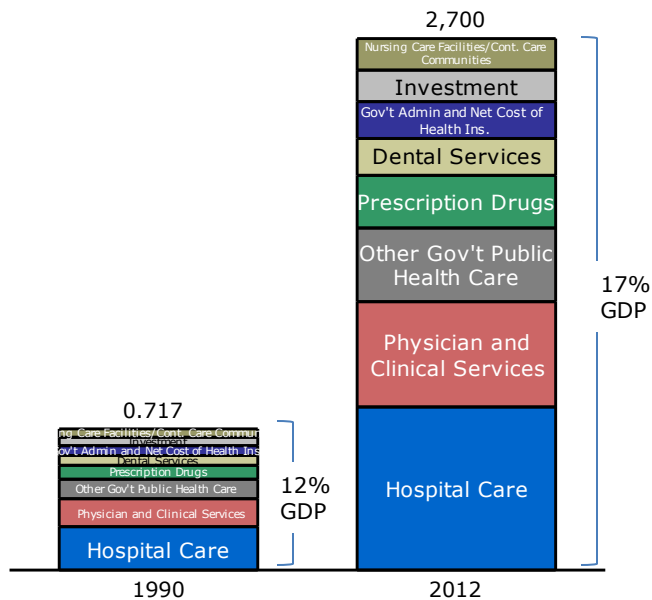


1. Proprietary internal estimates and literature search
2. Barnes Reports, Worldwide Kidney Dialysis Centers Industry, 2012

By 2030 China's projected healthcare spend will be comparable to US

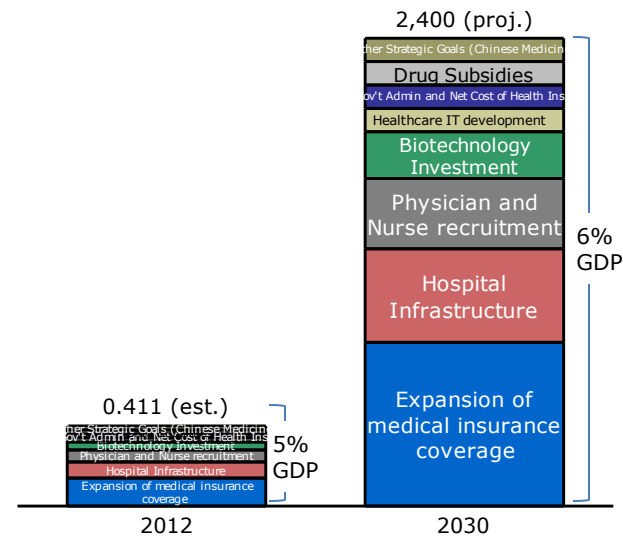
US Healthcare Spend

\$ Billions



China Healthcare Spend

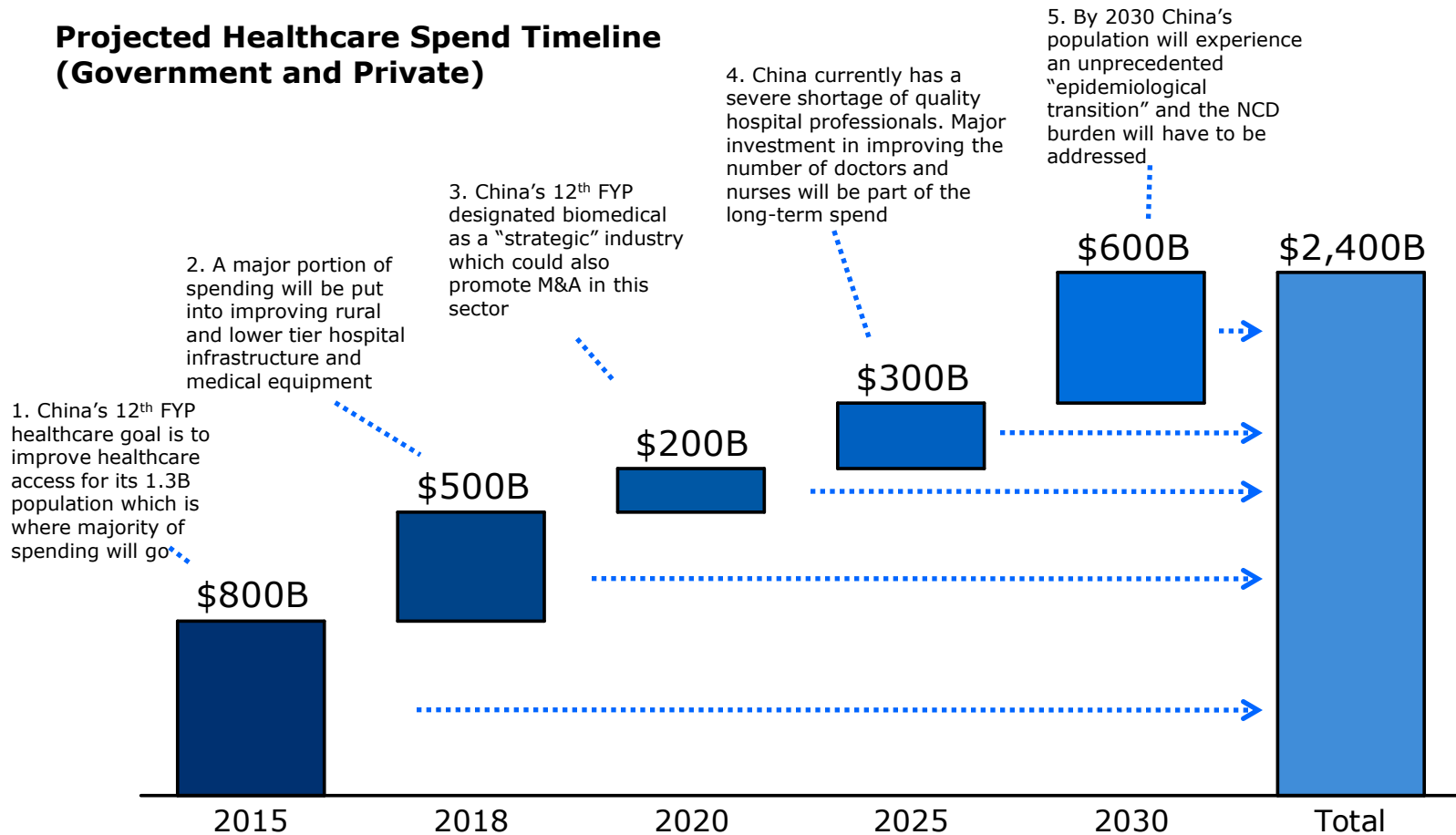
\$ Billions



1. "Healthcare in China: Entering Uncharted Waters", McKinsey, September 2012
2. International Monetary Fund, World Economic Outlook Database, October 2013
3. "National Health Expenditure Projections: Modest Annual Growth Until Coverage Expands And Economic Growth Accelerates", the Office of the Actuary at CMS, June 2012
4. China projected healthcare spend breakdown is based on literature search and the 12th Five-year plan which specified five major goals of reform: i) expand basic medical insurance coverage, ii) establish a national essential drug list (EDL) system, iii) improve grassroots medical infrastructure, iv) provide more equitable access to basic healthcare services, and v) carry out public hospital pilot reforms.

Certain Healthcare segments will be prioritized in the next two decades

Projected Healthcare Spend Timeline (Government and Private)



Combination of demographic trends, disease prevalence, and government fiscal will, provide compelling investment opportunities

Macro Investment Themes:

Domestic Biotechnology

- As China continues to promote the biotechnology sector, domestic “homegrown” biotechnology firms will undoubtedly be the greatest beneficiaries of the new regime policies. With high potential for acquisitions by MNCs, investors should look to identify certain firms that hold attractive technologies with mass indication potential.
- **Potential “Winners”:** smaller homegrown biotechnology firms with existing production and distribution networks in China.

Healthcare Services

- Upward trending prevalence rates of noncommunicable diseases will increase patient populations. Investors should seek to identify those MNC companies who possess technical know how and financial resources to work with government authorities in addressing this national health crisis.
- **Potential “Winners”:** Large healthcare MNCs in particular ones serving the chronic noncommunicable disease population

Clinical Data Infrastructure

- Continuing Healthcare Reform should promote growth of an IT healthcare industry. Companies that have the wherewithal to help China reach international standards in terms of clinical data infrastructure will benefit from the future government investment in this area. Investors should consider allocating portion of portfolios to companies currently expanding healthcare IT systems expertise overseas.
- **Potential “Winners”:** IT infrastructure providers, healthcare consulting

Conclusion

There are two roads that China faces in the near future, one of fearful uncertainty and the other of fulfilled promise. This report seeks to identify those coming trends that will pose the most significant challenges to China's road to dominance in the next century. Whether Government health authorities ultimately "tame the dragon" and make the right strategic decisions that lead to prosperity for the country remains to be seen.

In these uncertain times, investors need to be aware of the changing landscape in China's healthcare sector and position themselves accordingly to either take advantage of these trends or reposition existing portfolio assets in the country to defend against previously unforeseen risks.

Author Biography

Marcus Yi-Min Ho is a healthcare analyst focusing on the Greater China Region. His professional experience includes international corporate development, strategy, and M&A work for one of the largest healthcare services companies in the US. Previously he worked at a Los Angeles based boutique investment banking firm focusing on cross border mergers and acquisitions advisory for small and medium sized private and public companies in the US and China.

Marcus holds an MBA in Finance and Accounting from the University of Southern California Marshall School of Business and a BA in Economics from the University of California at Irvine.