Innovation and the Future of Healthcare in China

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It is a privilege to speak to this gathering of experts in health policy and practice from both China and the United States. I am particularly pleased today to have been invited to join the organizing committee of the United States China Healthcare Summit, an honor I am delighted to accept.

My topic today is "Innovation and the Future of Healthcare in China." My perspective is multiple, that of a biomedical scientist, a health entrepreneur, and from my current healthcare policy perspective.

Healthcare Finance

It is a truism, deeper than it may appear, that you get what you pay for. So it is for much of life, so it is for healthcare. Finance underpins what health services exist, what services are available, and who receives treatment. In my opinion, finance is the proper primary focus of healthcare innovation. Each payment alternative has profound implications for the health of individuals and for populations.

China is at a crossroad. There is general agreement that healthcare in China deserves improvement. China is now a middle income country with a rapidly rising gross domestic product and average income, yet high quality affordable healthcare services are not available to most people, especially in rural communities. Fundamental issues of social equity, social harmony, and social security are at issue.

The future direction does not seem entirely clear. Will the public or private sector deliver the majority of care? Will central, provincial, and local governments carry most of the burden? If so, how will the responsibilities be divided among various government entities? Will people pay out of pocket directly or through voluntary or mandatory insurance programs? Will out of pocket payments be admixed with state subsidies? Will payments be made as fee for service, as bundled payments for specific maladies, or as capitated payments for populations? Will doctors be salaried or paid by procedure?

Experience with health systems around the world reveal the profound consequence of each of these decisions. We know fee for service drives over prescription of services. We know capitation systems can increase emphasis on preventive health. We know reliance on out of pocket and insurance programs can lead to inequitable distribution of healthcare benefits.

We at ACCESS Health International have studied healthcare finance in both high and low income countries. We have some knowledge as to what may work and what may not. We have seen highly innovative effective systems radically change the health prospects for broad populations. We have witnessed failed public and private approaches. As a not for profit think tank and advisory group, our mission is to share our knowledge with those planning for the future health of their country.

The systems we have seen that function best are public private partnerships, wherein the local and central governments pay for services delivered by both the public and the private providers. The state sponsored systems are often found side by side with fully private healthcare providers for those able and willing to pay.

We are happy to share what we know. We know this: Finance is the key to health outcomes. Get it right, and the health of a nation improves. Get it wrong, a nation flounders at the expense of its population and finance.

Only those responsible for the health and well being of their country can decide what is best in their own context. We at ACCESS Health can offer the benefit of experience elsewhere.

Healthcare Systems

Innovation in how healthcare is delivered is almost as important as how healthcare is financed. Healthcare systems are as varied as their contexts. In some countries, each component of healthcare exists in isolation. Prevention is considered a state and local government responsibility, managed by public health offices. Primary care may be entirely private or public but independent of hospital care. Maternal and child care may be independent as well, not integrated with other components of the healthcare system. Small public and private hospitals may provide independent secondary care. Well equipped private, public, and academic multispecialty hospitals may exist as standalone entities. Eldercare may be entirely neglected, treated as a medical issue, or considered to be a social issue. Such divisions are prevalent in China today.

Integrated health systems are beginning to emerge as solutions to both population and individual health. Such systems are founded on home based and community health networks. Preventive and wellness services are available to young and old, at home or as close to home as possible. Social and healthcare services are integrated. Local clinics provide the bulk of care. Homecare and community and local clinics are linked to secondary and tertiary hospitals. The tertiary hospital provides specialty care, often in an academic and research environment.

The goal of an integrated health network is to assure that patients receive the care they need at the right place, by the right team, at the right time, and at the right cost. Integrated care functions best if payments are capitated, allowing a focus on wellness and preventive health. Keeping people healthy at all ages is the best medicine.

The success of an integrated health system depends on treating the patient in the right setting. Home and community healthcare workers must know what they can treat and when to refer patients for more advanced procedures. A system of positive and negative incentives for correct treatment and referral is one way to ensure that patients receive the care they need.

Integrated health systems also rely on staff that is specifically trained to perform needed functions. The training of caregivers, nurses, and local physicians emphasizes skills different from those in secondary and tertiary hospitals. Medical training and education is key to building integrated care networks. Innovation in medical education is a key component to building a robust healthcare system.

Integrated care is data intensive. A seamless flow of information is needed at all levels. Patient records must be electronic and linked throughout the entire system. Data on day to day operations, complications, infections, and readmissions must be available in an easy to read dashboard format. All aspects of medical and financial performance should be available to all managers. The data from individual units, departments, doctors, and researchers should be transparent.

Medical Education

Innovation in medical education is central to the creation of an integrated health system that serves the diverse needs of China's population. Such systems demand sufficient numbers of care givers, medical technicians, nurses, physician assistants, family and community physicians, gerontologists, and specialists trained to the highest standards. Integrated care demands transparent and uniform medical records and tracking

systems to monitor performance and outcomes, price cost, and profit or loss.

An innovative education system is needed to train the very large number of people to meet the needs. Training should be designed to produce those medical specialists needed at all levels of the health system. The needs of patients will be met by teams of medical workers, not by individuals. Experimental programs to expand, diversify, accelerate, and integrate medical training are working. I recommend dramatic expansion and integration of medical training here. Without adequately trained personnel, the health needs of the country cannot be addressed.

An Aging Population

China's population is aging. An aging population poses special challenges to a society and to healthcare, challenges that can be met through innovation.

Older people need more personal care and medical attention. Traditional family centered care is unlikely to meet China's future needs. People will save now for their future needs if they are not confident an adequate system of social and health support will be available as they age. The impetus to save hinders the development of a consumer society.

Planning for an elder population is both a national, regional, and local responsibility. Key elements involve financial planning, including retirement benefits, social security payments, and insurance programs for healthcare needs. Planning for how and where the elderly will live is critically important. Housing, communities, and cities must be designed to accommodate their needs. There is tremendous need for innovation in planning for the community and health needs of an aging population.

Planning is essential. You cannot build a smart city that suits the needs of the young and old without careful, long term, integrated planning. Cities that grow without careful planning based on the motives of individual developers will not meet these needs. Health should be a central component of such plans. My reading of most current city plans is

that health is not a priority. It should be.

Technical Innovation

I have spent most of my career as a research scientist and medical entrepreneur. It has been a wonderful time for discovery in biomedical science, for the creation of new medical devices, imaging and surgical techniques, and new drugs and diagnostics. Entire new business sectors, including health informatics and the biotechnology industry, were born. We are just at the beginning of a century of discovery and invention. Never before have our tools for medical research been so powerful. Never have the resources on a global scale, including the impressive significant contributions by China, been applied to medicine.

China has the energy, intelligence, trained personnel, and infrastructure to be a world leader in medical innovation in all areas, including information science, medical devices, and pharmaceutical and diagnostics products. Chinese innovation can serve the needs of people here and throughout the world.

New methods are needed to translate the wealth of ideas pouring forth from the world's laboratories to products that serve the needs of patients. For example, the productivity of large pharmaceutical companies has declined dramatically over the past twenty years, in terms of the number of new products introduced, cost, and development time. One result is that many of the new products are far too expensive for most people and countries. Innovation in the process of translating discovery to new products is urgently needed.

These are some thoughts on innovation and healthcare in China. I look forward to a continuing dialogue in this and other venues.

Thank you.