As one of Pfizer’s 2012 Global Health Fellows, I had the wonderful opportunity to partner with GBCHealth’s Beijing, China office for a five month assignment on a diabetes initiative. A coalition of more than 200 member companies and organizations worldwide, GBCHealth aims to leverage the global business community with information, strategies, and resources for a positive impact on global health challenges. GBCHealth traditionally focuses on infectious diseases such as HIV/AIDS, malaria, and TB. However, global health is starting to transition from infectious to non-communicable diseases (NCDs) as a result of growing economies, improved sanitation, and lengthened life expectancy across the globe. GBCHealth has responded to this general shift by expanding its horizon to include NCDs and explore diabetes as its pilot focus area.

The scope of my fellowship assignment was to help GBCHealth understand the diabetes epidemic in China and set up short- and long-term strategies for its new directions. As an experienced biostatistician and native Chinese with a strong academic background in public health, I possess a unique combination of competencies for this assignment which allowed me to integrate my quantitative skills, health policy awareness, and ethnic/cultural background. This essay highlights some points of my research in diabetes in China which included assessing clinical and economic disease burdens and their policy implications; outlining strategic recommendations for GBCHealth; and summarizing potential opportunities for business – especially within the pharmaceutical industry.

Diabetes Epidemic in China

Diabetes is a serious epidemic in China. Literature has reported over 90 million diagnosed diabetic and nearly 150 million pre-diabetic patients [1]. As these numbers only include those who have been diagnosed, they necessarily under-report the burden of diabetes in the country. Not surprisingly, this large population of diabetic patients poses serious threats to healthcare in China. In addition to various medical complications accompanying diabetes, economic burdens associated with the disease also take their toll. For type 2 diabetes alone, the annual cost associated is $26 billion [2].

My colleagues and I conducted extensive research in the field by reviewing the literature and interviewing experts. Our effort illustrated several key features of diabetes in China. First, the population with diabetes contains those both in developed cities with fast growing economy and in poorly-developed areas. It is widely recognized that the economic growth of China leads to more affordable food and less physical exercise time and thus contributes to overweight and obesity, important risk factors for diabetes [3]. While this conventional understanding of diabetes as a relatively new and growing burden is still true; my conversations with some leading experts in China reminded me that the prevalence of diabetes in low or middle income countries is not low. Research from Africa has shown that malnutrition in low-income areas is a key contributing factor to increasing diabetes [4]; nevertheless, this field of inquiry is just starting to scratch the surface and the etiology of this process is not clear yet.
Second, the public’s awareness of diabetes is very low. This covers almost all sectors engaged in the epidemic, including non-specialist medical professionals, patients and their family members, and the general public. Due to this pervasive low awareness, patients can confirm the diagnosis only when the disease has developed to its late stage. Many who are diagnosed do not know how to treat and manage their chronic condition.

Given the above two features, type 2 diabetes has a high growth rate and tremendous potential to worsen. It is estimated that the number of diabetic patients in China will increase from 92 million to nearly 130 million by 2030 [5] and the associated annual medical cost for type 2 diabetes alone will increase from $26 billion to $47 billion [2].

Tremendous pressure from NCDs represented by diabetes and other chronic diseases pushed the Chinese government to take strong actions to respond to these challenges. In May 2012, China’s Ministry of Health (MOH), joined by 14 other governmental agencies, issued *Planning for Prevention and Control for Chronic Diseases in China (2012—2015)*, in which four leading NCDs (cardiovascular disease, cancer, diabetes, and COPD) were explicitly targeted. MOH also initiated a series of policies to encourage healthy lifestyle and to engage grass-roots organizations to push an all-encompassing agenda for promoting population health. As a matter of fact, due to the tremendous economic consequences of NCDs, other government stakeholders are also concerned. For instance, at the recent Asia-Pacific Conference of the International Society for Pharmacoeconomics and Outcomes Research, the Director of the Department of Price, National Development and Reform Commission held a plenary session to outline pricing and reimbursement policies in response to the country’s heavy disease burden due to NCDs.

**Recommended Strategies for GBCHealth**

**Overview**

Strategies to prevent, diagnose, and treat diabetes in China must be targeted towards the key issues mentioned above. Given the scale of the problem, it is necessary to prevent diabetes at every stage of the disease and imperative to have comprehensive interventions to improve prevention, screening, diagnosis, and treatment. Nevertheless, since reducing incidence of new cases is extremely critical to reduce future disease burden, more focus should be placed on prevention and diagnosis of early stage diabetes.

This kind of effort must encompass multiple stakeholders, including but not limited to government agencies, research institutes, non-governmental organizations, GBC member companies, and local communities. Every party has its own strength and can make important contributions in this effort. This is a long term process involving multiple stages, and promoting diabetes awareness is the necessary starting point.

This general recommendation can be effectively implemented in light of GBCHealth’s distinctive feature of deep connection with the business world. As promoting employees’ well-being and guiding corporate social responsibility stand at the heart of GBCHealth’s mission and vision, the following short- and long-term strategies outline how it can engage its member companies in promoting diabetes awareness.

**Short-term strategies**

For promoting member company employees’ well-being, GBCHealth can help facilitate on-site workplace training. By coordinating relevant medical resources from other organizations with more expertise in diabetes, GBCHealth can thus offer a very welcomed diabetes knowledge campaign. This will help raise grass-root awareness of the disease, consistent with government policy, and establish GBCHealth’s reputation in this particular disease area.
In terms of corporate social responsibility, given that many member companies already direct resources at particular diseases of interest, the co-morbidity of diabetes with other conditions is a good point of contact to engage member companies in promoting diabetes awareness. In fact, one member company actively sought opportunities of collaboration by expressing its interest in prevention of diabetic blindness. As our research indicated numerous reports on cardiovascular disease and TB coexisting with diabetes, addressing co-morbidities is a promising way forward for generating collaborative interests and funding opportunities from member companies.

**Long-term strategies**

In the long run, I personally would like to push forward the following strategies to address the diabetes epidemic in a more comprehensive and holistic fashion.

First, in the special political backdrop of China, government has a unique and influential impact on enterprises. Since the government is so serious in dealing with NCDs, it is to GBCHealth’s great benefit to take this advantage and enhance its existing relationship with government agencies in promoting diabetes awareness. GBCHealth’s effort through its short-term activities, such as on-site workplace training, can initiate further government support which will motivate greater participation by the members of the coalition in China.

Second, I strongly recommend developing long-term strategic partnerships with research institutes to quantify and publicize GBCHealth’s efforts in fighting diabetes in China. In this era of evidence-based decision making, outcomes research is indispensable because data-based evidence is no doubt most convincing to show how effective GBCHealth’s effort is and consequently generate sustainable funding and partnership opportunities.

Last but not least, advancement in technology, especially information technology, should be heavily leveraged. Nokia China, a mobile phone service company, for example, is an exceedingly appropriate potential partner. Huge development disparities exist across China. While major cities such as Beijing, Shanghai, or Guangzhou can provide people multiple information resources, the majority of the country has limited education and access to information sources such as the internet. Nokia China has extensive coverage in these under-developed areas and has mature mhealth technology for social-life message delivery system and built-in IT research capability. This is an extraordinary resource GBCHealth can take advantage of to further its diabetes initiative in raising population awareness in these areas.

**Key Learnings**

Although my fellowship was focused on helping GBCHealth to develop strategies to fight diabetes, my experience in Beijing can also shed light on the business side, especially for the pharmaceutical industry.

An immediate consideration naturally for a pharmaceutical company is to produce effective drugs that cure diabetes. However, this direction should be pursued with extreme care as it is a mixture of high return and high risk. On the one hand, given the population size of diabetes patients in China, even a tiny portion of market share may represent some financial return. On the other hand, given the government’s concern in controlling the skyrocketing healthcare cost, it may be very challenging for a brand-name drug to justify its high price and get in the formulary list for official reimbursement that makes large scale prescriptions possible. On a more technical level, an updated system review sponsored by the Agency for Healthcare Research and Quality reaches the conclusion that newest agents do not necessarily offer advantages over older medicines [6]. If a company aims to create a new diabetes drug, either a notably different efficacy profile or significantly lower safety risk must be demonstrated.

While developing a highly effective new drug is not an easy task, industry has more options than providing a direct product to make a difference in this important battle. As illustrated above, social and behavioral interventions outside the conventional medical domain are very useful in preventing, diagnosing, and managing the disease. This is where any business can take an active role.
To begin with, the GHF partnership with GBCHealth I participated in provides a strong example of how industries can partner together for a common goal. The beauty of this collaboration is fusing industry’s business and medical strength into GBCHealth’s wide network connection to accomplish things that each individual organization cannot achieve on its own. As GBCHealth is strong in its network and industry is strong in its expertise, the combination is a perfect match to achieve a common goal.

The partnership certainly need not end with the pharmaceutical industry; other businesses can also take an equally important part. For example, as mentioned above, mhealth is an effective form of public health promotion and advocacy. It is, without exaggeration, my greatest regret that I met the personnel in the sustainability department of Nokia China at the very end of my assignment. Although the company expressed very strong interest in delivering health messages via mobile phones as part of its consistent effort in corporate social responsibility, it was impossible during my assignment to advance this promising collaboration with any meaningful progress. However, technology is too important to be ignored as an integral component for improving population health. Not only should GBCHealth pick this thread up and continue the conversation with Nokia China, but other technology providers should be encouraged to join this collaboration.

References


