Globally, over 250 million slum dwellers suffering from chronic diseases need help. The social and economic cost of chronic diseases is significant for individuals, families and society. Generics, better medicine, and digital technologies may offer solutions, but more are needed. Solutions for chronic diseases in slums are not a priority for governments, the private sector or NGOs. Social enterprises may be the best option to address this issue. However, building successful social enterprises in slums will be difficult.

Can we build a social healthcare enterprise that serves the needs of 25 million slum dwellers suffering from chronic diseases by 2019?

Written by:
Hitendra Patel, Ronald Jonash, Kristen Anderson and Julius Bautista

IXL CENTER
Message from President Clinton

Dear Friends:

Our interdependent world offers more opportunities for creative cooperation than ever before. Great minds from around the globe have shown us what is possible when we embrace our common humanity, bridge our timeworn differences, and work together to find effective and sustainable solutions to our shared challenges.

One of the most inspiring examples is the annual Hult Prize competition. Over the past four years, the Hult Prize has brought together some of the brightest young innovators to address the obstacles that prevent prosperity and opportunity from thriving worldwide. From increasing access to technology and clean water to tackling poverty and food security on a global level, past competitions have yielded tremendous ideas that support business and social enterprise while serving the greater good.

This year’s Hult Prize competition will address the pressing challenge posed by chronic, non-communicable diseases (NCDs)—including cardiovascular disease, diabetes, cancer, and chronic respiratory diseases—and their highly related mental and behavioral health conditions. Since the 1980s, we have made great strides in strengthening health systems and lowering the cost of diagnostics and treatment in the developing world. While this progress is significant, NCDs continue to take a devastating toll on lives and livelihoods, causing two thirds of all deaths worldwide annually. About 80 percent of NCD-related deaths occur in low- and middle-income countries—and if we fail to act, the World Health Organization estimates that NCDs will cost these countries more than US$7 trillion by 2025.

In order to stem this crisis and alleviate the burden on those working to survive on just a few dollars a day, we must offer prevention strategies, early diagnosis, and effective healthcare infrastructures in urban and peri-urban communities. Social enterprises, which creatively combine the tools used by governments, NGOs, and the private sector, offer some of the most promising opportunities for innovation in these areas. Through the Hult Prize challenge, you will be part of the solution as you develop accessible, affordable health enterprises capable of delivering care to the millions of people suffering from chronic diseases in or near the world’s cities.

Access to health care should be a right, not a privilege. As you work to create business plans that advance shared opportunity, shared responsibility, and shared prosperity, I encourage you to take the opportunity to learn from other companies and organizations that have made strides in NCD prevention and treatment. I commend all of you who choose to answer this important call, and I look forward to seeing the many outstanding ideas the competition will produce.

Sincerely,

Bill Clinton
Over 250 million slum dwellers suffering from chronic diseases need help
Chronic diseases affect an estimated 250 million people in slums worldwide
Physical chronic diseases like cardiovascular disease, cancer, chronic respiratory disease and diabetes account for 63 percent of deaths worldwide
Mental chronic disease is a leading cause of disability and lost productivity
Slum dwellers have a range of complex healthcare needs

Current solutions to address chronic diseases in slums are not working
Prevention is not a priority
Alternate solutions are preferred, which delay correct diagnosis and treatment
Clinics are ill-equipped to identify chronic diseases early and provide proper treatment

The social and economic cost of chronic diseases is significant for individuals, families and society
Individuals suffering from a chronic disease pay with more than their health
Families who care for members with chronic disease face financial and emotional stress
Chronic diseases are costly for society

Generic pharmaceuticals, better medicine and digital technology may offer solutions, but more are needed to counter the increasing slum population
Generic pharmaceuticals are increasingly available to slum dwellers
Better medicine is making healthcare more accurate
Virtual solutions and telemedicine are beginning to offer lower-cost health options
However, the impact of chronic diseases in slums is expected to increase due to behavioral risk factors in slums, urban migration and increasing life expectancy

Solutions for chronic diseases in slums are not a priority for governments, the private sector or NGOs
Governments see slums as illegal habitats and focus on emergency care
The formal private sector is unable to provide market solutions for chronic diseases in slums
NGOs focus on healthcare challenges related to communicable and infectious diseases

Social enterprises may be the best option to address this issue
However, building successful social enterprises in slums will be difficult
Social enterprise operations are difficult to manage
Inconsistent demand is hard to plan for
Fair pricing for health solutions is difficult to implement
Consumers with fluctuating income and limited savings are difficult to serve
Partners across the value chain are difficult to work with dependably

Can we build a social healthcare enterprise that serves the needs of 25 million slum dwellers suffering from chronic diseases by 2019?

Addendum: Create Successful Social Enterprises
Find customers who can pay
Use existing channels
Make offerings affordable and accessible
Build with local parts and knowledge
Go beyond traditional business models

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Over 250 million slum dwellers suffering from chronic diseases need help

Chronic diseases affect an estimated 250 million people in slums worldwide

All over the world, poor people are suffering from diseases that can be treated and even cured, but their suffering continues unnecessarily because they do not have reasonable healthcare. Healthcare, as it is described in this case, entails the maintenance and improvement of physical and mental well-being through medical services. People who live in slums lack access to “effective and affordable” healthcare. It is estimated that close to a billion people worldwide live in slums.

Slums are poor, densely populated, illegal (or informal) settlements with weak or non-existent infrastructure near or within an urban area. Slums exist all over the world but are more common in developing regions in Africa, Asia and Latin America (Figure 1). People who live in these areas lead difficult lives. Employment is intermittent. Sanitation is poor. Education about choices is insufficient. Quality healthcare is nearly impossible to find. Because of the grim conditions in slums, disease comes sooner, lasts longer, has more serious consequences and is all too often too expensive to treat. As expected, poor people in these poor countries are more vulnerable and have fewer options and less access to quality care.

Improving Chronic Disease Care in Slums by 2019

Chronic diseases, also known as non-communicable diseases (NCDs), are not passed from person to person. They are of long duration and generally slow progression, representing the main cause of disability and death worldwide.

Identifying appropriate statistics and population measures is always a difficult task. Explicit counts are based on general estimates because of two key factors — (1) governments often overlook slums in official counts and (2) records are limited because of informal employment, land tenure and networks. In terms of morbidity, it is estimated that there are at least 2 billion people worldwide, and 250 million people living in slums, who suffer from at least one of the following chronic diseases: cardiovascular disease (CVD), cancer, chronic respiratory disease (CRD), diabetes or mental illness. The number of people suffering from chronic diseases is expected to continue rising (Figure 2).

Figure 1. Slum populations are largest in Africa, Asia and Latin America

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Improving Chronic Disease Care in Slums by 2019

For slum dwellers, being unhealthy is the first step that leads them towards a dangerous cycle (Figure 3). Without their health, slum dwellers’ productivity is compromised and many are often too sick to work at all. This leads to wasted time, forgone wages, and deeper and deeper poverty. Proper healthcare that is affordable, accessible and accurate is critical to breaking this cycle and enabling people to lead happier and more productive lives.

Physical chronic diseases like cardiovascular disease, cancer, chronic respiratory disease and diabetes account for 63 percent of deaths worldwide

Research suggests 80 percent of chronic disease deaths are caused by one of four types of disease: cardiovascular diseases, cancer, respiratory diseases, or diabetes.9

Cardiovascular diseases (CVD) are a group of disorders of the heart and blood vessels.11 Heart attacks and strokes are the most common diseases suffered and are the number one cause of death globally. High blood pressure accounts for the majority of deaths.
Mental chronic disease is a leading cause of disability and lost productivity

Although it is not responsible for a high percentage of deaths, mental illness can have an enormous impact on health and wellness. This medical condition disrupts a person’s thinking, feeling, mood, ability to relate to others and daily functioning. The different types of mental illness include depression, anxiety disorders, schizophrenia, eating disorders and addictive behaviors. There are at least 60 million people with mental illness in slums around the world.

Depression is a mood disorder that causes a persistent feeling of sadness and loss of interest. Anxiety disorders include panic disorder, obsessive compulsive disorder, post-traumatic stress disorder, social anxiety disorder, specific phobias, and generalized anxiety disorder. Schizophrenia is characterized by a breakdown of thought processes and by impaired emotional responses. Eating disorders are diseases defined by abnormal eating habits involving excessive or insufficient food intake to the detriment of an individual’s physical and mental health. Addictive behaviors cover all types of activities, substances, objects or behaviors that becomes the major focus of a person’s life to the exclusion of other activities.

All these cause distress and interfere with a person’s ability to function normally. It influences a person’s ability to work, sleep, study, eat and do other daily activities. There are at least 60 million people with mental illness in slums around the world.
Improving Chronic Disease Care in Slums by 2019

Slum dwellers have a range of complex healthcare needs

Do I know what I need? The first step to improving health comes from knowing the risk factors that can make people sick. Education about conditions that cause illness can help families make the right choices. From basic sanitation and nutrition to physical activity and the dangers of smoking, education about the causes of disease can go a long way towards preventing it. All too often children and families suffer needlessly because they do not have enough information about how their own behaviors may be making them ill.

Do I know when I am ill? In addition to needing to know what can make them sick, people need to know what symptoms to look out for once they are ill. Particularly with chronic disease, symptoms may be subtle. High blood pressure can have no symptoms at all, and many cancers are first noticed by a feeling of fatigue.

For slum dwellers who struggle to get enough to eat, medical treatment for apparently minor outward symptoms would seem a poor use of limited income. Education about the importance of early detection and treatment can help prevent chronic diseases from being disabling, which can not only improve productivity but also increase quality of life.

Do I know what to do when I am ill? Once someone is ill, it’s important that individuals, heads of household, and caregivers know the appropriate subsequent steps to take. Hospitals can be far away or too expensive for slum dwellers to use. Even if medical facilities happen to be within a reasonable proximity, urban slum dwellers, who are most often migrants from rural areas, do not know how to use the urban health systems. In rural areas, health programs are traditionally outreach-focused, while urban health centers are typically facility-centric. Because many poor people in cities are unfamiliar with the processes and expectations of these health programs and facilities, there is an additional burden on those who are sick and concerned about meeting their family’s basic needs.

Can I trust I got the “right” care?

Do doctors have enough knowledge? Not only do slums lack medical professionals (Switzerland: 40.8 per 10,000 residents; Brazil: 17.6 per 10,000 residents; Nigeria: 4.0 per 10,000 residents; and Kenya: 1.8 per 10,000 residents21), these professionals are sometimes under-trained and are often over-worked. This makes it difficult for doctors to communicate basic health knowledge, and it makes medical care even more burdensome for families by extending wait times. Weak systems also mean that personal medical records are difficult to track. Individuals rarely have access to their own medical histories, and if they do, they typically lack the ability to store the
information safely and privately. This means doctors have to diagnose and treat patients with imperfect and incomplete information.

Do doctors have the right incentives? Corruption often develops because incentives aren’t properly aligned. Doctors need to be incentivized to provide the best care for patients, rather than finding the quickest way to move slum dwellers and other poor patients out of the hospital. All players along the value chain need to be incentivized to price treatment and medicine fairly, offer care extensively, and ensure the highest level of quality to all people.

Are people held accountable? Because of a lack of transparency, holding corporations, clinics and medical practitioners accountable for their actions is at best difficult. In 2001, pharmaceutical companies in the private sector came under tremendous scrutiny for their policies and pricing models on life-saving HIV and AIDS medication. This pressure for transparency, however, has not been equally applied or sustained around the world. Governments, middle men, and black market dealers all have their own reasons to manipulate the system. A study in Pakistan slums has shown that only 24 percent of corrupt medical practices come from doctors while 70 percent comes from other hospital staff.

Can I find it when I need it? Can I get there? Weak infrastructure means that frequent trips to clinics or hospitals can be too costly for individuals and families. A survey in India found that 14 percent of respondents were dissatisfied with the distance they had to travel to receive care. 17 percent were dissatisfied because of the amount of time they were required to wait. All of these barriers are making healthcare more difficult to access.

Can I find it when I need it? Cannot find it

A 68-year old slum dweller, Bharat Tiwari, is disappointed because doctors at a government-funded hospital in New Delhi have deferred a surgery needed to treat his heart ailment and told him to return in two months. Such delays are not unusual at the overstretched facility. Bharat and his family were hoping that surgery could reduce the high drug costs. His son says the 100 spent every month on his father’s medications adds up to a quarter of the family income. Now Bharat and his family will just have to wait.

Is there a system? Because slums are informal or illegal habitats, most do not have the necessary infrastructure to build or maintain a health system. Medical facilities and clinics need to have access to running water and electricity to maintain basic sanitation and be staffed with skilled workers, all of which may be difficult to find within slums. The system that does exist is typically very fragmented; different facilities offer different capabilities and levels of care and are unable to communicate with each other.

Do I have the legal right to care? In some countries, governments guarantee access to healthcare for all citizens. Although these facilities may be crowded and have long waits, there is some way for people to get medical treatment at subsidized or no cost. However, there are many countries (of which most are in the developing world) that have no commitment to universal healthcare. For people in these countries, and particularly those living in illegal slums, there is no guarantee that healthcare will be provided, even if they are able to make it to a medical facility. Legal coverage, protection of privacy and government support can be important to making healthcare accessible.

As mentioned, the poor often find themselves in a vicious and reinforcing cycle when it comes to healthcare. Indrajit Hazarika, a senior lecturer at the Indian Institute of Public Health, Delhi describes what he has observed: “Social exclusion and lack of information and assistance inhibits the use of private facilities. These make the urban poor more vulnerable and worse off.”

Can I pay for it when I need it? I just can’t pay

Shakeela Begum, a 65-year-old housewife from a Karachi slum, had a heart attack several years ago, and she still hasn’t fully recovered. “I can’t do as much, because I get tired very quickly,” she says. Nevertheless, she’s not taking the prescribed dose of medication. “I know I should be taking my medication every day, but this way I can also save some money for my grandchildren — they are young and have a future,” she argues.


Can I pay for it when I need it?

Is the supply chain efficient? People need to be able to pay for the care they receive. Because infrastructure is difficult to manage not just in slums, but often throughout low and middle-income countries (LMICs), getting equipment, clinicians and medicine to the market can become more costly than in developed areas. It is estimated that drugs in developing countries are 2.7 times more expensive in the public sector and 6.3 times more expensive in the private sector than they are in the developed world. Additionally, in many developing countries, regulatory authorities from the government are unable to consistently fulfill their role in maintaining the quality control of the testing or distribution of drugs. Caring for chronic disease is particularly difficult because the supply chain is extremely complex and varied by region.
Improving Chronic Disease Care in Slums by 2019

Are cheaper options available? Because the supply chain can add significant cost to medicine, labor and other equipment, alternatives need to be available to make healthcare more affordable. Currently, the price of generic drugs varies dramatically by location but could provide affordable options to slum dwellers if a profitable market environment can be created for these areas.26

Is there insurance/financing available? Medical treatment for families in the developed and developing world is typically unexpected and expensive (Figure 7). In parts of the developed world without universal healthcare, however, insurance and financing options enable individuals to pay in to insurance companies over time before an emergency occurs or in small amounts after treatment has been received.27 In slums, where access to healthcare can be dependent on the ability to pay (as it is in Bogota, Colombia), health insurance or financing plays a vital role to ensuring care.28

Current solutions to address chronic diseases in slums are not working

Prevention is not a priority

Studies show that even in the developed world, individuals will often ignore or underutilize preventative health treatments.39 Although some reasons for this trend can be traced to lack of knowledge or resources, it is also partly because individuals often don’t see the direct benefits from the cost. In other words, with a limited income, families have a choice to spend their money on many things. Too often, family income is spent on “emergency” needs – school bills that are past due, any type of food to fill empty stomachs, or a bus ticket that takes a family member to work. There is rarely enough money saved to allow families to plan for the future. Even with enough money, preventative care can be hard to measure in strict economic terms and a difficult behavior to instill both in rich and poor consumers.

Slums are a challenging place to access affordable and nutritious food supplies and basic preventative care.40 Slum dwellers also may be unable to access sufficient knowledge about chronic diseases. Because of these problems, which are exacerbated by the strain and hardship of living in poverty, slum dwellers are simply unable to prevent chronic disease on their own.

Alternate solutions are preferred, which delay correct diagnosis and treatment

People often favor using conventional wisdom from family members, neighbors or friends to treat ailments over visiting a hospital or clinic. Because the situation in slums makes accessing and paying for healthcare burdensome, self-medication can be even more common and potentially more dangerous.

Although self-medication can be an affordable method of care, it can also be unsafe. A survey done in Mumbai found that almost 25 percent of those who self-medicate use old, leftover drugs, and almost 13 percent borrow medication from a friend or neighbor.41 This can result in drugs that are at best less potent and at worst dangerous.42

For chronic diseases, in particular, this sort of ad hoc treatment extends the amount of time slum dwellers wait to go to a clinic or hospital and can expose more people to dangerous counterfeit medication. Professional treatment, even when severe symptoms do develop, is often postponed for any number of reasons: misunderstanding of symptoms and warning signs, inability to pay for service, lack of access to services, overwhelming procedural process, or mistrust of medical personnel and facilities.43 For most chronic disease, delaying treatment can cause additional complications (like diabetic amputation or metastasized cancer).44

Clinics are ill-equipped to identify chronic diseases early and provide proper treatment

Doctors and caregivers are under immense pressure, particularly in slums where their resources are stretched – often to a breaking point. Because early warning signs of chronic disease are often unrecognized, not just by patients but by physicians as well, life-saving care can be even more difficult to get on time.45 Additionally, sufficient medical supplies can be difficult to find in slums, and doctors are forced to treat illnesses without the proper tools.
Individuals suffering from a chronic disease pay with more than their health. The majority of slum dwellers are daily wage earners who make, on average, less than 5 USD per day.

The direct costs associated with chronic disease, even if diagnosed early, are overwhelming. For example, one chemotherapy session in India costs nearly 1,500 USD. Six months of cancer treatment in India can range from 4,000 USD to 32,000 USD.

Without insurance and financing, slum dwellers bear almost all medical costs out-of-pocket. In addition to the direct cost, chronic disease impacts an individual’s ability to work – lowering income and affecting productivity. Aside from the economic costs, individuals also suffer tremendous emotional and psychological effects from pain, anxiety, inconvenience and bereavement. Individuals are often treated poorly and ostracized by other community members.

Families who care for members with chronic disease face financial and emotional stress. Those with chronic diseases are not the only people who feel pain. Entire families often bear the burden when one member suffers from a chronic disease. Management of chronic disease is complicated, and can require special therapy and training. Families who must help with this care lose income and productive time from work and school. Lost income and direct costs for care push many families deeper in to poverty. This vicious cycle is often called the “medical poverty trap”.

According to the World Health Organization (WHO), 44 million households (100 million individuals) fall in to poverty each year because of catastrophic health costs. It is estimated that 90 percent of these people live in low income countries. Because of the expense and duration, catastrophic risk is associated mainly with chronic disease. In Burkina Faso, the possibility of catastrophic economic consequences increases from 3.3 to 7.8 times in households stricken by chronic disease.

Living with sick family members is also a psychological burden, stressing relationships, creating anger and frustration, and spawning feelings of hopelessness that often only end with the loss of a loved one.

Chronic diseases are costly for society. In addition to threatening human health, chronic diseases have huge impact on economic growth and societal development. Global costs for chronic disease are enormous – ranging from 290 billion USD for cancer to 2.5 trillion USD for mental illness each year. Cumulative losses for the five most threatening chronic diseases (Figure 8) are estimated at 47 trillion USD over the next two decades. This sum could eliminate 2 USD per day poverty for 2.5 billion people for more than fifty years. These costs will be felt not just today but for several generations to come.

The social and economic cost of chronic diseases is significant for individuals, families and society.

### Generic pharmaceuticals, better medicine and digital technology may offer solutions, but more are needed to counter the increasing slum population

Generic pharmaceuticals are increasingly available to slum dwellers. Medication can be exceptionally costly for those living in slums. It is estimated that the vast majority of healthcare spending is spent on medication each year. In addition, there is often a “poverty penalty” (because of inefficient supply chains, as mentioned above) for those in slums who may have the greatest need for medicine. The production and sale of generic drugs can drastically lower the costs of these medications.

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**My family pays the price**

Roberto Severino Campos was from a shanty town in Brazil. He worked as a public transport agent and never paid attention to his high blood pressure or smoking and drinking habits. Now, he lives with his seven children and 16 grandchildren, who must take care of him, because after three strokes, he is paralyzed and has lost his ability to speak. Fortunately his medication and check-ups are free, but sometimes we just don’t have enough money for the bus to take us to the local medical centre," explains his 31-year-old daughter Noemia. Roberto depends entirely on his family, and much of the family’s income is used to cover his healthcare needs. "We all wish we could get him a wheelchair to make his life a little easier," she says, but unfortunately, the family cannot afford it.

Source: [http://www.who.int/features/galleries/chronic_diseases/roberto/01_en.html](http://www.who.int/features/galleries/chronic_diseases/roberto/01_en.html)
As patents expire, more and more medications are legally permitted to be sold as generics and are therefore more likely to meet quality standards (Figure 9).

In addition, the World Trade Organization (WTO) passed an agreement in 1995 known as TRIPS that allows governments to issue licenses that allow non-patent holders to manufacture and market a medicine in a domestic market. This agreement has led to more competition in the generics market and significantly lower prices. Because of the TRIPS agreement, the price of AIDS medication in Brazil fell by 82 percent.

Better medicine is making healthcare more accurate
As more pharmaceuticals become available as generics, so too are new and better drugs being discovered and developed. Funding for pharmaceutical research is funded by government grants, private corporations, and even new breeds of NGOs like the Aravind Eye Care System. New diagnostic methods, like the pancreatic cancer screening test developed by 15-year-old Jack Andraka, are allowing people to diagnose faster, cheaper, more reliably and often in the comfort of their own homes. The entire medical system is continuing to mature and take a more holistic view of health, integrating modern medicine with more traditional techniques. These trends offer hope that the developing world will have the opportunity to leap-frog technologies in healthcare, as it has done with mobile technology in the telecom industry.

Virtual solutions and telemedicine are beginning to offer lower-cost health options
For the last several decades, technology innovations have been decreasing in price and complexity, allowing more of the world’s population to have access to a variety of different services. The healthcare industry is no exception. Since the early 1990s, technology-enabled programs have become an increasingly significant part of programs implemented in low- and middle-income countries (LMICs) (Figure 10).

Not only have these solutions increased the quality of care, understanding, and access that slum dwellers have to healthcare, but they have also dramatically lowered healthcare costs.
However, the impact of chronic diseases in slums is expected to increase due to behavioral risk factors in slums, urban migration and increasing life expectancy.

**Certain behavioral risks are high in slums and contribute to increased levels of chronic disease**

Chronic disease is a risk for slum dwellers because of poor nutrition, physical inactivity and alcohol and tobacco consumption. In slums, there is limited access to sufficient, nutritious food. Not only can proper nutrition improve childhood health, maternal outcomes, and productivity, it can also dramatically lower the rates of cancer and non-communicable disease. Evidence suggests that urbanization can lead to a more sedentary lifestyle. Lack of physical activity can lead to increased risk for hypertension, heart disease, diabetes, stroke, and certain types of cancer. Alcohol abuse and over-consumption can lead mainly to liver cancer, cardiovascular disease, high blood pressure, and seizures, killing an estimated 2.5 million people annually. Tobacco usage, responsible for nearly six million deaths every year, causes cancer, respiratory disease, and cardiovascular disease. All of these risk factors are prevalent in slums and contribute to increasing levels of chronic disease in slums.

**Urbanization will increase slum population further and also stress an already weak slum infrastructure**

Currently, over 50 percent of the world’s 7.2 billion people live in urban areas. In 2050, this number is anticipated to reach over 6.7 billion (Figure 11). This increase is due to urban migration as well as higher birth rates (especially in the developing world). This means that approximately 180,000 people move to cities every day. Researchers suggest that current cities will have to expand by an area equivalent to the size of Greater London every month for the next forty years.

Cities around the world, particularly those in the developing world already facing growing slum populations, are unlikely to be able to manage the demand this growth will put on infrastructure especially public sanitation, electricity, and access to medical care.

**Increasing life expectancy is making care more expensive, especially for chronic conditions**

All around the world, life expectancy is increasing. The world average life expectancy has gone from 47 years to 68 years in just over half a century. Correlated to this, the population is aging significantly. There will be an additional 800 million people over age 60 by the year 2050. Although chronic diseases affect every age group, 75 percent of the deaths they cause are in people over age 60. This is because chronic diseases often develop as an accumulation of bad habits built over the course of a person’s life (Figure 12).

As conditions within and outside of slums improve, longer life will translate into additional costs incurred in caring for and managing chronic disease. Chronic diseases cost the developing world well over 50 percent of total healthcare costs. This number is expected to increase dramatically as countries develop. Chronic diseases cost the United States 75 percent of total healthcare costs.
Solutions for chronic diseases in slums are not a priority for governments, the private sector or NGOs

Governments see slums as illegal habitats and focus on emergency care

Governments are responsible for providing infrastructure and rule of law. Unfortunately, slums are in flux and often not recognized as legal places of habitat with legal protection and security. As a result, nominal efforts are made by governments in slums to provide roads, schools, electricity, water and security. Moreover, many governments see urbanization as a problem and put more effort in rural development to slow urbanization. Most governments ignore slums or threaten residents with eviction.

Additionally, the type of aid that governments do traditionally provide is often designed to attend to communicable or infectious diseases. Governments have spent billions of dollars in aid for malaria, HIV and tuberculosis. Among aid provided by the United States government, almost 50 percent of global health dollars was spent on HIV alone. This focus on HIV creates a global mentality of reactive care from epidemic flare-ups, but it does not address the growing problem of non-communicable disease education, prevention, diagnosis, treatment and care.

The formal private sector is unable to provide market solutions for chronic diseases in slums

There is a thriving informal private sector — low-cost, low-quality healthcare market — in urban slums. These informal providers and medicine shop-keepers often lack training or formal education in healthcare and operate outside the purview of regulation. Though they provide affordable and accessible healthcare opportunity for slum dwellers, they are also a threat due to higher risk of getting proper diagnosis and treatment. On the other hand, the formal private sector may have difficulty building a profitable business in slums because it is harder to provide complete, consistent, quality and affordable services and still maintain significant margins. The formal private sector, in general, has had difficulty implementing pricing models that work in slum environments.

There are some formal private entities existing in slums, however, most of them are still quite expensive for the average slum dwellers’ limited budgets. Clinics are also hard to monitor and lack transparency that is critical for ensuring appropriate accountability across the value chain.

NGOs focus on healthcare challenges related to communicable and infectious diseases

Non-governmental organizations (NGOs) have become major contributors to social development in recent decades. Some NGOs focus on rural areas and provide relief aid. Others work in urban areas and focus on development. However, NGOs have challenges in funding, program continuity and customer perception. As a result, their impact has been nominal and at times even negative.

The last decade has shown that non-communicable diseases are a growing concern for the developed and the developing world. Significant research is being done not only on these chronic diseases and their root causes but also on their impact on slum areas. Unfortunately, acknowledgement of the problem has not yet turned into viable solutions for slum dwellers with chronic diseases. NGOs often focus more on communicable and infectious diseases that are easy to prevent and are still among the leading causes of death in the developing world.
Social enterprises may be the best option to address this issue

Social enterprises deliver both social impact and business profit. They deliver social impact by improving the health and well-being of the world’s most vulnerable people. While social enterprises can be either for-profit or not-for-profit organizations, they all aim to utilize a pricing strategy that will create a sustainable, consumer or partner-driven business model. This helps reduce or eliminate dependence on donations and cash injections. Slums will benefit from the emergence of more social enterprises – particularly those focused on prevention, diagnostics, treatment, and sustainable care to chronic disease (Figure 13).

Addressing pain points along the chronic disease timeline (Figure 14) will improve solutions for slum dwellers throughout the developing world. Bigger, better, bolder, faster and cheaper solutions are needed in all parts of this chain: from manufacturing to distribution channels to treatment and continued care. Solutions that integrate the participation of slum dwellers are considered even more interesting because they create employment, purpose, and economic wealth for these individuals.86 Robust and scalable business solutions that create economic wealth across the value chain for all stakeholders are needed to improve care for people suffering from non-communicable diseases in slums.

Social enterprise in motion

A social enterprise called Access Afya is creating a network of paperless “health kiosks” that offer basic healthcare services for slum dwellers in Kenya. Kiosks are staffed with a nurse and community health worker and use an electronic patient management system and text messages for communicating with patients. To make each mini-clinic a self-sustaining operation, every patient pays a small fee. In first six months, more than 500 patients from Nairobi slums have used and paid for these health services. Source: http://www.accessafya.com/

Figure 13. Social enterprises may be best suited to address chronic care in slums

Figure 14. Solutions should work with specific intervention points to make targeted impact

Efforts are already in place to create solutions around food security and education. For that reason, we encourage solutions that focus on the early identification of chronic diseases, their treatment and care.
Improving Chronic Disease Care in Slums by 2019

However, building successful social enterprises in slums will be difficult

All people are exposed to risk from unexpected changes in the environment, accidents, illnesses, price increases or cash availability. Unfortunately, low income individuals have limited safety nets, social networks and buffers to deal with unexpected change, particularly the major expenses associated with chronic disease care. Social enterprises that target these types of customers will have to work with value chain players who are also at a higher risk in an environment with limited government support and infrastructure.

Social enterprise operations are difficult to manage

Finances must be efficient

Social enterprises need to operate with razor-thin margins in an environment of fluctuating demand and supply. In informal business (which dominates the economic landscape in urban slums), relationships with suppliers and customers are informal – the hierarchy of roles and work is flexible. There are few, if any, contracts. Contracts are irregular and hours of operation vary. Managing cash collection, inventory and supplier payments is key to ensuring a healthy cash position. To reduce cost, social enterprises will need to grow significantly to enjoy economies of scale. Both working capital and scaling up can be managed through financing. Unfortunately, financing for companies working in the slums or targeting poor slum dwellers is limited to a few microfinancing institutions.

Assets must be able to bear risk

Social enterprises working in slums are exposed to higher risk from supply chain inefficiency, fire hazards, natural disasters, corruption and high crime rates. Most insurance organizations are unable to assess the risk, claims and premiums accurately enough in slums to build a viable business. Social enterprises have to manage their environment and assets to ensure business continuity in the face of risk that most enterprises in wealthier regions have insurance for.

Employee training must be flexible and culturally appropriate

Social enterprises should hire from slums to increase social impact; however, these potential employees may not have the appropriate skills and training for the job. Training and on-the-job skills development will put additional stress on management and operations. Additionally, it is critical to work with local employees in a way that is culturally acceptable and considerate to differences in gender sensitivity, religious practice, dietary preferences and other social norms.

Inconsistent demand is hard to plan for

Most services are not derived from homogenous demand. Airlines, banks, and particularly health care clinics may see demand vary by time of day, day of the week or even by season. These fluctuations can make operations difficult, particularly for social enterprises struggling to leverage sustainable business models. Operating with peaks and valleys of demand can quickly wipe out many businesses that must operate on squeezed margins.

Fair pricing for health solutions is difficult to implement

Social enterprises will have to struggle with the same challenges that traditional businesses do in building business models for the healthcare industry. Healthcare is extremely susceptible to inelastic demand and what is known as “dynamic inconsistency.” This means that the need, and therefore willingness to pay, for services fluctuates dramatically over time. As a result, setting market prices is difficult to do with fairness and integrity. This inconsistency, combined with a unique lack of transparency and feedback mechanisms around true pricing, means that healthcare social enterprises will not be able to use business models leveraging traditional supply and demand curves.

Consumers with fluctuating income and limited savings are difficult to serve

Poor people in slums lack adequate education. Those with less education typically make less money and lack access to higher paying jobs. The jobs that slum dwellers are able to access are often irregular and provide fluctuating income. Social enterprises will need to have business models that can accommodate inconsistent consumer income. In addition, slum dwellers who...
do not have sufficient education do not typically have enough knowledge about proper chronic disease prevention, diagnostic, treatment and care options.

Slum dwellers also struggle to build significant savings accounts that are critical to being able to pay for medical care and services. Without a savings account, people sometimes fundraise for their own medical procedures by begging in their own communities. Those lacking in healthcare in slums typically have incomes between 1 USD to 5 USD a day. Social enterprises that target this segment will have to provide low-cost solutions that consider financing and savings opportunities within this income level.

**Partners across the value chain are difficult to work with dependably**
Pharmaceutical producers, medical equipment manufacturers, and distribution networks to hospitals and clients must ensure quality care. However, most players in the healthcare value chain are remote and ill-designed for slum environments, which make the whole value chain fragile. Social enterprises will face significant challenges in building a consistent and predictable supply chain.
Can we build a social healthcare enterprise that serves the needs of 25 million slum dwellers suffering from chronic diseases by 2019?

The purpose of this challenge is to improve health options around diagnostics, treatment and care for those suffering from chronic diseases in slums around the world. This will lead to better productivity, more robust healthcare systems for all slum dwellers, and individuals who have significantly higher quality of life. The winning business solution should have significant and measurable impact.

A list of questions to help develop a good winning business solution is provided in Figure 15. The solution should have a sustainable business model. It should improve health options. It should have a stage implementation plan with clear milestones and funding required for each milestone. Overall, the winning solution should scale rapidly to serve an ever increasing number of people with chronic disease in a relatively short time. Solutions may be built around any of the following steps in the chronic disease timeline: diagnostics, treatment or continued and extended care, but must reach 25 million people with chronic disease by 2019.

"Through the Hult Prize challenge, you will be part of the solution as you develop accessible, affordable health enterprises capable of delivering care to the millions of people suffering from chronic diseases in or near the world’s cities.”
- President Clinton

<table>
<thead>
<tr>
<th>Metrics</th>
<th>Guiding Questions</th>
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<tbody>
<tr>
<td>Increased Awareness</td>
<td>• Are consumers more educated about disease, health and safety? • Do people with chronic diseases have better information about market access and pricing? • Are other pieces of the value chain more efficient because they have more useful information? • Will your solution make people with chronic diseases aware or give them opportunities that they did not have before?</td>
</tr>
<tr>
<td>Better Accessibility</td>
<td>• Does your solution make healthcare available anytime/anywhere for people with chronic diseases? • Are you reducing the distance from production to end consumer? • Does it increase distribution to a wider market? • Does it reduce the time a consumer spends to find or use medical treatment? • Is it replicable or scalable?</td>
</tr>
<tr>
<td>Improved Quality and Reliability</td>
<td>• Does your solution improve safety or hygiene? • Are your solutions culturally accepted? • Have you enabled head-of-households to provide better care for family members with chronic diseases? • Have you improved the ethical elements of the value chain?</td>
</tr>
<tr>
<td>Reduced Cost and Increased Affordability</td>
<td>• Are the inputs lower cost? • Is the processing, procurement or distribution cheaper? • Is your solution affordable over time? • Does it create new sources of income?</td>
</tr>
<tr>
<td>Improved Quality of Life and Happiness</td>
<td>• Does your solution improve health outcomes for people with chronic diseases? • Does it reduce the persistence and prevalence of chronic diseases? • Are people with chronic diseases able to live happier or more comfortably? • Does it improve productivity or time available to work?</td>
</tr>
</tbody>
</table>

Figure 15. Guiding metrics help identify solutions that deliver the most impact.
Addendum: Create Successful Social Enterprises

"As you work to create business plans that advance shared opportunity, shared responsibility, and shared prosperity, I encourage you to take the opportunity to learn from other companies and organizations that have made strides in NCD prevention and treatment.”
- President Clinton

To develop a solution, lessons learned by other companies, NGOs and social enterprises in other industries should be considered. IXL Center uses the innovation value chain to find growth and opportunity in new areas. There are bright spots around each section of the innovation value chain – market, delivery, offering, production and business model – that should be considered as inputs when developing solutions for the poor (Figure 16).

Find customers who can pay

- Target profitable customers and segments
- Know your customers’ needs and behaviors
- Plan for consumers who lack trust

What you should ask:
- Who is your target customer? Social enterprises typically target those who earn more than 2 USD/day.
- What are your customers’ needs and purchase behavior? Offerings need to delight customers and be integrated into existing behaviors.
- How will you build trust and credibility for your consumers? Making the wrong decision has much more serious consequences for the poor, so customers must trust in what they pay for.

Use existing channels

- Tap existing channels
- Use powerful influencers
- Leverage virtual solutions

What you should ask:
- What existing distribution channels of major corporations or local business can you work with? Channels that have already been built may cost money, but they are effective and ready immediately.
- Who or what are the influencers that can accelerate acceptance of your offering? Strong relationships and word-of-mouth networks can scale social enterprises quickly.
- How can you use new and existing technology to move goods and services virtually? Finding solutions that leap-frog the developed world with technology can be more cost-effective.
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Make offerings affordable and accessible

- Right-size solutions
- Hold people and organizations accountable
- Focus on human-centered design

What you should ask:
- How can you build your offering in pieces? Low-income families can pay for things bit by bit more easily than all at once.
- What can you do to ensure accountability? Audits and monitoring should be embedded to keep business trustworthy.
- Who are you designing for? Your customers are more likely to pay for things that were designed with them in mind.

Build with local parts and knowledge

- Use parts that are available where you are delivering
- Apply insight and knowledge of the community
- Build with assets of value

What you should ask:
- What do you need to replace parts of your offering with locally available supplies? You can save money and time by building closer to home.
- Who has knowledge that can help you be more successful on the ground? Navigating communities often requires local support and engagement.
- What assets will make your enterprise more valuable by itself? Just because something is free, does not mean it is valuable to your operations.

Go beyond traditional business models

- Provide value exchanges and microfranchises
- Create intangible value
- Create a business model with flexibility

What you should ask:
- How does your solution capture the value you create? Capturing value is a critical step to making your social enterprise economically self-sustainable.
- What do you offer people that is difficult to put a price on? Your offering will be more interesting if you free up people’s time, or increase self-esteem, dignity, security or happiness.
- What are the different stages of your business model? You may need to finance operations differently during the pilot and early stages than you do at scale.

Companies who are able to think broadly and holistically about the entire business innovation value chain are more likely to be able to capture value. Social enterprises developed for the Hult Prize, like Aspire, Reel Gardening, Pulse, Poshnam, Origin and Sokotext, have worked across these segments to scale offerings that will help end food insecurity in urban slums. They are working on the ground, today, to produce at lower cost, find offerings that delight consumers, deliver quickly and effectively, build brands that inspire trust, and use partners and networks to help capture new value in new ways. How can you do the same for people’s well-being and health?

A new kind of business model

Aravind Eye Care System is trying to solve the problem of avoidable blindness in India. Aravind’s non-profit network of hospitals, research centers and eye banks is not dependent on donors, and its efficiency allows paying patients to subsidize patients who are unable to pay with a sliding scale. Every doctor works at all of the various clinics to ensure that the quality of care is consistent. Since its founding in 1976, Aravind has performed about 4 million eye surgeries and treated nearly 30 million patients. With a net profit of nearly 8 million USD in 2020, Aravind is the world’s most productive and largest eye care service group.

Source: http://www.aravind.org/Default.aspx
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AUTHORS

Dr. Hitendra Patel
Managing Director, IXL Center; Hult Professor of Innovation and Growth
Hitendra Patel is the Managing Director of the IXL Center. He helps Fortune 1000 companies identify and implement new growth engines while helping them build innovation capability. He has written all the cases for the Hult Prize and is on its advisory board. Previously, Hitendra worked at Monitor, ADL, and Motorola.

Ronald Jonash
Partner, IXL Center
At Arthur D. Little for 25 years, Ron led the effort to translate strategic planning methods to the institutional and non-profit sector as well as the effort to transition a technology innovation practice to a broader strategic innovation practice. Ron was also head of the Innovation practice at the Monitor Group for five years before launching the IXL Center and the Global Innovation Management Institute.

Kristen Anderson
Consultant, IXL Center
Kristen is a consultant with the IXL Center. Kristen has worked with the Hult Prize since 2010, when she was a student in London. In 2012, she wrote the case study with Habitat for Humanity. She specializes in corporate and MBA Management Consulting training. Kristen also provides coaching and training for innovation and business intelligence action projects around the world.

Julius Bautista
Consultant, IXL Center
Julius works on product development and research efforts at the IXL Center. He has contributed to the development of white papers, articles and books around the topic of innovation. Additionally, Julius co-wrote the One Laptop per Child (OLPC) case used by Hult Prize for the 2012 challenge. He is also a mentor at the Hult Innovation Olympics helping MBA students generate breakthrough ideas for OLPC to educate more children in developing countries.

RESEARCH TEAM

Lydia Baluchova
Research Associate, IXL Center
Lydia is a research associate at the IXL Center. Prior to IXL Center, she was working as a lawyer in the private and public sector in Slovakia. Lydia completed her legal studies in Greece and Slovakia and also has an LL.M in International Business Law from Central European University in Hungary.

Karla Gomes
Consultant, IXL Center
Karla has more than four years of consulting experience working in Strategy and Organization (S&O) related projects where she worked with public and private sector clients for various industries such as energy, finance and construction, among others.

Shinhee Kim
Associate Consultant, IXL Center
Shinhee is an Associate Consultant at the IXL Center. Prior to IXL Center, she worked as a HR manager and research associate for various companies in South Korea. Shinhee is a MBA candidate at Suffolk University and she has a B.A. from University of Ulsan, South Korea.

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Pamela McNamara, Principal, IXL Center
Steve Andrews, CEO, Solar Aid
Joan Bragar EdD, Leadership Consultant, Boston Leadership
Grace Garey, Marketing, Watsi
Akansha Hazar, CEO and Founder, mPaani
Dr. Isabel Martinez del Rio, Dietitian/Nutritionist, Hospital St. Angelin Chapultepec
Dr. Kishor Misty MD PhD, Managing Trustee, Koshish-Milap Trust
Jennifer Norman, Director of Public Health Mercy Corps
Dr. Miguel Angel Santos, Henrique Capriles Presidential Campaign Public Policy Team, Harvard Kennedy School of Government
Greg Scarborough, Senior Advisor on Nutrition & Food Security, Mercy Corps
Dr. Ricardo Villasmil, Head of Public Policy, Henrique Capriles Presidential Campaign, Harvard Kennedy School of Government
David Peters MDDPH MPH, Professor, Chair, Department of International Health, Johns Hopkins Bloomberg School of Public Health
Michael B. Bracken PhD, MPH, FACE, Professor of Epidemiology (Chronic Diseases), Yale School of Public Health
Darrel J. Irvine PhD, Professor of Biological Engineering and Materials Science, David H Koch Institute for Cancer Research, MIT
Minister Rim Chemin, Ministry of Health and Welfare, Republic of Korea
Lucie Blouin B.Sc. ND CN MTH, Functional medicine member and International speaker

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Selected Reference Sites and Sources


Improving Chronic Disease Care in Slums by 2019


56 ibid.


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The Center for Innovation, Excellence and Leadership’s vision is to Make Innovation Management a critical business discipline in corporations and business schools around the world. Its mission is to help corporations and individuals develop world-class innovation management capability while driving significant business impact. IXL Center delivers this through Training, Coaching and Advisory services to create innovation breakthroughs and to build the innovation capabilities of individuals, teams and organizations. Clients achieve bigger, bolder, better results more quickly and cost effectively though blended learning and action learning programs and collaborative research projects. IXL Center is a global community of innovation thought leaders and practitioners with offices in Bolzano, Boston, Dubai, London, San Francisco, Shanghai, São Paulo and Seoul. Learn more about us at http://www.ixl-center.com.

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Ibid.


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