



The No Empty Shelves project: PATH and Novo Nordisk

The global noncommunicable disease crisis and the need for equitable access to affordable treatment and care



EXECUTIVE SUMMARY

Once considered a health issue primarily affecting affluent nations, noncommunicable diseases (NCDs) such as diabetes, cardiovascular disease, cancer, and chronic respiratory ailments are now the world's leading cause of sickness and death. Yet in low- and middle-income countries—where three-quarters of all deaths from these diseases occur—medicines and technologies to diagnose, treat, and prevent NCDs are often unavailable or unaffordable.

In 2014, PATH launched the No Empty Shelves: Diabetes Supplies, There When Needed project in partnership with Novo Nordisk. The goals: to improve understanding of issues that limit access to drugs and technologies in resource-poor communities, to raise awareness of the impact of NCDs on those communities, and to lay the foundation for a global network of organizations committed to improving the treatment and prevention of diabetes and other NCDs.

Our research found that diabetes medicines and supplies are rarely available in most public or private health care facilities in low- and middle-income countries. Even when they are available, the cost is often prohibitively expensive.

A global call to action to improve the availability of NCD drugs and technologies has drawn support from dozens of global organizations.

THE PARTNERSHIP

PATH is at the forefront of global health innovation. An international nonprofit organization, PATH uses our entrepreneurial insight, scientific and public health expertise, and passion for health equity to mobilize partners around the world to help countries in Africa and Asia tackle their greatest health needs. Because NCDs now place an enormous burden on communities and families in resource-poor settings, PATH has made it a priority to reduce preventable morbidity and mortality through cross-sector partnerships that use scalable innovation and technology to increase access to NCD prevention and care.

Novo Nordisk has been a world leader in diabetes research and innovation since it was founded in 1923. As the leading manufacturer of insulin, Novo Nordisk is committed to financial, environmental, and social responsibility, an approach the company calls its Triple Bottom Line business principle. The No Empty Shelves project is tightly aligned with this core principle. The project complements Novo Nordisk's existing initiatives, including Early Origins of Health and Changing Diabetes in Children, which aim to improve access to diabetes care for women and children in resource-poor communities.

THE NEED

Dramatic progress over the past 25 years in the global effort to reduce infectious diseases—including malaria, tuberculosis, HIV/AIDS, and polio—has driven unprecedented improvements in health around the world. But the rapid emergence of NCDs as a serious health issue in low- and middle-income countries threatens to undermine the remarkable gains that have been made as those countries struggle under the daunting double burden of infectious and chronic diseases.

Almost half of diabetes cases in low-resource settings are undiagnosed or inadequately managed because people do not have access to affordable treatment and care.



PATH/Julie Jacobson

"Diabetes represents a significant portion of the expanding noncommunicable disease health crisis—one that does not recognize geographic borders and disproportionately affects low- and middle-income countries."

LARS SORENSEN

President and Chief Executive Officer
Novo Nordisk

The impact in resource-poor communities and nations can be staggering. For example, 75 percent of the nearly 400 million people living with diabetes today can be found in low- and middle-income nations. The prevalence of the disease is expected to rise significantly in coming years. The sharpest increase is likely to come in Africa, where an increase of more than 100 percent over the next 20 years is predicted.

Yet almost half of diabetes cases in low- and middle-income countries are undiagnosed or inadequately managed because of the high cost and inaccessibility of essential medicines and technologies to detect, treat, and monitor the disease. In Africa, for example, two-thirds of diabetes cases are thought to be undiagnosed.

The resulting disabilities and inability to work, combined with the cost of treatment, drain household savings and dampen economic development. NCDs already force more than 100 million people in low-resource communities into poverty every year. The emergence of NCDs also places

a huge strain on health care systems that are designed to deal with acute infectious diseases but often lack the resources and expertise to treat chronic diseases.

Recognizing that it will take a coordinated global effort to address the crisis, the World Health Organization (WHO) issued a Global Action Plan for the Prevention and Control of Noncommunicable Diseases. The plan includes a goal of reducing premature deaths from NCDs by 25 percent and a target of 80 percent availability for affordable essential medicines and technologies to treat NCDs by 2025.

While it's clear that we are a long way from achieving the 80 percent availability target—a prerequisite for reaching the goal—we know too little about the factors that limit access and drive up costs to improve access at the rate that will be required.

THE STRATEGY

The No Empty Shelves project grew out of PATH's commitment to addressing NCDs. PATH's approach includes accelerating the development of promising technologies and innovative approaches, advocating for increased global attention, integrating prevention and care into local health care systems, and increasing the availability of essential medicines, diagnostics, and technologies.

No Empty Shelves was launched to develop a strong, evidence-based understanding of the current state of access to medicines and technologies for diabetes, as well

as the barriers to greater availability of affordable solutions. The goal is to inform efforts to solve supply chain and affordability issues, strengthen health systems so they can respond to the increasing prevalence of diabetes, and adapt treatments and diagnostic tools that were developed for use in affluent communities to the needs of low-resource settings.

In 2014, PATH approached Novo Nordisk seeking support for No Empty Shelves. Because of the match between the goals of No Empty Shelves and the company's focus on expanding affordable access to diabetes care, Novo Nordisk committed to work in partnership with PATH and fund the first phase of the project, which launched in July 2014. The work is guided by technical advisory committees consisting of global and national leaders in diabetes and supply chain management that are managed by PATH.

The project team conducted research to gather evidence on the availability of 22 essential medicines and technologies for managing diabetes and monitoring and screening for diabetes-related complications. Given the limited data available, the research was augmented by more than two dozen stakeholder interviews.

In September 2015, PATH published *Diabetes Supplies: Are They There When Needed?*, a report detailing the results. The report was released at the 2015 United Nations General Assembly, and the project team has presented the report at several global forums, including the Global Health Supply Chain Summit and the World Diabetes Congress.

PATH also worked in collaboration with the ministries of health in Kenya and Senegal to conduct comprehensive assessments of the supply chain for diabetes medicines and treatments in those two countries.

THE RESULTS

The global landscape report highlights the challenges and outlines strategies used in other health areas that could be applied to NCDs. Medicines and supplies for diabetes are rarely available in 80 percent of public and private health



Diabetes medicines and supplies are rarely available in 80 percent of the public and private health care facilities in low-resource countries.

care facilities in low- and middle-income countries. Even at facilities that offer diabetes diagnosis or treatment, the availability of supplies is limited.

When medicines and supplies are available, the costs are often prohibitive. In Ghana, a 30-day supply of drugs and equipment costs an average of 15 days' wages.

"In many countries, the essential medicines and tools needed to treat chronic diseases like diabetes simply aren't getting to the people who need them. Working with our partners to intercept NCDs early on is a clear priority for us."

STEVE DAVIS
President and CEO
PATH

The study also found wide-ranging disparities in access to diabetes care across and within countries, with availability generally higher in urban areas and lowest at the primary care level—a fundamental problem because primary care facilities are accessible to more people.

In general, essential medicines and treatments for diabetes are far less available than medicines for acute disease, with the greatest disparities found in the lowest-income countries, particularly in Africa.

The No Empty Shelves research identified three main barriers to more widespread, affordable access to diabetes treatment and care:

- **Financing:** Although NCDs are the leading cause of global mortality, only 1.2 percent of global development assistance for health is devoted to NCD-related interventions. This means the majority of spending for NCD services and procurement comes from government budgets that are already stretched thin by a wide range of competing health priorities.

- **Health systems:** Low- and middle-income health systems created to address acute infectious diseases have been slow to adapt to the changing nature of the disease burden in their countries and often lack the capacity and expertise needed to provide diagnosis, treatment, and ongoing care for NCDs.
- **Supply chains:** Forecasting and supply planning for diabetes medicines and technologies is severely hampered by a lack of data collection, and procurement capacity in low- and middle-income countries needs to be strengthened. To improve affordability, more effective negotiation of prices and limits on markups along the supply chain are needed.

The report's findings provided the foundation for a call to action for coordinated global engagement to improve the availability of essential medicines and technologies for diabetes and other NCDs. The call to action was launched in December 2015, and more than 100 organizations have expressed support to date, including some of the world's leading pharmaceutical companies, research institutions, global health nonprofits, and advocacy organizations focused on NCDs.

THE FUTURE

Phase I of the No Empty Shelves project provided a deeper understanding of the issues limiting the availability of affordable supplies for diabetes treatment and care. It made clear that a broad, multisector approach is needed to ensure that people living with diabetes in poor and remote settings have equitable access to high-quality medicines and technologies.

In phase II, PATH proposes to meet three critical objectives:

- **Strengthen the global evidence base on the availability and affordability of essential medicines and technologies for diabetes.** We will identify interventions to address factors that limit availability of affordable diabetes treatment. This work will include demonstration projects in Kenya and Senegal to study the impact of proposed solutions on availability, price, and affordability.

PATH/Cabe Biencyidi



PATH and Novo Nordisk are engaging the international community in a call to action to address barriers that keep people from having access to essential medicines and technologies for chronic diseases.

- **Raise awareness of major barriers to the availability of diabetes medicines and technologies.** To support national efforts to tackle the rise of NCDs, we will publicize the findings of the No Empty Shelves report and the results of the studies in Kenya and Senegal at the national and local levels. To increase worldwide focus on this critical issue, we will share what we have learned at global and regional conferences and in partnership with organizations focused on public health supply chain management and security.
- **Establish a network committed to taking action to increase the availability of affordable medicines and technologies.** We will convene global forums to raise the profile of this issue and take advantage of existing regional meetings to bring African countries together to identify solutions. PATH and Novo Nordisk will also continue to drive engagement with and commitment to the call to action.

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Cover photo: PATH/Matthew Dakin



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PATH is the leader in global health innovation. An international nonprofit organization, we save lives and improve health, especially among women and children. We accelerate innovation across five platforms—vaccines, drugs, diagnostics, devices, and system and service innovations—that harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity. By mobilizing partners around the world, we take innovation to scale, working alongside countries primarily in Africa and Asia to tackle their greatest health needs. Together, we deliver measurable results that disrupt the cycle of poor health. Learn more at www.path.org.

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