5. The Current Medicine System Neglects Many Major Diseases

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As we have seen in chapter 3, thousands of people died from Ebola because our current medicines system ignored the health needs of the low-income patients who faced the risk of that epidemic. The Ebola tragedy is just one indicator of the flaw lying at the heart of our medicine development process. For pharmaceutical corporations, the pot at the end of the research rainbow is filled with gold only if the discovered medicine can be sold at high prices to patients or their government health care systems.

Inevitably, this arrangement means that pharmaceutical corporations devote their research almost exclusively to medicines that will be consumed by the comparatively wealthy. Researchers Adam Mannan and Alan Story have pointed out that the corporate marketing dollars spent to promote any one of the current high-profile erectile dysfunction drugs far exceed the global investment in developing a vaccine for dengue fever, which poses a risk to 40 percent of the world’s population. And little wonder, given the for-profit foundation of the current system: within a day of the introduction of the erectile dysfunction drug Viagra, the stock price of Pfizer, its patent-holder, doubled.
In global health discussions, the term used for killers such as dengue fever, along with elephantiasis, sleeping sickness, river blindness, and others, is *neglected diseases*. These diseases have a ferocious impact: one of every six people in the world, including a half billion children, suffer from neglected diseases. And the moniker *neglected* is well deserved; these diseases represent barely a blip on the radar screen of medicine research and development. Only 4 percent of new medicines registered during the years 2000–2011 were for neglected diseases, and in 2010, only about 1 percent of research and development dollars was directed at neglected diseases. This is not a new phenomenon. An oft-cited analysis reported in the British medical journal *The Lancet* found that, of 1,556 new chemical entities marketed between 1975 and 2004, only 21 were for tropical diseases and tuberculosis.

In contrast, pharmaceutical industry research on hair-loss treatments is going strong, and new medicines to reduce facial wrinkles and to thicken eyelashes are rushed to market. The disparity is so stark that it long ago earned its own name—the 10/90 Problem—reflecting the approximation that only 10 percent of research and development goes into creating medicines for diseases that affect 90 percent of the world’s population.

A particularly disturbing example of the 10/90 problem is provided by the case of tuberculosis (TB), one of the deadliest diseases in the world. More than 9 million people develop TB each year, and 1.6 million die from it annually. Yet over the past half-century, only two new medicines have been developed to treat TB, and an increasing number of patients have TB that is resistant to the decades-old medicines that are the predominant form of treatment. Like the Ebola vaccine, promising treatments sit undeveloped because TB mostly affects the global poor.

The situation is not improving. Although there are philanthropic and government investments in TB research, major pharmaceutical corporations continue to walk away from the crisis. In 2014, for example, AstraZeneca closed a major research laboratory in India devoted to TB and other neglected diseases, announcing a renewed focus on medicines for cancer, high blood pressure, and other diseases that affect people in the developed world. That same year, Pfizer cancelled plans for a TB medicine clinical trial in South Africa. The *Financial Times* identified these decisions as evidence of a “gloomy outlook” for privately funded research and development for TB drugs. “TB is particularly unattractive
as a commercial proposition because [it] is heavily concentrated among the indigent in poorer countries,” the newspaper article concluded.14

A similar lack of commercial appeal has stunted research for new antibiotics to respond to drug-resistant bacteria, which kill 700,000 people globally each year. In the case of drugs to address microbial resistance, the relatively short length of treatment needed has convinced for-profit pharmaceutical companies that the medicine would not be profitable.15 Reflecting on the problems in addressing the spread of tuberculosis, antimicrobial resistance, and other health emergencies, a commission of experts empaneled by the prestigious British medical journal The Lancet concluded in 2016 that the present system of drug development is “in crisis.”16

When pharmaceutical industry leaders speak candidly, they admit that all this is true. “We have no model which would meet the need for new drugs in a sustainable way,” former Novartis CEO Daniel Vasella, said in 2006. “You can’t expect for-profit organizations to do this in a large scale. If you want to establish a system where companies systematically invest in this kind of area [low-cost medicines for developing-countries], you need a different system.”17

While these global health crises rage on unaddressed, the pharmaceutical industry stays laser focused on the needs of its wealthiest customers. That focus is demonstrated by a remarkable fact: nearly three of every four “new” medicines developed in recent decades are not new at all. Analyses of U.S. and French medicine development in recent decades show that over 70 percent of the medicines newly approved offer no therapeutic benefits over existing medicines.18 Instead, the same pharmaceutical corporations that are ignoring the unprofitable diseases of the poor have devoted enormous resources to produce copycat drugs, also called “me-too” drugs, that allow them to carve out a piece of the blockbuster markets for high-end customers.19

One of many examples of the “me-too” phenomenon is cholesterol-reducing drugs. The United States currently has seven statins on the market to lower cholesterol, all essentially identical to the original version that was approved more than a quarter century ago.20 Drug companies sometimes even copy themselves, creating their own version of a “me-too” drug when the patent is set to expire on the original blockbuster medicine. As the original drug is going off patent, the companies roll out a new but
very similar drug and use heavy advertising to physicians and the public to move them off the older medicine, which soon will face generic competition. AstraZeneca did this, pushing the heartburn drug Nexium in place of the older Prilosec; Shering-Ploug did it, promoting Clarinex over its patent-expiring allergy drug Claritin; and Eli Lilly did it, pushing Sarafem over the antidepressant Prozac.21

These approaches come as no surprise. As Dr. Chan said when describing the Ebola tragedy, a medicine system based on maximizing profits creates no incentive to address the needs of the global poor, no matter how many millions of people are dying. That grim fact has been quietly acknowledged by pharmaceutical corporations for decades. On occasion, the truth is even admitted in a public setting. In a 2013 conference on the pharmaceutical industry, Marijn Dekkers, Bayer CEO, was asked about the status of one of the company cancer medicines in India. Dekkers responded with revealing candor: “We did not develop this product for the Indian market, let’s be honest. We developed this product for Western patients who can afford this product, quite honestly.”22