PREFACE

Pandemics, Wall Street, and the Value Playbook

In late June 2020, as COVID-19 exacted a devastating human toll across the world, we got our first glimpse into a critical question: how might drug companies price new treatments for a global pandemic? With significant investments from the US government, the pharmaceutical company Gilead Sciences attempted to show that a drug called remdesivir could help treat COVID-19. As an antiviral drug, remdesivir offered none of the immunity of a vaccine, but a clinical trial led by the National Institutes of Health suggested that it could lead to quicker resolution of symptoms and a reduction of hospitalization days (from 15 to 11). Whether it actually saved lives—or in clinical parlance, offered a mortality benefit—appeared doubtful at best.[1]

That same month, I was completing my internship year as a physician at Boston Medical Center, a safety-net hospital that had become an epicenter for COVID-19 care and treatment. With few treatment options at the time besides oxygen and watchful waiting, remdesivir offered a small glimmer of hope. But beyond its potential clinical significance, the treatment also carried important economic implications. Experts estimated the treatment cost $10 to manufacture, but Gilead's patents over remdesivir gave it monopoly power over the price.[2] As the first major drug to be approved to fight COVID-19, remdesivir's price was closely anticipated, both for its cost to health systems but also for the ways drug companies and governments might deal with paying for the future health technologies needed to effectively confront the pandemic.

After weeks of speculation, Gilead announced its pricing: $2,340 for a five-day course for developed-country governments, including the US Veterans Affairs and Indian Health Service systems, and $3,120 for Medicare and Medicaid as well as all US private insurers.[3] The prices immediately drew consternation for being too high—and too low. The consumer watchdog group Public Citizen called the price "offensive" for a drug "that should be in the public domain," citing US public investment of at least $70.5 million in the riskiest development stages for remdesivir, along with over $700 million in publicly financed coronavirus research since the SARS outbreak.[4] By this view, the US government was also implicated in this pricing outcome for failing to use its public power to safeguard the value it had helped create through its own investments. Given the large patient population that could require COVID-19 treatments, this pricing was expected to yield a huge financial windfall for Gilead while causing new budgetary challenges for health systems. In referring to Gilead, Peter Bach, a health policy expert at Memorial Sloan Kettering, remarked, "This is entirely predictable. . . . They take the highest number anybody has floated, they cut down a bit from there, and they say now they're the good guys."[5]

Indeed, in an open letter explaining the pricing, Gilead's CEO, Daniel O'Day, wrote, "We believe that pricing remdesivir well *below* value is the right and responsible thing to do" (italics added).[6] But how was O'Day conceiving of value? From his perspective, value was the savings the drug offered health systems by shortening hospitalizations. By Gilead's math, the potential average savings amounted to $12,000 per patient, making the drug's price good "value for money." Conveniently, the strategy also allowed Gilead to forecast nearly $3 billion in revenues just for remdesivir by the end of 2020—in the thick of a grim pandemic year.[7]

Yet some on Wall Street felt Gilead *undersold* the treatment's value. Geoffrey Porges, an analyst with the SVB investment bank, argued for $5,000. And even that, Porges said, would be underselling remdesivir, because it "ignores the enormous societal value that everybody else gets from making a patient less infectious, for getting a patient back into the community, for getting them back to work sooner. . . . All of those societal benefits aren't even considered in this price."[8] His view begged the question: could any price be too high for a drug or treatment amid a pandemic? Curiously, some policy thinkers seemed to think that any effort to curb prices would be dangerous. In a *Washington Post* editorial headlined "Beware of Underpriced Drugs for Covid-19 Treatments," economist Craig Garthwaite argued that failing to pay *higher* prices for treatments like remdesivir would mean calamity: "Said plainly, we must convince biotechnology firms that we will pay for the value they create. . . . Come in too low, and the long-term cost may be high, both in dollars and lives."[9] Higher prices, by this argument, were not only a reflection of the value of new and better treatments, but also the only route to their discovery and development.

I was finishing my first draft of this book just as the pandemic gained steam in the spring of 2020. Though my book was about a different infectious epidemic,

hepatitis C, the arguments over "value" felt disconcertingly familiar. In the years prior to my residency training, I had researched and published on Gilead's new curative treatments for hepatitis C, which had triggered a political firestorm with launch prices north of $80,000 per course.[10] In investigating the politics and the financial model underlying their development, I heard similar claims regarding drug pricing and value from Gilead, its allies, and even many policy experts. Better health, they argued, would only be possible if we were willing to pay more for a better treatment. These claims were being made even as access to treatment was restricted and deferred for millions of patients with hepatitis C around the world, disproportionately harming marginalized patients—low-income people and racial minorities, people who inject drugs, and those currently or formerly incarcerated. Now, even amid a global pandemic, echoes of this playbook seemed to be unfolding—a dynamic that, as I describe in the concluding chapter, would grow even more stark with the failure to equitably deploy vaccines for COVID-19.

Though the scale and severity of the COVID-19 pandemic challenged any contemporary comparison, my research into hepatitis C had helped identify an underappreciated yet shared culprit for unprecedented prices and unequal access to medical technology: the growing reach of finance into how we value health and determine who heals and who suffers. This book takes us into the development of curative medicines for hepatitis C and the ensuing struggle over treatment access to illustrate what happens when medicines become financial assets controlled by shareholders in speculative markets. Drawing on scholarship in sociology and political economy, historical research into scientific and business developments, and rarely analyzed corporate documents and earnings-call transcripts, the book illustrates the pivotal decisions and financial actors that shaped the price of these medicines. Rather than taking high drug prices and inequities in access as a natural outcome, we will see how "financialized" drug development has been socially constituted, and also how this economic calculus faces resistance and contestation from people striving for innovation that better meets patient and public health needs.

In a June 2020 note to Wall Street amid Gilead's pricing moves, Geoffrey Porges harkened back to World War II, quoting then US secretary of war Henry Stimson: "If you are going to try to go to war, or prepare for war in a capitalist country, you have to let business make money out of the process or business won't work."[11] Yet this historical allusion falls flat precisely because it is ahistorical—failing to consider, for example, the major government-led mobilization behind the mass production of penicillin in World War II, the large-scale public investments in COVID-19 biomedical research, or the major changes in how contemporary pharmaceutical businesses make money. In contrast, this book's social and historical analysis reveals the distinctive *kind* of capitalism practiced today by pharmaceutical businesses and its profound and morally troubling consequences for patients and society—a set of realities that the leaders of the World War II era might have found deeply unfamiliar and concerning.