FIGURE 5.3. A demonstration organized by the Treatment Action Campaign at the 2000 International AIDS Conference in Durban, South Africa. Courtesy Gideon Mendel/CORBIS.

retroviral drugs, including a successful campaign to get Pennsylvania Medicaid—government insurance for the poor—to cover antiretroviral drug costs. Realizing the links between their own campaigns for access and the growing treatment gap between the rich and poor worlds, these groups established transnational alliances with AIDS activists in developing countries.[41] For example, the Health Global Action Project (Health GAP) and ACT UP joined forces with a South African civil society group, made up largely of poor people living with HIV/AIDS, called the Treatment Action Campaign (see figure 5.3). Together, these organizations led a worldwide campaign to lower the costs of antiretroviral drugs in poor countries.

UNPACKING THE "COST" OF AIDS TREATMENT: INTELLECTUAL PROPERTY AND CIVIL SOCIETY

Intellectual property rights lay at the heart of the first transnational battle for expanded access to antiretrovirals. In the mid-1990s, public laboratories and privately owned companies in Brazil began producing generic versions of patented ARV (antiretroviral) medications; Brazil also imported generic antiretrovirals from suppliers in India.

These actions precipitated a 70 percent drop in Brazil's domestic price of HAART by 2001.[42] Some countries attempted to emulate Brazil's strategy by passing legislation that permitted generic production of certain patented drug formulations.[43] In late 1997, South Africa's parliament approved the Medicines Act, which stipulated that in the case of a national health emergency, the government could allow both compulsory licensing (generic production of patented antiretroviral medicines without the permission of the patent holder, who would, however, be paid an appropriate royalty) and parallel importation (importation of these drugs from countries where they are sold at lower prices). These measures aimed to lower prices for antiretroviral therapy in South Africa, where, in 2000, only an estimated 1 percent of the half million South Africans in need of antiretrovirals received them.[44]

Thirty-nine pharmaceutical companies, alarmed by the prospect of losing the exclusive rights guaranteed by their patents, filed suit in South African courts in 1998 to overturn the Medicines Act. These companies argued that the legislation undermined the notion of intellectual property, thereby weakening incentives for innovation and decreasing funds for pharmaceutical research and development. Advocates of the law, including AIDS activists in the United States and South Africa, pointed out that brand-name pharmaceutical companies in the United States derived only 5 to 7 percent of their profits from low- and middle-income countries.[45] They argued further that branded antiretroviral prices far exceeded outlays for production, research, and development, contending that companies set ARV prices high to increase profits at the margins.

Initially, the Clinton administration sided with the pharmaceutical companies. Vice President Al Gore, who served with Deputy Prime Minister Thabo Mbeki of South Africa as co-chairs of a bilateral commission to promote democracy in South Africa, used the forum to express the U.S. government's opposition to the Medicines Act. When President Nelson Mandela and the South African legislature remained unmoved, Charlene Barshefsky, President Clinton's U.S. trade representative, placed South Africa on a "priority watch list"—a diplomatic precursor to trade sanctions—in March 1999, citing the Medicines Act as South Africa's major transgression. In Barshefsky's words, the passage of the Medicines Act merited this response because it could "abrogate patent rights."[46]

American AIDS activists and members of the Congressional Black Caucus called on the Clinton administration to stop pressuring South

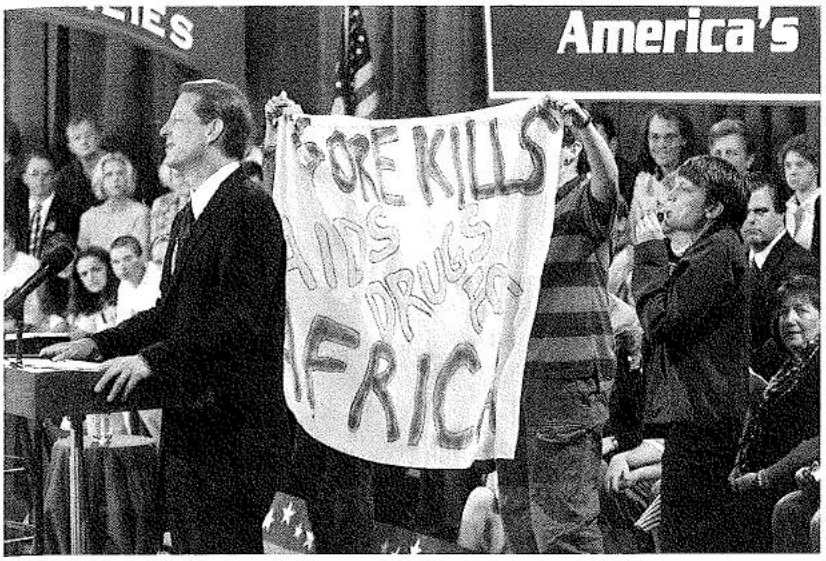

FIGURE 5.4. Activists interrupted the first three events of Vice President Al Gore's presidential campaign in 1999, before the 2000 election. Within a year, President Bill Clinton issued an executive order meeting the activists' demands that the United States not interfere with South Africa's generic licensing policies for lifesaving medications. Courtesy Luke Frazza/AFP/Getty Images.

Africa to repeal the Medicines Act. Members of what would become Health GAP targeted Gore's presidential campaign rallies (see figure 5.4). As he announced his candidacy on June 16, 1999, in a carefully choreographed event in Carthage, Tennessee, activists interrupted his speech with whistles, banners, and chants of "Gore's greed kills! AIDS drugs for Africa!"[47] In the ensuing days, similarly disruptive protests took place at other campaign events, lending the bilateral dispute prominence in the U.S. press.

Soon after these protests, the political winds shifted decidedly against the pharmaceutical lobby. In September 1999, just three months after the Carthage demonstration, Barshefsky announced the Clinton administration's support for the Medicines Act. In December, Clinton announced that the United States would not pressure any sub-Saharan African country into purchasing brand-name AIDS drugs and would support parallel importation or generic production as a means to lower prices.[48]

By April 2001, all thirty-nine pharmaceutical companies had withdrawn their lawsuits.[49] Later that year, the Doha Declaration, adopted

University Students and Access to Medicines: Yale and d4t

Although deprived of political support after President Clinton publicly backed South Africa's Medicines Act in 1999, the thirty-nine pharmaceutical companies continued to sue the South African government in an effort to overturn the Medicines Act and retain their exclusive patents. In opposition, Amy Kapczynski, a first-year Yale University law student who had recently returned from the Durban International AIDS Conference, helped launch a campaign to improve treatment access by leveraging Yale's intellectual property rights.[1]

In the mid-1980s, a team of researchers led by Yale's William Prusoff had detected the potency of d4t, an antiretroviral also known as stavudine, against HIV; and Yale secured a patent for the discovery. In 1988, Yale issued an exclusive license to Bristol-Meyers Squibb (BMS) to produce and sell d4t. By 1999, this license alone accounted for approximately $40 million of the $46.12 million that the university collected in royalties. As it became a mainstay in first-line HAART regimens, d4t garnered $578 million in sales for BMS in 2000. In 2001, d4t (sold by BMS under the brand name Zerit) cost nearly $1,600 per patient per year in South Africa, a nation with a per capita GDP of approximately $3,000. BMS, one of the parties to the suit challenging South Africa's Medicines Act, was strongly opposed to generic production or importation of d4t in South Africa.[2]

In 2001, Amy Kapczynski and her classmates, working alongside Médecins Sans Frontières (MSF), demanded that Yale renegotiate its license for d4t with BMS and that the university "issue a voluntary license to allow the importation and use of generic stavudine in South Africa."[3] Yale initially denied this request, explaining that it had granted exclusive rights to the company and that only BMS could renegotiate the license.[4] MSF responded that Yale should breach its contract to ensure that d4t could reach poor patients unable to afford Zerit's high price. The students protested and gathered petition signatures (drawing media attention in the process) and convinced Prusoff to pen a *New York Times* op-ed arguing that "d4t should be either cheap or free in sub-Saharan Africa."[5] Within one month of MSF's original request, Yale and BMS announced that they would permit the sale of generic d4t in South Africa.[6] In June 2001, BMS signed an "agreement not to sue" with Aspen Pharmacare, a generic manufacturer in South Africa. The price of d4t in South Africa subsequently dropped by 96 percent.[7]

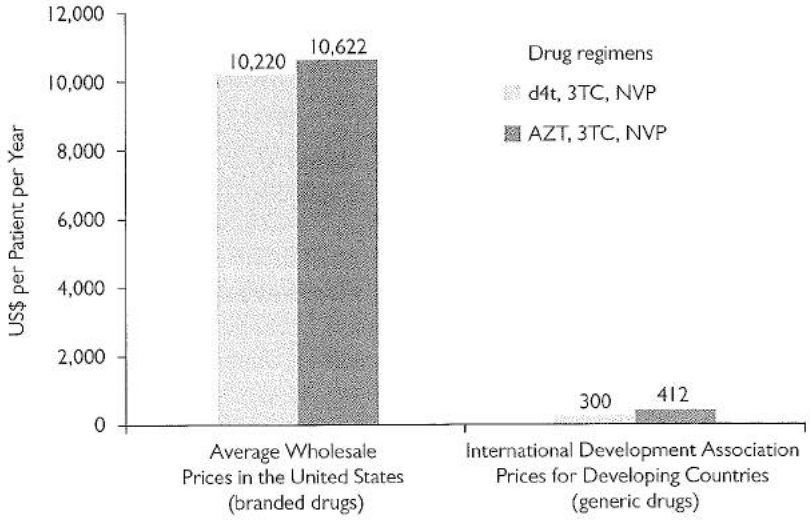

FIGURE 5.5. Prices of first-line HIV/AIDS drug regimens, branded versus generic, 2002. Sources: Internal Partners In Health data and Médecins Sans Frontières.

at a ministerial meeting of the World Trade Organization (WTO), reaffirmed that the 1995 international agreement on intellectual property protections, known as TRIPs, "does not and should not prevent Members from taking measures to protect public health." The agreement recognized the right of each WTO member "to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted."[50] In other words, the world's most powerful states had agreed, for the moment at least, that access to medicines could, in certain instances, trump patent protections.

This nascent international political and legal consensus opened the door to generic production of patented HIV drugs for poor countries. Realizing this opportunity, the William J. Clinton Foundation—established in 2001 after President Clinton left the White House—and other institutions sought rapid reductions in treatment costs. Beginning in 2002, the Clinton Foundation's HIV/AIDS Initiative worked to generate demand, securing agreements from the governments of developing countries to place large orders of generic antiretrovirals at specified prices. Generic producers in India and South Africa, in turn, agreed to alter their business models, producing higher volumes and improving production processes to lower unit costs, while seeking smaller mar-

gins per pill sold. By harnessing newfound economies of scale, generic producers of antiretrovirals realized higher profits (after suffering some anticipated losses in the short term), while purchasers secured substantial price reductions.[51] The lowest available annual per-patient price of the most common first-line HAART regimen in the developing world fell from $10,000–$15,000 in the late 1990s to $300 in 2002 and to $87 in 2007. Figure 5.5 contrasts the 2002 costs of branded drugs in the United States with the costs of generic drugs in developing countries.[52]

This precipitous decrease in drug prices created new opportunities to scale up AIDS treatment programs globally. Yet another hurdle remained—the lack of dedicated funding for implementation in poor countries.

STRANGE BEDFELLOWS IN THE FIGHT FOR FUNDING

With growing consensus that antiretroviral therapy could be delivered effectively and affordably in resource-poor settings, advocates continued calling for increased funding for global AIDS treatment programs. The World Health Organization's Commission on Macroeconomics and Health, chaired by economist Jeffrey Sachs, published a report in 2001 providing evidence that improved health outcomes could boost economic growth. (The economic effects of health programs are difficult to capture in metrics used to formulate development policy.) The report also suggested that donor dollars had an important role to play in fostering the virtuous cycle of growth and health improvements in poor countries.[53]

Earlier that year, Sachs and Harvard colleague Amir Attaran had published an article in *The Lancet* proposing a practical application of these findings: a new funding stream dedicated to controlling the world's greatest infectious killers. Funded by increased foreign aid commitments from rich nations, this new body would use a competitive and transparent process to distribute grants, rather than loans, to health projects in developing countries. Grants would be "directed toward funding projects which are proposed and desired by the affected countries themselves, and which are judged as having epidemiological merit against the pandemic by a panel of independent scientific experts."[54] UN Secretary-General Kofi Annan vocally endorsed the plan, and leaders of the developed world launched the Global Fund to Fight AIDS, Tuberculosis and Malaria at the G8 Summit in Genoa, Italy, in 2001. In 2002, the fund made its first disbursements.[55]

In rich countries, the political capital of global health increased rapidly in the early 2000s. In 2001, students at Harvard's undergraduate campus and the Kennedy School of Government jointly founded the Student Global AIDS Campaign, an advocacy group that by 2004 boasted more than eighty chapters at colleges and universities across the country.[56] A number of global AIDS advocacy organizations soon established a presence in Washington, including the Health Global Access Project (June 1999), the Global AIDS Alliance (March 2001), Prescription for Hope (2002), and DATA (Debt, AIDS, Trade, Africa) (2002). Once established, the AIDS lobby—made up of conservative evangelical Christians, college students, gay rights activists, African Americans, and people living with AIDS—began exerting significant pressure on the federal appropriations process.

The AIDS movement also drew considerable support from opinion leaders and celebrities. Franklin Graham, founder of the Christian charity Samaritan's Purse and son of the renowned evangelist Billy Graham, helped convince Senator Jesse Helms that AIDS afflicted the "blameless" just as often as it afflicted homosexuals, whom Helms judged to be immoral.[57] Helms, chair of the Senate Committee on Foreign Relations, noted that Graham was the first to explain to him the toll taken on "innocent victims of this sexually transmitted disease"—the millions of children who had either contracted the infection from their mothers or been orphaned by the death of a parent.[58] Bono, lead singer of the Irish rock band U2, who had already played a key role in the Jubilee 2000 campaign advocating debt forgiveness for poor countries, emerged as a champion of worldwide AIDS efforts. In a meeting with Helms, he pointed out that the Bible mentions poverty in 2,103 verses, while it mentions sexual behavior in only a few.[59] Helms would repeat this observation in a press conference, and soon thereafter he would publicly apologize for not supporting AIDS care and treatment efforts in the past.[60] In late 2001, Helms joined his colleague William Frist (R-Tenn.) in sponsoring a $500 million initiative—which came to be known as the Helms Legacy Amendment—to prevent mother-to-child transmission of HIV in poor countries.

The most important convert was, in some ways, the least likely: President George W. Bush. During Bush's tenure as governor of Texas, his senior health advisor had observed that "the one thing Bush is really uncomfortable dealing with is AIDS" because of supposed links (much-discussed in conservative media) between the disease, homosexuality, and promiscuity.[61] During his 2000 presidential campaign, Bush told

FIGURE 5.6. Ugandan physician and AIDS expert Peter Mugyenyi attends President George W. Bush's 2003 State of the Union address as a special guest of First Lady Laura Bush. Dr. Mugyenyi's efforts to provide AIDS treatment and prevention services at the Joint Clinical Research Centre in Uganda helped convince President Bush to launch PEPFAR. Courtesy George W. Bush Presidential Library.

journalist Jim Lehrer that Africa "doesn't fit into the national strategic interests" of the United States and would therefore not figure prominently in his foreign policy agenda.[62]

But in January 2003, Bush reinvented himself as one of the great champions of global AIDS relief. During his State of the Union Address that year (see figure 5.6), he proposed a sweeping new international AIDS initiative:

> AIDS can be prevented. Antiretroviral drugs can extend life for many years. . . . Seldom has history offered a greater opportunity to do so much for so many. . . . To meet a severe and urgent crisis abroad, tonight I propose the Emergency Plan for AIDS Relief—a work of mercy beyond all current international efforts to help the people of Africa. . . . I ask the Congress to commit $15 billion over the next five years, including nearly $10 billion in new money, to turn the tide against AIDS in the most afflicted nations of Africa and the Caribbean.[63]

No one in Congress—Democrat or Republican—had formally proposed $3 billion in annual spending on global AIDS programs. Prodded by Bush's powerful proposal, both houses of Congress passed legisla-

tion in May 2003 authorizing the five-year $15 billion U.S. President's Emergency Plan for AIDS Relief.[64]

Spurred by the same forces—lower drug prices, growing evidence of treatment efficacy in resource-poor settings, grassroots activism, and advocacy by elites—other rich nations also increased their allocations to global AIDS programs. At the G8 summit in Gleneagles, Scotland, in 2005, leaders of rich countries pledged to double aid to Africa and to ensure "as close as possible to universal access to treatment for AIDS" by 2010.[65] UNAIDS reported that disbursements by the G8 and the

The Politics of Global AIDS Funding in the American Heartland

The nascent global AIDS lobby proved its clout in 2004, convincing a congressional committee chair to reverse a budgetary decision that could have decreased U.S. AIDS appropriations. In April 2004, as the House considered the fiscal year 2005 budget resolution, Representative Jim Nussle (R-Ind.), then chair of the House Budget Committee, proposed $3.6 billion less for the international affairs account than had been proposed by either the Senate Budget Committee or the president's budget.[1] Because the majority of global AIDS spending came from that account, AIDS activists worried that Nussle's proposal would lower the U.S. contribution to treatment and prevention programs abroad. In response, Student Global AIDS Campaign members at Luther College—Nussle's alma mater—petitioned the college president to revoke Nussle's forthcoming public service award and staged a protest at one of his town hall events. Meanwhile, advocacy groups such as DATA and the Global AIDS Alliance convinced sympathetic religious leaders in Nussle's district to express public disapproval of this funding shortfall. Lutheran bishop Phillip Hougen, one such leader, emphasized his congregation's ties to Tanzania, telling a reporter from *Roll Call:* "Iowans are somewhat more globally aware than people give them credit for."[2]

Faced with a surge of political pressure during an election year, Nussle relented.[3] In late May, he announced that he would request an additional $2.8 billion for the international affairs account when the budget resolution was negotiated in conference committee. Nussle spokesperson Sean Spicer acknowledged the influence of constituent activists: "He wanted to make sure they understood that he truly was supportive" of AIDS funding.[4] Global AIDS once again proved to be a political issue that could unite people across the ideological spectrum.

European Community for HIV/AIDS prevention, care, and treatment programs in the developing world rose from $1.2 billion in 2002 to $7.6 billion in 2009, though this figure fell to $6.9 billion in 2010. Leading public donors to global AIDS programs in 2010 were the United States ($3.7 billion), the United Kingdom ($0.9 billion), and the Netherlands, Germany, and France (each about $0.4 billion).[66]

In some cases, AIDS funding increases proved to be a beachhead for new resources for other global health priorities. For instance, the WHO estimates that international funding disbursements for malaria increased from $249 million in 2004 to $1.25 billion in 2008.[67] The second five-year iteration of PEPFAR, authorized by the U.S. government in mid-2008, established new goals to strengthen health infrastructure—recruiting and training (and retaining) 140,000 health care professionals and paraprofessionals in partner countries by 2013, for example—in addition to expanding AIDS treatment and prevention services.[68]

AFTER THE GOLDEN AGE

The first decade of the twenty-first century raised the bar in global health. The failures of imagination that had long been the status quo fell prey to evidence of effective health care delivery in resource-poor settings matched with bold visions of global health equity. Although some public health "experts" had declared lifesaving interventions such as antiretroviral treatment too complex or too expensive for resource-poor settings, pioneering programs proved otherwise. The costs of numerous preventatives, therapeutics, and diagnostics decreased significantly after transnational activism and innovative market coordination opened the door to generic production as well as new strategies for financing and procurement. Funding for global health increased to unprecedented levels; long socialized for scarcity, health practitioners and policymakers around the world were able to reimagine global health equity. By 2010, drug prices were lower and international funding levels were higher than almost anyone had thought possible a decade earlier.

Yet it is still a long road to "health for all." Although getting 6.6 million people on antiretroviral treatment is a feat that affirms the promise of global health and modern medicine, such progress must be sustained and expanded. Millions more are in need of antiretroviral treatment

around the world. In the wake of the worldwide economic downturn in 2008, many countries, including the United States, faltered on their foreign aid pledges.[69] Across the developing world, hospitals and clinics have had to turn away new AIDS patients.

This slowdown was especially poignant because it came on the heels of breakthrough evidence about AIDS treatment and prevention. In May 2011, a study funded by the National Institutes of Health found that antiretroviral treatment reduces the rate of transmission by 96 percent.[70] Put another way, treatment *is* prevention. For the first time in three decades, it became possible to imagine the "end of AIDS." Redoubled commitment to HIV-control initiatives around the world could slow (or even stop) the pandemic. Such an effort would demand not only increased funding but also better use of the dollars available. Much of PEPFAR's funding is distributed to contractors, including universities and NGOs, which are tasked with implementing PEPFAR programs. In 2008, journalist Laurie Garrett reported that although PEPFAR did not provide details on contractor "overhead" rates—that is, the percentage of funding going toward expenses such as NGO salaries and office expenses rather than treatment, prevention, and education—reports indicated that rates of 30 to 60 percent were the norm.[71] If fewer dollars were siphoned off en route to poor patients, many more would have access to life-saving treatment.

Beyond AIDS, the golden age of global health ushered in significant advances against other leading causes of suffering and premature death around the world. Some health providers learned to use "vertical" AIDS programs to simultaneously provide "horizontal" primary health care services and strengthen health systems. Delivering services for complex chronic conditions like AIDS requires a full-time salaried staff; modern facilities; trained community health workers, supported by stipends; and a robust referral network. It can therefore have powerful spillover effects on other health priorities. Health practitioners, including community health workers, who are focusing on HIV control can be trained to simultaneously address other pathologies of poverty: HIV patients infected with tuberculosis, children with pneumonia or diarrheal disease, families without sufficient food or access to clean water. In other words, AIDS treatment can be used as a wedge to strengthen health systems.[72] The next chapter explores one model of care based on this approach.

SUGGESTED READING AND OTHER MEDIA

Behrman, Greg. *The Invisible People: How the U.S. Has Slept through the Global AIDS Pandemic, the Greatest Humanitarian Catastrophe of Our Time*. New York: Free Press, 2004.

"Consensus Statement on Antiretroviral Treatment for AIDS in Poor Countries, by Individual Members of the Faculty of Harvard University." March 2001. www.cid.harvard.edu/cidinthenews/pr/consensus_aids_therapy.pdf.

d'Adesky, Anne-Christine. *Moving Mountains: The Race to Treat Global AIDS*. London: Verso, 2004.

Epstein, Steven. *Impure Science: AIDS, Activism, and the Politics of Knowledge*. Berkeley: University of California Press, 1996.

Farmer, Paul, Fernet Léandre, Joia Mukherjee, Rajesh Gupta, Laura Tarter, and Jim Yong Kim. "Community-Based Treatment of Advanced HIV Disease: Introducing DOT-HAART (Directly Observed Therapy with Highly Active Antiretroviral Therapy)." *Bulletin of the World Health Organization* 79, no. 12 (2001): 1145–1151.

Gupta, Rajesh, Jim Y. Kim, Marcos A. Espinal, Jean-Michel Caudron, Bernard Pecoul, Paul E. Farmer, and Mario C. Raviglione. "Responding to Market Failures in Tuberculosis Control." *Science* 293, no. 5532 (2001): 1049–1051.

Kapczynski, Amy, Samantha Chaifetz, Zachary Katz, and Yochai Benkler. "Addressing Global Health Inequities: An Open Licensing Approach for University Innovations." *Berkeley Technology Law Journal* 20, no. 2 (2005): 1031–1114.

PBS. *The Age of AIDS*. Frontline documentary series directed by William Cran and Greg Barker. 2006. www.pbs.org/wgbh/pages/frontline/aids/.

Public Square Films. *How to Survive a Plague*. Documentary directed by David France. 2012.

Siplon, Patricia D. *AIDS and the Policy Struggle in the United States*. Washington, D.C.: Georgetown University Press, 2002.

Smith, Raymond A., and Patricia D. Siplon. *Drugs into Bodies: Global AIDS Treatment Activism*. London: Praeger, 2006.