





Gifts OF HEALTH

By Karl Zinsmeister

*American medical charity has a noble history
that extends right to our present moment*

For generations, deadly epidemics were a regular occurrence in America. The disease feared perhaps more than any other was yellow fever. Every few years, outbreaks would explode across seaboard regions, killing thousands at random, with victims spewing black vomit and crying out in horrible pangs. People were so frightened that a third or more of the residents of major cities like Philadelphia would flee to the countryside at the first hint of infection—compounding the harm to health with egregious economic damage.

No one had any accurate idea what caused the fever. Not until 1900 did researchers understand that it was caused by a virus (the first human virus ever identified) and transmitted from person to person by mosquito bites. Even after that discovery, efforts to quench yellow fever floundered. Then in 1915 the Rockefeller Foundation declared war on the illness. A special research station was set up in Nigeria where rhesus monkeys were used to test infection and immunity—dangerous work that killed three of the foundation's lead researchers. Rockefeller continued its heroic battle in high-security labs

in New York City and elsewhere. Despite tight precautions, more of its researchers died.

In 1931, Rockefeller Institute scientist Bruce Wilson volunteered to be injected with an experimental vaccine. He developed immunity to the illness. It took until 1937 to make the vaccine mass-producible, but in the first seven years it was available the Rockefeller Foundation gave out 28 million doses. One of the world's most frightening scourges was finally brought under control, and lead Rockefeller researcher Max Theiler was awarded the Nobel Prize in Medicine.

The polio precedent

A second virus that terrorized Americans, even beyond the middle of the twentieth century, was polio. Every summer there would be alarms in various parts of the U.S.—complete with social distancing, quarantines, and whole families sequestering inside their homes or temporarily

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The *New York Times* reports on the epic philanthropic battle against yellow fever.

moving to rural areas—as epidemics tore through communities. Living Americans can still remember the 1952 polio outbreak that killed 3,145 U.S. residents and permanently crippled many more. Every single year the illness ended lives without warning, and left hundreds of thousands of children and adults clamped into Iron Lung machines, wheelchairs, and permanent leg braces and crutches.

It was swarms of small voluntary donations that finally disabled the polio virus. Millions of families all over the U.S. began making donations to the National Foundation for Infantile Paralysis (known as the March of Dimes because of its reliance on small gifts). At the time of the 1952 pandemic, the charity's annual budget was almost \$500 million in today's dollars. It provided 25 times more funding for polio research that year than the U.S. National Institutes of Health. The foundation's money went to fellowships in virology, lab studies, support for stricken families, and public-information efforts. Among many other accomplishments, it funded the lab where the polio virus was first grown in non-neural tissue.

Institutional donors also did their part. The Rockefeller Institute for Medical Research, for instance, funded studies of infantile paralysis. It hosted the vaccine experiments of Albert Sabin.

This combination of mass giving and foundation support eventually put a dagger into polio. In 1948 Dr. Jonas Salk won a \$35,000 grant from the Sarah Scaife Foundation that allowed him to equip a modern virus laboratory at the University of Pittsburgh. Scaife subsequently offered follow-up grants. Salk also received support from small donors through the March of Dimes (as did Dr. Sabin).

The philanthropic backing for Salk yielded a medical breakthrough

right amidst the 1952 polio terror. The doctor created an experimental polio vaccine made out of killed virus cells, then bravely immunized himself and his family with it. Thanks to rapid field trials paid for by the March of Dimes, the Salk vaccine was soon deemed safe. It went into production in 1955 and was widely administered around the world as the world's first polio blocker.

By 2019 there were barely 100 polio cases anywhere on the globe, and a set of philanthropies were collaborating to drive the virus to final extinction. Toward that cause the Rotary International Foundation has donated \$2 billion collected from its 35,000 local chapters, and the Gates Foundation has put up billions more. At the end of 2019 donors pledged an additional \$2.6 billion with the aim of turning one of history's most wounding viruses into a cold memory.

Other virus victories

The epic triumphs over polio and yellow fever were part of a long philanthropic history. The deadliest viral assault ever was the 1918 influenza that killed as many as 50 million people worldwide. At the time, most doctors believed it was caused by bacteria. Eager to avoid repeats of the calamity, researchers spent subsequent years trying to nail down sources and cures. Investigators from the Rockefeller Institute for Medical Research eventually demonstrated that viruses are the actual sources of influenza. That opened the door to lifesaving flu vaccinations.

Another viral panic occurred when HIV started killing thousands of Americans—more than 50,000 deaths per year at the mid-1990s peak—plus millions abroad. Real-estate developer Aaron Diamond and his wife Irene had agreed during their estate planning that as

soon as one of them passed away, the other would quickly blast out most of their assets to some urgent charitable cause. After Aaron was struck down by a heart attack in 1984, his widow's gaze settled on the alarming new HIV-AIDS epidemic. The Aaron Diamond AIDS Research Center was launched, and \$220 million of family funds were rapidly pressed into research, with the Diamond Foundation expending its last dollar seven years later. The center became one of the most spectacularly productive entities fighting AIDS. Its scientists did important testing at the molecular level, identified a gene mutation that confers immunity to HIV, developed anti-retroviral “cocktails” that eventually brought the epidemic under control, and demonstrated how to almost eliminate transmission of HIV from mothers to babies.

Philanthropists played an important role in quenching another red-hot viral emergency in 2014. That year, nearly 5,000 West Africans perished suddenly and horribly when the Ebola virus swept the region. Paul Allen, who became a major medical donor after retiring from Microsoft, had been funding Ebola studies and vaccine experiments for years, and acted aggressively. Allen offered an immediate \$100 million, and inspired additional quick donations from other philanthropists, including \$50 million from the Gates Foundation and \$25 million from Mark Zuckerberg. These resources made possible the speedy dispatch of 500 crisis responders and all of their equipment to the hot zone where the disease was raging, smothering the contagion before it spread. The emergency operations director of the U.S. Centers for Disease Control later cited “the huge contribution made by Paul Allen” in controlling the 2014 Ebola flare.

Anti-epidemic philanthropy

Philanthropic campaigns also put a crimp in tuberculosis. TB accounted for 11 percent of all U.S. deaths in the early twentieth century, sparking a people's army to fight back. A new National Association for the Study and Prevention of Tuberculosis collected coins from the public, and soon grew to command

multimillion-dollar annual budgets. (It eventually became the American Lung Association.) More than 500,000 supporters raised funds for research, sanitariums, and relief for afflicted households, and the number of TB clinics jumped from 18 to 1,324 in a little more than a decade.

This “people’s philanthropy” became a model for subsequent popular crusades against cancer, heart disease, and other ailments. And as with polio, wealthy givers also became involved. The Russell Sage Foundation made tuberculosis one of its main targets, and bankrolled the famed Saranac Sanitarium in New York’s Adirondack mountains. John Rockefeller and his charities took part in gradually driving down cases of TB.

Though it didn’t work against tuberculosis (because of TB’s peculiar molecular structure), miraculous progress was made in breaking the back of diphtheria, meningitis, rheumatic fever, pneumonia, syphilis, gonorrhea, and other communicable diseases when scientists learned how to produce penicillin in large quantities. Penicillin’s therapeutic value was first proven by an Australian scientist named Howard Florey. The Rockefeller Foundation financed part of his scientific training, awarded him a pharmacological fellowship at the University of Pennsylvania, then provided a series of post-doctoral grants for equipment, supplies, and research help. This allowed Florey to assemble a large team of technicians who explored the potential of penicillin and then conducted human drug trials in 1941.

Laborious processes of culturing and concentration prevented easy production of penicillin, but effective means of mass manufacture were eventually developed with Rockefeller assistance. The drug immediately saved hundreds of thousands of lives, revolutionized medicine, and earned Florey and two other scientists the Nobel Prize in Medicine.

Other philanthropic counterpunches

Amidst rapid improvement of the tools available to doctors, philanthropists next began to focus on bringing more of the miracles of modern medicine to people in very poor countries. The Edna McConnell



Dr. Jonas Salk in the Pittsburgh lab funded by the Scaife Foundation.

Clark Foundation (a product of the Avon fortune) resolved in the early 1970s to attack tropical illnesses that were then getting relatively little attention from the medical establishment. At that point tropical maladies represented the vast portion of the world’s infectious disease, yet only a percent or two of all drugs approved for human use were specifically targeted at them.

So from 1974 to 2000, the Clark Foundation pushed more than \$90 million into research on afflictions like schistosomiasis (snail fever), onchocerciasis (river blindness), and trachoma (a painful eye disease). These were traumatizing hundreds of millions of people, and Clark became the world’s largest funder, public or private, of countermeasures. Other charities later followed this lead.

The Carter Center, for instance, made plans to wipe out the hideous Guinea worm. Cases have been chopped down from 3.5 million to just a handful today, with complete eradication on the horizon. Bill Gates has funneled

billions of dollars into blitzes against neglected tropical diseases, including one that debilitates 200 million people and kills 400,000 every year: malaria. Gates spending against malaria helped cut annual deaths by more than half, and the foundation has pledged to continue crusading for years to come. It is even funding genetically modified sterile mosquitoes aimed at stopping transmission of the malaria parasite from person to person.

Another lifesaving intervention by Bill Gates has been his massive program to bring immunizations to the low-income world. That effort has dramatically expanded access to existing vaccines for DPT, measles, hepatitis, influenza, and polio. It is also pursuing new vaccines, including for diseases for which no immunal shield has previously existed—like malaria, rotavirus, pneumonia, and, very currently, covid-19. It’s estimated that more than 13 million deaths have so far been prevented as a result of the vaccination program Gates launched in 2000—with most of the beneficiaries

Much of our nation’s medical backbone
has been laid down by donors.



Figuring out **how to culture penicillin** in mass quantities was the hard part.

being babies and children with full lives ahead of them.

And now coronavirus

Today, donors are attacking the new coronavirus in a panoply of ways. An instant grant from long-time medical philanthropists Mark and Lisa Schwartz, provided back in February before the scope of our epidemic was even understood, enabled Boston's Ragon Institute (created by a \$100 million gift from Phillip and Susan Ragon) to convene one of the earliest research collaborations of top American and Chinese scientists.

As the infection spread in the U.S., the Gates Foundation and Chan Zuckerberg Initiative—each based in a disease hotspot—took rapid action to overcome testing bottlenecks. Gates created new home testing kits to dramatically improve diagnosis and contact tracing in Seattle, and then the rest of the country. CZI quadrupled clinical testing capacity in San Francisco almost overnight by purchasing diagnostic machines. It later put \$14 million into two areas crucial to economic reopening—finding effective ways of tracking infections through populations, and comparing the strengths and weaknesses of various new virus tests.

To speed coronavirus science without bureaucracy or lag time, a group of wealthy

executives from tech businesses like Stripe, LinkedIn, Y Combinator, and Amazon, along with some venture capitalists, plus grantmakers from Arnold Ventures, Crankstart, and other philanthropies, joined in an impromptu coalition. The donors created an application requiring less than 30 minutes for researchers to fill out, and rendered verdicts within 48 hours. Their Fast Grants initiative almost immediately distributed \$22 million, in \$10,000-\$500,000 awards, to scientists working on covid-19 solutions. An even larger science-grant collective called The Accelerator was launched in March. Gates, Wellcome Trust, Mastercard, CZI, and others combined donations to steer hundreds of millions of dollars to new coronavirus therapeutics.

One of the most dramatic philanthropic actions in response to covid-19 was the overnight pivot of the Gates Foundation. "We've taken an organization that was focused on HIV and malaria and polio eradication and almost entirely shifted it to work on this," explained Bill Gates at the end of April.

"This has the foundation's total attention." Within weeks Gates had directed more than \$355 million into new anti-covid spending. The foundation's mobilization is much larger than that, though, because so many existing projects, and so much of its standing expertise, have been retargeted on the coronavirus.

These Gates contributions put the lie to critics who caricature philanthropists as unqualified meddlers, drive-by dabblers, rank amateurs—like Twitter sniper Dan Riffe, who just before the coronavirus contagion said it was "ludicrous" that some "guy who has expertise in software and taking maximum advantage of patent laws" would "be out there curing malaria." Contrary to that barb, Bill Gates isn't just a retired electronics peddler. He, like the best philanthropists throughout history, has made himself into a formidable authority on his philanthropic passions. He studied, gathered networks of experts, and used his rare engineering and organizational skills to become one of today's most effective solvers of public-health problems. For years, Gates has been warning government authorities they were unprepared for a pandemic. It was "experts" at agencies like the WHO and CDC who lacked understanding and failed to act.

Today's emergency is demonstrating not just the rapid-response strengths of philanthropy, but also the deeper, accumulated benefits of dedicated giving. The first public transmission of covid-19 in the U.S. was detected in February thanks to a Gates-funded project that had been running for years. The Seattle Flu Study was set up back in 2018 to track normal influenza cases via home test kits. The foundation and its partners were able to speedily turn that existing charitable effort into SCAN, the Seattle Coronavirus Assessment Network, whose ubiquitous home tests will give us some of our first

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reliable metro-wide data on the true scope of the virus. This valuable information is being gathered on an entirely voluntary, self-serve basis, in homes, so no one needs to visit a health facility where the virus could be transmitted.

Philanthropic solutions to today's pandemic continue to unfold. Individuals, foundations, businesses, and charities are leading efforts to study the virus, control its spread, and bolster health-care responses. They are doing this locally, nationally, and globally.

Giving as a backbone of health

Deeper and less obvious contributions to health and healing have accumulated through centuries of philanthropic activity across the United States. Much of our nation's medical backbone has been laid down and strengthened by private giving. Decades before we were even a nation, back in 1735, our first charity hospital was established by a generous businessman acting in a remote frontier town that had existed for only 18 years (New Orleans). Other hospitals have since been built up in thousands of American communities. Unsurpassed treatment facilities like the Mayo Clinic, Johns Hopkins, Cleveland Clinic, NY-Presbyterian, Houston Methodist, M. D. Anderson, Cedars-Sinai, Langone, Sanford, Huntsman, and hundreds more have been financed by donors.

It was philanthropists who created America's medical schools, modernized them against much resistance, and made them the best in the world by endowing professorships, labs, and clinics. Private givers established top research institutes (Rockefeller, Sloan Kettering, Broad, Columbia, St. Jude, Allen, Van Andel, Janelia Farm, many others), and offered landmark fellowships (Howard Hughes, Markey, Lasker, etc.) for grooming the most promising medical scientists.

The first schools of public health were created by John Rockefeller, and accelerated by donors like George

Eastman. A surge of funding from supporters like Gerald Chan, Michael Bloomberg, the Rollins family, Michael Milken, Joseph Mailman, the Gillings family, and others has expanded public-health education over the last decade. It is likewise donors who have driven the recent explosion of superb specialized hospitals just for children.

Today's vital mechanisms of trauma response, 911 calls, EMT training, ambulance and E.R. coordination were instigated by the Robert Wood Johnson Foundation in the 1970s. Electronic health records, patient surveys, protocols to prevent released patients from relapsing to hospitals, hospice care at the end of life—these and many other innovations were initiated or hurried along by voluntary givers. The very nomenclature with which diseases are categorized and understood was first shepherded into use by gifts from the Harkness family.

The John Hartford Foundation brought lifesaving kidney dialysis and transplants to the public, and played a large role in building up the emerging field of geriatric medicine. Uncas Whitaker poured more than \$700 million into developing biomedical engineering as a thriving independent discipline, overcoming government and academic inertia to hasten modern miracles like joint replacement, laser surgery, lab-grown organs, and bionic limbs. The Carnegie Corporation saved hundreds of thousands of lives by speeding insulin-replacement therapy to patients.

Important elements of today's newest departures in genomic medicine, plus entire fields like systems biology and computational medicine, have relied heavily on visionary donors like Sol Price, Bill Bowes, James Simons, and the Chan Zuckerberg Initiative. Brain, neurological, and mental-health research have been led by private giving for a couple decades now. Today's freshest investigations in immunotherapy are racing along thanks

to charitable giving. A vast portion of America's infrastructure for battling cancer has been donor initiated.

Though it comprises only a modest portion of total funding for health, voluntary giving continues to catalyze a great many medical breakthroughs. That's because it tends to be flexible, risk-tolerant, fast-moving, and offered without either the onerous red tape of government grants or the short time horizon of corporate research. And in addition to sponsoring many hyper-modern therapies, philanthropy has been crucial in carrying medical advances out into the real world—from campaigning against hookworm right up to recent battles with HIV and malaria.

The collective effect of these multifarious gifts is vast. More than any other factor, it is philanthropy that has distinguished America at understanding and fending off threats to human health. Our neighborly traditions of donating and volunteering in support of lifesaving and healing, extending back hundreds of years, continue to be generously adhered to by millions of citizens, with great effects.

And our medical charity does more than just tame disease. It offers us a way to connect and commune, to reduce human suffering and deepen happiness. It does these things not only among assisted populations but also among those who offer the help.

Dr. Karl Menninger, the eminent psychiatrist who practiced in the American Midwest, was once asked after delivering a lecture on mental health, "What would you advise a person to do, if that person felt a nervous breakdown coming on?" Members of the audience expected him to suggest consulting a doctor, entering therapy, getting expert help. But his years of clinical work made him understand that health has many social and moral aspects that cannot be reduced to expertise, that no man or woman is an island when it comes to remaining well, and that offering care can sometimes be as curative as receiving care.

He answered: "Lock up your house. Go across the railroad tracks. Find someone in need. And do something for them." **P**



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