

# USC Schaeffer

Leonard D. Schaeffer Center  
for Health Policy & Economics

Annual Report\_2020



The mission of the Leonard D. Schaeffer Center for Health Policy & Economics is to measurably improve value in health through evidence-based policy solutions, research excellence, and private and public sector engagement.

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# Relevance and Reach

Like so many other institutions, the Schaeffer Center had to dramatically pivot in 2020 to maintain our relevance and reach. Fortunately, we had a decade of evidence-based research on health and innovation upon which to build—and a set of research partners who understood the acute policy needs.

Neeraj Sood, writing in *The Wall Street Journal*, was among the first to call for population screening to understand the dynamics of COVID-19. We launched a new COVID Initiative under his leadership, and—with support from the USC Offices of the President and the Provost, the Rockefeller Foundation and others—have partnered with the mayor of Los Angeles and the L.A. County Department of Public Health to conduct population surveillance.

The USC-Brookings Schaeffer Initiative, led by Paul Ginsburg, continued its legacy of improving regulation and functioning of healthcare markets. In 2020, the initiative’s efforts culminated in the No Surprises Act as part of the year-end omnibus spending bill. The legislation alleviates the patient from bearing the financial brunt of surprise medical bills—a clear market failure—and sets up an arbitration process for providers and insurers.

The Value of Life Sciences Innovation program, led by Karen Van Nuys, continued to shine a spotlight on distortions in the prescription drug marketplace. The team demonstrated some alarming associations between list prices and drug rebates—highlighting the opacity of prices in the marketplace and the financial consequences for patients. This research informed an executive order, Lowering Prices for Patients by Eliminating Kickbacks to Middlemen.



Dana Goldman



Erin Trish

Our External Affairs team continued to convene healthcare experts, policymakers and stakeholders representing diverse views for a series of conferences and webinars. Although we moved events to a virtual platform for safety reasons, this proved to expand their reach, as geography no longer limited people’s ability to attend and participate.

We also continued a long history of collaboration with outside partners. Working with the Aspen Institute, we assembled a distinguished advisory panel to recommend ways to modernize health technology assessment in the United States. It is clear the U.S. must do a better job of linking the price of innovations to the benefits they provide for individuals and society, and we are developing solutions for this pressing issue.

In addition, we collaborated with Gates Ventures to explore innovative clinical advances and diagnostics—from cancer to Alzheimer’s disease—and the policy challenges associated with access to and adoption of these advances.

None of these accomplishments would be possible without the support of Leonard Schaeffer and his wife, Pamela, our Advisory Board and the outstanding faculty in our two partner schools at USC: the Sol Price School of Public Policy and the School of Pharmacy. We are grateful for everyone’s support during this tumultuous time.

Dana Goldman  
*Leonard D. Schaeffer Director’s Chair, USC Schaeffer Center*

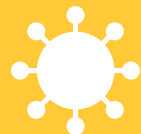
Erin Trish  
*Associate Director, USC Schaeffer Center*

“The Schaeffer Center’s mission *to improve health and the healthcare system* was truly tested this year. The Center *responded rapidly* to address a pandemic that caused public health, economic and humanitarian crises. Staff organized virtual forums for private- and public-sector engagement and faculty provided much-needed analysis and *evidence-based solutions* for policymakers and public health officials. As our nation and the world begin to heal, the Schaeffer Center will continue to be at the *forefront of policy research* that seeks not a return to normal but to a *better healthcare system than before.*”

– Leonard D. Schaeffer, USC Schaeffer Center Advisory Board Chair



# innovation



**USC Schaeffer Center for  
Health Policy & Economics:  
Driving the Future of  
Healthcare**

**Every aspect of the Schaeffer Center’s work drives innovation.** Our scholars ceaselessly explore cutting-edge ways to maximize the value of healthcare while also enhancing affordability to expand its reach.

The spread of COVID-19 over this past year served as a reminder of how vital this research truly is, as we developed viable strategies for testing as well as distribution for that moment when vaccines were ready. Indeed, amid unprecedented challenges, the record-breaking development of vaccines was a bright spot reflecting the true value and wonders of innovation.

For more than 10 years, Schaeffer Center experts have worked to advance innovative prescription drug payment models that lead to better health and long-term returns. We have shed light on the broken—and at times distorted—pharmaceutical distribution system and provided policy solutions that benefit patients. Our analyses helped spur

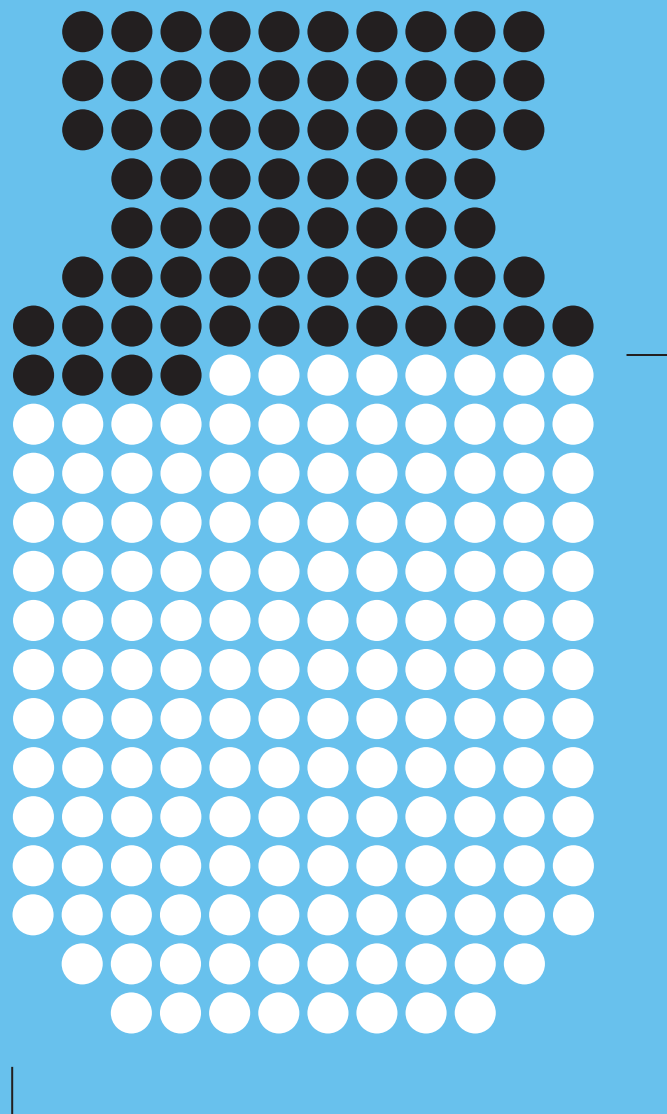
federal regulations and state laws to save patients from spiraling out-of-pocket costs and improve access to breakthrough therapies.

The following pages highlight just a few studies that have made an impact over the past year. Our work informs policymakers and private-sector leaders and has been cited by the White House and Congress as well as by state and international authorities.

We continue to push new frontiers in health policy advancements by consistently introducing innovative concepts and methods to the health policy conversation. From promoting better treatments and preventive measures for Alzheimer’s to increasing the convenience of kidney care, our efforts strive to help people lead healthier lives as well as longer ones. Our research makes a real impact on improving the health of individuals and society as a whole.

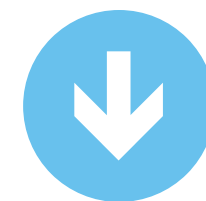
70%

of global pharmaceutical profits, which drive future innovation, stem from the U.S.



## 01\_ Value of Life Sciences Innovation

The life sciences are at the front lines of transforming healthcare through innovations that benefit countless people. The Value of Life Sciences Innovation (VLSI) program exemplifies the Schaeffer Center's focus on evidence-based analyses that encourage biomedical advances while developing pricing and reimbursement strategies to help ensure that patients receive the therapies they need.



Drug price controls would hamper innovation and could reduce life expectancy over the long term by 3%.

25+ studies and articles were authored under the VLSI program over 5 years.

### The Schaeffer Center's VLSI program advances strategies for spurring innovation while ensuring access.

The many successful COVID-19 vaccines and therapies developed at unprecedented speed during the pandemic provide a stunning illustration of the benefits of a robust scientific discovery system supported by investment, incentives and policy. Yet such benefits are not unique to the COVID experience. From cancer treatments and HIV/AIDS therapies to hepatitis C cures and interventional cardiology, innovations in the life sciences over the past half century have lengthened life spans by curing many deadly diseases and transforming others into manageable chronic conditions.

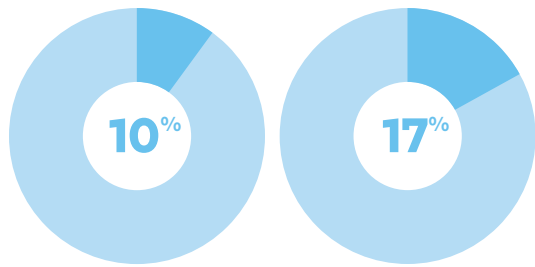
Still, prices remain controversial—especially in the United States, where they are generally higher than in nations that impose price controls. However, Schaeffer Center research shows that instituting price controls here would harm health in the long run. For example, as Congress considered H.R. 3, the Lower Drug Costs Now Act, Schaeffer Center modeling showed that while lower U.S. prices might improve health by increasing access in the short run, they would also hamper innovation and ultimately reduce life expectancy by about 3%. Other countries would also feel this loss, as they benefit from having Americans shoulder much of the expense of innovation.

VLSI Executive Director Karen Van Nuys, Schaeffer Center Director Dana Goldman and others at the Center have proposed value-

based pricing schemes as an alternative to price controls. Such strategies link a drug's expense to its benefits as shown in clinical trials and other data-driven methods.

One perceived roadblock to implementing value-based prices was Medicaid's best-price rule. However, Schaeffer Center Director of Research Darius Lakdawalla and colleagues have found that, while the rule does present challenges, it need not impede progress.

Spurred by such analysis, the Centers for Medicare & Medicaid Services finalized regulatory changes allowing states, private payers and manufacturers more flexibility in value-based pricing arrangements for prescription drugs. ●



Two years after launch, biosimilar drugs approved for conditions like Crohn’s disease and rheumatoid arthritis captured only 10% of the market and lowered reimbursement by just 17%.

**6 recommendations** for how health technology assessment can improve decision-making in the medical marketplace came from Schaeffer Center experts.

1:1.17

A \$1 rebate increase is associated with a \$1.17 increase in list price.

**VLSI scholars investigate what drives adoption patterns for biosimilar drugs.**

Offering the same effectiveness as biologic medications, biosimilar drugs can save money for patients and payers, but the biosimilar market has been slower to bloom in the U.S. than in Europe. Van Nuys and Schaeffer Center Senior Fellow Alice Chen have investigated the dynamics underlying this slow uptake. Their research suggests that the market is functioning but that increasing physician awareness and removing reimbursement-related barriers to biosimilar adoption can strengthen it.

“There has been some concern that U.S. biologic markets are developing too slowly, with some even arguing it’s time to give up on biosimilars and instead have the government regulate biologic drug prices outright,”

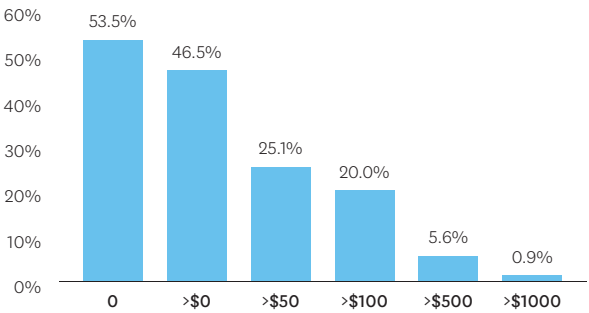
Van Nuys says. “We’re not ready to give up on competition just yet—we need to understand the barriers that may be slowing biosimilar uptake, and whether alleviating them could lower costs.” ●

**Studies reveal the relationship between higher rebates and higher prices—suggesting that eliminating Medicare’s safe harbor could save money for patients.**

Although drug rebates are meant to save money, Schaeffer Center research suggests the opposite may be true. Since a rebate is really a kickback allowed by federal safe-harbor regulations, the current system of negotiation between pharmacy-benefits managers and manufacturers may increase prices.

Van Nuys and Schaeffer Center Senior Fellow Neeraj Sood showed that, on average,

Almost half of Part D beneficiaries who do not receive a low-income subsidy would save money if cost-sharing were based on net prices; 20% would save more than \$100 per year.



a \$1 increase in rebates is associated with a \$1.17 increase in list price. In addition, Schaeffer Center Associate Director Erin Trish and Director of Health Policy Geoffrey Joyce found that if Medicare cost-sharing were based on post-rebate prices, out-of-pocket spending would be reduced for nearly half of Part D beneficiaries who do not receive low-income subsidies. Some 20% of them would save more than \$100 per year and about 1% would save more than \$1,000 annually.

To allay concerns that eliminating the safe harbor for rebates would raise Part D premiums, Goldman and Trish showed that any premium increases would be modest, and most beneficiaries would be protected.

This evidence motivated an executive order to eliminate hidden rebates in Medicare Part D. ●

**The Schaeffer Center explores the unique role and requirements for health technology assessment in U.S. healthcare markets.**

In collaboration with the Aspen Institute, the Schaeffer Center formed an expert advisory panel to examine the U.S. healthcare system’s unique requirements and how health technology assessment (HTA) could be designed and applied here to better link the cost of innovations to their value for patients. As opposed to other developed nations, the U.S. relies almost exclusively on privately funded HTAs, but the panel sees room for public-sector funding to improve our country’s disjointed approach.

The panel proposes six recommendations that, taken together, would enhance the HTA landscape and improve decision making:

- 1) Encourage private HTA efforts
- 2) Establish a publicly funded HTA coordinating entity to augment private efforts and evaluate their overall quality

- 3) Ensure that HTA reports present clinical and economic findings in a disaggregated format
- 4) Evaluate existing and new healthcare services and technologies, including drugs, devices, diagnostics, procedures and public health interventions
- 5) Engage healthcare providers, consumer groups, public and private payers, employers and the life sciences industry in the activities of any public HTA entity
- 6) Create a policy path for the HTA coordinating entity’s findings to influence decisions

“The U.S. market fails to produce enough high-quality evidence,” says Lakdawalla, who co-chaired the panel. “Robust, unbiased assessments of the evidence can help accelerate the long overdue transition to value-based pricing in healthcare.” ●



Behavioral science combines insights from psychology, economics and other social sciences to understand how people make decisions relevant to their wellbeing. The Schaeffer Center applies the field’s knowledge to find ways to enhance that wellbeing. This research took on increased urgency as COVID-19 began proliferating throughout the world.

5 thousand+ people responded to questions about the COVID-19 pandemic for the Understanding America Study.

During a tumultuous year, Schaeffer Center investigators applied methods from behavioral science to better understand individual responses to safety measures and election polling.

As COVID-19 rapidly unfolded in spring 2020, health leaders urged behavioral changes—including social distancing—to contain its spread. Although many followed these guidelines, others flouted them.

To understand how and why Americans responded in those crucial early days, Wändi Bruine de Bruin—co-director of the Behavioral Sciences program—and colleagues polled 5,414 nationally representative adults through the online Understanding America Study. The study showed that those perceiving greater danger—partly based on case numbers locally and nationally as well as age and economic factors—were more likely to implement

protective behaviors. These findings could help leaders improve communication and implementation of mitigation strategies as we continue to battle COVID-19—and better prepare for future pandemics.

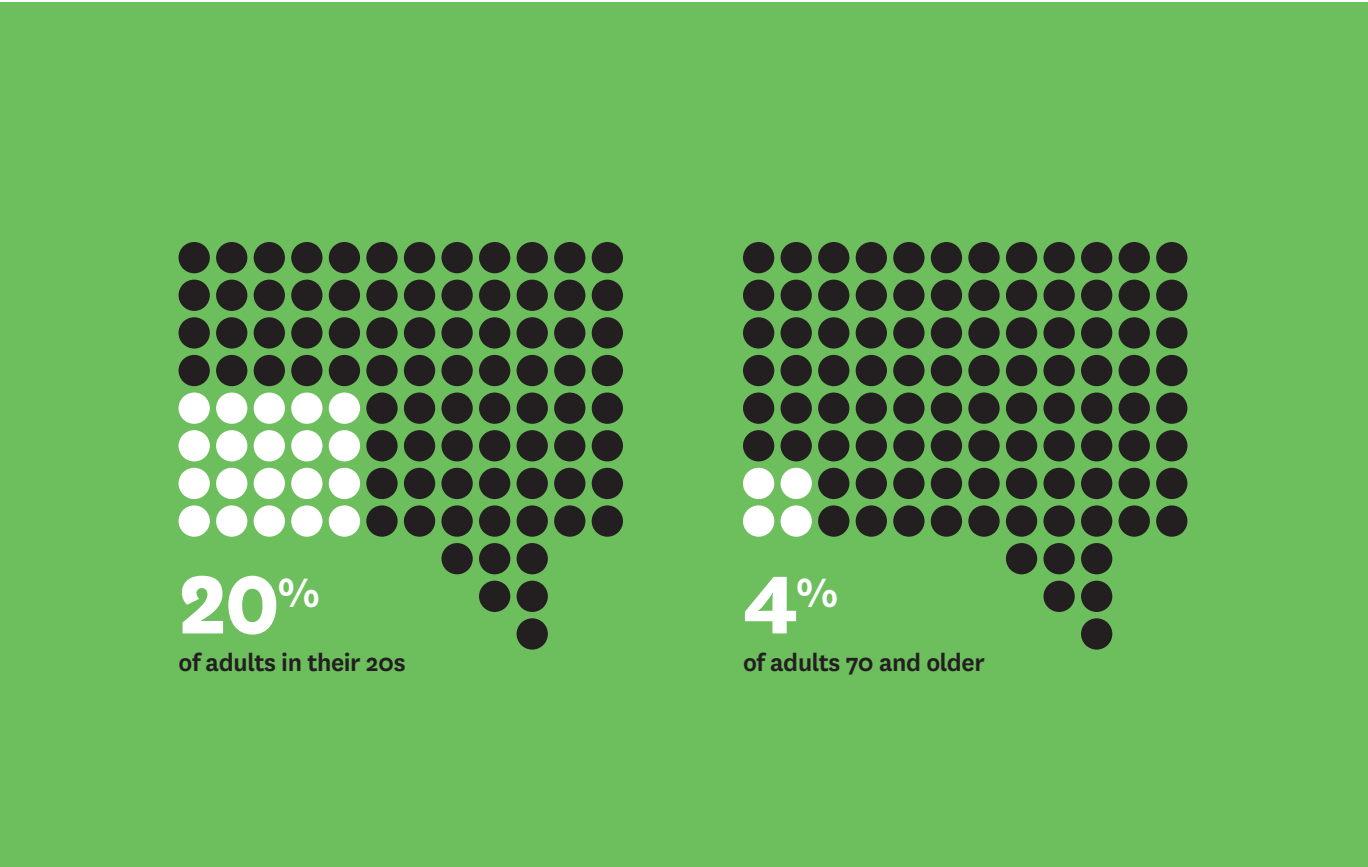
Meanwhile, Bruine de Bruin used politics as a lens to analyze the flaws in standard polling. For example, traditional polls ask people whom they would vote for if an election were held today or their likelihood of voting for specific candidates. But Bruine de Bruin found that asking people about the political preferences of those in their social circles and in their states could paint a more complete picture of the American electorate.

“People often get information about political issues from friends and family—and those conversations may influence their voting choices,” Bruine de Bruin and her co-authors note. ●

The USC Behavioral Science and Well-Being Policy Collaboration unites experts from across disciplines to promote policies with positive social impact.

Because behavioral science is by nature multidisciplinary, its leading minds are spread across a range of departments at a variety of institutions. This new collaboration, led by Bruine de Bruin and Jason Doctor—director of health informatics at the Schaeffer Center and co-director of the Behavioral Sciences program—is building a network of communication and research partnerships among these experts through conferences, seminars, a website and co-authored studies.

The collaboration’s activities will strengthen research in subjects from personal finance and poverty to climate change, environmental risks and security—all of which affect human health. ●



Twenty percent of adults in their 20s had warning signs of depression and anxiety in a poll conducted in March 2020. This compares to only 4% of adults age 70 and older.

Twenty years from now, adults age 65+ will make up more than 20% of the U.S. population—and physicians and health systems will need guidance to provide these older patients with the best care.

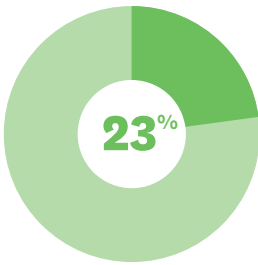
The new USC Roybal Center for Behavioral Interventions in Aging was created to strengthen the ability of clinicians to recommend safe and effective treatments for elderly patients through evidence-based behavioral economic interventions.

With funding from the National Institutes of Health, the Roybal Center’s co-principal investigators—Doctor and Schaeffer Center Director Dana Goldman—lead research that advances healthy aging for older adults, with a focus on those who are economically insecure, culturally diverse and underserved by human services organizations. The Roybal Center’s studies include stemming the opioid crisis by influencing physicians to avoid unnecessary prescriptions.

BMJ published a study co-authored by Doctor and Schaeffer Center Fellow Daniella Meeker that builds on their groundbreaking work in low-cost nudges that improve prescribing practices. To help ensure the success of such interventions, the authors suggest that:

- Nudges should be carefully designed and implemented for awareness and ease of use by clinicians.
- Details such as orienting clinicians to goals and publicizing their commitment are important to success.
- Strategies should be adjusted to address the needs of different groups and clinical contexts.
- Trust between clinicians and administrators is critical.

The nudges devised by Doctor and colleagues are being increasingly adopted across the nation as well as in the United Kingdom. ●



23% of Americans will be over age 65 by 2040.

COVID-19 has cost millions of lives worldwide, overwhelmed healthcare systems, devastated economies and changed society for years to come. To ease the pandemic’s impact, the Schaeffer Center immediately launched research to improve public safety while getting people back to work without fear of infection.

\$106 billion

in potential gains delivered by COVID-19 treatments by the end of 2021

2,200 quotes and interviews of Schaeffer Center experts about the coronavirus in mainstream media

The Schaeffer Center is partnering with the city of Los Angeles to examine the advantages of rapid antigen testing to track COVID-19 and reopen schools and businesses safely.

Schaeffer Center Senior Fellow and Director of the COVID Initiative Neeraj Sood is collaborating with the Los Angeles County Department of Public Health and the Los Angeles Mayor’s Office to examine the advantages of rapid antigen testing among first responders and school-aged children. Rapid tests have the potential to quickly alert people who are contagious and need to isolate, thereby stopping the chain of transmission.

The study examines antigens—which trigger our immune systems to produce virus-fighting antibodies—in the bloodstream of both symptomatic and asymptomatic participants to understand how COVID-19 spreads

in different communities. The pilot study may help determine the best ways of leveraging these inexpensive tests to facilitate safe reopening efforts. Los Angeles is one of the nation’s first metropolitan areas to launch a large-scale study of rapid tests in both symptomatic and asymptomatic participants.

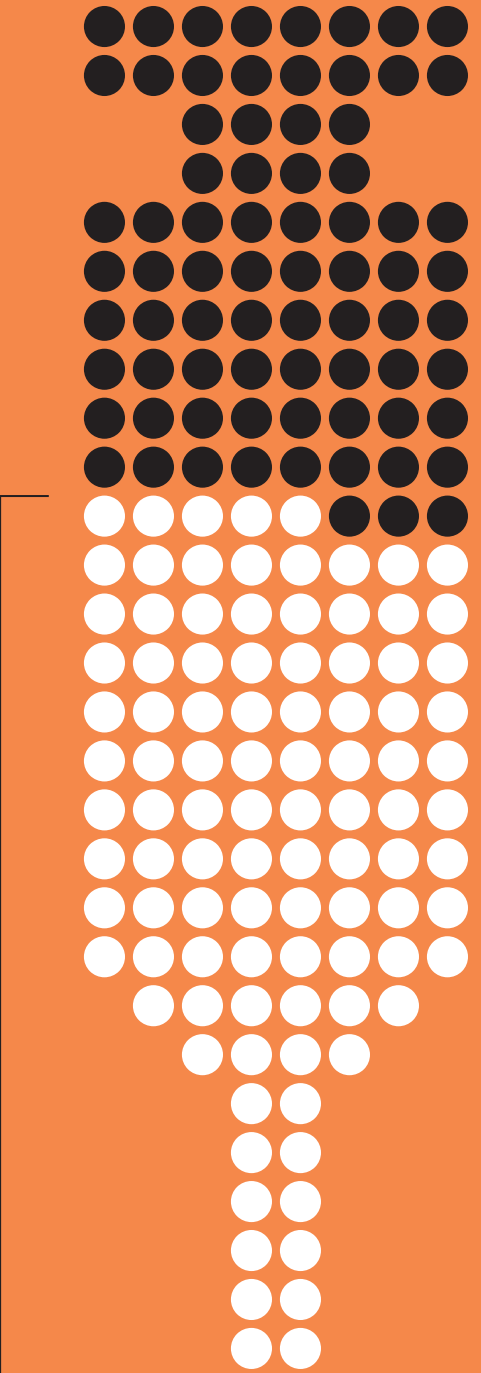
Mayor Eric Garcetti held a press conference in October 2020 with Sood to discuss the project. “Rapid tests are cheaper, faster and more accessible—and they are a potential game-changer in our ability to respond to COVID-19, reopen our schools and get our economy back on track,” Garcetti told journalists. “Los Angeles never shies away from a challenge, and we are tapping into our trademark creativity, our innovative spirit, and our strong partners with USC and the county to advance groundbreaking research, prevent the spread of this virus and save lives.”

The second phase of the project seeks to assess the feasibility, acceptability and

accuracy of repeat rapid antigen testing for screening school-aged children. The researchers hope to establish the best way to deploy rapid testing, how often each student should be tested and the most efficient large-scale testing methods. ●

Rapid and effective vaccine distribution requires a well-designed plan. Schaeffer Center fellows explored ways to build the infrastructure to facilitate quick and effective vaccination.

Even the most potent vaccine only works if it reaches communities quickly. The Schaeffer Center leveraged scientific and strategic expertise to help local, state and federal governments make the difficult decisions crucial to efficient distribution.



63% of Americans said they would take the COVID-19 vaccine in December 2020, down from 83% in March 2020.



“We want to understand whether rapid antigen tests identify infectious and asymptomatic individuals, whether they can be self-administered, and how they can be used for screening at schools and workplaces. We are especially excited to be piloting a new rapid antigen test and mobile app that uses computer vision technology to automatically interpret results.”

– Neeraj Sood, Schaeffer Center COVID Initiative Director

Those who perceived a higher risk of dying or getting seriously sick from COVID-19 were more likely to engage in protective behaviors.



Schaeffer Center Senior Fellow Jeffrey McCombs and colleagues emphasized the importance of community pharmacists to any immunization effort. “Roughly 9 out of 10 Americans live within five miles of a pharmacy with the capacity to provide vaccinations during extended hours and without an appointment,” they wrote. However, to be truly effective, “state practice laws concerning vaccine prescribing authority should be uniform across states and written to automatically include new vaccines once they are approved by the Food and Drug Administration.”

In February 2020, Schaeffer Center Director of Health Policy Geoffrey Joyce brought attention to the dangers of shortages posed by supply chains. In an interview with the *Los Angeles Times*, he said, “the vast majority of raw materials that go into a prescription drug are produced overseas, mostly in China and India.” As a result, he noted, “[t]he coronavirus shutting down China or India for an extended period of time

is likely to have a substantial impact on the supply of many drugs.”

In addition, vaccine hesitancy is a major concern. According to a survey of Americans conducted in December 2020, only 63% said they would take the COVID-19 vaccine, down from 83% in March 2020. “These results suggest that we need to have good strategies in place very soon to ensure the greatest possible uptake of vaccines,” said Wändi Bruine de Bruin, co-director of the Schaeffer Center’s Behavioral Sciences program, during an expert panel on vaccine adoption hosted virtually by the Schaeffer Center.

Schaeffer Center Director Dana Goldman, Senior Fellow John Romley and Visiting Scholar Matthew A. Crane examined the public health challenge of vaccine hesitancy and urged transparency from public health agencies at all levels to address safety concerns. Communication with minorities, especially the Black community, is especially vital as they may be distrustful of vaccines due to historical wrongs. ●

**Analysis promotes widescale random testing and greater care with personal protective equipment.**

In March 2020, Sood penned an opinion piece in *The Wall Street Journal* calling for random testing rather than only testing the symptomatic to better understand community spread. Schaeffer Center Fellow William Padula expanded on this idea. Writing in *Applied Health Economics and Health Policy*, Padula noted “there is substantial evidence to support the belief that many of the infected population are asymptomatic.” Therefore, “the U.S. should consider randomizing testing in the general population.”

Padula also found that long hours of wearing the same mask may result in facial injuries, rendering caregivers vulnerable to the very virus from which the gear aims to protect them. “Healthcare facilities should establish



Neeraj Sood participated in a press briefing with Los Angeles Mayor Eric Garcetti and the Los Angeles County Department of Public Health about the project to examine use of rapid antigen tests among first responders and school-aged children.



clear policies for educating frontline staff on steps to maintain personal hygiene and protect the health of vulnerable, noninfected patients in addition to those presenting with COVID-19,” he and colleagues wrote in a position paper for the National Pressure Injury Advisory Panel. ●

**As COVID-19 began spreading, so did disagreements about its hazards and how to respond. Schaeffer Center research emphasized the importance of clear messaging and public alerts to protect people from COVID-19.**

Bruine de Bruin conducted a national study that highlighted the importance of clearly communicating the disease’s risks. She found that people who understood the potential dangers were more likely to take protective measures.

“Unless addressed by effective health communication that reaches individuals across all social strata, variations in perceptions about the COVID-19 epidemic raise concerns about the ability of the U.S. to implement and sustain the widespread and restrictive policies that are required to curtail the pandemic,” Bruine de Bruin and her fellow researchers wrote.

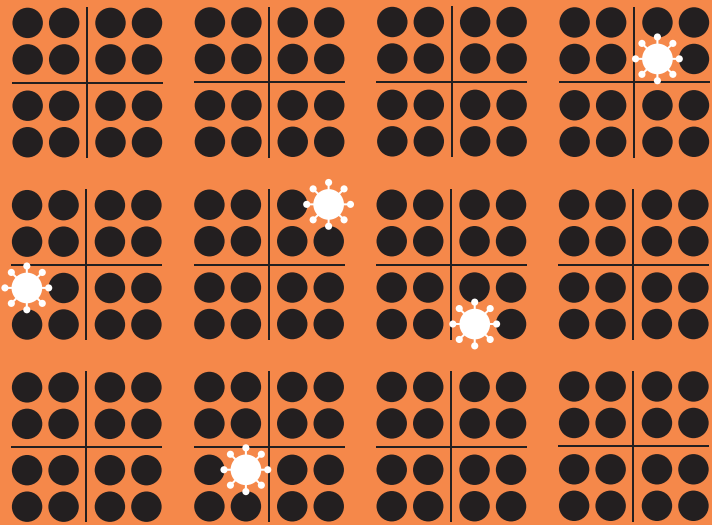
In a co-authored op-ed for the *Los Angeles Times* in April 2020, Goldman proposed modifying California’s smog alert system to warn people of COVID-19 spikes. Such “virus alerts” would be triggered by high levels of infection or mortality rates.

“People could return to work while observing reasonable safety rules, such as wearing masks in public places and practicing social distancing in restaurants and workplaces,” Goldman and his co-author wrote. To that end, they also encouraged public service campaigns reminding the public to follow these commonsense safety measures. ●

**Schaeffer experts offer pooled testing as a cost-effective measure to help safely reopen businesses and schools.**

As the pandemic spread and testing supplies became more limited, screening as many people as possible as quickly as possible became urgent. In July 2020, Schaeffer Center Director of Research Darius Lakdawalla, Associate Director Erin Trish and Goldman proposed pooled testing as a way to safely reopen businesses and schools.

Instead of laboratories running tests on each individual in a company or school, pooled testing processes samples in batches. If a result shows one or more infections, individual testing is used to find the source. However, if the pool comes back negative, all members are cleared for in-person work or school.



Pooled testing works by batching samples from several people. If the pooled sample result is positive, it indicates at least one person in that pool is infected. Individuals in the infected pool are retested to reveal the source. By contrast, if the pooled sample comes back negative, it clears all members of the pool until the next testing cycle.

The team found that pools of four are optimal—and would cut costs of periodic testing by more than half while providing accurate results. In response to this research, the Food and Drug Administration began issuing emergency-use authorizations for pooled-testing techniques and school administrators reached out to Schaeffer Center experts for advice. The findings also garnered nationwide media coverage. ●

**Schaeffer Center research examined the balance between public health concerns and the economic consequences of COVID-19.**

Nobel Laureate and Schaffer Center Distinguished Fellow Daniel McFadden analyzed a worst-case scenario of the pandemic in spring 2020, finding that it could cause up

to 4.5 million deaths among older Americans. Fortunately, policymakers heeded enough advice from experts, including Schaeffer Center fellows, to avoid that outcome, but the toll has still been tragically high.

To avoid the worst, Mireille Jacobson, co-director of the Schaeffer Center’s Aging and Cognition program, wrote in STAT in March 2020: “We should all be prepared to make significant economic sacrifices now to minimize the harm of this evolving crisis. Furthermore, we should provide assistance to help those who are disproportionately affected by such measures weather the current storm and get back on their feet once the epidemic has passed.”

Joyce examined the economics of COVID-19 for MarketWatch in April 2020. “Some economists and business leaders believe the costs of constraining the virus have exceeded the benefits,” he wrote. “They point to unemployment totals not seen since the Depression

and entire industries shut down, compared to virus death totals that may reach only the numbers from a bad flu season (55,000).” However, Joyce noted, the emerging data showed that governments had no choice but to impose restrictions. “Assuming that mortality rates would rise from 0.5% to 1.5% as hospitals become increasingly overrun, the estimated cost of COVID-19 increases to \$5.6 trillion,” he calculated. ●

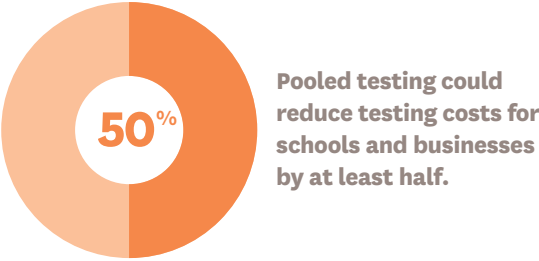
**A Schaeffer Center model showed the potential value of new COVID-19 therapies—in vivid terms of lives saved and dollars conserved.**

Schaeffer Center Fellows Karen Mulligan and Karen Van Nuys, along with Joyce, used a data model to consider the financial and health-related benefits of two hypothetical treatments.

**“Testing as a surveillance strategy is critical for a successful reopening of the country, especially given the concerns about people being infectious and asymptomatic. But testing millions of people individually is cost-prohibitive. Our study shows pooled testing is an effective tool for identifying people who have the virus at a reasonable cost.”**

– Darius Lakdawalla, Schaeffer Center Director of Research

**12 webinars** hosted by the Schaeffer Center brought together leaders to discuss the pandemic and its impact.



They estimated that an outpatient treatment reducing hospitalization risk by 50% would result in 285,000 fewer hospitalizations, up to 71,000 fewer deaths and almost \$88 billion in value by the end of 2021. Meanwhile, a hospital-based treatment that reduces mortality and length of stay by 30% would save between 51,000 and 85,000 lives, generating up to \$106 billion in value during that same period.

“With the U.S. not pursuing a strategy of ‘crushing the virus’ like Europe and Asia, treatment to manage the virus’s impact becomes even more valuable,” they wrote. This was especially true before vaccines became available. Yet innovative treatments will remain vital to COVID-19 management, as vaccines are not perfect and some people will refuse inoculation.

“We will need to manage COVID-19, and possibly other novel viruses, for years to come,” the team added. “A vital tool will be effective treatments. We must prioritize their development now. If we do, we will be rewarded with resilient health systems, a stronger economy and longer lives.” ●

**The USC-Brookings Schaeffer Initiative helps consumers navigate the insurance market to get better healthcare value—with the pandemic adding new urgency.**

As COVID-19 cases mounted, the Affordable Care Act (ACA) enabled many families to obtain subsidized coverage during special enrollment periods or if they had lost coverage along with a job loss. However, those who are excluded may turn to insurance that does not comply with ACA standards.

The USC-Brookings Schaeffer Initiative for Health Policy helped protect families by disseminating information on the pitfalls to avoid and the types of comprehensive coverage to look for. The initiative also explained how and where to sign up. The authors noted, however, that people had to act fast. In many cases, the deadline for getting coverage is 60 days after the previous plan ends—and healthcare costs often remain uncovered until enrollees sign up.

In a story for *Marketplace* in May 2020, USC-Brookings Schaeffer Initiative Fellow Christen Linke Young explained that the plans “are likely more affordable than people may be expecting,” adding that the plans are subsidized and based on estimated total yearly income. “On average, for people who bought a plan on healthcare.gov last year, the financial assistance covered 87% of the premium.” ●

Alzheimer’s disease is the most common form of dementia and a leading cause of death for older Americans. It currently afflicts more than 5 million people across the country—a figure that threatens to triple in the next 40 years. But new therapies are on the way, and the Schaeffer Center is exploring options to facilitate their use, improve clinical trials, and ease the burden of the disease for patients and families.

14 million

Americans will be stricken with Alzheimer’s disease by 2060 without significant new interventions.

Schaeffer Center researchers uncover why Alzheimer’s clinical trials are slower to enroll participants, take longer to complete and are more expensive than those for other conditions.

In a survey of nearly 900 Alzheimer’s stakeholders, researchers found that 99% of eligible patients are never referred to or consider participating in an Alzheimer’s clinical trial. Schaeffer Center experts say that patient organizations, healthcare providers, researchers, government and industry must work together in a holistic approach to reform clinical trials for Alzheimer’s, improving awareness of the disease and facilitating participation in trials among diverse patients. ●

With breakthroughs on the horizon, Alzheimer’s disease may finally meet its match, but health systems must be prepared.

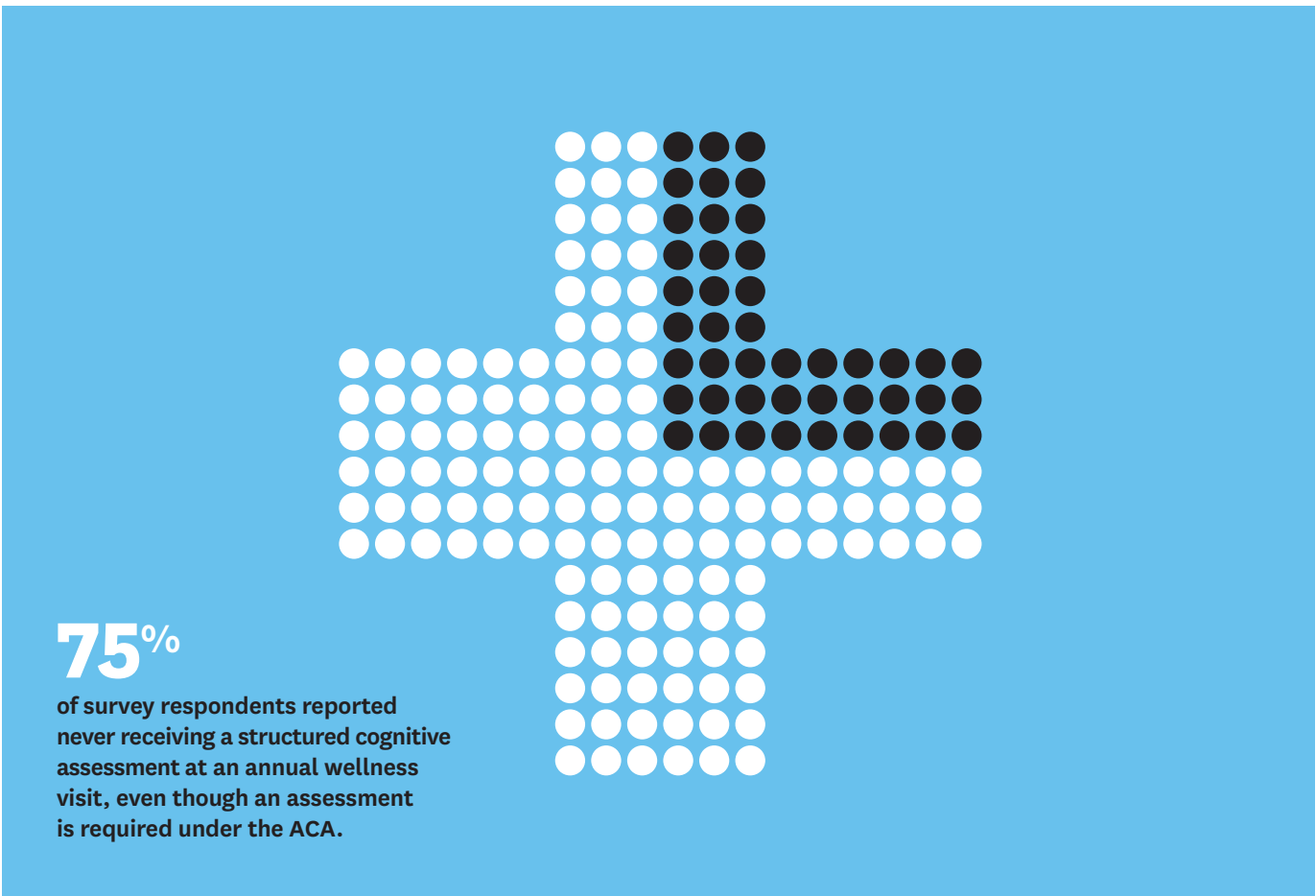
New Alzheimer’s disease treatments and prevention strategies are drawing near, with a reported 132 drugs in the pipeline. Many of these could slow or reverse development of Alzheimer’s telltale brain plaques, called amyloids.

“We are close to major breakthroughs,” said Paul Aisen, founding director of the USC Alzheimer’s Therapeutic Research Institute, during a webinar held by the USC-Brookings Schaeffer Initiative for Health Policy. Leonard Schaeffer introduced Aisen, who noted that advances in brain imaging and blood-based biomarkers may help with Alzheimer’s prevention.

Schaeffer Center Director Dana Goldman moderated the panel, which included Sharon Cohen, medical director of the Toronto Memory Program at the University of Toronto, and Heather Snyder, vice president of Medical and Scientific Relations at the Alzheimer’s Association.

A second panel discussed possible models to pay for novel treatments. Schaeffer Center Director of Research Darius Lakdawalla suggested that USC’s Future Elderly Model microsimulation could help estimate long-term health consequences of functional and cognitive decline and associated costs, and inform a pricing strategy that would reflect the lifetime health burden of Alzheimer’s.

Early interventions are key. Citing Schaeffer Center research, panelist Sarah Lenz Lock, senior vice president for Policy and Brain Health at AARP, noted that if innovative drugs reduce the risk of getting Alzheimer’s by 20% to 40%, or can delay onset by five years, the overall cost burden could be cut in half.



However, more people need regular assessments so interventions can be employed. A Schaeffer Center study led by Aging and Cognition program Co-Director Mireille Jacobson showed that only one-fourth of Medicare patients report receiving structured cognitive assessments during annual wellness visits, even though they are a required component. ●

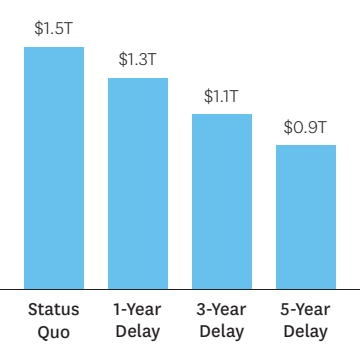
A healthy lifestyle and management of risk factors such as high blood pressure and high cholesterol could reduce dementia rates.

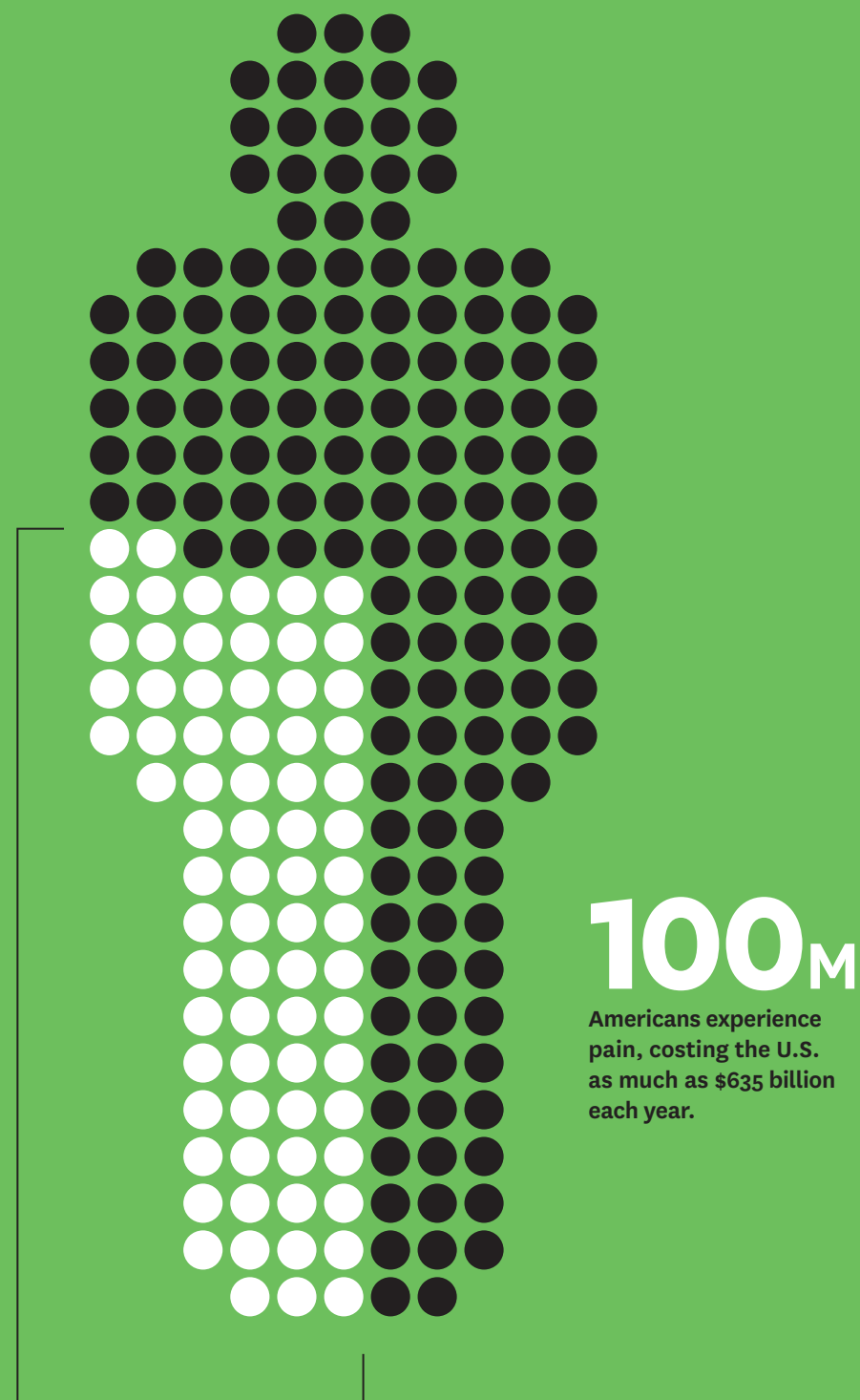
Certain combinations of cardiovascular drugs may reduce the risk of Alzheimer’s disease, according to a Schaeffer Center study of nearly 700,000 Medicare beneficiaries. Since 1 in 4 adults over age 65 uses both antihypertensives and statins, treatments already in use could reduce the number of people with Alzheimer’s and related dementias. ●

The Schaeffer Center is exploring new ways to ease the toll of Alzheimer’s disease on individuals, families and caregivers, along with strategies to reduce the burden on health systems.

With a \$4.1 million grant from the National Institute on Aging, the Schaeffer Center launched the multisite Center for Advancing Sociodemographic and Economic Study of Alzheimer’s Disease (CeASES-ADRD). Led by Julie Zissimopoulos, co-director of the Aging and Cognition program, CeASES-ADRD confronts the enormous health, economic and social costs of Alzheimer’s disease by increasing knowledge and technological capacity and building a global network of researchers. Partners include Stanford University and the University of Texas at Austin. ●

By 2050, the total cost of Alzheimer’s disease will be \$1.5 trillion. But a delay of even one year would reduce costs and prevalence.





## 05\_Population Health

**Health inequity is one of today's most urgent challenges. The Schaeffer Center develops high-value strategies to improve the wellbeing of vulnerable and underserved populations. Our research explores issues confronting patients of all ages and backgrounds—as well as systemic issues within the healthcare system.**

# 158 thousand<sup>+</sup>

Americans died from drug overdoses, suicide or alcoholism in 2017 alone.

**Each generation of less-educated Americans reports more pain throughout their lives than their elders, and education may hold the key.**

Schaeffer Center research reveals that middle-aged Americans now report more pain than the elderly, and reports of pain are rising more quickly in younger people. The trend seems to be driven by the two-thirds of U.S. adults without a four-year college degree. This troubling finding seems to be unique to our nation—and is rising with each generation.

The intergenerational increase could be driven by numerous factors to which the less educated are vulnerable—including stagnant wages, unemployment, broken homes and social isolation. If the trend continues unchecked, tomorrow's elderly will be sicker than older people today, presenting even greater challenges for the healthcare system that tends to their needs.

In conducting the study, Nobel Laureate and Schaeffer Center Distinguished Fellow Sir Angus Deaton, Princeton Professor Anne Case and Schaeffer Center Fellow Arthur Stone drew from surveys of more than 2.5 million adults in the United States and Europe. The research builds on previous work by Deaton and Case that coined the term “deaths of despair.”

Deaton and Case's bestselling book, *Deaths of Despair and the Future of American Capitalism*, documents the devastating deaths that preceded COVID-19. In 2017 alone, 158,000 Americans died from drug overdoses, suicide or alcoholism. The toll contributed to the first three-year drop in U.S. life expectancy since the flu pandemic of 1918.

Although policymakers have tried to address opioid addiction as a main cause, Deaton and Case argue that these addictions merely accelerated an already existing epidemic. Opioid overprescribing also provides a glaring

example of how the U.S. medical system has failed to uphold its mandate of improving people's health. ●

**The Schaeffer Center promotes policies to ensure high-quality care for kidney patients.**

Schaeffer Center Fellow Eugene Lin and Director of the USC-Brookings Schaeffer Initiative Paul Ginsburg co-authored an influential report on the dominance of in-center dialysis care, which has persisted despite home-based alternatives offering similar outcomes and often being preferred by patients. In 2019, a presidential executive order, Advancing American Kidney Health, was signed to enable more patients to receive dialysis treatments at home—increasing patient satisfaction while reducing Medicare costs. ●

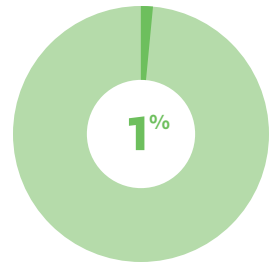


“Current research is limited by a lack of complete and representative data sets. Our goal is to change this and ultimately better understand how different populations have different health behaviors and experience different social determinants of health. With that information, we hope to create precision public health interventions that meet individual needs.”

– Ritika Chaturvedi, Schaeffer Center Research Scientist and Principal Investigator, American Life in Real-Time

37 million Americans use cannabis each year.

145 opioid policy studies revealed a need for more rigor in research design and statistical methods.



of Medicare patients live with kidney failure but represent 7% of Medicare spending.

A new digital initiative collects data from across sociodemographic groups to improve population health and reduce disparities.

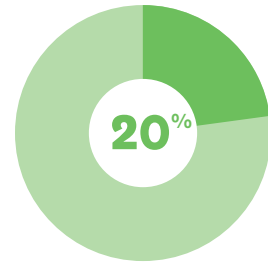
The American Life in Real-Time project is building the first large-scale digital health dataset that will represent everyone in the nation—including previously underrepresented ethnic and economic groups. The Schaeffer Center launched the initiative with the RAND Corporation and Evidation Health to correct the bias in most data sets that investigators rely on. For example, as information collected by internet-enabled devices is increasingly used to study public health, people who cannot afford or choose not to purchase such technology are being left out of data pools. ●

Schaeffer Center research examines how states are tackling the opioid crisis to promote best practices for stemming addiction.

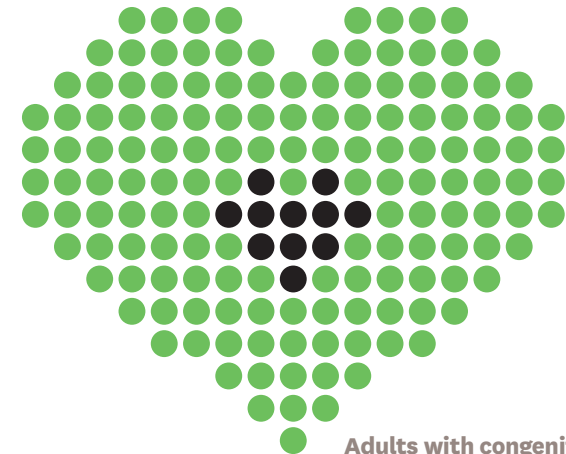
Ten Western states reported an increase of nearly 100% in deaths caused by synthetic opioids in 2020. To promote effective tactics for stopping the tidal wave of opioid addiction, Schaeffer Center Senior Fellow Rosalie Liccardo Pacula collaborated on an examination of three approaches taken by states:

- Increasing healthcare insurance coverage and payment rates
- Expanding treatment capacity
- Developing more comprehensive and connected treatment networks

The study notes that, thanks to federal efforts and certain state initiatives, substance-use treatment organizations are gradually becoming better integrated into the overall



of L.A. County residents—many of whom live in the urban core—have only intermittent access to comprehensive stroke centers.



Adults with congenital heart defects have a life expectancy 4.6 years lower than healthy adults.

healthcare system. However, the process has been slow and mostly unknown to the public. Further, more needs to be done to modernize information systems so those helping people overcome addiction can better communicate with insurers. ●

Researchers calculate the lifetime costs of adult congenital heart disease.

Schaeffer Center Fellow Cynthia Gong, Health Policy Microsimulation Director Bryan Tysinger and Schaeffer Center Director Dana Goldman modeled the lifetime health, education, labor and social outcomes of people with congenital heart disease. They found that adults with the condition face a lifetime burden of \$500,000 compared to those who are healthy. The study used the Future Adult Model, an economic-demographic microsimulation that covers the entire U.S. population, to study the lifetime impacts of chronic diseases. ●

A Schaeffer Center expert evaluates markets for recreational drugs to examine their health ramifications.

As more states and nations legalize marijuana for recreational use, policymakers rely on Pacula’s expertise for evidence-driven analysis of the long-term effects of decriminalization. In her role as president of the International Society for the Study of Drug Policy, Pacula has testified before the United Nations and World Health Organization and has briefed state legislatures and the Centers for Disease Control and Prevention.

Vaping represents a particular health concern, especially since young e-cigarette users have been shown to be five times more likely to be diagnosed with COVID-19 than nonusers. However, Pacula suggests that making e-cigarettes illegal would simply drive the market underground—making it harder to track health effects.

“The unregulated vaping market today is a Wild West of hucksters, unsubstantiated claims and unknown ingredients. The health of our nation, particularly our young people, is riding on getting it under control,” said Pacula, for an article that appeared in The Hill. ●

Who receives advanced stroke care may depend on traffic.

Schaeffer Center Fellow Sarah Axen and colleagues at the Keck School of Medicine at USC analyzed how long it took emergency medical services to transport patients to hospitals with comprehensive stroke centers in L.A. County. The study revealed that shifting traffic conditions—not distance—result in nearly 20% of the population having only intermittent access to care. The researchers hope these findings will influence how planners and public health professionals allocate resources and think about access. ●

U.S. medical costs are the highest in the world—but vast spending does not automatically result in healthier outcomes. By measuring and analyzing value in healthcare and proposing insightful and affordable ways to enhance resources, Schaeffer Center experts are helping improve healthcare for all.

\$10 thousand  
per person annual spending on healthcare in the U.S.

Higher spending does not necessarily lead to better cancer outcomes—especially at the end of life.

Schaeffer Center Director of Research Darius Lakdawalla and Schaeffer Center Director Dana Goldman reviewed studies that examined the relationship between spending and outcomes in cancer in the U.S. and internationally. They found that higher cancer spending, in international comparisons, was almost always correlated with better outcomes and lower mortality. However, spending in the United States—especially when focused at the end of life—did not always produce better outcomes and was frequently associated with higher mortality.

Writing in the *Journal of Clinical Oncology*, the team noted that although the average patient in the United States has faster access to a greater number of innovative treatments and services, overall costs are driven up through wasteful spending. Studies of alternative care

delivery and revised payment models indicated that lower spending is achievable without adversely affecting outcomes, with the best results coming from efforts to limit expensive hospital use. ●

The Schaeffer Center’s new Healthcare Markets Initiative explores novel ways to deliver value and improve efficiency.

U.S. healthcare markets suffer from both overuse and underuse. The challenge is how to create market incentives to eliminate the inefficiencies that make some services too expensive and many public-sector reimbursements too low. Led by Lakdawalla and Nonresident Senior Fellow Joe Grogan, the Healthcare Markets Initiative brings together experts and innovators to seek ways of redesigning healthcare markets to improve their function.

Taking a broad view of medical services, drugs, devices and insurance, the Healthcare

Markets Initiative examines numerous areas for potential improvements, such as encouraging innovation to treat chronic disease, making health insurance markets work more efficiently, improving regulation to support medical innovation and designing pay-for-performance frameworks. ●

A Schaeffer Center study examined life-expectancy gains in recent decades for healthy Americans and those with chronic conditions such as diabetes, hypertension and coronary artery disease.

Published in *Health Economics*, the research found that in people with or without chronic conditions, survival gains were significant only among those over age 65—notably, the sole group in the U.S. with universal access to public insurance. Racial disparities in life expectancy also narrowed with access to Medicare. ●

While the U.S. has achieved significant reductions in cancer mortality, it’s been an expensive endeavor—with oncology spending rising from \$27 billion in 1990 to \$137 billion in 2017.

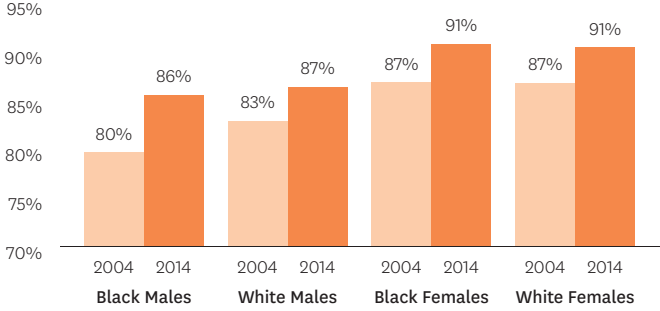
In a study published in the *Journal of Policy Analysis and Management*, Schaeffer Center experts explored whether cancer detection and mortality rates shifted at age 65, when Americans become eligible for Medicare.

Focusing on breast, colorectal and lung cancer—since guidelines recommend screenings for those conditions before and after age 65—they found that access to Medicare coverage increased cancer detection by 10% at age 65 compared to people just one to two years younger. In terms of survival, the analysis revealed a 4.5% decrease in cancer mortality for women age 65 when contrasted with women ages 63–64—and results were even better for Black women, who saw

cancer mortality drop by 9% compared to their slightly younger peers.

The authors’ conclusion: Universal coverage improves detection and outcomes, especially for underserved populations that may delay healthcare if they have inconsistent insurance coverage. ●

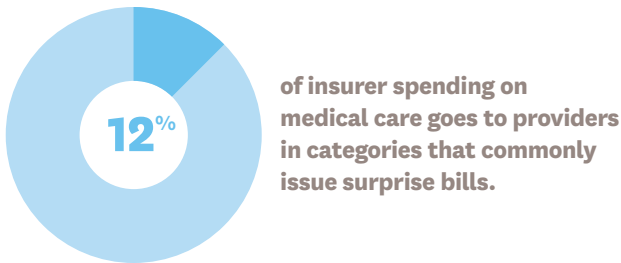
Five-year survival for older individuals with major chronic conditions is improving and racial disparities are narrowing.



10% increase in cancer detection with access to Medicare at age 65



The USC-Brookings Schaeffer Initiative for Health Policy combines the data and analytic strengths of the Schaeffer Center with the policy expertise of Economic Studies at Brookings. In the five years since its founding, the initiative has become an influential powerhouse that informs the national healthcare debate with rigorous, evidence-based analysis and practical recommendations.



**Surprise medical billing has become one of the most pressing topics in healthcare, and USC-Brookings Schaeffer Initiative experts have been prolific contributors to analysis of the issue and policy solutions.**

Too often after a hospital procedure or visit to an emergency room, patients get hit with unexpected bills from out-of-network providers—such as anesthesiologists, emergency room doctors and radiologists—that they had no role in choosing.

Under the leadership of Director Paul Ginsburg, the USC-Brookings Schaeffer Initiative for Health Policy produced seven publications on surprise billing over the past year, including investigations of different states’ laws, the most common sources of surprise bills and how policies to address surprise billing could lower premiums for all.

In one study, Erin L. Duffy, a Schaeffer Center postdoctoral research fellow, and her co-authors found that 12% of insurer spending on medical care goes to providers who commonly issue surprise bills.

Loren Adler, associate director of the Schaeffer Initiative, provided technical assistance to state leaders in Indiana, Maine and Virginia in crafting surprise billing legislation in 2020—with Indiana passing the first state law to protect patients enrolled in self-insured employer health plans.

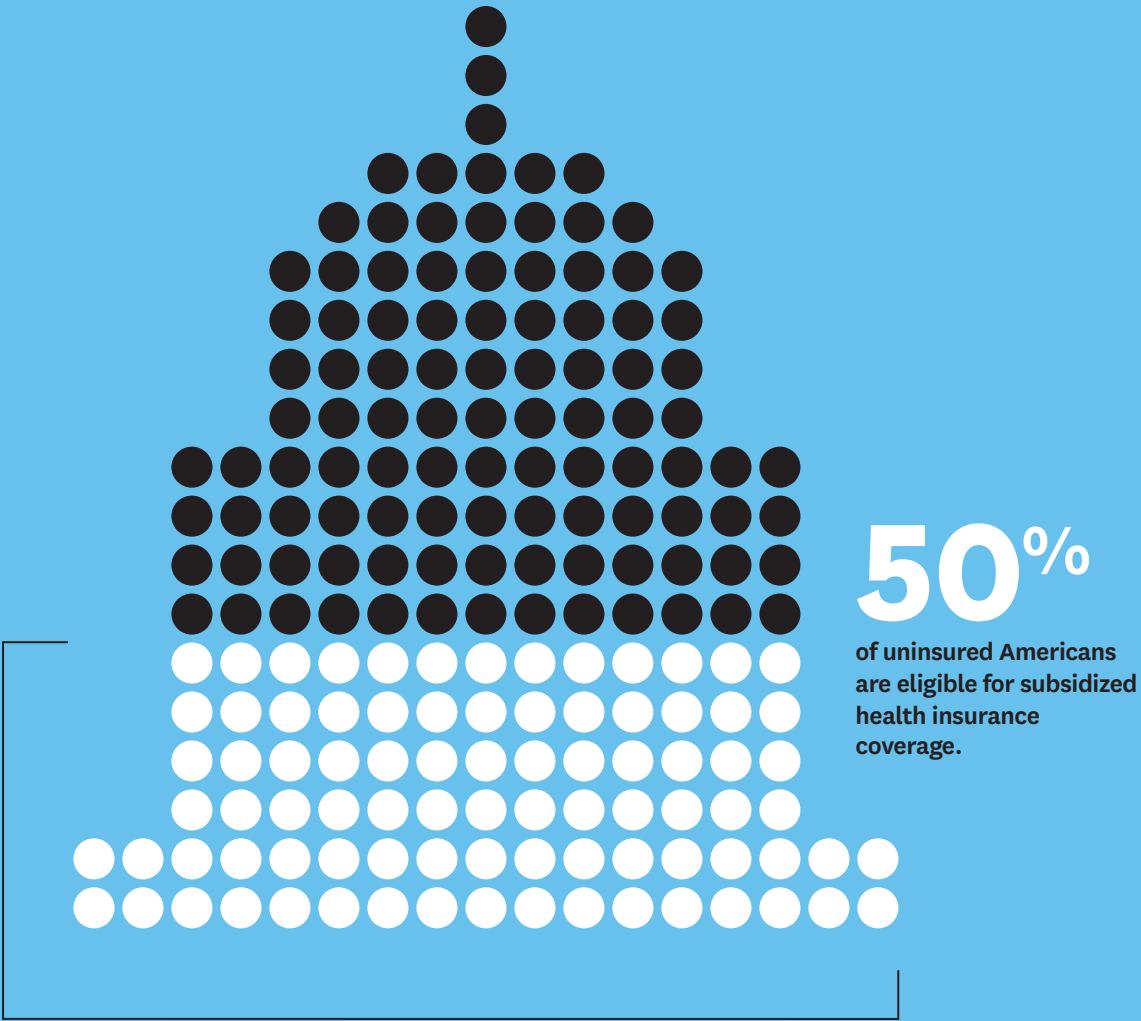
Ginsburg, Adler and other initiative leaders have also provided guidance to Congress on this issue. As a result, in December 2020, Congress passed legislation that eliminates surprise bills for patients who receive emergency care, are transported by air ambulance or receive nonemergency care at an in-network hospital. Adler was subsequently quoted in numerous media outlets.

“The law really captures every single form of surprise billing that we think of in this context, except ground ambulances,” Adler told *The New York Times*.

With renewed support from Arnold Ventures through 2023, USC-Brookings Schaeffer experts will continue the team’s solution-focused work on surprise billing. ●

**Services for which surprise billing is common make up 12% of health plan spending.**

Emergency outpatient	3.1%
Anesthesia	2.4%
Pathology	2.4%
Radiology	2.3%
Emergency	1.5%
Ground ambulances	0.3%
Total	12.0%



“Policymakers are well aware that we spend a lot on healthcare. What they need now is better information on why, and what we can do about it.”

– Erin Trish, Schaeffer Center Associate Director

\$3.6 million

in support from Arnold Ventures will focus on rising healthcare spending.

30 studies authored by Schaeffer Initiative experts on surprise billing have been published since 2016.

Regulatory gaps lead some Americans to choose health insurance that falls below the standards set by the ACA.

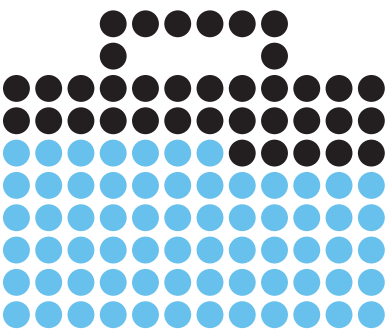
Building on decades of prior law, the Affordable Care Act (ACA) took important steps toward a comprehensive regulatory structure that sets minimum standards for healthcare coverage. Yet some plans—referred to as “junk insurance”—still fail to meet those standards, leaving consumers burdened by high costs.

In addition to conducting an expansive analysis of junk insurance, Schaeffer Initiative Fellow Christen Linke Young has met with staff from numerous congressional committees and state insurance departments to offer pathways to improved regulation and oversight. After a yearlong investigation into the issue, the House Committee on Energy and Commerce released a report on short-term plans to curb junk insurance, citing work by Linke Young and Kathleen Hannick, a Schaeffer Initiative senior research assistant. ●

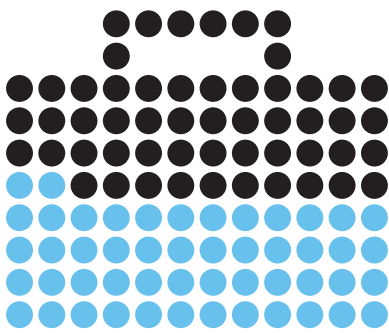
Despite reports of cost reform by CMS, analysis reveals that savings were overstated.

The Centers for Medicare & Medicaid Services (CMS) estimated that the Medicare Shared Savings Program led to \$2.6 billion in gross savings in 2019 and \$1.2 billion in net savings when accounting for shared-savings payments to participating Accountable Care Organizations (ACOs). Alice Chen, a Schaeffer senior fellow, and J. Michael McWilliams, a Schaeffer Center visiting scholar, crafted a two-part response published in *Health Affairs*. They outlined the ways that the CMS assessment is misleading and recommended reforms to help ACOs achieve their potential and help CMS reach its efficiency goals.

“At this stage of Medicare payment reform, progress is not served by applauding illusory savings or overselling simple solutions such



67%  
uninsured for at least one month



56%  
uninsured for at least three months

Even before the pandemic forced millions of people out of jobs, a substantial number of individuals were losing their employer-covered health insurance after layoffs.

as downside risk,” they wrote. “Sound evidence and theory should inform vision and set a course. Resolve will be a must and patience a virtue. Guided by these principles, designing a payment system that improves the efficiency of care delivery, meets fiscal goals and makes patients better off should be doable.” ●

Employer-sponsored insurance is the primary source of coverage for U.S. workers and their dependents—so when unemployment rises so does the uninsured rate. Auto enrollment into subsidized coverage could be a solution.

Millions of Americans who lose their employer-based insurance fall through the cracks. They might qualify for Medicaid or insurance through subsidized marketplaces created by the ACA

but getting insurance through these sources requires information and action on the part of the individual. In an analysis published by *Health Affairs*, Linke Young and colleagues found two obstacles to enrollment that could be addressed through federal and state policies: perceived affordability of coverage and complexity of the enrollment landscape. They offered three ways to improve health insurance enrollment: simplified income rules, consumer assistance and automatic enrollment. Such approaches could increase health insurance coverage even during an economic downturn.

Linke Young continued her work on auto enrollment through additional publications, a webinar co-hosted by the Schaeffer Initiative and the American Enterprise Institute, conversations with members of Congress and a state auto-enrollment proposal with Covered California. ●

Schaeffer Initiative researchers launch a new portfolio of projects to improve understanding of rising healthcare spending.

With \$3.6 million in support from Arnold Ventures, the team will take a data-driven look at provider prices, market consolidation, private equity, consumer costs, and a patchwork of related state and federal laws to produce evidence-based insights for consumers, insurers and policymakers.

The researchers hope to fill knowledge gaps that have prevented action or led state and federal policymakers to pursue ineffective solutions. ●

USC Schaeffer Center 2020 \_

# meeting the challenges ahead

**COVID-19 has brought many lessons** about infectious disease, public health, pharmaceutical distribution, health outcomes and the need for clear, reliable and honest communication. As soon as the crisis unfolded, the Schaeffer Center quickly pivoted, developing much-needed insights to help alleviate the impact on public health and the economy. Meanwhile, we furthered the Center’s important work in a host of other ongoing health policy concerns. Our experts found new strategies for easing the damage wrought by Alzheimer’s disease, reducing substance addiction, saving consumers from surprise medical bills and enhancing the value of treatments for conditions ranging from cancer to diabetes.

Looking ahead, we will continue to arm policymakers—from the new presidential administration to local communities—with evidence-based analysis to inform their decision-making and improve health policy. We will continue to develop partnerships across the country and around the globe to ensure the underserved and vulnerable have access to affordable care. And we will continue conducting research with impact and making significant contributions to policy and health improvement.

Though the future will inevitably bring new healthcare crises, we are prepared to meet these challenges and rise to the occasion. The Schaeffer Center will always remain resolute in developing innovative, cost-effective methods for improving individual and population health.



The Schaeffer Center’s microsimulation team and data core leverage the information and tools necessary to help answer big questions in health policy with evidence-based solutions. Including programmers, microsimulation modelers, statisticians, analysts and a data resource administrator, the team brings expertise in the methods and programming necessary to rigorously analyze big data. Schaeffer Center fellows and students rely on this team for support on a range of projects.

Health Policy Microsimulation

For more than a decade, the Schaeffer Center has been at the forefront of developing pioneering economic demographic microsimulation tools to effectively model future trends in health and longevity and answer salient questions in health policy. The centerpiece effort is the Future Elderly Model (FEM), which projects a rich set of health and economic outcomes for the U.S. population age 50 and older. The FEM was originally set up to answer questions about the long-term economic viability of

the Social Security and Medicare programs. Schaeffer Center researchers have used the FEM to explore an increasingly wide variety of policy questions, ranging from the fiscal future of the U.S. to the role biomedical innovation can play in future health outcomes. They are also using the model to drill down into the financial impact of a range of disease states.

The Future Adult Model (FAM) extends the FEM to the adult population age 25 and older in the United States, allowing the team to model much more of the life span. For example, the researchers analyzed lifetime health, education, labor and social outcomes for people born with congenital heart defects—many more of whom are living into adulthood due to advances in technology. The team found that living with congenital heart defects is associated with significant challenges, negatively impacting quality of life, disability and life expectancy as well as medical spending, chronic disease and employment outcomes.

The microsimulation team is building a global network of collaborators who are developing country-level FEM-based models in 18 nations. This effort will allow researchers to compare demographic, health and economic trends on a global scale.

Models have also gone local, with simulations conducted for California and Los Angeles County to help policymakers at the state and county levels understand trends and the impact of policy decisions.

For example, in 2004, the California Institute for Regenerative Medicine (CIRM) was launched with \$3 billion in funding approved by the state’s voters. CIRM delves deep into the possibilities of stem cell research, which holds promise for generating breakthroughs for conditions including Alzheimer’s, cancer, diabetes, heart disease, vision loss—and even COVID-19. Yet this leading-edge science requires significant investment.

Schaeffer Center researchers leveraged the FEM to evaluate the economic and health impacts of the CIRM investment in California. They estimate that a new therapy that halves the rate of diabetes among adults over age 51 would translate to a \$332 billion gain between 2018 and 2050 in social value.

Ultimately, the goal is to offer a tool to help policymakers weigh the pros and cons of potential policies using actual evidence about impact when deciding where to put resources. Findings using the FEM and FAM models have been published in top journals and cited—or commissioned—by government agencies, the White House, the National Academy of Sciences and private organizations interested in aging policy.

Data Partnerships and Collaborations

In addition to being a resource for Schaeffer Center researchers, the data core and microsimulation team partners with local, state, federal and international collaborators to develop data projects and models. Key collaborations include the National Academies of Sciences, Engineering, and Medicine; Los Angeles County Department of Public Health; and Los Angeles Homeless Services Authority.



In just one project, data from the Greater Los Angeles Homeless Count is analyzed by the Schaeffer Center’s data core team members, who clean, categorize and divide the data to understand key components of the homeless population, including age, race, ethnicity,

chronic mental and physical health problems, HIV status, veteran status and the length of time persons have experienced homelessness. The Schaeffer Center has served as the project’s data partner since 2017.

Data Library and Data Security

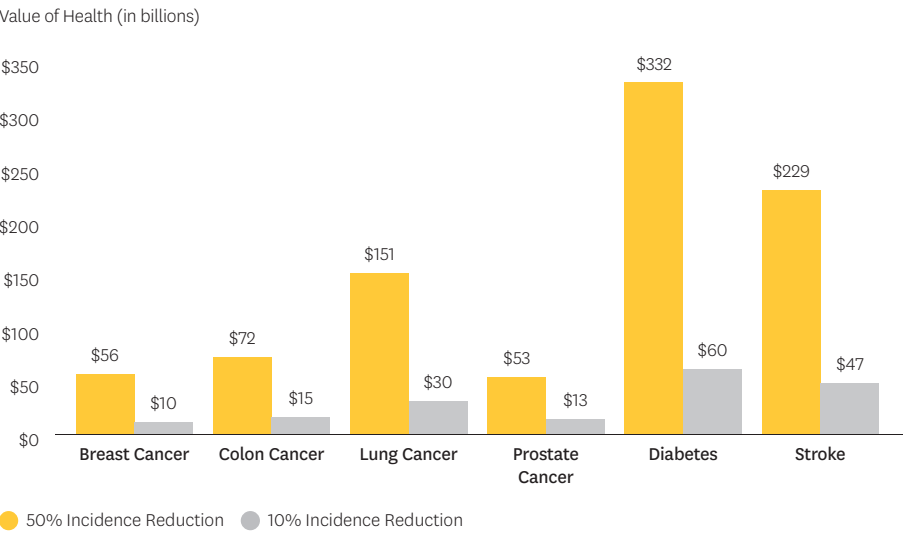
The data library maintained at the Schaeffer Center includes survey data, public and private claims, contextual data and electronic health network data feeds. The Schaeffer Center data core is a pioneering information resource and computing environment that meets exacting standards of excellence in data security. The data core manages a mix of security measures, from an air-gapped workstation to state-of-the-art, Health Insurance Portability and Accountability Act (HIPAA)-compliant systems that include 24/7 monitoring to ensure private health data resources are protected.

170 million

lives represented in Schaeffer Center data

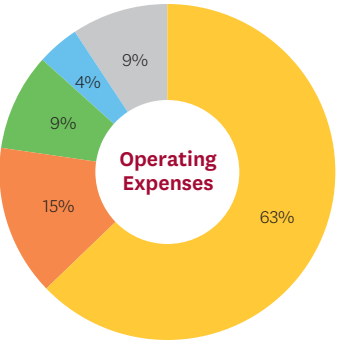
A team of 16 data scientists maintains over 70 databases and provides support for each of the Center’s research projects.

Gains in social value by 2050 if disease incidence in California were reduced

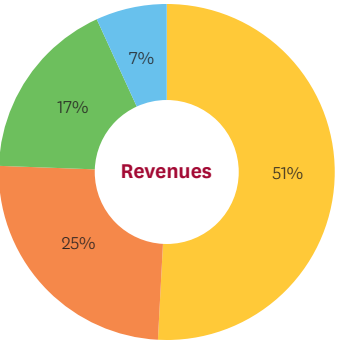


For fiscal year 2020 (July 1, 2019–June 30, 2020), total expenditures on the operating budget were \$12.9 million. The operating budget includes compensation for faculty, scholars and staff, programmatic expenses and general operating costs. Faculty salaries that are covered by the schools are not included in these totals. Expenses by function are outlined in the graph below left.

70 federally funded projects spanning topics such as Alzheimer’s disease, Medicare Part D, aging and health disparities



- \$12.9M**  
for fiscal year 2020
- Research: \$8.1M**  
Salaries, research expenses, initiatives and special projects
  - Data Core and Health Informatics, \$1.9M**  
Salaries, data and data infrastructure
  - External Affairs, \$1.2M**  
Salaries, development, communications and event expenses
  - Research Training Programs, \$0.5M**  
Salaries and training expenses
  - Administration, \$1.2M**  
Salaries and general operating expenses



- \$130M**  
(inception through 06/30/20)
- Government, \$66.1M**  
National Institutes of Health, Centers for Medicare & Medicaid Services, and other government sources
  - Corporations, \$32.2M**  
Industry
  - Individuals and Foundations, \$22.7M**  
Foundations, family foundations and individuals
  - USC and Others, \$9.0M**  
University support and miscellaneous income

In fiscal year 2020, the Center funded the \$12.9 million in operating expenses with \$18.9 million current revenue. University support does not include faculty salaries covered by the schools. Since its inception, the Schaeffer Center has raised more than \$130 million, the majority of which has come from federal grants.

Conflict of Interest Policy

The USC Leonard D. Schaeffer Center for Health Policy & Economics conducts innovative, independent research that makes significant contributions to policy and health improvement. Center experts pursue a range of priority research areas focused on addressing problems within the health sphere. Donors may request that their funds be used to address a general research priority area, including:

- Improve the performance of healthcare markets
- Foster better pharmaceutical policy and regulation
- Increase value in healthcare delivery
- Improve health and reduce disparities throughout the life span

Schaeffer Center funding comes from a range of sources, including government entities, foundations, corporations, individuals and endowment. At all times, the independence and integrity of the research is paramount and the Center retains the right to publish all findings from its research activities. Funding sources are always disclosed. The Center does not conduct proprietary research.

As is the case at many elite academic institutions, faculty associated with the USC Schaeffer Center are sought for their expertise by corporations, government entities and others. These external activities (e.g., consulting) are governed by the *USC Faculty Handbook* and the university’s Conflict of Interest in Professional and Business Practices and Conflict of Interest in Research policies. All outside activities must be disclosed via the university’s online disclosure system, *disClose*, and faculty must adhere to all measures put in place to manage any appearance of conflict.

*A wide range of public and private funders provide grants, gifts and sponsorships that help advance our work. The Schaeffer Center gratefully acknowledges the following fiscal year 2020 supporters:*

- 5AM Ventures
- Agency for Healthcare Research Quality
- Catherine Ahmed
- Allergan Alliance Advocacy
- Amgen
- Laura and John Arnold Foundation
- Brent Bayless
- Blue Cross Blue Shield of Arizona
- Blue Cross Blue Shield of Illinois
- Blue Cross Blue Shield of Massachusetts
- Brewster Foundation
- Bristol-Myers Squibb
- Cathy and Drew Burch
- California Hospital Association
- Cambia Health Solutions
- Cedars-Sinai
- Centers for Disease Control and Prevention
- Centers for Medicare & Medicaid Services
- Children’s Hospital Los Angeles
- City of San Jose
- CommonSpirit Health
- Stephanie and John Connaughton
- Susan and John Diekman
- Jason Doctor
- Donaghue Foundation
- Edwards Lifesciences
- Edwards Lifesciences Foundation
- USC President Carol L. Folt
- Steven Fradkin
- Bill & Melinda Gates Foundation
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- Gilead Sciences

- Josephine Herbert Gleis Foundation
- Dana P. Goldman
- Toni and Chase Haddix
- Ann and Kent Harada
- Brian Harper
- Helmsley Charitable Trust
- Jaeb Center for Health Research
- Gauri Jauhar
- Jedel Family Foundation
- Johnson & Johnson
- Henry J. Kaiser Family Foundation
- Carole King
- Komoto Family Foundation
- Philip Lebherz
- Los Angeles Homeless Services Authority
- Massachusetts Institute of Technology
- Richard N. Merkin, MD
- Gordon and Betty Moore Foundation
- National Cancer Institute
- National Institute of Diabetes and Digestive and Kidney Diseases
- National Institute of Nursing Research
- National Institute on Aging
- National Institute on Alcohol Abuse and Alcoholism
- National Institute on Drug Abuse
- National Library of Medicine
- National Science Foundation
- Regina Nordahl
- Novartis Pharmaceuticals Corporation
- Sam Nussbaum
- Patricia and James P. OConor
- Patient-Centered Outcomes Research Institute
- Melinda and Norm Payson
- Pfizer
- Pharmaceutical Research and Manufacturers of America
- Tom Pike
- Providence St. Joseph Health
- Riksbankens Jubileumsfond
- Judith A. Salerno

- Pamela and Leonard D. Schaeffer
- Arnold Schwarzenegger
- The Eunice Kennedy Shriver National Institute of Child Health and Human Development
- Jacque J. Sokolov
- Neeraj Sood
- Walter Jay Unger
- University of Southern California
- USC Lusk Center for Real Estate
- USC Schwarzenegger Institute for State and Global Policy
- Utrecht University
- Walgreens Boots Alliance
- Timothy Wright
- Meng Yin
- USC Provost Charles F. Zukoski

**Thank you**  
*Your generosity contributes to the work of the Schaeffer Center—from groundbreaking, multidisciplinary research to national conferences to fellowships—all of which helps us pursue innovative solutions to improve healthcare delivery, policies and outcomes.*

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100%  
of Schaeffer Center trainees  
go on to careers in healthcare or  
health policy in academic, private  
and public-sector organizations.

In partnership with the USC School of Pharmacy and USC Price School of Public Policy, the USC Schaeffer Center prepares the next generation of health policy researchers to bring innovation and expertise to higher education, government, healthcare and research institutions. Our programs:

- Offer one-on-one mentorship and opportunities to collaborate with distinguished investigators in the field
- Provide dedicated, full-time administrative and data support at the Schaeffer Center, and access to university-wide educational and career-development resources
- Equip trainees with sophisticated data-analysis tools and resources
- Ensure numerous professional development opportunities, including support for grant writing, publication in peer-reviewed journals, and travel for attending and presenting at major conferences
- Assist trainees in securing influential positions in prestigious academic, public and private settings

Clinical Fellowships

The clinical fellows program fosters collaboration between Schaeffer Center fellows and exceptional early-career scholars, clinical researchers and thought leaders. The program provides training and support for grants, papers and ongoing research projects.



Predoctoral Fellowships

Predoctoral students in related programs in the School of Pharmacy, Price School of Public Policy, and USC Dornsife College of Letters, Arts and Sciences can conduct research under the guidance of a Schaeffer Center fellow, gaining knowledge and experience relevant to their doctoral program.

Postdoctoral Fellowships

Scholars chosen for our prestigious postdoctoral fellowships focus completely on research, with no teaching requirement. They receive one-on-one mentoring to support development of their individual research agendas and collaborate with other Schaeffer Center researchers.

Pilot Funding

USC Alzheimer’s Disease Resource Center for Minority Aging and Health Economics Research

The USC Alzheimer’s Disease Resource Center for Minority Aging and Health Economics Research (USC AD-RCMAR) aims to increase the number, diversity and academic success of junior faculty who are focusing their research on the health and economic wellbeing of minority elderly populations, with an emphasis on reducing the burden of Alzheimer’s disease and dementia. Funded through a grant from the National Institute on Aging and support from the USC Office of the Provost, Price School of Public Policy and School of Pharmacy, USC AD-RCMAR has cultivated the research of

27 early-career scholars since its launch in 2012. Collaborating centers include the USC Roybal Center for Behavioral Interventions in Aging, USC Edward R. Roybal Institute on Aging, USC Roybal Center for Financial Decision Making and Financial Independence in Old Age, USC Alzheimer Disease Research Center, and USC/UCLA Center on Biodemography and Population Health.

USC Center for Advancing Sociodemographic and Economic Study of Alzheimer’s Disease and Related Dementias

Funded through the National Institutes of Health, the USC Center for Advancing Sociodemographic and Economic Study of Alzheimer’s Disease and Related Dementias (CeASES-ADRD) is an interdisciplinary research center launched in 2020 by the Schaeffer Center, University of Texas at Austin Population Research Center and Stanford Health Policy. Its mission is to advance innovative social science research in Alzheimer’s disease and related dementias, increase and diversify the number of researchers working in the field, and disseminate findings for impact. Goals are accomplished through network meetings, workshops, pilot project support and the new annual USC Science of Alzheimer’s Disease and Related Dementias for Social Scientists Program.

USC Roybal Center for Behavioral Interventions in Aging

The USC Roybal Center for Behavioral Interventions in Aging conducts research that advances healthy aging for older adults who are economically insecure, culturally diverse and underserved by human services organizations. By developing and testing interventions based on insights from behavioral science to promote healthy aging, the Roybal Center aims to strengthen the ability of clinicians to recommend the safest, most effective treatments for patients. The Roybal Center funds pilot projects proposed



by senior and junior researchers from academic and research institutions focused on the consequences of current patterns of practice and development of interventions that will improve care delivery, quality of care and value to aging adults.

Additional Opportunities

USC Science of Alzheimer’s Disease and Related Dementias for Social Scientists Program

The inaugural Science of Alzheimer’s Disease and Related Dementias for Social Scientists Program, set to take place in 2021, will consist of informative and interactive lectures presented by national biomedical experts. Social scientists—from junior to advanced—who are interested in research into the biomedical foundations of Alzheimer’s and related dementias can apply to participate. The program is funded by the National Institute on Aging.

USC Schaeffer Center Summer Internships

Each summer, the USC Schaeffer Center welcomes outstanding graduate, undergraduate and high school students to gain hands-on experience and mentorship in health policy research and data analysis as well as an introduction to the broader field of health economics through a three-week intensive internship program. Interns are paired with a Schaeffer Center mentor and given resources to conduct a tailored research project.

Research Assistantships

Students from relevant disciplines—such as economics, public policy, health policy, statistics, medicine and psychology—work directly with Schaeffer Center fellows on specific research projects, attaining valuable experience and skills to further their research proficiency.



26+ conferences, seminars, policy forums and webinars in 2020

65+ thought leaders participated in Schaeffer Center events in 2020.

23,000 total views across Zoom, Facebook and YouTube platforms in 2020

**Schaeffer Center Celebrates Faculty Honors**  
**University of Southern California**  
**Los Angeles**  
**February 13, 2020**  
The Schaeffer Center hosted a celebration of its senior fellows who have been appointed to named professorships at USC. Senior Fellow **Wändi Bruine de Bruin**, MSc, PhD, was named Provost Professor of Public Policy, Psychology and Behavioral Science at the USC Price School of Public Policy and the USC Dornsife College of Letters, Arts and Sciences. Senior Fellow **Jason Doctor**, PhD, was appointed as the Norman Topping National Medical Enterprise Chair in Medicine and Public Policy at the Price School. Senior Fellow **Rosalie Liccardo Pacula**, PhD, now holds the Elizabeth Garrett Chair in Health Policy, Economics and Law at the Price School.



**24th Annual Wall Street Comes to Washington Healthcare Roundtable**  
**March 31, 2020**  
Designed to bridge the worlds of Wall Street and Washington, D.C., the roundtable featured an expert panel of equity analysts who discussed market trends shaping the healthcare system and the impact of federal policies on healthcare companies. Topics discussed included merger and acquisition trends, provider payment reform, insurance premium trends, hospital and provider consolidation and other issues. The panel was moderated by **Paul B. Ginsburg**, PhD, director of the USC-Brookings Schaeffer Initiative for Health Policy and professor at the USC Price School.

*Panelists included:*  
**Matthew Borsch**, MBA, MPH, managing director, BMO Capital Markets  
**Ricky Goldwasser**, MBA, managing director, Morgan Stanley  
**George Hill**, managing director and equity research analyst, Deutsche Bank

**A Short- and Long-Term Approach to COVID-19**  
**April 17, 2020**  
**William A. Haseltine**, PhD, chair and president of ACCESS Health International and a Brookings Institution trustee, joined USC-Brookings Schaeffer Initiative Director **Paul B. Ginsburg**, PhD, for a discussion on tackling COVID-19. Haseltine, who is known for his groundbreaking work on HIV/AIDS and pioneering applications of genomics to drug discovery, noted that the steps recommended by public health officials such as quarantining and contact tracing are “straight out of any epidemiology textbook” and must be applied rigorously and consistently, in every community, in order to reduce infections. He also sees hope for overcoming the disease in the deep reservoir of knowledge in the scientific community, which has successfully combatted other coronavirus-driven diseases like MERS and SARS.

**Health Economic Considerations of the COVID-19 Pandemic**  
**April 21, 2020**  
**William Padula**, PhD, a fellow at the Schaeffer Center and assistant professor of pharmaceutical and health economics at the USC School of Pharmacy, shared initial research findings and potential policy solutions for grappling with COVID-19—and future pandemics. Within days of COVID-19 being reported in the U.S., Padula and colleagues began investigating the value of hypothetical treatments and vaccines, applying data from the World Health Organization and the Johns Hopkins Coronavirus Resource Center. The team’s modeling methods are identifying optimal price points and gauging the long-term effects that new treatments could have on the population.

**Public-Private Efforts to Test and Mitigate COVID-19**  
**April 29, 2020**  
Schaeffer Center Director **Dana Goldman**, PhD, led a discussion with panelists including Amgen Senior Vice President and former Acting U.S. Surgeon General **Steven Galson**, MD, MPH, **Bob Kocher**, MD, former member of the California Coronavirus Testing Task Force, and **Darius Lakdawalla**, PhD, Schaeffer Center director of research. They discussed public-private efforts to effectively and economically test for COVID-19 during the first months of the pandemic, how public health officials ramped up the most ambitious contact-tracing effort ever undertaken in the country, and ways to continue to get people back to work and restart the economy.



**Health Insurance Auto Enrollment**  
**May 18, 2020**  
The USC-Brookings Schaeffer Initiative for Health Policy, in partnership with the American Enterprise Institute, hosted a webinar about how auto enrollment could help expand health insurance coverage. Auto enrollment automatically places individuals into the health insurance coverage they are qualified for and has received support across the political spectrum. During the discussion moderated by **Paul B. Ginsburg**, PhD, panelists discussed how to practically and effectively grow auto enrollment in health insurance. This conversation was even more critical given the significant increases in individuals who have lost employment due to the pandemic.

*Panelists included:*  
**James Capretta**, MA, resident fellow and Milton Friedman Chair, American Enterprise Institute  
**Lanhee J. Chen**, PhD, David and Diane Steffy Fellow in American Public Policy Studies, Hoover Institution; director of domestic policy studies, Public Policy Program, Stanford University  
**Stan Dorn**, JD, senior fellow and director, National Center for Coverage Innovation, Families USA  
**David Kendall**, JD, senior fellow for health and fiscal policy, Third Way  
**Christen Linke Young**, JD, fellow, USC-Brookings Schaeffer Initiative

**Telehealth in the Era of COVID-19**  
**May 19, 2020**  
**Bob Kocher**, MD, Schaeffer Center nonresident senior fellow, partner at Venrock and former member of the California Public-Private Coronavirus Testing Task Force, led a discussion about the outlook for telehealth during and after the pandemic. The panel noted advantages and downsides of virtual care and monitoring devices, barriers for certain populations and the likelihood that the pandemic will propel long-term use of telehealth.

*Panelists included:*  
**Andrew Dreyfus**, president and CEO, Blue Cross Blue Shield Massachusetts  
**Hill Ferguson**, MBA, CEO, Doctor on Demand  
**Leslie Saxon**, MD, professor of medicine and clinical scholar, Keck School of Medicine of USC; executive director, USC Center for Body Computing



**How Will COVID-19 Change American Healthcare?**

**June 9, 2020**

**Dana Goldman**, PhD, and **Jay Crosson**, MD, past chair of the Congressional Medicare Payment Advisory Commission (MedPAC) and an infectious disease physician, discussed the epidemiology of COVID-19 and what it means for America, cost consequences of the pandemic, and the impact of COVID-19 on the pharmaceutical industry.

**Prioritizing Infectious Disease Research in Treatment and Vaccine Development**

**June 16, 2020**

COVID-19 has propelled infectious disease research, treatments and vaccines to the top of the public health agenda. **Dana Goldman**, PhD, **George Scangos**, PhD, president and CEO of Vir Biotechnology—which is developing a therapeutic for COVID-19—and **Vassilios Papadopoulos**, DPharm, PhD, DSc (hon), dean of the USC School of Pharmacy, discussed the policies needed to prioritize infectious disease mitigation and treatments to protect against future outbreaks of COVID-19 and other diseases.

**Deaths of Despair and the American Healthcare System**

**July 7, 2020**

Deaths of despair primarily strike those without a college degree whose loss of a way of life can lead them to suicide, alcoholism, drug overdose and premature death. **Angus Deaton**, PhD, Schaeffer Center Distinguished Fellow and Presidential Professor of Economics at the USC Dornsife College of Letters, Arts and Sciences, and **Anne Case**, PhD, Alexander Stewart 1886 Professor of Economics and Public Affairs Emeritus at Princeton University, discussed ways that the COVID-19 pandemic—which has disproportionately impacted African Americans and Hispanics—has further exacerbated deaths of despair and noted some policy approaches that could help those most at risk. **Dana Goldman**, PhD, served as moderator.

**The Intersection of Two Pandemics: COVID-19 and Addiction**

**July 23, 2020**

Individuals who suffer from addiction may be especially vulnerable to serious complications if they contract COVID-19. Furthermore, the pandemic has caused unprecedented levels of stress and other life disruptions, which may exacerbate substance use disorders and interfere with recovery. **Rosalie Liccardo Pacula**, PhD, Admiral **Brett Giroir**, MD, 16th assistant secretary for health in the U.S. Department of Health and Human Services, and **Adam Leventhal**, PhD, professor at the Keck School of Medicine of USC, discussed how public health officials can mitigate the devastating effects of two intertwined pandemics: COVID-19 and addiction.

**The Future of American Healthcare**

**July 28, 2020**

**Dana Goldman**, PhD, and **Harvey V. Fineberg**, MD, PhD, president of the Gordon and Betty Moore Foundation, held an engaging and wide-ranging conversation about the future of American healthcare and, as Goldman said, “the future of American health.”



**Innovation in Alzheimer’s Disease: Policies to Support Access to Treatments, Diagnostics and Prevention**

**September 1, 2020**

Progress against Alzheimer’s disease and related disorders remains frustratingly elusive, but diagnostics and early treatments may be on the horizon. **Dana Goldman**, PhD, led a discussion of policies that will need to be in place to support access, ways to support novel payment approaches and how the healthcare system can be ready to meet demand.

Panelists included:

**Paul Aisen**, MD, founding director, USC Alzheimer’s Therapeutic Research Institute; professor of neurology, Keck School of Medicine of USC

**Sharon Cohen**, MD, medical director, Toronto Memory Program; assistant professor, Division of Neurology, University of Toronto

**Darius Lakdawalla**, PhD, director of research, Schaeffer Center; Quintiles Chair in Pharmaceutical Development and Regulatory Innovation

**Sarah Lenz Lock**, JD, senior vice president for policy and brain health in the policy, research and international affairs division, AARP

**Steve Miller**, MD, chief clinical officer, Cigna Corporation

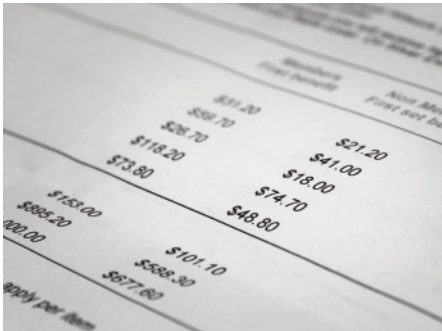
**Leonard D. Schaeffer**, Judge Robert Maclay Widney Chair and Professor, USC

**Heather Snyder**, PhD, vice president of medical and scientific relations, Alzheimer’s Association

**Are U.S. Healthcare Prices Too High, Too Low or Some Mix of the Two?**

**September 9, 2020**

Part 1 of a series on healthcare price regulation honoring the late healthcare economist Uwe E. Reinhardt: Some policymakers and analysts have called for governments to play a larger role in determining the prices of healthcare services, such as by regulating prices or introducing a public option. A panel of experts led by **Paul B. Ginsburg**, PhD, reviewed evidence commonly used to assess prices paid by privately insured Americans, comparisons of prices paid by public and private payers, and how policymakers might respond accordingly.



Panelists included:

**Richard E. Besser**, MD, president and CEO, Robert Wood Johnson Foundation

**Melinda Buntin**, PhD, Mike Curb Professor and Chair, Department of Health Policy, Vanderbilt University Medical Center

**Amitabh Chandra**, PhD, Ethel Zimmerman Wiener Professor of Public Policy and director of health policy research, Harvard Kennedy School; the Henry and Allison McCance Professor of Business Administration, Harvard Business School

**Tsung-Mei Cheng**, LLB, MA, health policy research analyst, Princeton School of Public International Affairs, Princeton University

**Michael Chernew**, PhD, Leonard D. Schaeffer Professor of Health Care Policy; director, Healthcare Markets and Regulation Lab, Department of Health Care Policy, Harvard Medical School

**Daria Pelech**, PhD, principal analyst, Health, Retirement, and Long-Term Analysis Division, Congressional Budget Office

**Louise Sheiner**, PhD, Robert S. Kerr Senior Fellow in Economic Studies and policy director, Hutchins Center on Fiscal and Monetary Policy, Brookings Institution

**Pitfalls and Potholes: Data Issues to Consider When Conducting Analyses of State Opioid Policies**

**September 14, 2020**

What is meant by a “state opioid policy,” and what gets ignored when such policies are designed? **Rosalie Liccardo Pacula**, PhD, led a discussion of current sources for state opioid policy data, opioid policy strengths and limitations, making the most of geographic diversity in opioid policies and measuring change over time.

Panelists included:

**Tisamarie Sherry**, MD, PhD, associate physician policy researcher, RAND Corporation

**Rosanna Smart**, PhD, economist, RAND Corporation

**Bradley Stein**, MD, PhD, senior physician policy researcher, RAND Corporation; adjunct associate professor of psychiatry, University of Pittsburgh

**The Future of Value-Based Payment**

**September 16, 2020**

The last decade has brought an increased focus on improving payment models to reward value over volume of care delivered. While many consider this a step in the right direction, challenges still need to be addressed to facilitate the transition. **Paul Ginsburg**, PhD, Schaeffer Center Associate Director **Erin Trish**, PhD, and **Elizabeth Fowler**, JD, PhD, executive vice president for programs at The Commonwealth Fund, discussed the future of value-based payment in the U.S., including how COVID-19 has affected the move toward value-based payment.





**Healthcare Price Regulation and Public Options: Assessing Approaches to Increasing the Public Role**  
**September 23, 2020**

*Part 2 of a panel series on healthcare price regulation honoring the late healthcare economist Uwe E. Reinhardt:* USC-Brookings Schaeffer Initiative fellows **Matthew Fiedler**, PhD, and **Christen Linke Young**, JD, joined a panel to discuss approaches to expanding the government’s role in determining healthcare prices in private insurance markets—limiting out-of-network prices, comprehensive price regulation and creating a public option—and how the effects of these policy approaches might compare to an approach focusing solely on improving competition in provider markets.

*Panelists included:*

**Benedic Ippolito**, PhD, research fellow, American Enterprise Institute

**Robert Murray**, MA, MBA, president, Global Health Payment; former executive director, Maryland Health Services Cost Review Commission

**Cori Uccello**, MA, actuary and senior health fellow, American Academy of Actuaries

**The Future of Higher Education**  
**September 24, 2020**

COVID-19 forced schools to a virtual teaching format, and college administrators found their costs soaring and revenues falling. Amid all this uncertainty, technology has emerged as a primary ingredient of higher education. Through this lens, **Dana Goldman**, PhD, and **Raynard Kington**, PhD, MBA, MD, head of school for Phillips Academy and an expert in education and health policy, had a wide-ranging discussion about the future of higher education.



**Lessons from International Experience in Determining Healthcare Prices**  
**October 7, 2020**

*Part 3 of a series on healthcare price regulation honoring the late healthcare economist Uwe E. Reinhardt:* **Paul B. Ginsburg**, PhD, led this panel that examined systems used to determine the prices of healthcare services in other developed countries, and a few specific systems in greater detail, to determine lessons these other systems may have for policymakers in the United States.

*Panelists included:*

**Adam Elshaug**, PhD, MPH, former visiting fellow, USC-Brookings Schaeffer Initiative for Health Policy; professor and chair, health policy, and co-director, Menzies Centre for Health Policy, University of Sydney

**Miriam Laugesen**, PhD, associate professor, Mailman School of Public Health, Columbia University

**Chris Pope**, PhD, senior fellow, Manhattan Institute

**Reginald Williams II**, vice president, international health policy and practice innovations, The Commonwealth Fund

**Richard N. Merkin, MD, Distinguished Speaker Series**  
**Public Policy and COVID-19: The Path Forward**

*The Richard N. Merkin, MD, Distinguished Speaker Series brings together prominent policymakers, experts and industry leaders to inform pressing debates in health policy. Merkin’s philanthropic leadership and commitment to improving healthcare made this speaker series possible.*

**November 17, 2020**

When it comes to COVID-19 strategies, some argue for loosening restrictions and allowing younger, low-risk individuals to return to pre-pandemic activities, while others argue that this will undermine vital public health efforts. **Darius Lakdawalla**, PhD, led a conversation on the path forward with **Jay Bhattacharya**, MD, PhD, Schaeffer Center nonresident senior fellow, professor of medicine at Stanford University Center for Primary Care Outcomes Research and director at the Stanford Center on the Demography and Economics of Health Aging, and **Sten H. Vermund**, MD, PhD, dean, and Anna M. R. Lauder Professor of Public Health and professor of pediatrics at Yale School of Medicine.

**Richard N. Merkin, MD, Distinguished Speaker Series**  
**Research, Advocacy and the Fight Against Alzheimer’s**  
**December 1, 2020**

The United States has more than 5 million patients with Alzheimer’s disease, and this number is expected to increase significantly in the coming decades. In addition to diminished quality of life for patients and families, this also translates into unprecedented costs. **Dana Goldman**, PhD, **Paul Aisen**, MD, and **Lauren Miller Rogen**, a screenwriter, director, producer and patient advocate whose life has been touched by the disease, discussed the latest research developments and ways to increase awareness of Alzheimer’s and its effects on patients, families and the healthcare system.



**Making Progress in Cancer Diagnostics: Clinical Practice and Policy**  
**December 10, 2020**

Cancer deaths are down nearly 30% over the last three decades, yet cancer remains the nation’s second-deadliest disease. Black Americans and rural residents are more likely to be diagnosed with cancer at advanced stages and die from the disease. Could innovation in cancer screening narrow these persistent gaps? **Dana Goldman**, PhD, and **Ruth Katz**, JD, MPH, vice president and executive director of the Health, Medicine and Society Program at the Aspen Institute, led an expert panel in discussion of these issues.

*Panelists included:*

**Otis W. Brawley**, MD, Bloomberg Distinguished Professor of Oncology and Epidemiology, Johns Hopkins University

**Howard A. “Skip” Burris III**, MD, president, chief medical officer and executive director, drug development, Sarah Cannon Research Institute; associate, Tennessee Oncology PLLC

**Stacey Fedewa**, PhD, MPH, senior principal scientist, Screening and Risk Factors Surveillance Team, Data Sciences Department, American Cancer Society

**Darius Lakdawalla**, PhD, senior fellow and director of research, USC Schaeffer Center; Quintiles Chair in Pharmaceutical Development and Regulatory Innovation, USC School of Pharmacy; professor, USC Price School of Public Policy

**Lincoln Nadauld**, MD, PhD, founder, Intermountain Precision Genomics

**Lee N. Newcomer**, MD, former chief medical officer, UnitedHealth Group

**Joshua Ofman**, MD, MSHS, chief medical officer, G-RAIL

**Azra Raza**, MD, Chan Soon-Shiong Professor of Medicine and director, MDS Center, Columbia University

**Seminar Series**

The Seminar Series features prominent academics, researchers, policymakers and industry leaders discussing timely themes in health policy and economics. The seminars prioritize informal discussions with the audience. The 2020 seminars, all held early in the year before COVID-19 restrictions were in place, included the following featured speakers:

**David Bates**, MD, MSc, professor of medicine, Harvard Medical School; professor of health policy and management, Harvard T.H. Chan School of Public Health; director, Center for Patient Safety Research and Practice, Brigham and Women’s Hospital: “The Case for Making Healthcare Data Broadly Available”

**Han Bleichrodt**, PhD, professor of behavioral economics, Erasmus School of Economics; professor of behavioral economics, Research School of Economics, Australian National University: “Incentives in Surveys”

**Thomas Buchmueller**, PhD, Schaeffer Center visiting scholar; Waldo O. Hildebrand Professor of Risk Management and Insurance and professor of business economics and public policy, Stephen M. Ross School of Business, University of Michigan; research associate, National Bureau of Economic Research: “How Well Do Doctors Know Their Patients? Evidence from a Mandatory Access Prescription Drug Monitoring Program”

**Michael D. Frakes**, PhD, A. Kenneth Pye Professor of Law and Professor of Economics, Duke Law; research associate, National Bureau of Economic Research: “The Effects of Patent Examination on Drug Pricing”

1,300+ studies published in leading journals by Schaeffer Center fellows since 2009

250+ citations of research by Schaeffer Center fellows in government reports and documents since 2009

White Papers

Aisen, P., **J. Hlávka**, **D. Goldman** et al. (2020). Prospects for future advances in Alzheimer’s disease.

**Fiedler, M.** (2020). Capping prices or creating a public option: How would they change what we pay for healthcare?

**Fiedler, M.**, and Z. Song. (2020). Estimating potential spending on COVID-19 care.

**Fiedler, M.**, and **C. Linke Young**. (2020). Federal policy options to realize the potential of all payer claims databases.

**Goldman, D.**, K. Malzbender, L. Lavin-Mena et al. (2020). Key barriers for clinical trials for Alzheimer’s disease.

**Goldman, D.**, **A. Rose**, M. Ryan, **B. Tysinger** et al. (2020). The economic case for public investment in stem cell research.

**Lakdawalla, D.**, **E. Keeler**, **D. Goldman** and **E. Trish**. (2020). Getting Americans back to work (and school) with pooled testing.

**Linke Young, C.** (2020). Taking a broader view of “junk insurance.”

**Linke Young, C.**, and S. Lee. (2020). How well could tax-based auto-enrollment work?

**Linke Young, C.**, and S. Lee. (2020). Making ACA enrollment more automatic for the newly unemployed.

**Linke Young, C.**, and J. Levitis. (2020). Georgia’s latest 1332 proposal continues to violate the ACA.

**Linke Young, C.**, and J. Levitis. (2020). Georgia’s 1332 waiver violates the ACA and cannot lawfully be approved.

**McCombs, J.**, R. Dang, Y. Seo et al. (2020). Is the U.S. ready to quickly vaccinate its population against COVID-19?

**Mulligan, K.**, **D. Lakdawalla**, **D. Goldman**, **J. Hlávka**, **D. Peneva** et al. (2020). Health technology assessment for the U.S. healthcare system.

**Mulligan, K.**, **K. Van Nuys**, **D. Peneva**, M. Ryan and **G. Joyce**. (2020). The value of treatment for COVID-19.

**Sood, N.**, **R. Ribero**, M. Ryan and **K. Van Nuys**. (2020). The association between drug rebates and list prices.

**Trish, E.**, **K. Kaiser** and **G. Joyce**. (2020). How would sharing rebates at the point-of-sale affect beneficiary cost-sharing in Medicare Part D?

Journal Articles

**Alpert, A.**, S. Dykstra and **M. Jacobson**. (2020). How do prescription drug monitoring programs reduce opioid prescribing? The role of hassle costs versus information. National Bureau of Economic Research, w27584.

Annika, K., and **E. Lin**. (2020). What the comprehensive ESRD care program tells us about the Advancing American Kidney Health initiative. *American Journal of Kidney Diseases*, 76 (6): 893-95.

**Armstrong, D. G.**, M. A. Swerdlow, A. A. Armstrong, M. S. Conte, **W. V. Padula** and S. A. Bus. (2020). Five-year mortality and direct costs of care for people with diabetic foot complications are comparable to cancer. *Journal of Foot and Ankle Research*, 13 (1): 1-4.

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**Barthold, D.**, Z. A. Marcum, S. L. Gray and **J. Zissimopoulos**. (2020). Alzheimer’s disease and related dementias risk: Comparing users of non-selective and M3-selective bladder antimuscarinic drugs. *Pharmacoepidemiology and Drug Safety*, 29 (12): 1650-58.

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**Bruine de Bruin, W.** (2020). Age differences in COVID-19 risk perceptions and mental health: Evidence from a national US survey conducted in March 2020. *Journals of Gerontology: Series B*, gbao074.

**Bruine de Bruin, W.**, and D. Bennett. (2020). Relationships between initial COVID-19 risk perceptions and protective health behaviors: A national survey. *American Journal of Preventive Medicine*, 59 (2): 157-67.

Casanova, M., and **E. Aguila**. (2020). Gender differences in cognitive function among older Mexican immigrants. *Journal of the Economics of Ageing*, 16: 100226.

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**Chen, A. J.**, **L. Gascue**, **R. Ribero** and **K. Van Nuys**. (2020). Uptake of infliximab biosimilars among the Medicare population. *JAMA Internal Medicine*, 180 (9): 1255-56.

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**Chen, A.**, M. Richards, C. M. Whaley and X. Zhao. (2020). The extent of externalities from Medicare payment policy. RAND Corporation, WR-A621-3.

**Chen, C.**, **J. Thunell** and **J. Zissimopoulos**. (2020). Changes in physical and mental health of Black, Hispanic, and White caregivers and non-caregivers associated with onset of spousal dementia. *Alzheimer’s & Dementia: Translational Research & Clinical Interventions*, 6 (1): e12082.

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Darius Lakdawalla,  
Rosalie Liccardo Pacula,  
Reginald Tucker-Seeley

National Academy of Medicine

**Eileen Crimmins**  
*Elected 2012*

**Dana Goldman**  
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**Leonard Schaeffer**  
*Elected 1997*

National Academy of Sciences

**Eileen Crimmins**  
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Select Committee Participation (including non-Academy committees)

**Wändi Bruine de Bruin**  
*Respiratory Protection for the Public and Workers Without Respiratory Protection Programs at Their Workplaces, National Academies of Sciences, Engineering, and Medicine*

**Eileen Crimmins**  
*Committee on Care Interventions for Individuals With Dementia and Their Caregivers, National Academies of Sciences, Engineering, and Medicine*



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USC School of Pharmacy

One of the top pharmacy schools nationwide and the highest-ranked private school, the USC School of Pharmacy continues its century-old reputation for innovative programming, practice and collaboration.

The school created the nation’s first Doctor of Pharmacy program, the first clinical pharmacy program, the first clinical clerkships, the first doctorates in pharmaceutical economics and regulatory science, and the first PharmD/MBA dual-degree program, among other innovations in education, research and practice. The USC School of Pharmacy is the only private pharmacy school on a major health sciences campus, which facilitates partnerships with other health professionals as well as new breakthroughs in care. It also is the only school of pharmacy that owns and operates five pharmacies.

The school is home to the D. K. Kim International Center for Regulatory Science at USC and the Center for Quantitative Drug and Disease Modeling, and is a partner in the USC Leonard D. Schaeffer Center for Health Policy & Economics and the USC Center for Drug Discovery and Development. The school pioneered a national model of clinical pharmacy care through work in safety-net clinics throughout Southern California and is a leader in comprehensive medication management. The school is distinguished by its focus on encouraging innovation, building new research portfolios, increasing diversity and preparing students for the careers of tomorrow. Vassilios Papadopoulos has served as dean since October 2016.



USC Price School of Public Policy

Since 1929, the USC Sol Price School of Public Policy has defined excellence and innovation in public affairs education. Ranked third nationwide among 275 schools of public affairs, the Price School’s mission is to improve the quality of life for people and their communities, here and abroad. For more than nine decades, the Price School has forged solutions and advanced knowledge, meeting timely challenges with purpose, principle and a pioneering spirit.

The school’s programs cut across 14 interdisciplinary research centers and five primary departments of study: governance and management, health policy and management, public policy, real estate development, and urban planning and spatial analysis. With interconnected yet distinct disciplines housed under one roof, the Price School brings multiple lenses to bear on critical issues.

Solving societal issues of such complexity requires not only great minds but also great action. USC Price fosters collaboration and partnerships to better understand problems through varied perspectives. The school uses the influence of California and Los Angeles as a resource for setting new paradigms. Every year, the school calls on a new generation of creative thinkers to explore beyond the status quo. These graduates go on to shape our world as leaders in government, nonprofit agencies and the private sector.

Dana Goldman was appointed interim dean in July 2020.



*The Leonard D. Schaeffer Center for Health Policy & Economics was established in 2009 at the University of Southern California through a generous gift from Leonard and Pamela Schaeffer. The Center reflects Mr. Schaeffer’s lifelong commitment to solving health-care issues and transforming the healthcare system.*

Today’s ever-changing health policy landscape requires creative solutions, robust research methods and expertise in a variety of fields. Schaeffer Center fellows excel not only at analyzing the current climate but also in predicting where health trends will lead. A collaboration between the USC Price School of Public Policy and the USC School of Pharmacy, the Schaeffer Center brings together health policy experts, a seasoned pharmacoeconomics team, faculty from across USC—including the Keck School of Medicine, the Dworak-Peck School of Social Work and the Viterbi School of Engineering—and a number of affiliated researchers from other leading universities to solve pressing challenges in healthcare.

In 2016, the Schaeffer Center partnered with the Center for Health Policy at the Brookings Institution to establish the USC-Brookings Schaeffer Initiative for Health Policy. This unique partnership enhances the capacity of both organizations to develop evidence-based solutions to inform policymaking on issues ranging from the future of Medicare to reshaping the Affordable Care Act.

The Schaeffer Center offers the human and technical capacity necessary to conduct breakthrough interdisciplinary research and exceptional policy analysis, with more than 50 distinguished scholars investigating a wide array of topics. This work is augmented by a visiting scholars program and partnerships with other universities that allow outside researchers to benefit from the Center’s unparalleled infrastructure and data collections. The Schaeffer Center actively engages in developing excellent research skills in new investigators who can become innovators of the future while supporting the next generation of healthcare leaders in creating strong management, team-building and communication skills.

The Schaeffer Center’s vision is to be the premier research and educational institution recognized for innovative, independent research that makes significant contributions to policy and health improvement. Its mission is to measurably increase value in health through data-driven policy solutions, research excellence, and private and public-sector engagement. With an extraordinary breadth and depth of expertise, the Schaeffer Center has a vital impact on the positive transformation of healthcare.

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