

PITT
iiii PUBLIC HEALTH

**HEART
DISEASE AND
DIABETES**

**SALK
CENTENARY
SYMPOSIUM**

**ALUMNI
LEADERSHIP**

*and
more*

“It is nonsense to suggest that we don’t know what predicts cardiovascular disease mortality ...but we do a very poor effort to prevent or treat the risk factors, especially for poorer people.”

Lewis H. Kuller

Emeritus Professor of Epidemiology

Read the full story on page 14.

Pitt Public Health Magazine

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Heartstruck

In this issue, we examine the third major cause of premature mortality in our region: mortality among adults ages 40-60, which is most often related to cardiovascular disease and diabetes, with a disproportionate number being residents of underserved communities. Previously, we examined premature mortality among the region's infants (fall/winter 2013-14) and youth (spring/summer 2014).

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Dean's Message



We now need the will.

This past October 28, we celebrated the 100th anniversary of the birth of Jonas Salk, an icon of public health, famous worldwide for developing the polio vaccine here on the Pitt campus. But at this celebration we sought to focus not on vaccines but on another of

Read about Dean Donald S. Burke's lifetime contributions to global sustainability at www.publichealth.pitt.edu/meet-the-dean.

Salk's important ideas: sustainable human development. We brought together some

of the nation's leading experts in sustainability for a symposium titled Survival of the Wisest, after one of Salk's books. Our speakers—thought leaders Jeffery Sachs, Van Jones, Nick Kristof, and others—discussed the many dimensions of sustainable human development, from challenges to world health, to the growing impact of climate change, to the quest for new sources of energy, and the need for social and health equity.

Opened by Pitt Chancellor Patrick Gallagher and Provost Patricia Beeson, the centenary symposium was by all measures a success. But the biggest takeaway

for the audience might not have been the scientific content but the spirit of commitment and of possibility. Led by Salk's son Peter, who cochaired the program, every speaker stressed that a sustainable global society could be achieved, given a genuine and concerted effort. That optimism reflects the worldview espoused by Jonas Salk. It's an attitude that remains absolutely critical as the University of Pittsburgh undertakes a yearlong examination of sustainability across all fields of study and research.

How we harness technology assuredly will be one crucial determinant of our ability to achieve sustainable human development. From genomic sequencing to cell phones, the growing abundance of data, information, and knowledge will surely help map our path forward. But as scientists, focused on the gathering and analysis of data, we may sometimes forget that stories and personal examples can be powerful motivators to others to change their health and their communities. As several of the symposium participants suggested, distilling our findings into compelling narratives—being better story-

tellers—will be critical to engaging the public.

In a recent commencement address to our graduates, Peter Salk invoked his father's words. "We have more knowledge than we have yet applied," he told us. "We now need the will." If we are truly as wise as Jonas Salk believed we could be, we will need to turn this existing knowledge into wisdom to achieve a sustainable—and healthy—world.

Donald S. Burke, dean ●

In Brief

Substantial Savings

Five billion—with a b—dollars. That's how much the federal government could save in the first year alone, simply by changing the way it assigns Medicare Part D plans to low-income beneficiaries.

This according to the results of a study conducted by **Yuting Zhang** and her health policy and management colleagues.

For nearly a decade, the government has been randomly assigning plans based on the region in which an enrollee lives, often resulting in plans “either not covering or charging higher costs for their medications,” Zhang says. “Most people are not in the least expensive plans that satisfy their medication needs.”

Using real data for a 5 percent random sample of all low-income beneficiaries, researchers simulated potential medication costs under each alternative plan. They found that if enrollees were assigned to the least expensive rather

than a random plan, the savings could amount to more than \$5 billion in the first year.

The results of the study, funded by NIH and HHS, were published in the June 2014 issue of *Health Affairs*. ●

Less Toxic

When it comes to new HIV drugs hitting the market and being used to treat younger patients, the rewards outweigh the risks in the form of increased life expectancy. Lower the toxicity of these drugs however, say Pitt Public Health researchers, and all HIV patients could benefit.

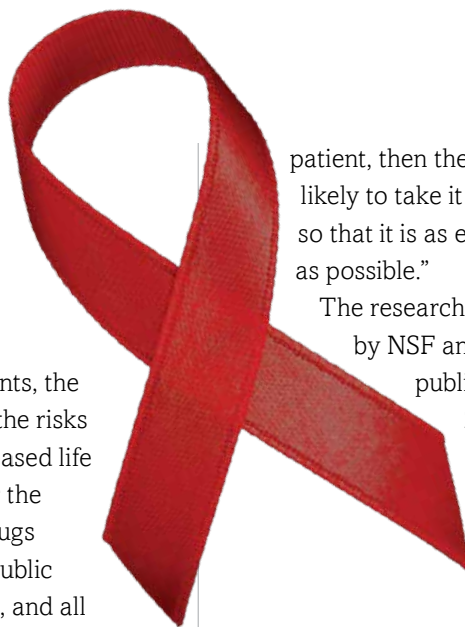
Researchers conducted a simulation and found that if the toxicity of new HIV drugs is reduced compared to existing drugs, these new drugs will increase the patient's quality-adjusted life expectancy by as much as 11 percent, or more than three years.

Doctors tend to wait longer to start antiretroviral therapy in younger patients because they will have to be on the drugs the longest in order to live an average lifespan. As such, they'll need the drugs to be effective longer and have fewer side effects.

“This availability of new drugs means that as the drugs a patient is on become less effective, doctors can adjust the therapy to use a new, more effective drug,” said senior author **Mark Roberts**, health policy and management chair. “And if that new drug has a low toxicity and is well tolerated by the

patient, then they are more likely to take it regularly so that it is as effective as possible.”

The research, supported by NSF and NIH, was published June 25, 2014, in the journal *PLOS ONE*. ●

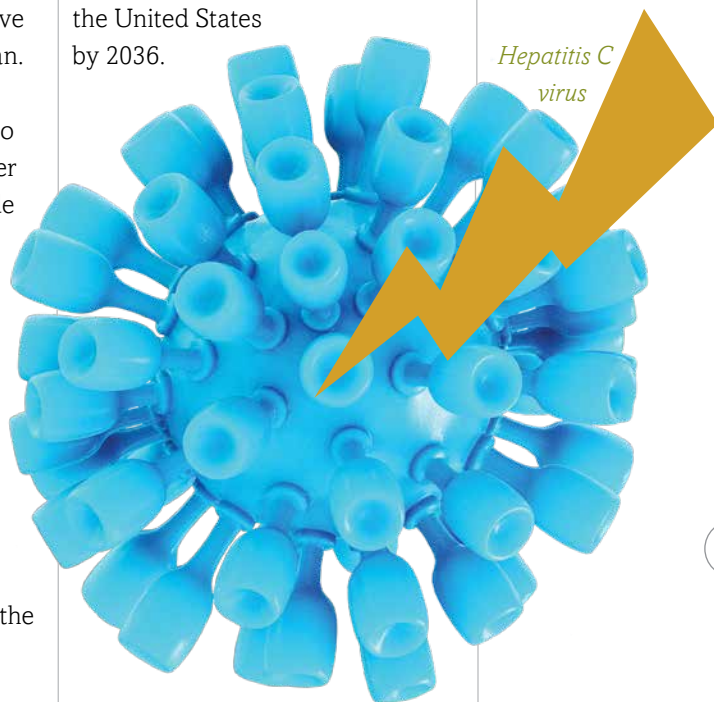


Heading Off Hep C

Approximately one in every 100 people in the United States now has chronic hepatitis C, a viral infection that compromises liver function.

There's good news, according to the results of a predictive model developed at Pitt Public Health: Newly implemented screening guidelines and improved, highly effective drug therapies could make hepatitis C a rare disease in the United States by 2036.

Hepatitis C virus



FACULTY AWARDS/HONORS

Sally C. Morton, biostatistics chair, has been appointed to the Patient-Centered Outcomes Research Institute Methodology Committee of the U.S. Government Accountability Office. She will advise the group on statistical methods, techniques, and analysis of research that supports the active involvement of patients and their families in treatment decisions.

Elsa S. Strotmeyer, assistant professor of epidemiology, has been named a fellow of the Gerontological Society of America, the highest class of membership and an acknowledgement of outstanding work in gerontology. Her research is in peripheral nerve impairments, diabetes, and osteoporosis. The society is the nation's largest interdisciplinary organization devoted to the field of aging.

Anne B. Newman has been appointed the first Katherine M. Detre Endowed Chair of Population Health Science, tasked with recruiting clinical specialists familiar with the methodology of large-scale clinical trials to study new therapeutics or diagnostic technologies. Pitt Public Health established the chair in honor of the late Katherine M. Detre, a distinguished professor of epidemiology.

A. Everette James, director of Pitt's Health Policy Institute, has been named the M. Allen Pond Chair in Health Policy and Management. M. Allen Pond was a former dean and longtime faculty member of Pitt Public Health, and the endowed chair recognizes significant contributions to the advancement of public health policy.

Lewis H. Kuller, former epidemiology chair, has been honored with the prestigious John Snow Award from the American Public Health Association and the Royal Society for Public Health in England. He was chosen for his contributions to the improvement of human health through practical, explicit, and applied innovations in public health practice.

James J. Schlesselman, biostatistics professor emeritus, has been named by his peers as a fellow of the American Association for the Advancement of Science, the world's largest general scientific society. He is honored for significant methodological contributions and leadership as a statistical scientist. ●

The research team, led by doctoral student **Mina Kabiri** and Jagpreet Chhatwal, created a computer model of the natural history and progression of the disease, both with and without treatment. They then considered what would happen if the guidelines were increased to include a one-time universal screening for hepatitis C among all U.S. citizens.

"In that scenario, nearly 1 million cases of hepatitis C would be identified in the next 10 years," said Kabiri. "And that translates into making hepatitis C a rare disease by 2026, a decade earlier than we'd predicted with the current screening guidelines."

Future research is needed to determine how the reduction in deaths and transplants offsets the increased costs of screening and drug therapy.

The results of the analysis, funded by NIH and performed with the University of Texas MD Anderson Cancer Center, are published in the August 5, 2014, issue of the *Annals of Internal Medicine*. ●

Nurse Knows Best?

Diabetic patients in need of assistance with deciphering test results, managing medications, making lifestyle changes, even dealing with emotional issues, in the very near future may need to look no further than their primary care doctor's office.

Thanks to an American Diabetes Association-funded evaluation, Pitt Public Health researchers have found that integrating nurses certified in diabetes education into primary care physician offices not only can be done but is a win-win: Patients seeking individualized care and practitioners with limited time and specific expertise alike



can benefit.

"So far, it seems like this model of diabetes care is well received in primary care physicians' offices," said **Janice Zgibor**, associate professor of epidemiology. "It will be interesting to see whether it proves to be a cost-effective way to manage the diabetes epidemic that is becoming an increasing burden on the U.S. health system." The trial, called REdesigning MEDication Intensification Effectiveness Study for Diabetes (REMEDIES 4D), is ongoing, and the research is published in the September 2014 issue of *Contemporary Clinical Trials*. ●

Highly Cited

Pitt Public Health researchers **Jane A. Cauley**, professor and vice chair for research in epidemiology; **Lewis H. Kuller**, emeritus professor of epidemiology; **Anne B. Newman**, epidemiology chair; **Thomas W. Kensler**, professor of environmental and occupational health;



and **Stephen R. Wisniewski**, professor of epidemiology, are included in the list of Highly Cited Researchers 2014.

Thomson Reuters compiled the list—which recognizes around 3,000 researchers worldwide—by surveying articles and reviews in both science and social science journals and identifying those that were most frequently cited in papers by others from 2002–12. Those that ranked in the top 1% for field and year are considered highly cited papers. ●



Autism Risk

A child's exposure to certain air toxics in utero and during the first two years of life might make him more prone to developing autism spectrum disorder (ASD). This according to the preliminary findings of a Pitt Public Health investigation of children in southwestern Pennsylvania.

Evelyn Talbott is principal investigator and professor of epidemiology. She and her colleagues performed a

population-based study of families across six counties and found links between increased levels of chromium and styrene and childhood ASD, a condition that affects one in 68 children.

Reported cases of ASD have risen nearly eightfold in the last two decades. While previous studies have shown the increase to be partially due to changes in diagnostic practices and greater public awareness of autism, this does not fully explain the increased prevalence. Both genetic and environmental factors are believed to be partially responsible.

"Our approach was novel," said **Vincent Arena**, associate professor of biostatistics and a coinvestigator. "It captured information about residential changes of the children from pregnancy through 2 years of age and incorporated those details into the analysis."

Other compounds associated with increased risk of ASD included cyanide, methylene chloride, methanol and arsenic. As these are often found in combination with each other, further study is needed.

"The next step will be confirming our findings with studies that measure the specific exposure to air pollutants at an individual level to verify these

EPA-modeled estimates," said Talbott.

The research, funded by The Heinz Endowments, was presented at the American Association for Aerosol Research annual meeting in Orlando, Fla., on October 22, 2014. ●



Campaign Update

The Building for a Healthier World capital campaign positions Pitt Public Health for a healthy future by providing funds in support of renovations of the school's infrastructure. To date, \$2.4 million has been raised.

The grand opening of the Pitt Public Health laboratory pavilion in January 2014 marked a significant step

toward meeting the ongoing challenge of providing the

best possible learning environment for students, faculty, and staff. Preparations are under way to begin much-needed upgrades to Crabtree and Parran halls in mid 2015.

As the groundwork for the next phase of this capital project begins, faculty have been asked to support the fund. A faculty giving campaign launched in September

Learn more about the campaign at www.publichealth.pitt.edu/capitalcampaign.

2014, and **Steven Albert**, chair of the Department of Behavioral and Community Health Sciences, spoke to faculty about the importance of supporting this initiative

Read more about the Elizabeth L. and John P. Surma matching gift program at www.publichealth.pitt.edu/SurmaMatch.

at the 2014 fall faculty retreat. In less than two months, faculty have already contributed

nearly \$50,000 and, with the Elizabeth L. Surma ('81) and John P. Surma Matching Gift Program, this amount is doubled to a value of close to \$100,000. Since the Surma Match kicked off in 2012, \$650,000 has been raised. ●



Healthy Sleep in Seniors

As we age, getting a good night's sleep can become increasingly difficult, leading many older adults to take over-the-counter drugs to help them nod off.

This practice—and the dangers associated with it—was recently called to the attention of U.S. poli-

cymakers during a congressional briefing given by a workgroup led by Pitt Public Health aging expert **Steven Albert**.

“Over-the-counter sleep aids are intended only for occasional difficulty with sleep and are not meant for regular use,” said Albert, chair of the Department of Behavioral and Community Health Sciences. “Their safety is not well studied in older adults, and there are concerns that the effects of these drugs could linger, increasing the risk of falls and vehicle accidents. Coupled with alcohol or taken in excess, these drugs also could cause serious health problems.”

An estimated 1.1 million adults 65 years of age and older in the United States are using over-the-counter sleep aids containing diphenhydramine or doxylamine—such as Tylenol PM, Benadryl, Unisom or ZzzQuil—according to results of the National Health and Wellness Survey.

More than half of those people report using the sleep aid with alcohol.

At the briefing, sponsored by the Senate Special Committee on Aging and also attended by representatives from the Food and Drug Administration and the National Institutes of Health, Albert led a group from the Gerontological Society of America in calling for more research into the best ways to promote sleep health in older adults.

In addition to noting the dangers of over-the-counter sleep aids and

importance of their appropriate use, the group also emphasized the serious consequences of untreated sleeplessness in older adults. According to the National Science Foundation, Americans sleep an average of 6 hours and 31 minutes each night, but report that they need nearly 45 minutes more to function at their best. Roughly one in six older adults report sleep difficulties.

“Lack of undisturbed sleep in older adults can lead to slowed response times, memory and concentration impairments, shortened lifespan, reduced quality of life, and higher use of health care,” said Albert. “Despite the pervasive impact on health and well-being, sleep difficulties in older adults are underrecognized and undertreated. This is bad for their health, but also for the safety of the general public.”

The congressional briefing was part of an ongoing national conversation on sleep health research, education, policy, and advocacy, all aimed at developing and instituting strategies that promote optimal sleep. ●

Data Sharing Saves Lives

Barriers to the sharing of public health data hamper decision-making efforts on local, national, and global levels and stymie attempts to contain emerging global health threats.

This analysis, published in the journal *BMC Public Health* (November 5, 2014) and funded by the Bill & Melinda Gates Foundation and NIH, classifies and examines the barriers in order to open a focused international dialogue on solutions.

“Data on disease surveillance, intervention coverage, vital statis-

tics, and mortality represent some of the most widely collected but also some of the most underused data,” said lead author **Willem G. van Panhuis**, assistant professor of epidemiology at Pitt Public Health. “Innovative methods for collection of new data are developed all the time, but a framework to share all these data for the global good is seriously lacking.”

Van Panhuis and his team—which included experts in ethics and law, as well as public health and epidemiology—identified more than 1,400 scientific publications related to public health data sharing, ultimately winnowing them down to the 65 most relevant articles. From those, they determined 20 real or perceived barriers to data sharing in public health and classified them into six categories: technical, motivational, economic, political, legal, and ethical.

“These barriers and categories describe a landscape of challenges that must be addressed comprehensively, not piecemeal,” said senior author **Donald S. Burke**, dean and UPMC-Jonas Salk Chair of Global Health. “We must work together as a global community to develop solutions and reap the benefits of data sharing, which include saving lives through more efficient and effective public health programs.”

The team found that most technical, motivational, and economic barriers are deeply embedded in much larger challenges of health information system capacity, particularly in low- and middle-income countries. Solutions lie in sufficiently funding such systems through international cooperation and shared development of data and infrastructure used across agencies and institutes.

The political, legal, and ethical

barriers will require a dialogue across international agencies that should include the World Health Organization, World Intellectual Property Organization, and World Trade Organization, as well as individual countries, development and funding agencies, and experts in ethics and law. The team proposes the creation of a global treaty for public health data sharing, as well as a commission to monitor, mediate, and facilitate data sharing.

“Identifying and classifying these barriers was the first step toward harnessing the potential of data for a new era in population health,” said van Panhuis. “As our knowledge of these barriers increases, so will the opportunities for solutions.” ●

Nontraditional HIV Testing

When **M. Reuel Friedman**, assistant professor in the Department of Infectious Diseases and Microbiology, was asked to improve the HIV testing rates among young, Black gay and bisexual men and transgendered women in Southwestern Pennsylvania, he realized it wasn’t as simple as offering clinics.

He’d have to build a community.

“If we just set up a storefront, a clinic to get tested, what’s the draw?” Friedman asked a group of public health professionals during a talk November 29, 2014, at the American Public Health Association’s annual meeting in New Orleans, La. “These young men kept saying to us, ‘There’s nowhere for us to go socialize, nowhere for us to call our own and be ourselves.’”

That’s when he had the idea to start Project Silk, a safe space for young Black men who have sex with men to hang out, dance,

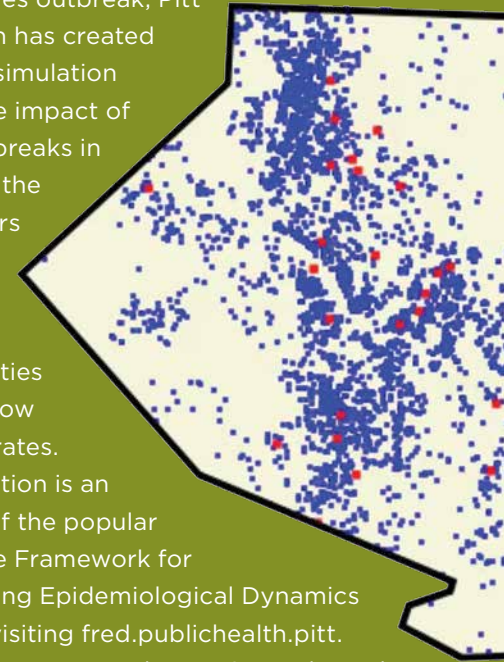
MEASLES OUTBREAK SIMULATIONS

To bring facts and clarity to the public debate about immunization in light of the recent measles outbreak, Pitt Public Health has created a computer simulation exploring the impact of measles outbreaks in cities across the country. Users can see how an outbreak would play out if their cities had high or low vaccination rates.

The simulation is an adaptation of the popular free resource Framework for Reconstructing Epidemiological Dynamics (FRED). By visiting fred.publichealth.pitt.edu/measles, you can select a city and watch a short animation of an outbreak with either high or low vaccination coverage, helping you grasp the concept of herd immunity. The Centers for Disease Control and Prevention estimates that when 95 percent of a community—or the “herd”—is vaccinated against measles, the 5 percent who can’t be vaccinated (because they are too young or have compromised immune systems) should be protected because the virus can’t gain a foothold and spread. When vaccination rates dip too low, the herd isn’t protected and measles can sweep through a community.

In addition to providing insight into how public health interventions could impact an infectious disease outbreak, it’s “also something that pediatricians could use to open a dialogue with parents who may not want to vaccinate their children. Public health officials and policy makers could use it to explain vaccination campaigns,” said FRED creator **John Grefenstette**, professor of health policy and management.

FRED was created at Pitt’s Models of Infectious Disease Agent Study (MIDAS) Center of Excellence, which is supported by the NIH’s National Institute of General Medical Sciences. ●



watch movies, sing karaoke, and just generally have a good time on nights and weekends. And he coupled it with HIV and sexually transmitted disease testing.

“It worked. We were crushed—in a good way—our first year with over 300 people attending, a lot of them multiple times,” said Friedman.

Through Project Silk, 94 percent of HIV-positive participants were linked to or re-engaged with HIV care services. Participants averaged 17 years old.

However, Friedman said, Project Silk also opened his eyes to the many challenges and stigmas that these young men face, ranging from peer violence to discrimination. His team is working to

to complete mental health or social services, the ban can be lifted on a case-by-case basis. ●

Risk Factors

Patients with atrial fibrillation who take the blood thinner Dabigatran are at greater risk for major bleeding and gastrointestinal bleeding than those who take Warfarin.

The findings, based on Medicare claims data and published in *JAMA Internal Medicine* (January 2015), indicate greater caution is

needed when prescribing Dabigatran to certain high-risk patients.

Atrial fibrillation can send tiny clots from the heart to the blood vessels in the brain, explained the study’s senior author **Yuting Zhang**, associate professor and director of the

Pharmaceutical Economics Research Group in the Department of Health Policy and Management. For that reason, these patients often are prescribed a blood thinner to limit clot formation with the aim of preventing strokes.

“Dabigatran was introduced in 2010 and, at the time of approval, it was the only available alternative to Warfarin,” Zhang said.

“Warfarin dosing can be tricky and regular monitoring with blood tests is required, so doctors and patients were glad to have a drug that was easier to manage. But some recent studies suggest that Dabigatran is associated with a higher risk of bleeding.”

To investigate that possibility, the team looked back at pharmacy and medical claims data from 2010 and 2011 of a random national sample of Medicare beneficiaries. They tracked 1,302 Dabigatran users and 8,102 Warfarin users to see whether they experienced bleeding episodes, classifying the events as major, such as intracranial bleeding or gastrointestinal bleeding requiring a hospital or emergency room stay; minor, such as gastrointestinal bleeding that was treated on an outpatient basis; or nose bleeds.

They also looked more closely at bleeding episodes in four high-risk subgroups: those 75 and older, African Americans, those with chronic kidney disease, and those with seven or more co-existing medical problems.

The data showed that Dabigatran users were 58 percent more likely to have a major



expand the services offered through Project Silk to provide job training, educational opportunities, and help with housing.

To ensure that Project Silk is a safe space, there is zero tolerance for violence or intimidation, and every participant has to read a clear set of antiviolence rules every time he attends. Those caught violating the rules are banned from Project Silk; however, if they agree

bleed and 30 percent more likely to have any kind of bleed than those taking Warfarin. African Americans and patients with chronic kidney disease using Dabigatran were about twice as likely to have a major bleed as those taking Warfarin. In addition, Dabigatran users were more likely than Warfarin users to experience gastrointestinal or vaginal bleeding, or blood in the urine, joints, or sputum. However, the Dabigatran group had a lower risk for bleeding in the brain.

Physicians should be cautious when prescribing Dabigatran, particularly to African Americans and patients with kidney impairments. The incidence of gastrointestinal bleeding was high in all the subgroups, so patients should be instructed on how to detect it so that it can be treated promptly. ●

Early Control

People with type 1 diabetes who intensively control their blood glucose soon after diagnosis are likely to live longer than those who do not.

Data from a long-running trial and follow-up observational study with participants from 27 academic medical centers in the U.S. and Canada showed a 33 percent reduction in deaths over the past several decades among participants who had early, good control of their blood glucose.

“We can now confidently tell doctors and patients that good, early control of blood glucose greatly reduces any risk for early mortality in people with type 1 diabetes, usually diagnosed in children and young adults,” said lead author **Trevor Orchard**, professor of epidemiology. “These results also remove any lingering concern that intensive therapy

may lead to increased mortality.”

The Diabetes Control and Complications Trial (DCCT) and the subsequent Epidemiology of Diabetes Control and Complications (EDIC) observational study have significantly changed treatment protocols for type 1 diabetes and improved the outlook for people with the condition.

Beginning in 1983, the DCCT enrolled 1,441 volunteers between ages 13 and 39 with recent-onset type 1 diabetes. Half were randomly assigned to intensive efforts to keep blood glucose as close to normal levels as possible. The other half were assigned to the conventional treatment at the time, which simply sought to keep blood glucose levels from getting so high or low that patients would show symptoms, such as blurred vision or shortness of breath.

The trial ended in 1993 when the intensive group was found to have less eye, nerve, and kidney disease. All participants were then taught the intensive blood glucose control techniques and early, good control of blood glucose was recommended for all people with type 1 diabetes. The EDIC study was then launched to continue tracking the health of all the participants.

Since 1983, 107 trial participants have died, with 64 in the group that originally received standard treatment, compared with 43 in the intensive treatment group.

The most common causes of death were cardiovascular disease at 22 percent, cancer at

20 percent, and acute diabetes complications at 18 percent, all of which were more common in the group that originally received conventional treatment. Accidents or suicide were the fourth most common cause of death at 17 percent, with nominally more deaths in the people assigned to the early intensive treatment.

Higher average glucose levels and increased protein in the urine—a marker of diabetic kidney disease—were the major risk factors for death.

“These results build on earlier studies that suggested that increased protein in the urine largely accounts for shorter lifespans for people with type 1 diabetes,” said Orchard. “Our findings further emphasize the importance of good, early glucose control, as this reduces the risk for increased protein in the urine in general, as well as for diabetic kidney disease itself.”

Orchard and his colleagues noted that the results cannot be extended to people with type 2 diabetes. Findings are detailed in the January 6, 2015, issue of the *Journal of the American Medical Association*. ●

Keep up with the most current research announcements at twitter.com/pittpubhlth.



Inflection Point

by Christine H. O'Toole

Some 200,000 years into human history on Earth, there are those who believe this decade may well mark mankind's most fateful choices: Can we choose sustainability over decline? A group of renowned speakers considered how to meet Jonas Salk's challenge to be "wise ancestors" at a symposium marking what would have been the researcher's 100th birthday.





JONAS SALK CENTENARY SYMPOSIUM ON SUSTAINABILITY SURVIVAL OF THE WISEST

On October 28, 2014, the centennial of Jonas Salk's birth was celebrated around the world, across the Internet, and on the campus of the University of Pittsburgh. While national media attention focused on the

development of the polio vaccine as the researcher's signal accomplishment—Google's homepage featured a cheerful street celebration and banner proclaiming "Thank you, Dr. Salk!"—the conversation on campus aimed to further Salk's legacy in broader realms.

Hosted by Pitt Public Health and the Jonas Salk Legacy Foundation to honor the man described as "one of our greatest faculty members" by University Provost Patricia Beeson, the Jonas Salk Centenary Symposium inaugurated a yearlong, \$38 million, University-wide focus on sustainability through new curricula and research. This emphasis on finding new ways to meet the environmental, social, and economic needs of the world's growing population echoes the global vision Salk espoused through his writings and research until his death in 1995. In four books on human nature and development and humanity's role and responsibilities in the evolutionary scheme, Salk posed a challenge still relevant today: "We must become wise and good ancestors." Speakers at the symposium, subtitled "Survival of the Wisest" after the title of Salk's second book, emphasized that today's societal choices will directly affect the quality of human life in the future.

Like developing a long-sought vaccine, discovering sustainable solutions to conserve and share the world's resources is a massive and, some say, optimistic endeavor. Jeffrey Sachs, director of the Earth Institute, leading global economist, and professor of health policy and management at Columbia University, described the polio vaccine development effort at Pitt, led by Salk in the early 1950s, as "a triumphant combination of human creativity, scientific advance, technological development, political leadership, philanthropy,

and moral commitment. These are the ingredients of sustainable development."

Sachs and the symposium's other speakers discussed the transition to sustainability that is already under way, arguing that it must be accelerated if humankind is to bridge widening gaps. In addition to disparities in economic opportunity, access to technology, and use of resources, author and *New York Times* columnist Nicholas Kristof cited another "gulf:" an "empathy gap" that divides communities and limits progress.

Two crises that dominated discussions at the conference were world population growth and climate change, which speakers argued are both on trajectories that, left unchecked, could overwhelm sustainability efforts. Despite the enormity of these trends, speakers stressed that immediate action could deflect worst-case scenarios. In his opening remarks, Peter Salk, Jonas Salk's eldest son and president of the Jonas Salk Legacy Foundation, used his father's example of a sigmoid curve, the S-shaped pattern describing population dynamics observed in numerous biological systems, to chart the trajectory of sustainable growth. "We're now at the point of inflection in the curve at which we have an opportunity and a responsibility to encourage a shift in emphasis to a set of values, attitudes, and behaviors which will support a leveling off of human population growth and promote a sustainable human future."

Sachs pointed to rapid advances toward the Millennium Development Goals set by the United Nations in the year 2000, including a 50 percent reduction of the global poverty rate in recent decades. Mortality among children under five has plummeted to 48 per 1,000 compared to a rate of 90 per 1,000 in 1990. Deaths from malaria have also decreased markedly. These results could be a prelude to international accords in the coming months. In 2015, negotiators will meet to set goals for sustainable development and sustainable financing, as well as to revisit a climate change agreement. Sachs called this "a decisive year," in which a rare opportunity exists to reach consensus on next steps in these three arenas.

Sachs also looked at the billionfold improvement in microchip processing power as having public health applications. It "has led to the highest achievement of civilization, which is the ability to stream movies on your phone," he said. "But there are other things to be done—curing

diseases, rapid genomic sequencing, educating the world's children. This curve is wholly in our favor.”

Moving the discussion toward creating sustainable jobs and meaningful work was CNN *Crossfire* host Van Jones, also a bestselling author and former green jobs advisor to the White House. Jones connects members of disenfranchised communities with jobs in the renewable energy sector, having led the Obama administration initiative that created a \$500 million job-training program in the field. But real change occurs, Jones said, through unlikely alliances. “When businesspeople start saying green jobs are good for the business climate, it will drive more innovation. It will create more jobs. It won't happen in coal mines—I don't think that's where the next set of jobs are going to be.”

Introducing a panel discussion on building sustainable businesses in sustainable communities, moderator Bernard Goldstein, professor emeritus in the Department of Environmental and Occupational Health at Pitt Public Health, agreed with Jones. “The real work of sustainability is coming out of the business community,” he said. Panelist Neal Hawkins, corporate vice president and chief sustainability officer for the Dow Chemical Company, noted that his company's annual research and development budget of \$1.7 billion outstrips the combined resources of all U.S. universities combined. “The private sector must evolve. Companies are key and can scale,” he told the audience.

While governmental regulation can inhibit bad behavior, Widener Law School professor John Dernbach cautioned that legal compliance alone doesn't produce real sustainability. “Sustainability is bottom-up. It's not what is required by law. It's opportunities for everyone, and all have a role to play.” In the United States especially, Dernbach said, inherently sustainable principles of freedom, opportunity, and quality of life “are at the core of our values.”

Many speakers decried the polarizing role mass media have played in framing the arguments regarding economic, social, and technological change, particularly in the United States. Luncheon speaker Joylette Portlock argued that scientists must counter misinformation by becoming better storytellers, presenting the realities of climate change in human terms.

Portlock illustrated the discrepancies between

scientific consensus and public opinion on climate change with a striking statistic: While 97 percent of scientists actively publishing in the field believe that climate change is a reality, only 52 percent of the public agrees. “Science is complicated,” she said. Now, as president of Communitopia, a nonprofit that uses new media to educate the public about climate change, Portlock is experimenting with a more direct approach. “We have an opportunity to figure out better ways to tell the story. Let's motivate not through guilt, but humor and hope,” she said.

Compelling storytelling is the forte of Kristof, the symposium's last speaker. Using examples from his most recent book, *A Path Appears: Transforming Lives, Creating Opportunity* (coauthored by his wife, Sheryl WuDunn), he described successful local and global initiatives that promote public health and wellbeing. A long-time advocate of education for girls and empowerment for women, Kristof suggested that progress in these areas over the past decade will have long-term ramifications in easing societal conflicts.

“Academic work in public health is illuminating where we put resources,” he said. He lauded interventions such as deworming children in Africa (at a cost of only \$3.50 per child) and providing family planning for teenage girls. And he told the story of one young American, Rachel Beckwith, whose example inspired thousands of others to donate to clean water projects. The campaign Beckwith began before an accident claimed her life at age 9 eventually raised more than \$1 million for villages in Ethiopia.

Too often, Kristof said, “poverty is viewed as a moral failure.” He called the resulting attitude an “empathy gap.” “There is a yearning to connect with larger causes that provides fulfillment and meaning. There's new, robust research in public health” that suggests that volunteerism actually prolongs life. “We're wired to be pro-social,” he concluded. Individual efforts may be “a drop in the bucket, but buckets get filled drop by drop.”

In his closing remarks, Peter Salk noted the spirit of optimism that characterized the day. “It was wonderful to have a wide range of people engage in a conversation on how to make the world a better place,” he said, “and focus on these important issues that my father wanted to see explored. It's been a great 100th birthday present to him.” ●



Heartstruck

by Christine H. O'Toole

While a prevention program developed at Pitt Public Health has become a national model, local rates of heart disease and diabetes show that behaviors are still hard to change.

In the long two-steps-forward-one-step-back history of public health, the recent decade of decline in hospitalizations for heart disease seems like a sprint toward progress. *Circulation*, the journal of the American Heart Association,

A man's likelihood of accumulating fat around his heart—an important indicator of heart disease risk—may be better determined if doctors consider his race and ethnicity, as well as where on his body he's building up excess fat. For example, excess weight carried around the mid-section of African American men usually means more fat around the heart, overall weight gain is a higher risk factor for Koreans. Read more at www.publichealth.pitt.edu/home/news/fat-around-the-heart.

recently surveyed data on 34 million Medicare patients between 1991 and 2011. The good news: hospitalization rates among all races and areas dropped dramatically, by 38 percent for heart attack; 83.8 percent for unstable angina, 30.5 percent for heart

failure; and 33.6 percent for ischemic stroke. The impressive improvements built on successes identifying and treating high blood pressure, the introduction of statins, marked declines in smoking, and better early treatments for heart attack patients.

*Odds of dying from a falling piano: 1 in 250 million
Odds of dying in a shark attack: 1 in 3.1 million
Odds of dying in a car crash: 1 in 5,000
Odds of dying from a firearm assault: 1 in 356
Odds of dying from heart disease: 1 in 3*

But a local study belied those encouraging statistics.

When Steven Reis examined a cohort of 1,933 adults in

Allegheny County as part of the Heart Strategies Concentrating on Risk Evaluation (Heart SCORE) study in 2011, only a single person met all seven criteria for a healthy heart: nonsmoking, a body mass index less than 25, goal-level physical activity and healthy diet, untreated cholesterol below 200, blood pressure below

Physical activity epidemiologist Andrea Kriska and her team have received a \$3 million NIH grant to investigate whether they can improve the health of sedentary, overweight people with a program of decreased amount of time spent sitting rather than increased amount of time spent exercising. Read more about this research at www.publichealth.pitt.edu/news/sitting.

120/80, and fasting blood sugar below 100. In announcing the results, the associate vice chancellor for clinical research at Pitt acknowledged a key factor: “Many of our study participants were overweight or obese,

and that likely had a powerful influence on the other behaviors and factors.”

As noted by diabetes expert and professor of epidemiology Trevor Orchard, coronary disease and diabetes are frequently twinned. “All the

things that lead to coronary disease lead to diabetes,” he notes. “And the prevention strategies have a major overlap.”

Cardiovascular disease (CVD) continues to be a leading cause of premature mortality in the region. Like the other spikes in premature mortality in the local population—infant mortality and violence—its risk factors are preventable. Groundbreaking work by Pitt Public Health researchers on an intervention education program has created an effective short-term model. Now, the school is advancing methods to deliver the program widely and cost-effectively, including programs for its own employees (see side story on page 20). It is also addressing how to improve long-term adherence for a lifetime of heart health. And other Pitt research into the properties of lipids is shedding light on their specific role in heart disease (see sidebar on opposite page).

State-level data presented by epidemiologist Marshal Ma at Pitt Public Health's Health Across the Lifespan conference in 2012 showed that Pittsburgh's decline in cardiovascular hospitalization rates between 2000 and 2011 has lagged behind Philadelphia. Moreover, when compared by race to suburban Montgomery County as well as Philadelphia, Allegheny County's African American rates were considerably higher at every age level, from 35 to 75 and up. But delving further into behavioral risk factors, Ma found that race was less a predictor of heart disease than BMI, age, income, diabetes, or smoking. Pitt Public Health professor of epidemiology Lewis H. Kuller agrees. “Once you control for risk factors, the difference for race is effectively gone,” he says. That suggests that education to reduce or eliminate risk factors must be focused on a variety of populations. However, data on Allegheny County residents and their comparative risk factors for CVD is limited, Kuller admits.

“[Locally] we depend on mortality statistics, data collected from hospitals, Pennsylvania cost containment data, and Medicare. What's missing is data on risk factors. Just counting the number of events is not terribly exciting.” Compared to other U.S. regions, “we don't have a surveillance system to monitor population or blood risk factors,” says Kuller. “If you look around the country, the Twin Cities and Chicago do a better job getting such data. There are a variety of NIH studies that measure population risk factors.”

Despite the lack of county-specific data, decades of local research in one of Pitt Public Health's flagship studies provide some insight.

Under Kuller's direction from 1972 to 2002, the Department of Epidemiology began to focus on chronic diseases such as type 2 diabetes, heart disease, aging, and cancer and their relation to lifestyle factors. The Women's Health Initiative (WHI), founded in 1994, has become the largest research study in the world on female health. The national longitudinal study at 40 centers comprises a cohort of 3,500 local women. Mortality rates for Pittsburgh women in WHI clinical trials ranked fourth highest out of the 40 cities. Examining individual risk factors for heart disease, the mortality risk was over a twofold increase among women with diabetes. Women with BMIs over 30 had higher rates, as did women with the lowest rates of exercise. Nationally, a combination of risk factors was a deadly combination. Among women 50 to 59 years old, those with severe obesity, hypertension, diabetes, and a history of smoking had a mortality rate of 140 cases per 10,000 person years, a 16- to 20-fold difference over peers with none of those factors.

"It is nonsense to suggest that we don't know what predicts cardiovascular disease mortality. We know what the risk factors are. We know what the problems are but we do a very poor effort to prevent or treat the risk factors, especially for poorer people."

APPLYING DIABETES PREVENTION STRATEGIES FOR HEART HEALTH

Another longstanding research pillar of Pitt Public Health has been its work in diabetes, originally starting with diabetes registries, but more recently, expanding nationally and internationally with trials involving both primary (type 2) and secondary prevention of complications of the disease (type 1).

The University of Pittsburgh was one of the research centers that took part in the landmark Diabetes Prevention Program (DPP), a large multicenter study funded by the National Institutes of Health. DPP aimed to determine whether either lifestyle intervention or the oral diabetes drug Glucophage (metformin) could prevent or delay the onset of type 2 diabetes in high-risk subjects. Orchard and his team developed the lifestyle approach for the national study, which was

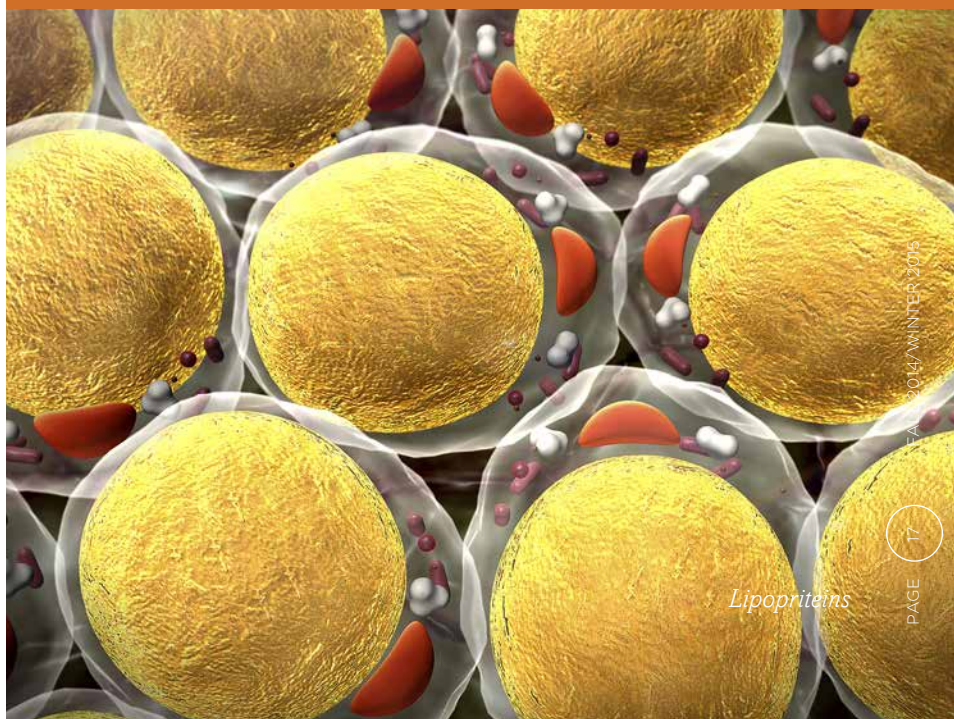
LIPIDS RESEARCH DELVES DEEPER

Blood cholesterol has been almost synonymous with heart disease for the last half century. The distinction between cholesterol carried by low-density lipoproteins (LDL, aka "bad cholesterol") vs. cholesterol carried by high-density lipoproteins (HDL, aka "good cholesterol") and their roles in heart health is more recent. Now the roles of specific particles within HDLs, as well as the impact that menopause hormone patterns have on women's cholesterol, are getting attention from Pitt Public Health faculty.

A national team of researchers led by Pitt Public Health analyzed blood samples of 5,598 healthy men and women and found that when assessing coronary heart disease risk, it appears more beneficial to measure—and make treatment decisions based on—HDL particles, rather than HDL-C, the cholesterol cargo of the HDL particles. The results were reported in the *Journal of the American College of Cardiology*.

"We found that higher levels of HDL cholesterol and HDL particles were both associated with less carotid atherosclerosis, and fewer heart attacks and other cardiovascular events," said Rachel Mackey, assistant professor of epidemiology at Pitt Public Health and lead author of the paper. "However, lipoprotein risk factors explained much of the protective association for HDL-C but almost none for HDL particles. These results provide a potential explanation for recent failures of HDL-raising medications, which increased HDL cholesterol without raising HDL particles, and did not reduce cardiovascular events."

Samar R. El Khoudary, assistant professor of epidemiology, recently published an analysis in the *Journal of Lipid Research*. She and her colleagues used nuclear magnetic resonance spectroscopy to measure the size, distribution and concentration of lipoproteins that carry cholesterol in the blood. The Pitt Public Health team found that as estrogen levels fall, women have higher concentrations of low-quality, smaller, denser LDL and HDL particles, which are associated with greater risk of heart disease. ●



Lipoproteins

RESEARCH ON RACE, ENVIRONMENT, AND CHRONIC DISEASE

Pitt Public Health research on chronic disease among races has spanned several geographic boundaries. Professor of epidemiology Akira Sekikawa has compared heart disease among Asian, Caucasian, and African American men. Tiffany Gary-Webb, associate professor of behavioral and community health sciences and epidemiology, is comparing four American cities, including Pittsburgh, to identify the socioeconomic determinants of diabetes.

Sekikawa's research showed marked disparities among middle-aged Japanese men and those living in the continental United States. The Japanese men had far lower rates of cardiovascular disease than those living in the continental U.S., prompting further examination of diet and lifestyles.

Gary-Webb is a member of the African American advocacy council for the American Diabetes Association (ADA) and believes environment plays a role in risk factors for chronic disease. "We are excited that a big organization (ADA) is paying attention not only to risk factors and their treatment, but to also to social determinants," she says. "Do people have access to treatment, to healthy foods, to recreation, to safe places to walk?" She coauthored a recent position paper in *Clinical Diabetes*, citing the role of four environments—neighborhoods, food resources, schools, and workplaces—in promoting health.

African Americans are more likely to be segregated in lower socioeconomic communities. Pitt Public Health's Center for Health Equity has addressed the needs of those communities through its innovative barbershop initiative (see photo below), which brings health education efforts into those gathering places. The Women's Health Initiative uncovered higher levels of cynical hostility, a predictor of cardiovascular mortality disease, among Pittsburgh's African Americans. That attitude affects a variety of health behaviors, such as smoking and adherence to medications.

According to Patricia Documet, scientific director of the Center for Health Equity, an undercurrent of racism causes stress. "Stress can be chronic. It increases cortisol that can damage arteries and affect sleep rhythm. Even African Americans with high levels of education and good income still fare worse. What is the explanation? I believe it is racism. We need that data." ●



tested in 27 centers across the U.S. with dramatic results. The DPP behavioral lifestyle intervention, with goals of 7 percent weight loss and 150 minutes of physical activity per week, reduced diabetes risk among participants by an astounding 58 percent, surpassing the reduction in risk seen in the metformin group. These results were so impressive that the study was ended a year early, with the findings announced in 2002.

"I thought we were done in 2002, but from a community perspective, we were just getting started," laughs Kaye Kramer, assistant professor of epidemiology and director of the Diabetes Prevention Support Center (DPSC) housed within Pitt Public Health. The center's mandates are to delay or prevent diabetes and improve cardiovascular health by providing education, training, and support services for implementation of an adapted version of the DPP lifestyle intervention in the community.

DPSC has kept Pitt Public Health in the forefront of lifestyle intervention research. Kramer, along with Andrea Kriska, professor of epidemiology; Elizabeth Venditti, assistant professor of psychiatry and epidemiology; and Linda Semler, nutrition director and senior research manager, have updated and refined the elements of the original DPP behavioral lifestyle intervention to create the Group Lifestyle Balance (GLB) program. The center has trained close to 2,000 health professionals and Pitt students to deliver the GLB program across the country and internationally through more than 150 programs. Pitt Public Health offers a course in lifestyle intervention through the Department of Epidemiology. The course incorporates a student service learning practicum in which students obtain hands-on experience delivering the GLB program in the local community.

The GLB program has been successfully implemented in multiple community settings, including health care institutions, medical practices, community centers, churches, and the military. In fact, Kriska and Kramer recently completed a National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)-funded project evaluating the implementation and effectiveness of the GLB program in diverse community settings ranging from the military and a large worksite to three senior centers. The GLB program was shown to be highly successful in all settings.

Another study led by Venditti examines GLB program effectiveness in older participants between ages 65 and 80, and Kriska recently received \$3 million from the NIDDK to investigate GLB program adaptation to reduce sedentary behavior for individuals in Allegheny County. That four-year study will focus on encouragement of general movement throughout the day, rather than on an increase of moderate to vigorous activity levels.

Higher rates of both cardiovascular disease and diabetes are found in poor communities. Kramer says that lifestyle programs such as GLB and those sponsored by the national YMCA are beginning to address needs in these neighborhoods. With support from some companies and a major insurer, United Healthcare, the Y is reimbursed for delivering the yearlong prevention course. If class enrollment goals are reached, and if participants lose 5 to 7 percent of their body weight over the year, the Y gets additional payments.

COST-EFFECTIVE INTERVENTIONS AND LONG-TERM ADHERENCE

Payers see intervention as an early investment. Higher rates of cardiovascular disease now cost the country more than \$100 billion a year. Treating one person with prediabetes costs about \$3,700; the bill for patients with advanced stages of diabetes tops \$20,000. By contrast, the one-year GLB program can be effectively delivered for about \$300-400 per person.



“There’s clear evidence that education can be delivered economically,” says Orchard. “One of the most encouraging aspects is how well we can delay onset.”

To Kramer, the next logical step would be to allow physicians to order intervention enrollment for patients. “My dream is for doctors to

The Robert Wood Johnson Foundation found that people living near recreational facilities and parks exercise 38 percent more than those without similar access to such facilities.

prescribe for lifestyle intervention,” she says. Proposed federal legislation backed by the American Diabetes Association (ADA)

would expand coverage for Medicare patients to receive prevention education; treatment costs for the disease comprise one-third of the program’s budget. However, Congress has not yet enacted the bill.

Kuller takes a long perspective on the work ahead. He believes the ultimate challenge for lifestyle intervention research is finding out how

to ensure long-term adherence to weight loss and activity programs, to prevent the backsliding that is human nature.

“We see models in the U.S. studies. We can do it. But the question is, how to maintain it. Even five years [of weight maintenance and activity] is not the answer. Not even 20 or 30 years. All approaches have a time limit.” He also laments the disconnect between overall

prevention efforts and the current health system.

“There is no effective arm in Allegheny County for [addressing] chronic diseases. It doesn’t exist,” he notes. “[Success] requires a public health program to deliver services in the community, and a lot of community effort as well.” ●



Physical activity is an essential component of chronic disease prevention. WalkWorks, a four-year statewide initiative of Pitt Public Health's Center for Public Health Practice and the Pennsylvania Department of Health, collaborates with rural communities to identify safe walking paths and to advocate for local policies to encourage increased recreation and exercise. Learn more about the program at www.cphp.pitt.edu.

WALKING THE WALK: THE GROUP LIFESTYLE BALANCE PROGRAM WORKS AT PITT PUBLIC HEALTH

After a decade of promoting weight reduction and physical activity among overweight adults across the country, the Group Lifestyle Balance (GLB) program came home to Pitt Public Health this fall.

A group of faculty and staff members filed into a sixth-floor meeting room in Parran Hall on September 10, 2014, ready to walk the walk of healthier habits that would reduce their risk of cardiovascular disease and diabetes. They were among the 43 employees beginning the yearlong program, the first effort of the school’s new Health and Wellness Committee.

The program participants enroll because they are interested in losing weight and improving their risk factors for diabetes and cardiovascular disease. After clearance from their physicians, individuals in three groups attend sessions weekly, then monthly over the course of one year, learning how food choices, physical activity, and a positive attitude can enable them to lose between five and seven percent of their body weight. “This is not a quick change,” Kaye Kramer, assistant professor of epidemiology and director of the Diabetes Prevention Support Center, told the group. “This is something to use the rest of your lives.” She encouraged participants to attend regularly, or make up sessions with lessons on an available DVD, and she invited them to bring their lunch to the noontime sessions. “To criticize it?” one participant asked, to general laughter.

One Pitt Public Health staffer can already testify to the efficacy of GLB. Sarah Brett, a 27-year-old assistant project manager in the Department of Biostatistics, enrolled in a GLB program at Conemaugh Memorial Medical Center in Johnstown, Pa., four years ago.

“I was living at home after graduation from Duquesne University,” she recalls. “I was job searching. I hadn’t been active during my college years, and at that point I was over 200 pounds on the scale. I said to myself, ‘Sarah, you don’t have any excuse. You don’t



have meetings and classes. Now is the time.' That was the tipping point for me."

During the next year, the Johnstown native lost 60 pounds. An equally important result is that she has found a sport she loves: She has completed three marathons and runs regularly with a Pittsburgh group, In Motion Athletics.

Brett was surrounded by support from the program leaders, fellow participants, and her family. Her mother Maryann, a Conemaugh employee, attended the group sessions with her and accompanied her on evening walks. "The group format is very powerful," says Elizabeth Venditti, director of the Diabetes Prevention Programs Outcomes Study Lifestyle Core. "Group members help each other in meaningful ways beyond what happens in one-on-one consultations." Brett's father did not enroll in the program but, as the family cook, he changed the daily menus. Both parents lost weight, and Brett says her mother has maintained her weight loss of 40 pounds. "The biggest reason this worked for me is that it didn't say to myself 'you must eat

this, you can't eat this.' Nothing is off limits. You take responsibility to meet your calorie and fat gram goal. That was so awesome."

Meeting GLB's exercise goal of 150 minutes a week was Brett's first objective. "Mom and I started walking a one-mile loop in our neighborhood. Then one day, I decided to jog for a block—then looked around to see who'd seen me. Gradually, it turned into fun," recalls Brett. Over the course of the program, Brett's waist circumference dropped by nine inches. Her blood pressure and fasting levels of triglycerides and glucose also declined on schedule. "Keeping regular exercise as part of everyday life has helped me maintain my goal weight. Now, I'm the me I was meant to be."

Brett earned a master's degree in health and physical activity from the University in December 2013. Her metabolic symptoms have vanished, and she now intends to become a trainer for the program that worked for her. "I'd like to share what I know with other people," she says. In February she began a two-day education program for GLB trainers on campus. ●





Alumni Profile

“Solve It, Test It, Spread It:”

Pitt Public Health Alums Patricia Maryland and Robert Henkel Lead the Largest Nonprofit Health Care System in the country.

by Christine H. O’Toole

If, in the early 1980s, Bob Henkel and Pat Maryland occasionally passed each other in Parran or Crabtree halls, neither remembers the encounters now. No matter. Today the pair of Pitt Public Health alumni, now president and CEO, and president of health care operations and COO, respectively, see each other on a daily basis at the St. Louis, Mo., offices of Ascension Health. Together they lead the largest nonprofit health care system in the country, one larger than UPMC and the Allegheny Health Network combined. Ascension Health is the health care delivery arm of Ascension, an enterprise comprising 131 hospitals in 23 states and the District of Columbia that bases its reputation for innovation on a spiritual mission to serve all, especially the poor and vulnerable.

Last year, Ascension provided more than \$1.8 billion in care for persons living in poverty and community benefit programs. “More than 50 percent of our revenue comes from non-acute care,” explains Henkel (MPH ’82). Ascension subsidiaries focus on expected areas, such as physician services and medical engineering, but also include global mission support and socially responsible investing. “We’ve worked hard to build related businesses. We’re utilizing our

size to better serve the communities we are in.”

Henkel has been a key player in Ascension’s diversification. Since 1998, he has guided the system’s efforts across most of

the Great

Ascension Health is committed to create a sustainable, holistic healing environment that is safe, accessible, appropriate, adaptable, and affordable; to eliminate all preventable injuries and deaths; and to work toward 100 percent access to health care in the many communities it serves.

Ascension is the country’s third-largest health delivery system after the Hospital Corporation of America and the Department of Veterans Affairs. That scale means that innovations and improvements can radiate across a vast system. In 2003, Ascension vowed to eliminate 900 preventable hospital deaths a year; eight years later, the system reduced those mortalities by 1,500 a year. Successes included a 94 percent drop in hospital-acquired pressure ulcers, an 89 percent decrease in neonatal mortality, and a 74 percent decline in ventilator-associated pneumonia. Maureen Bisognano, president and CEO of the Institute for Healthcare Improvement, says Ascension’s willingness to share its findings means that “the best practices developed at Ascension Health are now in place in hospitals across the country.”

Henkel says, “We don’t want to be the norm. That’s expected. I want to take us to another level and

I want to prove as a system we can do these things. There are many other examples where

we’re changing expectations, changing national norms.”

But outside its hospital doors, Ascension’s willingness to engage with poor, underserved communities is the hallmark of its approach. For more than a decade before the passage of the federal Affordable Care Act, Ascension had committed itself to work for 100 percent access to quality health care. When the Affordable Care Act finally passed, Ascension immediately mobi-

lized to help 40,000 people enroll in insurance plans. And in between, it began to redefine how health care systems engaged in public health.

Leading that effort since 2013 is Maryland (DrPH ’82), a 30-year veteran in health care leadership throughout the Midwest. In 2005,

Lakes and eastern United States, later adding responsibilities for health care services, information technology, organizational development, operations resources, pension and benefits, risk management, and more. He was named president of Ascension Health in 2012, and since that time has also served as an executive in residence and adjunct professor at Pitt Public Health.

Maryland was named chair of the Citizens' Health Care Working Group, whose recommendations formed the basis of national health care reform. Now Ascension's president of health care operations and COO, she previously had headed its ministries in Michigan, whose aging industrial communities needed special attention. She was recently named one of *Modern Healthcare's* top 25 minority executives in health care for 2014.

"What we love about work focused on public health is that it doesn't stay within four walls," she says. "If we ask how to keep a community healthy, number one, it's making sure that the public has access to quality care. We define that as providing each person the opportunity to access the right provider in the right setting at the right time—not using an emergency room for a non-acute visit, for example. We work closely with registered nurses and clinical social workers working with PCPs (primary care physicians). We identify high-risk patients with multiple chronic conditions. We take an issue or problem, solve it, test it, and spread it nationally."

In Saginaw, Michigan, homeless members of the community who consent to wellness checks receive a unique incentive: they have their laundry done free of charge. Children, teens, and parents in Pasco, Washington, can participate in Body-work nutrition and activity programs at community centers, learning to prevent obesity. And in Flint, Michigan, where supermarkets had fled the inner city, Ascension helped to create the Healthy Dollar store, offering an oasis of fresh produce in the middle of an urban food desert.

"In Flint and Detroit, a success story grew from a small idea. It was exciting," says Henkel. "We embedded our health workers in the poor neighborhoods. We learned that if the community leaders are the ones building programs, it gets people engaged." Awarding seed grants averaging about \$50,000, Ascension worked together with local health departments, churches, and health communities developing business plans to establish sustainable businesses.

Ascension adopted another simple local idea and spun it into a distribution system for free medications for those in need. When a Nashville physician wondered how to put unused pharmaceutical samples to better use, a vision for a free distribution system was born. Inaugurated by Saint Thomas Health, an Ascension member,

Dispensary of Hope has evolved into an effective national system that redistributes prescription drugs with the cooperation of pharmaceutical manufacturers. Maryland says the program, which also offers diabetic supplies, has recovered more than \$10 billion in potentially unused sample medications over the past seven years.

Henkel sees advocacy as part of Ascension's mission. Writing recently in *Roll Call*, the Washington congressional report, he urged lawmakers to continue funding for the federal 340B program providing affordable medications for the poor and vulnerable, citing lifesaving stories of Ascension patients. "This is a public health issue, and there are ways to address it," he says.

As states grapple with new structures for Medicaid programs, Ascension has led efforts to connect the unemployed to Indiana's Pathway to Work system. The project helps Hoosiers apply for health care coverage, then link into job search programs. "Our ministry covers three quarters of the state," points out Maryland. "Our STAR program reaches individuals who have been out of work for a while to enroll in job readiness programs—even finds them clothing for job interviews—then also provides opportunities for employment within our health ministry. We make every effort to ensure that these individuals have every opportunity for success."

Ascension continues to leverage other facets of its operations to support its mission. Ascension Information Services found more than \$30 million in cost-savings that have been directed back to its health ministries. The system also continues its work overseas, most recently in the Cayman Islands. Ascension partnered in the first phase of Health City Cayman Islands (HCCI), the construction of a 104-bed tertiary care hospital. HCCI is the idea of an Indian physician, Devi Prasad Shetty, in collaboration with government leaders of the Cayman Islands who envision ultimately not only a hospital, but an educational facility, a biotech park, and an assisted living community. The mission of the joint project with India's Narayana Health is to provide high-quality health care at low cost and to try to adapt its approaches to care in the United States and even further in the international health care community, while providing new career and economic growth opportunities for residents of the Cayman Islands. ●

Alumni News



2014 Legacy Laureate on Leadership

On October 24, 2014, **Diane Peterson** (HPM '75) spoke with biostatistics chair Sally Morton and the Pitt Public Health community on "Taking the Lead," the kickoff event of this year's Pitt Public Health's One Book, One

Community initiative. Peterson had traveled from Houston to receive a 2014

University of Pittsburgh Legacy Laureate award.

Peterson spoke about leadership and her "circuitous route" to founding her health care consulting firm, D. Peterson & Associates. "There are opportunities to lead everywhere," said

Peterson, who looked to volunteer organizations for leadership roles early in

her career. Refusing to accept that any barriers existed for her, she went on to hold several elected leadership positions before starting

her own business. Then, at her secretary's suggestion, she began sending mystery patients into hospitals to test customer service, increasing the recognition of her firm across the country.

Peterson also spoke about the importance of mentoring, building a network, lifelong learning, and strong ethics. She addressed all aspects of leadership from payroll and finance to hiring employees and setting up office space. Carefully picking your bosses; treating everyone with dignity, respect, and fairness; and not leading by fear and intimidation are just a few of the lessons she shared.

After earning a Master of Public Health, Peterson began her career as vice president of Sewickley Valley Hospital, then executive vice president of corporate development for St. Luke's Episcopal Hospital and Texas Heart Institute in Houston's Texas Medical Center. She went on to become vice president of marketing and public affairs for Memorial Care Systems in Houston before starting her company. ●

Crowdfunding for the Homeless

Nearly every day for 40 years, Oakland's resident gospel singer Bill Dorsey has taken to his sidewalk stage outside the Rite Aid on Forbes Avenue to earn money for food expenses. After seeing Zachary Schaffer's photo of Dorsey pop up on her Facebook timeline in January 2014, **Elana**



Barkowitz (BCHS '11) was inspired to initiate a crowdfunding campaign for the blind musician using GoFundMe.

Barkowitz knew that thousands of students, neighbors, and business owners pass the musician daily, and she thought it would be a great opportunity to make an impact. She says, "In public health we focus on the well-being of a whole population. In this instance, I wanted to make a difference in one man's life, but I knew that we—the Pittsburgh community—would benefit as well. I created the campaign the day I saw the photo, teamed up with Zach, and over six months we had seven donors who contributed \$195." Then Schaffer and Barkowitz shared the GoFundMe campaign on their Facebook pages and *The Pitt News* pick up the story, resulting in 50 more donors and a new total of \$1,314. "I had set \$1,000 as our goal, and I was floored to reach it—and I never, ever thought we'd surpass it. Zach and I are humbled and so grateful for the generosity of the Pittsburgh community. Even if people couldn't financially donate, they shared stories, shared

Watch the entire conversation between Diane Peterson and Sally Morton at www.youtube.com/user/PittPublicHealth.

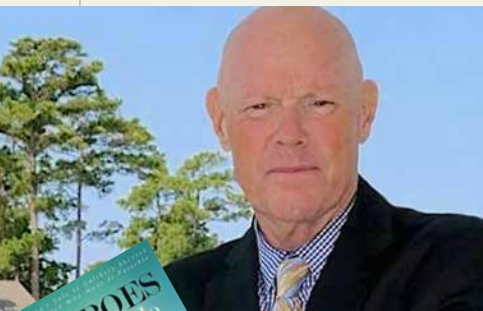
View Zachary Schaffer's series, "They're People Too," at www.facebook.com/zachschaferphotography.



our link, and all have shared our passion for helping Bill. We are looking forward to helping him in a safe and effective way and to share with him the impact he has had on so many people.” ●

Career Heroes

After completing his Master of Public Health, **Eric Rieseberg** (HPM '74) began a career in hospital administration. Eight years later, at age 26, he became the youngest community hospital CEO in the country. How? Rieseberg sums it up in one word: “heroes.” His book, *Heroes Alongside Us* (Salt Island Publishing, 2014), is both a tribute to the men who were keys to his success and a case for the crucial role of heroes in our everyday lives. He



emphasizes that there is hope for anyone willing to work with and seek out guidance from the “best of the best.”

Rieseberg shares how heroic acts by others can make achieving success possible against all odds, using his own story as an example. While Rieseberg was in high school, his military dad

was rarely present and his mom suffered from mental illness and alcoholism. The odds were also stacked against him academically. “I was certainly not a high achiever. I’d had a poor foundation from moving all over the world as a child of a Navy captain: By the time I reached high school, I’d attended seven different schools. My parents never saw an A on my report card. I simply wasn’t an academic kid.”

By the age of 32, Rieseberg had served as CEO of three large hospitals in the United States. By 34, he was managing 20 hospitals.

How does a chubby, never-got-picked-for-any-team, sub-par student from a dysfunctional family end up achieving more success than anyone expected? He attributes these accomplishments to the help of individuals who are well known in the national health care and business communities. “I couldn’t have done it without my heroes,” he says. ●

Alumni Leadership

Students crowded into the laboratory pavilion auditorium on January 23, 2015, for a lively panel discussion presented by five alumni guests, good friends from school days, now in positions of authority across the country.

Sauna Clark (IDM '08), **Rashida Dorsey** (EPI '06), **Keon Gilbert** (BCHS '09), **Roderick Harris** (BCHS '13), and **Natalie Solomon** (BCHS '06) have stayed in touch over



the years, and the power of their professional networking and accrued wisdom was evident as they candidly responded to questions from moderator Joan Anson, director of career services, and members of the audience. A follow-up reception provided additional opportunities for current students to meet, greet, and receive encouragement from the panelists. ●



Morning Connections

Kim Faulkner (EPI '04) was one of 30 alumni to meet with students eager to exercise their career-building skills at the second annual Alumni-Student Networking Breakfast on February 12. Another alum commented on an evaluation form, “The students were professional and interested and will definitely make significant contributions to public health.” ●

In the World

a On September 20, 2014, 30 members of the Pitt Public Health community participated in the Juvenile Diabetes Research Foundation (JDRF) Walk to Cure Diabetes. Team Epi Gives Back strolled through Schenley Park

Let us know what you're up to! Send news and a photo of your public health-related activities and travels to gsphalum@pitt.edu.

in Oakland to raise awareness and fund research for a cure for type 1 diabetes.

Many team members had their own stories to tell ranging from conducting diabetes research to improving type 1 diabetes care in Rwanda to living with the disease. The group has raised \$3,814.

b In October, representatives from Myanmar and South Africa joined in a five-day workshop on expanding collaborations for data management and computational modeling. Detailed presentations of modeling projects, hands-on-training experiences, and wide-ranging discussions of possible joint project were part of a special International Fellows Program designed to improve public health through global collaborations between our Public Health Dynamics Laboratory and partners from middle- and low-income countries.

c Current students (left to right) Leah Goeke (EPI), Summer Miller-Wallfish (BCHS), Sarah Sandrian (IDM) are sending back encouraging news from their

Peace Corps Master's International health volunteer assignments in Zambia. Combining the Peace Corps experience with an MPH degree gives students experience in international public health and fosters a nuanced understanding of global health challenges and opportunities. Learn more about this experiential degree program at www.publichealth.pitt.edu/pcmi.

d Knowing how deeply afflicted his native country of Nigeria is by health issues, Kelechi Oriaku was inspired to study public health. Now, having traveled to Asia and Europe to study their exemplary health care systems and technologies, Oriaku is a Heinz Fellow in the Department of Behavioral and Community Health Sciences. The H.J. Heinz Company Foundation Fellowship is awarded to individuals from developing countries who demonstrate potential as future leaders in the public, government, nonprofit, or private sectors.

e While alumni were in New Orleans for the 2014 APHA Annual Meeting, they attended a jazz-themed reception on November 17 and reconnected with Pitt Public Health faculty and staff. Lucia Guerra-Reyes (BCHS '13) enjoyed networking with colleagues.

f Jordan Taradash (EPI '12), shown here with his daughter, knows that staying in shape is not easy. As chief operating officer

of Myofitness, he focuses on behavioral lifestyle interventions to prevent chronic disease. He has a particular concern for community service and uses a holistic, team approach to help clients achieve fitness goals. Through his work, Taradash specializes in on-location services. Last June, he put on a free fitness clinic at a local high school where participants of all ages had the chance to try out yoga, Zumba, bootcamps, and a kids' zombie run.

g As part of their 2014 orientation, Pitt Public Health students traveled up river to Braddock, Pa., where they helped to process inventory and hang clothes at the Free Store 15104. The store's goal is to redistribute surplus and donated goods to neighbors in need, and reduce food and clothing insecurity in a town that's lost 90 percent of its population, homes, and businesses since the collapse of the steel industry. Learn more about this local initiative at www.freestore15104.org.

h Our new laboratory pavilion won an AIA Pittsburgh Architecture Honor Award in the Design Pittsburgh 2014 competition. We are grateful for the fine design work of R3A and Wilson Architects. The jury found that the addition to our existing building created "a unified building expression with a strong civic quality and a pleasing facade rhythm." ●



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FLASH FROM THE PAST: In 1948, Thomas Parran (above right) became the first dean of the Graduate School of Public Health. Previously he was instrumental in the founding of the World Health Organization and served for 12 years as surgeon general of the United States. Here in Pittsburgh, he guided the early development of the school and recruited many of its prominent early faculty. An early focus of the school was occupational and industrial health and hygiene in the steel mills of Pittsburgh. These studies, and Pitt Public Health investigations of black lung among coal miners,

strongly influenced the Occupational Safety and Health Act of 1970 which, based mostly on school-generated data, created the first national standards for on-the-job worker safety and health. Parran's legacy lives on at Pitt, as the Graduate School of Public Health building was renamed Parran Hall in 1969. The Thomas Parran Papers in the University archives contain records documenting his career, including his time as surgeon general and dean of Pitt Public Health. Discover more about the school's history at www.publichealth.pitt.edu/history.