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Achieving Health Equity: How Academic Medicine Is Addressing the Social Determinants of Health

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Achieving Health Equity: How Academic Medicine Is Addressing the Social Determinants of Health



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Contents

Introduction 4

Philip M. Alberti, PhD

Commentary

Crossing the Inequality Chasm 5

Darrell G. Kirch, MD

Research Centers Investigate Root Causes of Health Inequities 7

Stephen G. Pelletier

Equity Research Among Veterans Provides Unique Insights 9

Kim Krisberg

Unlikely Partners: How Academic Medicine and Correctional Facilities Can Forge Progress Together 11

Stephen G. Pelletier

Commentary

Academic Medicine and Social Justice 13

Darrell G. Kirch, MD

Beyond ACA Requirements: Community Health Needs Assessments Address Local Health Priorities 15

Sarah Mann

Tackling Food Insecurity in Communities 17

Stephen G. Pelletier

Merging Social Determinants Data into EHRs to Improve Patient Outcomes 19

Stephen G. Pelletier

Experts See Growing Importance of Adding Environmental Health Content to Medical School Curricula 21

Stephen G. Pelletier

Race and Bias from the Classroom to the Exam Room 23

Kim Krisberg

Commentary

The Supreme Court Bends Toward Health Equity 25

Darrell G. Kirch, MD

Medical-Legal Partnerships Help Patients Address Barriers to Health 27

Kim Krisberg

Commentary

From Pre-Med to Practice: The Role of Public Health Service in Medical Education 29

Leana S. Wenn, MD, MSc, and Katherine E. Warren

Training Physicians to Meet the Needs of Rural America 31

Stephen G. Pelletier

Service-Learning Plays Vital Role in Understanding Social Determinants of Health 33

Stephen G. Pelletier

Resources 35

Introduction

Philip M. Alberti, PhD, Senior Director, AAMC Health Equity Research and Policy

The mission of the Association of American Medical Colleges (AAMC) and of its member medical schools and teaching hospitals is to “improve the health of all.” This seemingly simple, five-word phrase underscores two issues of paramount importance to the patients and communities we serve: health and health care equity.

To truly benefit all, academic medicine and its partners must increasingly focus on efforts to address health and health care inequities that continue to undermine the well-being of various groups in the United States. These inequities—systematic, measurable, and avoidable health differences between populations that stem from social factors such as racism, poverty, lack of healthful food, and homophobia—result in disproportionate disease and death for the poor, racial and ethnic minorities, persons living with disabilities, LGBT communities, and others.

The need to address these social factors, these “social determinants of health,” is integral to academic medical centers’ mission to improve health. According to the World Health Organization’s constitution, good health is “a state of complete physical, social, and mental well-being.” Given that scientists estimate that at least 40 percent of health outcomes are the result of social and economic factors, a sole focus on treating disease will not “improve health.”¹ Rather, a concomitant focus on social determinants is needed to address inequities, promote community well-being, and improve the health of all.

As the AAMC’s senior director of health equity research and policy, I have seen firsthand the passion and commitment academic medical centers bring to the patients and communities they serve. This passion—coupled with other drivers such as the move to value-based health care, the new MCAT® exam sections focused on sociocultural contributors to health, and new requirements for not-for-profit hospitals to identify and intervene on prioritized community health needs—has sparked innovation across the research, education, and clinical missions of academic medicine to engage local communities in service of addressing social factors that affect health.

Over the course of 2015, the AAMC’s *Reporter* chronicled some of these innovations in its Addressing Social Determinants of Health series. From cutting-edge, NIH-funded research centers to novel environmental health curricula to social and behavioral data collection in the clinical record, the series explored the ways in which academic medicine rises to the challenge of providing exceptional clinical care to the individual while also addressing social factors in the communities where patients are born, grow, work, and play.

The articles, commentaries by AAMC President and CEO Darrell G. Kirch, MD, and resources that are bundled together in this compilation offer a snapshot of some of the strategies medical schools and teaching hospitals have launched to narrow inequities and address social factors that affect community health. By sharing these stories and successes, medical schools and teaching hospitals can build, adapt, and implement relevant interventions for their own communities to meet their mission to improve the health of all.

1. Robert Wood Johnson Foundation, University of Wisconsin Population Health Institute. County Health Rankings. 2014. www.countyhealthrankings.org/our-approach. Accessed March 4, 2016.

Crossing the Inequality Chasm

Darrell G. Kirch, MD, AAMC President and CEO

In a 2001 landmark report, *Crossing the Quality Chasm*, the Institute of Medicine recognized equity as a central pillar of quality care. Nearly 15 years later, we continue to examine the ways in which racial, social, and economic inequality affect society and health. These issues have figured prominently in recent public discourse, as protests erupted in cities such as Ferguson, Mo., and Baltimore, and deep frustration too often turned into violence. Health disparities related to race are deep and profound, and I encourage everyone to read the inspiring address on the topic by AAMC Chair Peter Slavin, MD, at the [2015 Learn Serve Lead meeting](#). As we discuss inequality across our country, all of us in health care need to ask ourselves: Where do we stand on crossing the “inequality” chasm?

Faculty, students, and staff at academic medical centers see first-hand the countless ways in which inequality affects health. Our teaching hospitals represent only 5 percent of all U.S. hospitals, but provide nearly 40 percent of all charity care—often the only care available for the poor, the uninsured, and the undocumented in our communities. The Affordable Care Act has helped make health insurance available to millions of previously uninsured or underinsured Americans. But insurance does not guarantee access, and access does not guarantee proper care. People might have insurance, but they may not have the physician they need nearby, they may not have transportation, or they may not know how to navigate a complex health system.

Health care access issues will intensify as the physician shortage becomes more severe, and vulnerable populations will be hit hardest. Nowhere are access issues more visible today than among our nation’s veterans. The Department of Veterans Affairs (VA) has long been a leader in patient care, and the VA Office of Health Equity works to ensure equitable care for veterans. This is vital because our veterans and active-duty military face complex health challenges, including traumatic brain injury, limb loss, and post-traumatic stress disorder. But physician staffing challenges in recent years have made it difficult for many veterans to access the care they need.

Other vulnerable populations also face difficulty accessing necessary care. For example, more than half of U.S. counties currently have no mental health professionals at all. While many patients with mental illness lead stable and productive lives, others are falling through our social safety nets. And because of our country’s inability to provide adequate support for this population, many people with serious mental disorders end up in the criminal justice system. Nearly 20 percent of inmates nationwide suffer from mental illness. If you wanted to visit the institution caring for the largest number of mentally ill people in America today, you would need to visit Cook County Jail in Chicago.

Unfortunately, health issues within our prisons go beyond mental illness. Correctional populations are among the sickest in our country, and, in many cases, inmates come from underserved communities with significant health disparities. Most will return to those communities when they are released, continuing a cycle of disease and disparity. Despite these issues, incarceration rates continue to rise. Between 1980 and 2008, the number of people incarcerated in America more than quadrupled, from approximately 500,000 to 2.3 million. More strikingly, one in six black men has been incarcerated since 2001. This trend is impacting the health of individuals, families, and communities across our country.

We continue to face many obstacles to achieving health equity. However, there is one area of historic disparity where our country made real progress this year. The Supreme Court's decision to extend marriage equality to all 50 states was a step toward greater health equity for the LGBT community. With marriage rights comes access to spousal insurance, Social Security survivor benefits, and hospital visitation rights. While the LGBT community still faces conscious and unconscious bias within our health care system, I hope the Supreme Court's decision will be a turning point toward greater health equity.

funding for residency positions because failure to address the physician shortage will affect vulnerable populations first. And we file briefs in every Supreme Court case that threatens to undermine holistic admissions because to succeed in reducing health disparities, we need a health care workforce that truly reflects the diversity of our communities.

All of us in health care are called to reduce inequity because of our commitment to social justice and our mission to provide quality care. By looking at each of our individual roles in academic medicine through a health equity lens, every one of us can help reduce disparities, contribute to community health, and support our colleagues in doing the same. Over the coming year, political battles and partisan spin will escalate. More than ever, we will need to ignore the noise and focus on bridging the inequality chasm. The health of too many people hangs in the balance.

“By looking at each of our individual roles in academic medicine through a health equity lens, every one of us can help reduce disparities, contribute to community health, and support our colleagues in doing the same.”

The progress made by the LGBT community this year gives me hope that we can continue to reduce the disparities that all vulnerable populations face. With every opportunity I have to visit one of our medical schools or teaching hospitals, I see the work that faculty, students, and staff are doing to address these challenges. Our students run free clinics and patient outreach programs in our poorest communities. Our faculty and researchers study genetic and environmental influences on mental health and educate new physicians about the unique health needs of LGBT patients. And through our unparalleled 70-year partnership with the VA, academic medicine is giving hope to those injured and traumatized by war.

The AAMC supports this work by facilitating collaboration and disseminating exemplary research, innovative care solutions, and best practices for teaching the social determinants of health. We also strive to advance solutions at the national level. We advocate for National Institutes of Health funding because research translates into medical practices that reduce health disparities. We advocate for increased

Research Centers Investigate Root Causes of Health Inequities

Stephen G. Pelletier

Examining key factors in health inequities, a 2013 Centers for Disease Control and Prevention report noted that non-Hispanic black adults are at least 50 percent more likely to die of heart disease or stroke prematurely than their non-Hispanic white counterparts. The study also found that adult diabetes is more prevalent among Hispanics and non-Hispanic blacks than among Asians and non-Hispanic whites and that the infant mortality rate for non-Hispanic blacks is more than double the rate for non-Hispanic whites. University research centers are developing important intervention strategies to address the complex causes of such health inequities, which encompass biological, social, behavioral, and environmental factors.

Variety of approaches

One strategy for addressing health inequities is investigating particular diseases. For example, one research area at Wake Forest School of Medicine's Maya Angelou Center for Health Equity (MACHE) concentrates on translating findings from several large clinical trials into community-based interventions to combat diabetes. The MACHE project, *Latinos Combatiendo la Diabetes*, relies on peer groups and lifestyle interventions to help prevent that disease among Latinos.

Some centers for health disparity research focus on particular populations. Through a five-year grant from the National Institutes of Health (NIH), for example, the Sanford School of Medicine at the University of South Dakota established centers for health research for tribes in South Dakota, Montana, and Wyoming. The initiative researches health inequities in the American Indian population of the Northern Plains.

Blending a population and disease approach, the Arkansas Center for Health Disparities (ARCHD), based at the University of Arkansas for Medical Sciences, studies inequities in chronic disease among the state's large African-American and expanding Latino

populations. A growing area of interest is the health of immigrants from the Marshall Islands who live in concentrated communities within Arkansas where tuberculosis and even leprosy still occur.

A multidisciplinary team at the National Health Disparities Research Center of Excellence at Meharry Medical College takes a different approach, exploring interactions between health inequities and "the natural, built, social, and policy environments."

Building the talent pipeline

Research centers for health disparity also offer training for students, faculty, and researchers. For example, MACHE provides funding for two medical students to work with faculty on a health inequities research project, according to Director Ronny A. Bell, PhD, MS, a professor of epidemiology and prevention at the Wake Forest School of Medicine. ARCHD Director James Raczynski, PhD, FAHA, professor and founding dean of the Fay W. Boozman College of Public Health at the University of Arkansas for Medical Sciences, said the center offers opportunities for medical students to gain practical field experience in the Latino community through a health promotion partnership with the Mexican consulate in Little Rock.

In addition to research and community outreach, the Minority Health and Health Disparities Research Center (MHRC) at the University of Alabama at Birmingham (UAB) focuses on career development for young investigators. "We provide funding for junior faculty who are interested in pursuing research on minority health and health disparities and need seed funds to develop pilot projects," said MHRC Director Mona N. Fouad, MD, MPH, senior associate dean for diversity and inclusion at the UAB School of Medicine. The university's investment of \$1.2 million in junior faculty over the past 10 years has leveraged \$24 million in federal research grants, she noted.

The UAB center also works to develop the pipeline for minority scientists. Partnering with historically black colleges and universities in Alabama, the center brings undergraduate minority students to the campus in the summer. Experts help the students map careers in science, study for the GRE® and MCAT® exams, learn scientific writing, and connect with mentors on campus. “So far, we’ve trained about 120 students,” Fouad said, with many continuing on in UAB’s

graduate programs. Basketball star Charles Barkley helps sponsor an award in his name to support young scientists at UAB.

“Moving [knowledge] into a translational phase sounds very beautiful in the abstract, but when you get into the community, there are all kinds of barriers and challenges.”

Ultimately, of course, centers for health disparity research want their knowledge to improve community health. But translating research into actionable strategies “is really one of the hardest things to do,” said Mario De La Rosa, PhD, director of the Center for Research on U.S. Latino HIV/AIDS and Drug Abuse

(CRUSADA) at Florida International University (FIU).

“Moving [knowledge] into a translational phase sounds very beautiful in the abstract, but when you get into the community, there are all kinds of barriers and challenges.”

A strong commitment to community engagement makes these partnerships successful. ARCHD, for example, trains parishioners of black churches to lead weight-loss groups. Building on knowledge gained from community needs assessments, Project EXPORT helps tribes develop strategies to reduce and prevent obesity among tribal children. Faculty from FIU’s medical school are part of CRUSADA’s field work to help Miami’s Haitian community understand how the impact of immigrants after the 2010 earthquake has affected general and mental health. As De La Rosa said, the key is to “get information to people for whom it matters most.”

In a related effort, the AAMC has created the Health Equity Research Virtual Site Visit, which spotlights outstanding health equity research portfolios at member institutions. Launched last year, the site recently highlighted four health equity research-focused centers at New York University Langone Medical Center, including the Center for the Study of Asian American Health (CSAAH). Funded by NIH’s National Institute for Minority Health and Health Disparities, CSAAH comprises a broad network of more than 55 community organizations and leaders, academic medical centers, and health care institutions that are committed to identifying health priorities and reducing health disparities in the Asian-American community through research, training, and partnership.

The AAMC site will continue to feature videos, webinars, presentations, journal articles, and other resources reflecting new research, curricula, and innovative care delivery that can contribute to minimizing health and health care inequities.

Equity Research Among Veterans Provides Unique Insights

Kim Krisberg

Compared with their urban counterparts, rural Americans often face more barriers to good health and quality health care. Unfortunately, rural veterans are no exception.

For veterans living in rural communities, access to medical care—particularly mental health care—can be a challenge. The Veterans Health Administration (VHA) Office of Rural Health reports a number of “important barriers” that rural veterans face, including long distances to Department of Veterans Affairs (VA) facilities, lack of specialty and urgent care within rural VA facilities, and shortages of health care providers. Such barriers can adversely affect the health

of rural veterans, who typically report lower health-related quality of life than veterans living in urban areas.

To help overcome one barrier, Leonard Egede, MD, MS, director of the VA’s Health Equity and Rural Outreach

Innovation Center in Charleston, S.C., led a study on the use of videoconferencing to deliver psychotherapy to older veterans with major depression. The study of more than 200 veterans found the telemedicine technique was just as effective as face-to-face therapy. Egede said the results, published in the *Lancet* in 2015, could help “change the landscape for mental health care for veterans.”

“Right now ... it’s not feasible to have enough slots to see patients in the office on a regular basis,” he said. “Having a system that allows you to reach into [people’s] homes will make a huge difference. It will transform the way we deal with access issues.”

Egede’s study is only one example of the wealth of research that the VA is spearheading on equity, disparities, and the social determinants of health. In

fact, Uche Uchendu, MD, executive director of the VHA Office of Health Equity, said one of her goals is to leverage the reach and influence of the VHA—the country’s largest integrated health care system—to become a national leader in health equity.

Even though veteran subpopulations tend to experience similar health disparities as those in the general population, they do face some unique health issues. For example, veterans tend to experience high rates of depression and post-traumatic stress disorder, are more likely to use tobacco, and may be at higher risk of homelessness. Uchendu’s office led efforts to highlight such issues in a September 2014 edition of the *American Journal of Public Health*, which was dedicated to exploring health equity among veterans.

While the VA has been zeroing in on disparities and equity research for more than a decade, most notably through its Center for Health Equity Research and Promotion (CHERP), the 2012 launch of the Office of Health Equity was intended to galvanize efforts across the agency, measure progress, and map the path forward. Perhaps most important, Uchendu said her office sees veteran health outcomes and disparities through a health equity lens, which continually prompts her and her colleagues to ask why certain veteran populations experience poorer outcomes despite having access to care through the VA.

“In order to achieve health equity, we need all hands on deck,” she said. “Everybody owns a piece of the action.”

Michael Fine, MD, MSc, director of CHERP, a joint effort of the VA Pittsburgh Healthcare System and Philadelphia VA Medical Center, noted that the center has a three-generation conceptual model of health disparities research: the first focuses on detection of disparities, the second on understanding the causes of disparities, and the third on creating interventions to eliminate disparities. The model can be applied outside the VA system as well, he added.

“Having a system that allows you to reach into [people’s] homes will make a huge difference.”

“Issues of equity should be thoroughly covered in medical schools,” said Fine, who is also a professor of medicine at the University of Pittsburgh School of Medicine. “We have medical students rotating through (VA) clinical services all the time ... and we train fellows, medical students, and residents to do this research.”

Among the underlying issues that CHERP researchers have identified are perceived and unconscious biases. Leslie Hausmann, PhD, a core investigator at CHERP in Pittsburgh, studies how various types of discrimination and bias can affect a veteran’s interaction with the health system and, ultimately, his or her health status. She coauthored a study published in 2012 in the *American Heart Journal* that found perceived discrimination was associated with a risk of severe coronary artery obstruction among black male veterans.

“We’ve done a lot of work to build that base of evidence to say that this is a worthy target to reduce disparities because there’s such a strong correlation between issues of discrimination and health outcomes,” said Hausmann, who also is an assistant professor of medicine at Pittsburgh.

In an example of translating research into practice, Hausmann partnered with the VA Office of Health Equity to create a training program that raises awareness of unconscious bias among providers. The curriculum, piloted at three VA facilities in 2014, engages primary care teams and creates a safe space in which team members can talk about bias and discrimination. The goal, Hausmann said, is not necessarily to eliminate biases, which can be “very stubborn and ingrained because of the broader society we live in,” but to teach techniques to slow down and recognize that biases exist and can affect patient interactions.

As minorities and people from socioeconomically disadvantaged backgrounds increasingly join the military and ultimately become veterans, tackling disparities and their contributors will remain important, explained Said Ibrahim, MD, MPH,

codirector of CHERP and a professor of medicine at the University of Pennsylvania Perelman School of Medicine. Moreover, the VA recognizes that confronting health disparities and their social determinants requires more than good care inside the clinic walls, he noted.

“What we have to do is follow patients into the community to help them there so they don’t have to come back into the hospital,” Ibrahim said. “And the VA is starting to see itself at the forefront of that movement.”

To learn more about the VA’s equity research, visit www.cherp.research.va.gov.

Unlikely Partners: How Academic Medicine and Correctional Facilities Can Forge Progress Together

Stephen G. Pelletier

Sundeep Virdi, MD, JD, admitted he was nervous the first time he saw patients who were behind bars even though correctional officers were nearby. A third-year psychiatry resident at the University of Connecticut School of Medicine, Virdi recalled that in one facility, inmates wandered around the cellblock where he worked. His office was a converted cell.

Despite his initial apprehension, Virdi said the experience he gained practicing in prisons was invaluable. Having to separate an inmate's crime, which Virdi generally did not know, from that individual's health concerns "definitely helped me in terms of objectivity and focusing on patient care," he said. "It was one of the more interesting things I've done in residency."

“[Working in prison] was one of the more interesting things I’ve done in residency.”

At academic medical centers (AMCs) across the country, practitioners and students are reaping similar lessons from work in the criminal justice system.

According to advocates, AMCs have much to offer—and gain—from partnering with correctional facilities. Correctional systems in a few states—such as Connecticut, Georgia, New Jersey, and Texas—have contracted with AMCs to provide health care for inmates. Elsewhere, AMCs provide specialty care, emergency medical services, or telemedicine to those in prison.

The authors of a study published in the January 2015 edition of *Academic Medicine* suggested that AMCs have a lot to offer corrections facilities, including health-related "expertise in evaluation, quality improvement, evidence-based practice, and implementation science."

At the same time, AMCs can leverage their relationships with correctional systems to provide educational opportunities for students and residents, as well as research grist for faculty. In addition, medical schools, especially those that receive public funding, are able to fulfill their mission of serving their states and regional communities when they provide health care in correctional facilities, the *Academic Medicine* article noted. Through its contract with the state's Department of Correction, UConn Health at the University of Connecticut School of Medicine leveraged \$92 million in the current fiscal year to support a range of infrastructure, residency, and faculty positions.

Prisons also provide settings that allow health care providers to practice public health and population-based care in the real world that can help to reduce health disparities, said study coauthor Robert Trestman, MD, PhD, a professor of medicine, psychiatry, and nursing and executive director of UConn Health's Correctional Managed Health Care.

"Students begin to understand that we can deliver effective and efficient health care that is also cost managed, without compromising quality," Trestman said. In addition, working in correctional health provides practice in team-based care and an understanding of what it is like to work with limited resources, he added.

Addressing health disparities

Health disparities are common in the prison population. Inmates have higher rates of chronic medical conditions, infectious diseases, and mental health challenges than the general population. Many prisoners come from environments where health disparities are endemic and access to care is limited. According to the U.S. Department of Justice, 95 percent of state inmates will one day be released, with many returning to underserved areas, sometimes

homeless and unemployed, which can set the stage for more health problems.

Warren J. Ferguson, MD, a professor of family medicine and community health at the University of Massachusetts Medical School, argued that AMCs have a moral obligation to address the health needs of those in correctional facilities. “There is a very significant linkage between social determinants for individuals who are leaving prison and jail and their downstream health,” he said. “We have a responsibility to train our health professionals on the issues that these populations face and strategies to try to help provide effective care.”

There are many voices calling for the development of correctional health research, which could bolster federal efforts to address health disparities. National Institutes of Health funding for criminal justice health research is relatively small, reported Brie Williams, MD, MS, an associate professor of medicine in the Division of Geriatrics at the University of California, San Francisco (UCSF), in a recent paper in the *Annals of Internal Medicine*.

“There’s an incredible opportunity for [academic medicine] to interface with the criminal justice system and lend our knowledge in developing evidence-based practice to the systems that are in need of that,” Williams said. In December 2014, Williams received the President’s Research Catalyst Award from Janet Napolitano, JD, president of the University of California (UC) system, to help fund a multidisciplinary UC system consortium focused on criminal justice health care research.

According to Ferguson, many medical students are deeply committed to contributing to correctional health. Reflecting that enthusiasm, two fourth-year medical students at the University of Massachusetts, Rahela Aziz-Bose and Julia Randall, created an elective on correctional health for medical and nursing students. “Inmates tend to be ethnically diverse and medically underserved and have extremely stark health disparities,” Aziz-Bose said. “It’s very important to understand the health concerns that these individuals face.”

Randall, who is interested in primary care and underrepresented populations, said she anticipates working with patients who have been incarcerated or whose family members have been touched by the correctional system. “I will be in communities where this is an epidemic, so I think it is vital for me to know all I can about their challenges,” she said.

Moreover, the care and health care education inmates receive can even cause a shift in their approach to life, Trestman said. “It can make a huge difference in terms of their behavior when they go back to the community.”

Academic Medicine and Social Justice

Darrell G. Kirch, MD, AAMC President and CEO

I have been reflecting on the recent events in Ferguson, Mo., and Staten Island, N.Y., and the resulting national conversation about interactions among minority communities and the police. Both deaths were avoidable tragedies that should have sparked serious and productive dialogue to address the underlying social issues. Like many of you, I was disheartened when, instead, strident, competing narratives developed in the wake of these events—with people often talking past one another. I am no better positioned than anybody to adjudicate the facts of what happened in Ferguson or on a street corner in Staten Island—responsible people with good intentions can interpret the same events in very different ways. It should be possible to acknowledge the difficult and dangerous work that police officers do to make our communities safer, while also recognizing that communities with high rates of poverty face barriers to fair outcomes within our justice system. But when our only dialogue is with people who share our own background and outlook, I worry we have lost the ability to put ourselves in one another’s shoes.

For that reason, in the midst of competing narratives, I was pleased to see so many of our medical students

make their voices heard in a peaceful and powerful way, sparking dialogue rather than division. Hundreds of medical students, faculty, and staff from every race, class, and background at more than 80 institutions nationwide participated in the “White Coats for Black Lives” movement, donning their white coats and staging on-campus “die-ins” to express their concern about the deaths of

Eric Garner and Michael Brown. They joined a long tradition of social activism in academic medicine, from the medical students who participated in the Civil Rights movement, to the medical schools and teaching hospitals that have opened their doors to DREAMers with Deferred Action for Childhood Arrival status. Our institutions and learners have been on

the front lines not only in times of natural disaster or sudden crisis but also in periods of social upheaval.

With the White Coats for Black Lives movement, medical students again have underscored the link between health care and social justice. When the Centers for Disease Control and Prevention reports 56,000 violent deaths each year in the United States, we face a serious public health crisis. The problem of violence, as with other health disparities, disproportionately impacts communities with high poverty rates. As community healers and leaders, we must do our part to address the systemic issues relating to inequality, social exclusion, racism, and bias that all too often are linked to the problem of violence in our society.

The AAMC has developed a robust research initiative in health equity to support our medical schools and teaching hospitals in identifying practical solutions to improve the health of their communities. We recently launched a series of Health Equity Research Virtual Site Visits, which highlight the research, innovative care solutions, and best practices that medical schools and teaching hospitals are implementing to address health inequity in their communities. The AAMC health equity research team also undertook a recent

“As doctors, our ethics are tested every day of our careers—not only in the care decisions we make but also in how we speak to and about our patients, in how we interact with our colleagues and learners, and in the steps we take to help those in our communities live healthier, longer lives.”

study into the Affordable Care Act's Community Health Needs Assessment (CHNA) requirement for nonprofit hospitals, which illuminates the ways in which the CHNA can be a useful tool for improving community health and engaging our learners in efforts to ameliorate negative social determinants of health. We also offer workshops for our constituents to help them understand how unconscious biases develop and how they can influence perceptions, decision making, education, and patient care.

But there is still more to do. As the training ground for our nation's doctors, we have a unique opportunity and a critical responsibility to produce a health care workforce that both understands the social determinants of health and will meet the needs of our increasingly diverse population. When our physician workforce reflects the diversity of our communities, we will be better prepared to meet the needs of all patients in their most vulnerable moments. Initiatives like the Summer Medical and Dental Education Program, sponsored by the Robert Wood Johnson Foundation, increase the pool of students from diverse or disadvantaged backgrounds pursuing careers in health care. In admissions, we must prioritize holistic review and approach the process with the understanding that effective physicians require a broad sociological knowledge base, not just strong test scores in biology and chemistry. Changes in the new Medical College Admission Test® (MCAT®), introduced in April 2015, were made in recognition that effective physicians need to understand the critical roles that behavioral and sociocultural factors play in health and illness. And in the classroom, we need to develop strong social medicine curricula that avoid reinforcing stereotypes and teach our students the true issues underlying poverty, education, unemployment, and access.

Social justice is a core tenant of medical ethics. By donning their white coats and declaring that black lives matter, medical students embodied the principles of trust and humanistic care that the white coat represents. As doctors, our ethics are tested every day of our careers—not only in the care decisions we make but also in how we speak to and about our

patients, in how we interact with our colleagues and learners, and in the steps we take to help those in our communities live healthier, longer lives. Our medical students have shown themselves to be empathic, engaged, and resilient in the face of deep-rooted social problems. They give me hope that we can find our way back to dialogue and to working toward solutions to our most entrenched social problems.

Please visit www.aamc.org/initiatives/research/healthequity and www.aamc.org/vsvumass for more information about the AAMC's health equity research and policy initiatives. To read the AAMC's December 2014 *Analysis in Brief* on CHNAs, please visit www.aamc.org/chnaib. This work reflects the deep commitment I know we all share to resolving health disparities.

Beyond ACA Requirements: Community Health Needs Assessments Address Local Health Priorities

Sarah Mann

In 1995, Massachusetts General Hospital (MGH) began working with three area communities to identify unmet health needs. After collecting and analyzing local health statistics, MGH staff shared results with community stakeholders and asked them to prioritize the most pressing health issues based on the data and, perhaps more important, their own experience as community members and leaders.

This was MGH’s first community health needs assessment, or CHNA, the process of collecting data to identify health needs, with the ultimate goal of using the results to engage community stakeholders, define priority health issues, and develop initiatives that address those issues. Staff from the MGH Center for Community Health Improvement (CCHI) worked with local leaders to develop sustainable programs that focused on preventing violence, reducing substance abuse, and improving access to care for vulnerable populations.

Since then, MGH has repeated assessments roughly every three years in each of the three communities.

The work has had a “transformative impact” on MGH, according to Joan Quinlan, MPA, CCHI executive director. In 2007, the institution added a charge to its mission statement to improve the health and well-being of area communities.

In 2011, MGH received the AAMC’s Spencer Foreman Community Service Award for its work with communities.

MGH has been working on CHNAs for years, but many teaching hospitals are just beginning similar assessments, in part because of an Affordable Care Act (ACA) regulation that mandates 501(c)(3) hospitals conduct a CHNA every three years to



The CHALK program calls on Latin singer Henry Santos to teach dance moves for good health at a New York City public school. (Photo: NewYork-Presbyterian Hospital)

maintain federal tax-exempt status. Hospitals that fail to meet the requirements can face up to \$50,000 in fines. An AAMC *Analysis in Brief*, published in December 2014, explored CHNA strategies among AAMC-member teaching hospitals, with the goal of helping institutions strengthen capacity to address health inequities and improve community health. While many respondents reported a lack of time and resources to conduct CHNAs, 83 percent of respondents planned to use the CHNA to form community-academic partnerships to address prioritized health needs, and 80 percent were planning to develop community-focused health improvement initiatives.

In New Mexico, Tassy Parker, PhD, RN, is examining CHNA data with an eye toward improving health equity for the state’s Native American population. As director of the Center for Native American Health at the University of New Mexico (UNM) Health Sciences Center, Parker takes a different direction than

“You can’t build programs in a vacuum. You have to engage your community partners; you can’t do it alone.”

institutions that are incorporating CHNAs because of the ACA requirements, although the ultimate goal is the same.

As sovereign nations, Native American tribes are not required to follow ACA requirements, but as Parker explained, there are still many reasons CHNAs can be helpful for these populations. “Just because [CHNAs are not] a requirement doesn’t mean that the tribes should not have access to good quality health data so they can prioritize what resources they do have in their communities,” she said. CHNAs can also provide tribes with “more ownership and authority over their own resource expenditures,” added Parker, who also is assistant dean of academic affairs at UNM School of Medicine.

For Parker, the data that come out of a CHNA are critical in part because findings can help community members and stakeholders make informed decisions about how to allocate finite resources. She and her team at the Center for Native American Health regularly work with Native American tribes in a co-learning effort to identify best practices for conducting CHNAs that are aligned with tribal cultural value systems. That work has led one large tribe to seek accreditation from the nonprofit Public Health Accreditation Board, which does require CHNAs. Other tribes are reaching out to allies to assist in building their own local public health systems.

While the data are invaluable, researchers will not get very far if they do not engage communities in the process of data interpretation and implementation, Parker reported. “Sometimes you can sit in the office and say, ‘According to the statewide statistics, this is what we should prioritize,’ and that will not help you to move the mountain of local persistent health disparities and inequities, nor will it sustain the CHNA process,” she said.

Back on the East Coast, Victor Carrillo, MPA, director of community health and research at NewYork-Presbyterian Hospital (NYP), agreed. “The data are important,” he said. “But I can’t overemphasize the importance of engaging your community as an active member of the process. You can’t build programs



The CHALK program encourages healthy eating by bringing farmers’ markets to the community.
(Photo: NewYork-Presbyterian Hospital)

in a vacuum. You have to engage your community partners; you can’t do it alone.”

With CHNA findings, NYP pioneered Choosing Healthy & Active Lifestyles for Kids (CHALK), an obesity prevention program that encourages kids to learn about healthy lifestyles. The program, which began in public schools near NYP, has expanded to 225 schools in 42 states and is a model for first lady Michelle Obama’s Let’s Move! Active Schools program. In 2014, NYP received the AAMC’s Spencer Foreman Community Service Award in part because of work with the CHALK program and other initiatives to improve health in surrounding neighborhoods.

As more institutions conduct CHNAs, MGH’s Quinlan suggested they look at the ACA requirements as an opportunity.

“I think to the extent hospitals can view these as an opportunity as opposed to a regulatory burden, it’s a great way to form those relationships with communities,” she said.

Tackling Food Insecurity in Communities

Stephen G. Pelletier

World renowned as a center of cooking excellence and innovation, San Francisco is a destination for epicures. But even with its status as a culinary capital, as many as one in four of the city’s residents struggles to find enough to eat, according to the Food Security Task Force of the San Francisco Board of Supervisors.

With help from some medical students, Rita Nguyen, MD, an assistant clinical professor of medicine at the University of California, San Francisco (UCSF), School of Medicine, is addressing that problem on the ground by leading efforts to create the San Francisco General Hospital Therapeutic Food Pantry, which will open in 2016. Adding another dimension to the healthy food focus of the hospital’s Community Wellness Program, patients soon will be able to fill “prescriptions” for healthy food at the pantry as part of their clinical care. An on-site nutritionist will educate visitors about food and its preparation. While it is too soon to determine how many prescriptions UCSF staff will write for food, Nguyen estimates there will be slightly more than 26,000 client encounters in the program’s first year.

“We tell our patients they have diabetes or hypertension and should eat better, knowing that a lot of [them] can’t really access that recommendation” because of food insecurity, said Nguyen, who is a faculty hospitalist at San Francisco General. “I’ve been thinking about what we can do better as a health system to address this issue. If we can give prescriptions for pills to tackle chronic disease, why can’t we write prescriptions for healthy food?”

Working with Nguyen as a medical student at UCSF last year, Jacob Benjamin Mirsky, MD, conducted focus groups with patients at San Francisco General to pinpoint their challenges around food insecurity. That work was funded by a University of California Global Food Initiative Student Fellowship. Now an intern at Brigham and Women’s Hospital in Boston, Mirsky



Blair Robinson, a member of the University of Massachusetts Medical School class of 2018, participates in the weekly Farm to Health food distribution to Family Health Center of Worcester patients who have been identified as food insecure. (Photo: UMass Medical School)

said studying issues of food access dovetailed with his long-standing personal interest in “developing a more sustainable society and planet.”

Documenting food insecurity

The U.S. Department of Agriculture (USDA) describes food insecurity as the disruption of food intake or eating patterns because of a lack of money and other resources. The USDA found that in 2013, 14.3 percent of U.S. households were food insecure. That percentage is substantially higher in households where incomes are near or below the federal poverty level and in homes with black and Hispanic families.

Nguyen pointed to a growing body of literature that documents the connection between food insecurity and disease. For example, Hilary K. Seligman, MD, an associate professor at UCSF, along with two colleagues, published a paper in the *Journal of Nutrition* that found food insecurity was associated with increased risk of hypertension, hyperlipidemia,

and diabetes, even after controlling for income. Seligman also collaborated on a paper in the *New England Journal of Medicine* that concluded, “Our ability to confront today’s problem of food insecurity in a thoughtful, health-promoting, and systematic fashion will have ramifications for health inequities for decades to come.”

Rolling up their sleeves

Given the growing evidence of food insecurity, efforts to address the problem have sprung up at medical schools. Many are led by students. Through an outreach program called Food Rx, students at the University of Arizona College of Medicine work at a community food bank farmer’s market to provide recipes and cooking demonstrations focused on local produce. Kieran Hynes, a student at the school who helps direct Food Rx, frames the program’s goals as

“helping people in the community become more aware of the health benefits of food” while trying to show them “how to live as healthy a lifestyle as possible.”

With two fellow students at the

University of Massachusetts Medical School, Kathryn Bailey cofounded the Farm-to-Health Center Initiative, which links a community health center and a local farm project that donates food to those in need. In addition to distributing free produce to food-insecure patients, the initiative educates medical staff about food insecurity and promotes food insecurity screening at the health center.

“Right now, medical students are kind of the bridge between the farm and the health center,” Bailey said. “Our goal is to establish a more formal partnership to help this continue and to establish a sustainable funding source.”

In another collaboration, Jeremy Goss, a medical student at Saint Louis University School of Medicine, and two colleagues developed the St. Louis MetroMarket, a nonprofit mobile farmer’s market that takes healthy foods into St. Louis “food deserts.” The group recently acquired a retired city bus that they intend to convert into a roving food dispensary.

Several years ago, Patricia A. Carney, PhD, a professor of family medicine at Oregon Health & Science University School of Medicine, helped direct a program that assisted farm workers to mitigate their food insecurity by growing home gardens. Through the project, the frequency of adults eating vegetables “several times a day” jumped from 18.2 percent to 84.8 percent, and the frequency of participants worrying that food would run out before they found money to buy more dropped from 31.2 percent to 3.1 percent.

Seeing the extent of food insecurity was eye-opening for medical students, Carney said. “Medical schools are doing a much better job of helping doctors-in-training to understand that they have a responsibility for the health of the population in their catchment areas and to create opportunities where their learners can see some things other than just what walks through the clinic doors.”

“If we can give prescriptions for pills to tackle chronic disease, why can’t we write prescriptions for healthy food?”

Merging Social Determinants Data into EHRs to Improve Patient Outcomes

Stephen G. Pelletier

Physicians routinely track details about a patient's diabetes or high blood pressure in electronic health records (EHRs). But what about other factors that may compromise the patient's health, such as inconsistent access to food or on-the-job exposure to air pollution? A paper published in the *Annals of Internal Medicine* in 2014 found that "residence within a disadvantaged U.S. neighborhood" is a factor in hospital readmissions at about the same rate as chronic pulmonary disease.

Nearly 80 percent of office-based physicians use EHRs today, but most of these systems are not designed to collect data on social determinants. Given the growing body of evidence about the health effects of social factors, however, there has been a push to bridge that information gap. If EHRs screened for social determinants of health, physicians could triangulate that information with clinical data to map a more comprehensive path to patient care. Such data also could help care providers achieve their population health management goals and inform health equity research.

In 2014, the Institute of Medicine (IOM) issued two reports based on the premise that health care providers and health systems can more effectively influence patient and population health if they have information on social and behavioral determinants. Specifically, IOM suggested EHRs capture sociodemographic, psychological, and behavioral factors, as well as individual-level social relationships and community-level data.

"So many of the health care problems that physicians may see in primary care or in hospitals are not necessarily a function of poor health practices, but may be lack of resources like food, shelter, or a safe park to walk in," said Arthur E. Blank, PhD, associate professor and codirector of the Division of Research in the Department of Family and Social Medicine at the Albert Einstein College of Medicine. A physician can urge a patient to change eating habits, but that's

a problem when the person's community has limited access to healthy food, he pointed out.

Blank cowrote a paper on combining clinical and population-level data to better understand neighborhood health. Published in the March 2015 issue of the *American Journal of Public Health*, the study identified differences in demographics, health behaviors, and overall health among patients at four health centers in the Bronx by including dietary intake and other behavioral information in the health centers' EHRs. The authors concluded that recording patient intake of sugar-sweetened beverages—in addition to other factors such as physical activity—could help clinicians better identify patients who could benefit from counseling on dietary and other lifestyle changes.

In June 2015, the AAMC's Research on Care Community health equity subgroup (ROCChE) convened to discuss how academic medical centers can begin to follow the IOM recommendations.

"My vision is to capture some of those upstream factors in the electronic health record so we can address those issues in addition to the clinical issues," said initiative participant Desiree de la Torre, director of community health improvement, health care transformation, and strategic planning at Johns Hopkins Medicine. "Education, social environments, and everything that is upstream needs to be considered in the overall health of the patient."

How social determinants data are used

A study in the *American Journal of Preventive Medicine* presented several examples of how institutions have used social determinants data to improve patient care. Pediatricians at Johns Hopkins Children's Center entered a basic family social history into the notes section of their EHR, which helped refer families in need to a community group that provides social services. At Boston Medical Center (BMC),

a medical-legal partnership integrated a letter into the EHR to help low-income patients with chronic conditions retain heat and electricity services.

Laura Gottlieb, MD, MPH, a coauthor of the study, said the BMC experience was impressive because it documented significant results, including a 300 percent increase in the number of completed utility-protection letters. “We need more evidence that doing this work at the intersection of social determinants and medical care actually makes a financial impact on health systems,” said Gottlieb, a member of the University of California, San Francisco, Department of Family and Community Medicine.

“So many of the health care problems that physicians may see in primary care or in hospitals are not necessarily a function of poor health practices, but may be lack of resources like food, shelter, or a safe park to walk in.”

Research documented by Kaiser Permanente Colorado (KPCO) underscores some of the fundamental challenges in linking social determinants data with clinical information. In 2011, KPCO began screening for hunger during patients’ clinical visits, referring food-insecure members to a

nonprofit that provides food and nutrition resources. The process is not seamless, however. Kaiser’s EHR populates a record with a letter that approves outreach on a patient’s behalf. Physicians refer the cases to community specialists on Kaiser’s staff, who then fax the letter to the nonprofit.

Apart from complying with patient privacy regulations and keeping data secure, the smooth sharing of information can be stymied by technical challenges when computer systems cannot communicate. The cost of connecting those dots can also be an impediment.

Pediatrician Sandra Hoyt Stenmark, MD, who helped lead KPCO’s efforts to collect food-insecurity data, maintains that social determinants of health need to be part of the basic medical school curriculum. “I once sat through an hour lecture on why children fail to thrive, and every possible differential diagnosis was discussed except the possibility that maybe they didn’t have enough food,” Stenmark said. “I think medical schools would really benefit from having some emphasis on the medical role in meeting patients’ social and nonmedical needs.”

Experts See Growing Importance of Adding Environmental Health Content to Medical School Curricula

Stephen G. Pelletier

A physician who treats a patient’s lung problems solely as a pulmonary issue might miss important diagnostic clues. For example, does the person live or work where air quality is compromised? Doctors are not always trained to look for such factors. But some experts are calling for the medical school curricula to include more training on the health effects of the physical environment.

Environmental health has many facets that are focused broadly on the impacts on health of the natural and the “built” environments. Epidemiological data about environmental impacts on health provide important insights for physicians and researchers.

At the same time, a growing body of knowledge is showing how environmental factors can have a disproportionate impact on certain populations, such as the elderly and families living in poverty.

“In the broadest sense, the environment is probably the major contributor to the determinants of health.”

“In the broadest sense, the environment is probably the major contributor to the determinants of health,” said Karen B. Mulloy, DO, MSCH, an associate professor at the Case Western Reserve University School of Medicine.

The typical medical school curriculum trains students to focus on the molecular origins of disease or on how organs function. But as the 2011 AAMC report *Behavioral and Social Science Foundations for Future Physicians* observed, “Health is the product of the interactions among biology, genetics, behavior, relationships, cultures, and environments.”

An Institute of Medicine report 20 years ago framed the need for an environmental health perspective in medical practice and suggested six related learning objectives for medical students. In a study of pediatricians published in 2006, however, just one

in five had received training in environmental history taking. An earlier study reported that in medical schools requiring content related to environmental medicine, students received just seven hours of such training. Nearly one-quarter of schools surveyed did not require any environmental content. And the AAMC’s 2013 survey of medical school graduates found that more than one-third of respondents said they received “inadequate” instruction in environmental health.

With medical school curricula already overflowing, adding blocks of environmental health content seems unlikely. Even though students can opt to specialize in a field like occupational health or pursue a joint MD/MPH degree, some experts argue that all medical students need better grounding in environmental content. Medical educators have pinpointed several key leverage points where environmental content can be inserted into medical school training. Mulloy, for example, said the answer is not to add 10 hours of lecture, but rather to try to integrate environmental content where it makes educational sense. At Case Western, for example, environmental content often fits naturally in case-based “IQ Sessions” that meet three times per week.

Field experiences offer yet another strategy. First-year medical students at Case Western complete a curricular block on population and public health that sends them to places like construction sites and clinics that serve the homeless. Traveling to where patients live and work, Mulloy said, yields important practical lessons and helps students “open their eyes to all aspects of the patient’s health.”

For Robert Harrison, MD, MPH, a clinical professor of medicine at the University of California, San Francisco, School of Medicine, a summer field experience with chemical workers while he was in medical school inspired him to design an internship program that sends students on environment-focused field

practicums between their first and second years. Students study job-related health and safety problems among workers, learning and helping to identify options to improve health.

At the beginning of the year, one of Harrison's second-year students, Zachary Wettstein, was so disappointed at the dearth of content about his own passion, climate change, that he banded with fellow students to organize an elective on environmental health and social justice. "In our generation as future doctors and health care providers, climate change is going to be the No. 1 health issue, and the curriculum needs to reflect that," Wettstein said. Residencies provide another insertion point for environmental health content. James R. Roberts, MD, MPH, a professor of pediatrics at the Medical University of South Carolina, said that meeting with residents in conferences and clinics provides natural opportunities to introduce content related to environmental health that do not occur in the first two years of medical school. Roberts also believes that adding more board exam questions related to environmental health will help drive more related content into medical student training.

Harrison believes that faculty mentors can help students learn more about environmental health. But as Roberts observed, a key challenge is that even faculty who have a lot of expertise in environmental health lack knowledge of certain topics. Continuing medical education might be part of the solution, he suggested, but even more important is medical schools supporting faculty so they can be better attuned to environmental health and its place in medical education.

Race and Bias from the Classroom to the Exam Room

Kim Krisberg

Thirty years ago, the U.S. Department of Health and Human Services released a landmark report documenting racial and ethnic health disparities in the United States. The 1985 report, commonly known as the Heckler Report, found that despite an “unprecedented explosion” in scientific knowledge and the “phenomenal capacity” of medicine, not all communities were benefiting equitably.

Decades later, while researchers continue to document racial disparities in health and disease burden, others are digging even deeper to better

understand how race—and by extension, racism and bias—manifests as a social determinant of health in clinical settings. For example, a study published in 2013 in *Maternal and Child Health Journal* found that among low-income black women in Milwaukee, where

black infants die at higher rates than white infants, perceptions of discriminatory provider interactions may adversely impact patients’ attempts to access prenatal care. Another study, published in 2008 in *JAMA Surgery*, found that race was a factor in trauma-related mortality risk regardless of insurance status. In other words, even with insurance, black and Hispanic patients faced greater mortality rates than their white counterparts.

For Adil Haider, MD, MPH, coauthor of the *JAMA Surgery* study and director of the Brigham and Women’s Hospital’s Center for Surgery and Public Health, such outcomes led him to explore how race and perception combine to affect care delivery.

“I truly believe that equality is the cornerstone of medicine,” Haider said. “I don’t think most people go to medical school to treat people differently ...

but just like the general population, we all have unconscious biases.”

During his time at Johns Hopkins University School of Medicine, Haider led a study among 202 first-year medical students using clinical scenarios and the Implicit Association Test, a validated tool to detect unconscious bias. He found that a majority had an unconscious bias toward whites, but it did not appear to affect how they treated patients during the clinical vignettes. Haider noted conflicting science on exactly how unconscious bias affects minority patients, especially since few related studies have been conducted in real-life settings. Still, he said such studies are critical to understanding race as a social determinant of health.

“If we have the courage to talk about [bias], we can make progress,” said Haider, who is leading efforts at Brigham and Women’s Hospital to develop a provider-focused intervention aimed at closing surgical disparity gaps.

Around the country, medical schools are integrating discussions about race, bias, and disparities into curricula, though the journey can be a bumpy one. At the University of New Mexico School of Medicine, Felisha Rohan-Minjares, MD, an associate professor and codirector of the school’s cultural competency curriculum, has codirected the Diversity of Human Experience course for first-, second-, and third-year medical students since 2008. The experience, Rohan-Minjares said, has taught her a lot about how to talk about racial bias in a way that opens students’ minds to an often uncomfortable topic. Originally, she talked explicitly about race, historical trauma, and white privilege, “but it created such resistance that it distracted from learning.”

Now, the curriculum has been reframed in a way that invites more openness to the topic. First, Rohan-Minjares said, the conversation became more “asset based.” For example, instead of focusing on

“We need to take the shame and stigma out of recognizing unconscious bias so we can help each other provide excellent care to all patients.”

historical trauma, the conversation now zeroes in on how to build genuine trust between patient and provider. In addition, the majority of the course's teachings are done in small-group settings, where the same students and facilitators stick together over three years with a goal of developing comfortable, nonjudgmental settings.

"Many of the students come with a good understanding of health disparities and are eager to help fix the problem," Rohan-Minjares said.

At Albert Einstein College of Medicine in the Bronx, Cristina M. Gonzalez, MD, MEd, an associate professor of clinical medicine and attending physician at Montefiore Health System, developed the elective Health Disparities: Awareness to Action with a purposeful focus on racial and ethnic disparities. Offered since 2009, a portion of the course explores race as a social determinant of health and its connection to unconscious bias. At first, students took the Implicit Association Test before receiving much contextual background in physician bias. Similar to the New Mexico experience, the test certainly triggered a discussion, but many students were too uncomfortable to participate. In turn, Gonzalez and her colleagues introduced implicit bias earlier in the course to help destigmatize and normalize the topic.

"We need to take the shame and stigma out of recognizing unconscious bias so we can help each other provide excellent care to all patients," Gonzalez said.

Elevating discussions around race are becoming a priority for many medical students as well. Ashley White-Stern, MA, a second-year medical student at Columbia University College of Physicians and Surgeons and president of the college's Black and Latino Student Organization, said acknowledging bias in both patient care and medical education is "foundational" to eliminating disparities. On her campus, White-Stern, also a member of the WhiteCoats4BlackLives National Working Group, is collaborating with the school administration to develop faculty trainings on microaggressions and how racism can percolate in subtle ways.

"Physician attitudes go so much further than the experience in the exam room," she said. "Attitudes can play a role much more broadly, like in advocating for Medicaid expansion or better housing conditions.... Working on personal bias will invariably affect health care outcomes."

While bias education is certainly warranted, "a concentrated effort can't divorce the overall climate from the curricula—equity and inclusion permeates every aspect of an organization," said Michelle van Ryn, PhD, professor of health services research at Mayo Clinic College of Medicine and director of the institution's Research Program on Equity and Inclusion in Healthcare. Van Ryn's own research has found that when medical students are exposed to negative comments from attending physicians, their own negative implicit attitudes can worsen. In fact, as part of her work at Mayo, van Ryn is the scientific lead on an institution-wide effort to survey Mayo's entire workforce on unconscious attitudes and inclusive work environments. Eventually, the data will be used to develop equity-focused training programs.

"We already focus a lot on curricula," she said. "But we really need to focus more on faculty and especially on clinical faculty in clinical training sites if we really want to make a difference."

The Supreme Court Bends Toward Health Equity

Darrell G. Kirch, MD, AAMC President and CEO

On Thursday, June 25, 2015, I was traveling to a national health conference, knowing that the Supreme Court would issue its decision in *King v. Burwell* that morning or one of the next several mornings. I expected much of the discussion at the conference to be about the decision. Since March 2010, when the AAMC was one of the first national health care organizations to endorse the final version of the Affordable Care Act (ACA), we have worked to support and strengthen the law, including filing an amicus brief in support of preserving the law's insurance subsidies.

Despite our hard work and the work of many others, there was considerable uncertainty and anxiety about how the court would rule. In the weeks leading up to the decision, the AAMC focused on what could be done to mitigate the destabilizing effects on national health care if the court reached an adverse decision. Shortly before the meeting began, I heard the good news: The subsidies had been upheld, and millions of Americans, many of whom had been uninsured

or underinsured before the ACA, would retain access to health care. I found myself feeling both relieved and reenergized by the good news.

In the weeks since the court's decision, my thoughts have turned to the work we still need to do to improve the law and the state of health care in this country. Although the

ACA has brought the rate of uninsured Americans to an historic low, 11 percent of our citizens remain uninsured and, therefore, deeply vulnerable in the event of illness or accident. As the institutions that provide 37 percent of hospital charity care to uninsured patients, AAMC-member teaching hospitals are particularly concerned about those who still lack health insurance. We believe attention

should now turn to solving these gaps in coverage at a systemic level.

We can begin by working for Medicaid expansion in the states. Twenty-one states have not expanded Medicaid under the ACA, although the law clearly intends and provides for expansion. Expanding Medicaid would provide insurance access to an additional 4.4 million Americans, many among the most vulnerable in those states. We also can improve access by working with the federal and state governments to strengthen the insurance marketplace and support programs to get more Americans enrolled.

Even Americans with insurance continue to face issues relating to access, and this problem will become more critical over the next decade. By 2025, we anticipate a shortage of between 46,000 and 90,000 physicians, largely the result of our growing and aging population. The impact of this shortage will be felt nationwide—in months-long wait lists for appointments and in emergency rooms full of patients who could not get in to see their regular doctors. Legislation currently before Congress would address the shortage by increasing the number of residency positions by 15,000 over five years. While this increase would not solve the shortage entirely, if combined with ongoing efforts to improve care models and mobilize other health professions, it would be a significant step toward alleviating the problem.

“As leaders in academic medicine, we have an obligation to work tirelessly to improve access to health care, ensure funding for medical research, and eliminate health care disparities.”

As we continue to address gaps in insurance coverage and access, we also must ensure continued investment in the prevention and treatment of illnesses. To this end, the AAMC is working with congressional leaders and the Obama administration to promote federal budget policies that would provide predictable, sustainable increases in funding for medical research through the National Institutes of Health (NIH). We also are working with our congressional allies on legislative approaches to supplement the annual spending bills, such as the 21st Century Cures Act recently passed by the House of Representatives. This bill would reauthorize NIH for three years at an increase of \$1.5 billion per year and create an NIH Innovation Fund supported by \$1.75 billion a year in mandatory funding for five years. As shown on a daily basis in our AAMC-member medical schools, hospitals, and clinics, “research means hope” for patients suffering from chronic or life-threatening illnesses. Just as we work to ensure that patients will have access to doctors when they need them, we must do all we can to sustain the research that will help them live longer, healthier lives.

King v. Burwell was not the only landmark decision at the end of this Supreme Court term. The next day, the court released another major opinion—the 5-4 ruling in *Obergefell v. Hodges*, which extended marriage equality to all 50 states. Unequal treatment of LGBT individuals contributes to health disparities. Prior to marriage equality, same-sex couples faced exclusions related to hospital access, medical decision-making authority, and access to spousal health insurance. The decision in *Obergefell v. Hodges* righted these wrongs.

But we cannot rely on the courts to solve every instance of inequality in our country. Speaking of the history of legal discrimination against the LGBT community, Justice Anthony Kennedy wrote, “The nature of injustice is that we may not always see it in our own times.” Many inequities continue to exist today and too often go unnoticed in the midst of the other problems we are trying to solve. Communities across our country struggle with systemic poverty, social exclusion, racism, and bias, all of which are predictors for health inequity.

As leaders in academic medicine, we have an obligation to work tirelessly to improve access to health care, ensure funding for medical research, and eliminate health care disparities. Justice Kennedy’s words on injustice remind me of a quote by Martin Luther King Jr.: “The arc of the moral universe is long, but it bends toward justice.” Following the two landmark decisions at the end of this Supreme Court term, I would add that it also bends toward health equity.

Medical-Legal Partnerships Help Patients Address Barriers to Health

Kim Krisberg

A pediatric patient is on cardiopulmonary bypass and will die without a heart transplant. Doctors have the medical knowledge and skill to treat the patient, but that is not enough. To save the child’s life, they need the help of a lawyer.

Although a heart transplant was desperately needed, the child did not qualify for the transplant list because of an unstable home situation where appropriate post-transplant care would have been impossible. The scenario—which took place at Children’s Healthcare of Atlanta—illustrates how even the best medical care in the world can be ineffective in the face of seemingly intractable social determinants. Fortunately, the physicians in Atlanta had access to the Health Law Partnership, or HeLP, a powerful collaboration of Children’s Healthcare of Atlanta, Georgia State University College of Law, and the Atlanta Legal Aid Society that began in 2004. An attorney quickly stepped in, securing an emergency legal arrangement that shifted custody from the child’s mother to the grandparents, who were capable of providing postsurgical care. The child got on the transplant list and received a new heart.

“It’s no stretch to say that [medical-legal partnerships] are saving people’s lives,” said Robert Pettignano, MD, MBA, medical director of HeLP and a professor of pediatrics at Emory University School of Medicine.

Today, medical-legal partnerships have been established in 276 health care institutions and 36 states, according to the National Center for Medical-Legal Partnership, which reports that nearly 50 million people in the United States need legal assistance to maintain their health. Medical-legal partnerships are particularly effective at addressing the social and economic determinants of health. For example, such partnerships can force landlords to remedy poor housing conditions that aggravate a patient’s asthma, help patients establish eligibility for Medicaid, secure educational services for children with special needs, or help patients escape domestic violence situations.



From left, Alise Cool, with Neighborhood Christian Legal Clinic and the Eskenazi Health Medical Legal Partnership, and Dawn Haut, MD, MPH, chief physician executive at Eskenazi Health Center. (Photo: Eskenazi Health Center)

These partnerships are the focus of a new AAMC initiative, Accelerating Health Equity, Advancing through Discovery (AHEAD), which is designed to identify, study, and disseminate practices that improve community health and reduce health inequities. Over the next three years, AHEAD and its three grantees will develop and implement metrics to evaluate the impact of medical-legal partnerships on health and health inequities; institutional cost savings, benefits, and efficiencies; and learner outcomes and competencies.

“One of our goals is to raise awareness of actions that providers and health systems can take to address the social determinants of health,” said Philip Alberti, PhD, AAMC senior director for health equity research and policy.

One AHEAD grantee is the Indiana University School of Medicine–Eskenazi Health Medical-Legal Partnership at Eskenazi Health in Indianapolis, one of the country’s largest safety net health systems. Before the program’s launch in 2008, Dawn Haut, MD,

MPH, said it never occurred to her that an attorney could affect her patients' health. However, Haut, co-principal investigator of the AAMC grant and chief physician executive at Eskenazi Health Center, quickly realized she saw patients nearly every day who could benefit from legal services.

Still, Haut said that while physicians were accustomed to connecting patients with social workers, it took new ways of communicating to identify which patients could benefit from legal services.

"Now, I dig way deeper and ask more questions because I know if I do uncover something, we can do something about it," said Haut, who is also a faculty member at Indiana University School of Medicine.

Medical-legal interventions can be transformative, she noted. For example, more than a year ago, Eskenazi's medical-legal partnership assisted a patient in escaping her abusive husband, eventually helping her secure a visa designated for victims of crime.

Haut recently saw the same patient and her children at the health center. The patient said her new visa status allowed her to get a driver's license, secure new housing, and go back to school, while her children were excelling academically. The woman credited her family's new-found wellness to legal services. In this case, legal services not only helped stabilize the family's home life but also enabled the pursuit of education, which research shows is a key determinant of health throughout the life span.

"It would be very difficult to go back to not having an attorney available," Haut said. "It's become the way I practice. It would be like telling me I can't have a stethoscope."

AHEAD grantee Healthy Together, a medical-legal partnership in Washington, D.C., between Children's National Health System and the Children's Law Center, has been assisting families since 2002.

Stephen Teach, MD, MPH, chair of pediatrics at Children's National Health System and principal investigator of the grant, said his interest in legal interventions stemmed from his work in asthma, which is linked to environmental and housing conditions often out of the control of patients and their families. Some mothers have shown him videos of mice in their homes, an environmental trigger of asthma symptoms. While a letter from Teach to the landlord would be ignored, correspondence from a lawyer often prompts swift action.

Such anecdotes are plentiful, but medical-legal partnerships remain understudied, and there is "precious little in the way of real, objective data about their effectiveness," Teach said. Common metrics and better data—goals of the AHEAD initiative—will better equip partnerships to justify their existence and secure sustainable support, Teach added.

"The health care system cannot solve the most intractable problems acting alone as doctors and nurses," Teach said. "We need multidisciplinary efforts that involve everyone."

Back in Georgia, at least 50 percent of the 360,000 unique patients who come to Children's Healthcare of Atlanta each year are eligible for legal services, according to Pettignano. HeLP, which is also an AHEAD grantee, had assisted nearly 3,400 patients as of 2014. As is the case at many teaching hospitals with medical-legal partnerships, medical residents and students have the opportunity to work alongside HeLP and witness the health benefits of legal aid firsthand.

"The best way for us to spread this mission is through the learner," Pettignano said. "Physicians who have been in practice for decades may be skeptical, but students and residents are more focused on the social determinants of health. They realize this is something they need."

To learn more about the AAMC AHEAD initiative, visit www.aamc.org/ahead.

“The health care system cannot solve the most intractable problems acting alone as doctors and nurses. We need multidisciplinary efforts that involve everyone.”

Commentary

From Pre-Med to Practice: The Role of Public Health Service in Medical Education

Leana S. Wen, MD, MSc, Baltimore City Health Commissioner, and Katherine E. Warren, Special Assistant to the Baltimore City Health Commissioner

Here are a few numbers from Baltimore in 2015:

- 25—The age of Freddie Gray, who died from injuries sustained in police custody.
- 13—The number of pharmacies looted, burned, and closed during the unrest that followed Gray's death.
- 45—The number of homicides that took place in Baltimore City during July.

These were statistics given time and time again in media coverage of Baltimore's unrest and recovery efforts. They are significant, but they do not tell the whole story of our city.

“Disease is inextricably linked to the underlying social fabric that determines individual health and well-being.”

To understand life—and death—in Baltimore, we have to turn to findings traditionally outside the realm of health and medicine. One-third of Baltimore households earn less than \$25,000 per year. Only 59 percent

of eighth graders are at a proficient reading level. Despite improvements in the mortality rates of several key health indicators, Baltimore City continues to have a mortality rate 1.34 times that of Maryland. By length and quality of life, Baltimore City ranks 24th out of 24 counties for health outcomes. In 2014, 303 people died of drug- or alcohol-related overdoses, a 23 percent increase over 2013.

These poor health outcomes are not evenly distributed. There is a 20-year difference in life expectancies between nearly adjacent neighborhoods. African-Americans make up 85 percent of people living with HIV, despite being only 65 percent of the city's population. One in three African-Americans in Baltimore lives in a food desert compared with only one in 12 white residents. On the most recent Baltimore City Health Disparities Report Card, the city

received C, D, or F grades on 15 out of 25 markers of disparity, including diabetes, obesity, cancer, and childhood asthma. HIV/AIDS and homicide each received an F in the grading system.

These statistics are grim. As clinicians, we may be tempted to focus solely on addressing the problems of the patient in front of us. After all, there is so much to reactively treat and so little time to proactively prevent. However, disease is inextricably linked to the underlying social fabric that determines individual health and well-being. More than a century ago, renowned doctor and public health advocate Rudolf Virchow wrote, “Do we not always find the diseases of the populace traceable to defects in society?” Based on our experiences in medicine, academia, and public health, we offer three ideas on how medical education can prepare future physicians to address these social determinants in Baltimore and beyond.

First, medical education must teach the social mission of medicine and then hold practitioners accountable to it. The World Health Organization defines the social accountability of medical education as “the obligation to direct their education, research, and service activities towards addressing the priority health concerns of the community, region, and/or nation that they have a mandate to serve.” There is certainly plenty of rhetoric about this “mandate,” but years of expensive training and practice can erode this more empathic and mission-driven orientation. Nearly nine of 10 medical students report insufficient training on public health and the community. Medical schools have made important gains in this respect in recent years. The Medical College Admission Test® (MCAT®) has been reorganized to include sociology, psychology, and medical ethics. However, that social mission needs to be fostered in a continuum of training. The emphasis on social determinants of health has to span from premedical education to residency to continuing medical education. Otherwise, it is too easy for physicians to settle back into disease

states, symptoms, and diagnoses, without thoughts of poverty, housing, and discrimination.

Second, hands-on public health work needs to be a mandatory part of medical training. Here in Baltimore, we have premedical students, public health students, and resident physicians in family medicine, preventive medicine, infectious disease, OB-GYN, and many other fields who do extended rotations within the Baltimore City Health Department. In the past month alone, we have had students and residents train Baltimore City residents on naloxone administration, deliver cribs to families without a sleep-safe environment, and exercise with new mothers in our B'More Fit program. During the unrest, dozens of volunteers went door-to-door in affected neighborhoods to conduct outreach in senior buildings and deliver medications to more than 200 residents. Our local partnerships with Johns Hopkins University and the University of Maryland are key resources in this work. We propose that every academic medical center partner with a local public health department to foster this direct service and public health work throughout the continuum of medical education.

Third, we must scale up programs that encourage new graduates to enter underserved areas through loan repayment in exchange for service. The National Health Service Corps, Public Health Commissioned Corps, and similar programs are critical to prevent medical school debt from being a deterrent to entering locations and specialties of high medical and public health need. In 2007, the Council on Graduate Medical Education called for a national medical school with a focus on public health and community service, which would provide education free of charge in return for service. We should renew this call to provide care for those most in need, while also strengthening our pipeline of future physicians who are truly committed to a career of service.

Within the public health sphere, there has been a revolutionary inclusion of social determinants in both educational training and professional practice. In medicine, there has been expansion of clinical training but a lack of sustained investment in the inclusion of social factors in professional development, as well as in health care educational financing. We need to find a way to make practicing prevention and primary care in places that are most underserved appealing to physicians, not just out of personal creed or altruism but through sustained professional and financial investments.

Physicians cannot treat only the patients in front of us in a place where the statistics are as stark as they are in Baltimore. The poor health, unnecessary loss of life, and health inequity that those numbers represent translate to real, lived experiences outside the exam room. Medicine needs to have a social mission built into every step of training as a default rather than the exception. This is about more than health—it's about justice and equity in the right to live healthy and fulfilling lives. The residents of Baltimore—and our communities across America—deserve this much from us with the trust they grant us in their care.

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Training Physicians to Meet the Needs of Rural America

Stephen G. Pelletier

Learning medicine “in the field” in rural North Dakota keeps third-year medical student Mark Rostad on his toes. Recounting a week that included a day in family medicine, two in surgery, and a fourth in obstetrics and gynecology, Rostad said the rapid-fire pace demands that he constantly refresh his medical knowledge. “That helps to reinforce a lot of the things I am learning. Out here in the rural setting, it’s just you and the doctors, and they will give you experiences that many medical students don’t get until they are residents.”

Rostad is part of Rural Opportunities in Medical Education (ROME) at the University of North Dakota School of Medicine and Health Sciences (UND), a program that sends medical students to live and learn in rural communities. “The difference in these experiences is the hands-on learning that the

students get one-on-one from teaching physicians,” said Kamille Sherman, MD, assistant professor of family and community medicine at UND and codirector of ROME.

ROME and rural practicums at other medical schools are responding to a pressing need to address health

disparities in rural communities and to encourage physicians to practice in these underserved areas. The Agency for Healthcare Research and Quality has found that rural populations are more likely to be “poorer, sicker, older, uninsured, and medically underserved than urban populations.” Obesity, diabetes, and certain cancers are more common in rural communities, as are male suicides. Alcohol abuse, smoking, and conditions related to poor diet are prevalent as well. In addition, access to health care

can be compromised by transportation difficulties, a dearth of specialists, and the cost of medical services.

Rural immersion programs may differ depending on the characteristics of the community the medical school is serving. The Wisconsin Academy for Rural Medicine (WARM), part of an expansion at the University of Wisconsin School of Medicine and Public Health, admits 26 students each year. Students spend two years in medical school at the main campus in Madison and then relocate in their third and fourth years to complete clinical requirements in one of three regional sites that serve as gateways to rural communities.

Each of the three sites developed its own approach to training students based on student and patient needs, according to Byron J. Crouse, MD, FAAF, associate dean of rural and community health and director of WARM. The La Crosse site adopted a clinical longitudinal integrated curriculum—encompassing internal medicine, pediatrics, and family medicine rotations—that immerses students in the same community for 18 consecutive weeks. The Green Bay site uses block rotations but requires students to go to the same rural community for their primary care clerkship rotation early in the third year and then again in the fourth year. The Marshfield site also uses the block approach but with a greater number of clinical rotations in rural settings, such as one in pediatrics.

To address the shortage of primary care physicians after Hurricane Katrina, Tulane University School of Medicine started the Tulane Rural Immersion Program in 2007 based on the WARM model. In the third year of medical school, students train in one of several rural communities. Their work includes projects they design, such as programs to educate patients about diabetes and obesity.

Other programs are designed to develop future leaders in health care. The Columbia-Bassett Program

“In the rural setting, it’s just you and the doctors, and they will give you experiences that many medical students don’t get until they are residents.”

combines study at Columbia University College of Physicians and Surgeons with clinical education at Bassett Medical Center in rural upstate New York. The longitudinal curriculum at Bassett offers a strong grounding in rural medicine and helps students explore career paths as they build patient panels and follow them.

Students follow a curriculum called SLIM (Systems, Leadership, Integration, and Management), which includes training in Lean Six Sigma techniques. "We think that those skills and cultural approaches are essential to transforming health care," said Henry Weil, MD, senior associate dean for education at Bassett.

The Rural Physician Associate Program (RPAP) at the University of Minnesota Medical School places third-year medical students in nine-month rural immersions. "The panel of patients are the patients in the community," said RPAP Director Kathleen D. Brooks, MD, MBA, MPA. The program is now 44 years old, with more than 1,400 graduates. "For me, wanting to do primary care, I don't think I could have had a better experience," said fourth-year medical student and RPAP alumnus Tyler Thorsen.

Students at the Commonwealth Medical College learn about the community through the eyes of a single family that they follow beginning in their first

year of medical school and until they graduate. "We find that is quite an important experience for the students to begin at the very start of their medical school experience," said William F. Iobst, MD, FACP, vice dean and vice president for academic and clinical affairs.

Perhaps the most important takeaway that medical students get from a rural immersion program is perspective. Said Iobst, "The goal is for students to understand from the care-receiving end what it's like to be a participant in health care in this country."

Service-Learning Plays Vital Role in Understanding Social Determinants of Health

Stephen G. Pelletier

The opportunity to help people in their communities was a compelling factor in the decision of John Nixon, MD, to enroll at Rush Medical College. During his first year of medical school, he was one of the student volunteers who drove more than two dozen outreach efforts in the Rush Community Service Initiatives Program (RCSIP).

Nixon, who graduated in May, made his mark in his second year when he founded a new RCSIP program, dubbed “5+1=20.” The initiative seeks to help youth deepen their understanding of five health challenges—asthma, diabetes, hypertension, high blood pressure, and HIV—that are particularly common in Chicago’s disadvantaged communities. The premise is that one informed young person can share knowledge about these conditions and help community members increase their life expectancy, which can be up to 20 years shorter for those who are uninsured or underinsured. “We show the kids that just because people in their community don’t have health insurance doesn’t mean we can’t do something about their health,” Nixon said.

Indeed, a growing body of evidence documents that community-based service-learning can increase medical students’ awareness and understanding of the social determinants of health. Service-learning, as defined by the Liaison Committee on Medical Education, is a structured learning experience that combines community service with preparation and reflection.

An overview published last year in the *International Journal of Medical Education* stated that service-learning helps medical students gain clinical knowledge; hone their leadership, collaboration, and communication skills; identify health needs in underserved communities; and “has the potential to strengthen campus-community relations and improve the lives of the underserved.”



Benefits for both students and the community

Service-learning takes many forms. At Rush, Marilyn Wideman, DNP, RN, FAAN, associate provost for professional education and community engagement, noted that RCSIP is both student and community centered, giving students rich learning experiences that help them develop leadership skills while providing exposure to populations they may not encounter during their clinical placement.

A 2014 survey found that at least 90 percent of RCSIP student participants said their community work reinforced learning acquired in the classroom or gained in clinical training. Another benefit of service-learning is that students gain experience in how to work interprofessionally.

“In the outcome data we collect, students say that RCSIP increases their understanding of the roles of other disciplines and their ability to work in teams, toward common goals, and helps them communicate more effectively,” Wideman said. As Nixon’s experience suggests, the program also gives the university a tool for attracting top medical students.

At Boston University School of Medicine, a program called PAIRS (Partnering in Alzheimer’s Instruction Research Study) teams medical students with patients who have early stage Alzheimer’s disease and other cognitive impairments. Established in 2007, PAIRS was the first program to replicate the successful Buddy Program developed in 1998 at Northwestern University Feinberg School of Medicine. That model enables first-year medical students to develop relationships with early-stage Alzheimer’s patients and their families outside of the clinical setting.

“We show the kids that just because people in their community don’t have health insurance doesn’t mean we can’t do something about their health.”

Angela Jefferson, PhD, an associate professor of neurology at Vanderbilt University, spearheaded development of the PAIRS program while she was on the faculty at Boston University School of Medicine. Her research with colleagues, published in a 2012 issue of

BMC Medical Education, found that PAIRS deepens participants’ understanding of Alzheimer’s disease and its impact on patients, caregivers, and families. The program also helps students sharpen their skills in communicating with older adults. “[PAIRS] provides a platform for teaching and education that is outside of the box in many ways,” said Jefferson. “It’s basically taking an educational opportunity and putting it into a real-world environment.”

Morehouse School of Medicine requires first-year students to take a yearlong community health course (CHC) where they identify a local health need and develop appropriate interventions. Ijeoma Azonobi, MD, MPH, director of undergraduate medical education in the Department of Community Health and Preventive Medicine, said the CHC helps students learn first-hand to deal with the reality that “our patients are underemployed, poorly educated, don’t have access to appropriate foods and nutrition, and live in neighborhoods where safety can be an issue.”

The CHC is a flagship program for the Morehouse mission to help the underserved and achieve health equity by producing community-oriented physicians, Azonobi noted. “The program is equally as much about the community as it is about experiences for our students,” he said. “The CHC helps us create the kind of physicians we are seeking to produce.”

A 2010 analysis published in *Academic Medicine* suggested that the CHC provides medical students with requisite knowledge and skills for assessing community health, as well as a channel for working with community partners to improve health. The study pointed out that the CHC also helps medical students understand the economic, social, and cultural factors that have an impact on health.

While studies have documented the benefits of service-learning for medical students, there is appreciably less hard data about the impact on communities, however. Volunteer opportunities in RCSIP are based on needs determined through health assessments, focus groups, surveys, and one-on-one interviews, but Wideman said the Rush program is planning to conduct focus groups with community residents to learn their views of problems and potential solutions. That type of research is imperative to know what the community wants, Wideman said, “so that we can be a true partner versus just doing what we think is a good idea.”

Resources

AAMC Health Equity Research and Policy

www.aamc.org/healthequity

To support AAMC members' efforts and build capacity to move their communities and our nation toward health equity, the AAMC has compiled webpages to disseminate solutions-focused research, funding and training opportunities, and constituent best practices in health equity research and policy.

AAMC Health Equity Research Virtual Site Visit Collection

www.aamc.org/virtualsitevisit

The Virtual Site Visit collection features videos, articles, presentations, and other resources that reflect the cutting-edge research, novel curricula, and innovative care delivery that can contribute to the evidence base of solutions to health and health care disparities.

AAMC Health Equity Research Snapshot Collection

www.aamc.org/healthequitysnapshot

Each health equity research snapshot highlights seven new research projects under way at AAMC-member institutions that represent the rich variety of populations and health outcomes health equity researchers investigate.

AAMC MedEdPORTAL® Health Equity Collection

www.mededportal.org/icollaborative/about/initiatives/healthequitycollection/

To support efforts to decrease or eliminate health and health care inequities, MedEdPORTAL® posts best practices and continuing education focused on optimizing learners' acquisition of the competencies and skills needed to provide comprehensive, equity-promoting care for all populations.

AAMC MedEdPORTAL Public Health Resources for Medical Education Collection

www.mededportal.org/icollaborative/about/initiatives/publichealth/

The integration of public health into the medical education curriculum exposes physicians to varied

sources of epidemiologic and statistical data, socioeconomic factors, and public health systems that collectively influence the burden of disease in a community. This collection is a compendium of tools and resources to assist with incorporating public health principles into medical education.

AAMC MedEdPORTAL Population Health Collection

www.mededportal.org/icollaborative/about/initiatives/populationhealth/

This MedEdPORTAL collection serves as the online destination for identifying, developing, and sharing resources to improve the public health content in medical education.

Urban Universities for HEALTH (UUHEALTH)

<http://urbanuniversitiesforhealth.org/>

The long-term vision of Urban Universities for HEALTH is to enhance and expand a culturally sensitive, diverse, and prepared health workforce that improves health and reduces health disparities in urban communities.

AAMC-CDC Webinar Series

www.aamc.org/initiatives/diversity/portfolios/cdc/384594/webinarseries.html

To promote increased public health awareness and encourage inclusion of public health perspectives, experts in the field speak about their personal experiences practicing medicine from a public health vantage point.

AAMC Public Health Pathways

<https://students-residents.aamc.org/advisors/article/public-health-pathways-5/>

Public Health Pathways is an online searchable database of domestic and international public health training opportunities in academic, government, and community settings for every level in the education continuum.