

S. HRG. 115-819

**THE HEALTH CARE WORKFORCE:
ADDRESSING SHORTAGES
AND IMPROVING CARE**

HEARING
OF THE
**COMMITTEE ON HEALTH, EDUCATION,
LABOR, AND PENSIONS**
UNITED STATES SENATE
ONE HUNDRED FIFTEENTH CONGRESS
SECOND SESSION
ON
EXAMINING THE HEALTHCARE WORKFORCE, FOCUSING ON
ADDRESSING SHORTAGES AND IMPROVING CARE

—————
MAY 22, 2018
—————

Printed for the use of the Committee on Health, Education, Labor, and Pensions



Available via the World Wide Web: <http://www.govinfo.gov>

—————
U.S. GOVERNMENT PUBLISHING OFFICE

30-257 PDF

WASHINGTON : 2020

COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS

LAMAR ALEXANDER, Tennessee, *Chairman*

MICHAEL B. ENZI, Wyoming	PATTY MURRAY, Washington
RICHARD BURR, North Carolina	BERNARD SANDERS (I), Vermont
JOHNNY ISAKSON, Georgia	ROBERT P. CASEY, JR., Pennsylvania
RAND PAUL, Kentucky	MICHAEL F. BENNET, Colorado
SUSAN M. COLLINS, Maine	TAMMY BALDWIN, Wisconsin
BILL CASSIDY, M.D., Louisiana	CHRISTOPHER S. MURPHY, Connecticut
TODD YOUNG, Indiana	ELIZABETH WARREN, Massachusetts
ORRIN G. HATCH, Utah	TIM KAINE, Virginia
PAT ROBERTS, Kansas	MAGGIE HASSAN, New Hampshire
LISA MURKOWSKI, Alaska	TINA SMITH, Minnesota
TIM SCOTT, South Carolina	DOUG JONES, Alabama

DAVID P. CLEARY, *Republican Staff Director*

LINDSEY WARD SEIDMAN, *Republican Deputy Staff Director*

EVAN SCHATZ, *Democratic Staff Director*

JOHN RIGHTER, *Democratic Deputy Staff Director*

C O N T E N T S

STATEMENTS

TUESDAY, MAY 22, 2018

Page

COMMITTEE MEMBERS

Alexander, Hon. Lamar, Chairman, Committee on Health, Education, Labor, and Pensions, Opening statement	1
Murray, Hon. Patty, Ranking Member, a U.S. Senator from the State of Washington, Opening statement	3

WITNESSES

Goodell, Kristen, M.D., F.A.A.F.P., Assistant Professor of Family Medicine, Assistant Dean for Admissions, Boston University School of Medicine, Bos- ton, MA	6
Prepared statement	9
Summary statement	15
Sanford, Julie, D.N.S., R.N., F.A.A.N., Director and Professor, School of Nurs- ing, James Madison University, Harrisonburg, VA	16
Prepared statement	18
Summary statement	23
Phelan, Elizabeth, M.D., M.S., Director, Northwest Geriatrics Workforce En- hancement Center, Associate Professor of Medicine, Gerontology and Geri- atric Medicine, and Adjunct Associate Professor of Health Services, Univer- sity of Washington, Seattle, WA	24
Prepared statement	26
Summary statement	27

**THE HEALTH CARE WORKFORCE:
ADDRESSING SHORTAGES
AND IMPROVING CARE**

Tuesday, May 22, 2018

U.S. SENATE,
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS,
Washington, DC.

The Committee met, pursuant to notice, at 10:05 a.m. in room SD-430, Dirksen Senate Office Building, Hon. Lamar Alexander, Chairman of the Committee, presiding.

Present: Senators Alexander [presiding], Collins, Cassidy, Young, Murkowski, Murray, Casey, Murphy, Warren, Kaine, Hassan, and Smith.

OPENING STATEMENT OF SENATOR ALEXANDER

The CHAIRMAN. The Senate Committee on Health, Education, Labor, and Pensions will please come to order.

Senator Murray and I will each have an opening statement, and then we will introduce the witnesses. After the witnesses' testimony, Senators will each have 5 minutes of questions.

Today's hearing is an opportunity to:

Learn about the growing shortage of health care professionals, especially in rural areas;

Examine what the Federal Government is doing to support our Nation's health care workforce;

Look at how well we are training health care professionals to meet the needs of patients and;

To better understand where health care professionals are choosing to work so we can start addressing shortages in rural and urban areas of the country.

I often hear from doctors and patients in Tennessee about the shortage of health care professionals, and from Members of this Committee. We know that the shortage of health care professionals—which includes doctors, nurses, paramedics, and X-ray technicians—is a problem that has the potential to keep getting worse.

First, our country's population is aging and growing, which is widening the gap between the number of people who need health care and the number of those who provide it.

According to the Association of American Medical Colleges, by 2030 our total population is expected to increase by more than 10 percent and the percentage of people over 65 is expected to increase 50 percent compared to today.

Second, at a time when we need more health care professionals, many of the existing health care workforce will reach retirement age. A third of all doctors will be older than 65 in the next 10 years according to Association of American Medical Colleges.

Simply put, we may have too many people and too few medical professionals.

We also know that rural areas, where 60 million Americans live, suffer the greatest impact of the shortage of health care professionals. According to the National Rural Health Association, there are only 39 primary care doctors for every 100,000 people living in rural areas, but 53 primary care doctors for every 100,000 people in urban areas.

That difference is even more dramatic for anesthesiologists, neurologists, cardiologists, and other specialties. Urban areas have 263 specialists for every 100,000 people, but in rural areas there are only 30 for every 100,000 people.

We also know the shortage affects certain populations more than others. For example in 2014, the American Congress of Obstetricians and Gynecologists reported that 47 rural Tennessee counties, out of 95 total, had no OB-GYN. That means a young couple starting a family may have to travel to Memphis, Nashville, or Knoxville to see an OB-GYN doctor.

Older Americans could face shortages in the coming years because there are not enough health care workers trained to care for geriatric patients. The Bureau of Labor Statistics has estimated that by 2024, we will need 1.1 million more nursing aides, home health aides, and other health care workers to assist older patients.

The Federal Government is doing, currently, three things to help reduce and prevent shortages of health care workers.

First, about \$10 billion goes to Medicare Graduate Medical Education Programs, which funds resident training for new doctors. That program is in the jurisdiction of the Finance Committee.

Second, we spend more than \$1 billion on about 70 different health workforce programs that provide scholarships and loan repayment for students, faculty, and health care professionals in exchange for working in rural areas. These programs also provide grants for children's hospitals that train new doctors and dentists. All of these programs are within our Committee's jurisdiction. We need to better understand if they are actually working and if they need to be changed.

Finally, we spend about \$310 million for the National Health Service Corps, which provides loan repayment for primary care doctors who go to work in underserved areas. Most of these doctors choose to work at the 10,000 community health centers across the country.

We need to know if what the Federal Government currently is doing is effective or if specific improvements should be made. Do we need all of these programs or should there be changes to better meet the needs of patients?

The witnesses here today will also be able to help us better understand how well we are training health care professionals, and what we can do to encourage more people to enter the health care workforce as professionals retire.

I plan to ask our witnesses today what role the Federal Government can play in encouraging health care professionals to work in underserved and rural areas of the country where they are most needed.

I look forward to hearing their recommendations. My hope is that the Committee will soon begin working on solutions to address these shortages.

Senator Murray.

STATEMENT OF SENATOR MURRAY

Senator MURRAY. Well, thank you very much, Mr. Chairman.

Thank you to all of our witnesses for joining us today.

A robust, diverse, collaborative workforce is critical to the health of our families and our communities. However, sustaining that workforce is a big challenge, and there are many smaller interconnected challenges too.

We need a strong pipeline to recruit, retain, and train more health care professionals, particularly in rural and underserved areas. We need to make sure the pipeline includes professionals who have different backgrounds and specialties.

We need a multifaceted approach to build a health care workforce that is more diverse, better distributed, and trained through collaborative models to provide as many patients as possible with care that meets their needs.

No single program could be adequate to meet these nuanced tasks, which is why the Health Resources and Services Administration, or HRSA, administers a series of interconnected programs, programs authorized through Title VII to support primary care, oral health, mental health, and other providers, and programs through Title VIII that support nurses.

HRSA provides scholarships and loan repayment programs, grants to support interprofessional training and residency programs in community-based settings, and research to help identify new workforce trends, problems, and solutions. These programs do not just tackle the workforce shortage at large, but targets specific challenges.

For example, HRSA administers the Centers of Excellence program and the Nursing Workforce Diversity program to address the need for better representation of racial and ethnic minorities in our health care workforce by supporting educational opportunities for young, underserved and underrepresented students.

According to the Association of American Medical Colleges, only 7 percent of medical school graduates are African-American and only about 6 percent are Hispanic. Changing that matters because greater diversity among practitioners, as well as greater cultural and language competency, can help patients from all backgrounds get higher health care quality.

It is worth noting that half of the graduates from HRSA's workforce programs last year were minorities or came from disadvantaged backgrounds.

But that is not all. HRSA also administers the National Health Service Corps and the Nurse Corps to target the needs of underserved communities. About one-fifth of our country's population is rural, yet only about one-tenth of our physicians practice in rural

areas. In fact, nearly 3 out of 5 areas facing a shortage of primary care professionals are rural.

Last year, loan repayment and scholarship programs through HRSA supported more than 12,000 practitioners in underserved areas nationwide, collectively serving more than 12 million patients.

At the University of Washington School of Medicine—which has long been recognized for its work to connect students to underserved communities, and at the new medical school at Washington State University—students learn about technologies and techniques specifically to support care in rural areas where many institutions are supported by HRSA grants to address that need.

But that is not all. HRSA also administers the Geriatrics Workforce Enhancement Program to support the integration of geriatrics into primary care settings so seniors get care that reflects their changing needs in their own community.

The number of seniors in our country is expected to nearly double over the next few decades. As this so-called “silver tsunami” hits, it will put us at risk of a serious workforce shortage in senior care. U.W.’s Geriatrics Program is among the HRSA grantees addressing this, and Dr. Phelan, I look forward to hearing your testimony today about that important work.

But that is not all. HRSA also administers the Behavioral Health Workforce Education and Training Program to help address the national shortage of mental and behavioral health experts. Over half of all counties across the Nation do not have a single psychiatrist. Over three-fourths have a severe shortage of psychiatrists.

In fact, according to the Kaiser Family Foundation, our current mental and behavioral health workforce cannot meet one-third of our needs in this area. This is an urgent issue, especially as our communities grapple with the opioid crisis and the epidemic of substance use disorders.

Last year, our health workforce programs trained over 4,000 new professionals in behavioral and mental health. And even that is not all. These are just a few of the many programs authorized by Titles VII and VIII to address our health workforce needs.

One program supports children’s hospitals, another supports training providers in community-based settings. Another program supports interprofessional training to help all practitioners learn to work together, and with community-based organizations, to provide the most patients with the best care.

Another, the Health Careers Opportunities Program, or HCOP, improves health workforce diversity by supporting programs that engage minority and disadvantaged children in health sciences. Children like Benjamin Danielson, who received mentorship and guidance that kindled his interest in attending U.W. School of Medicine.

Today, he now serves as Clinic Chief and Medical Director of the Odessa Brown Children’s Clinic in Seattle, which provides specialized pediatric care to patients regardless of their ability to pay. And he also serves as a mentor, through the same HCOP program that helped him, to support and inspire future generations of minority medical students.

These are great programs with a positive impact, but we have got to invest in that impact on a larger scale because, compared to the scope of the challenge, we are fighting fires with a squirt gun. We have the right idea, but we need to do a lot more.

Unfortunately today, President Trump seems interested in only doing a lot less. His budget proposal would all but end these efforts, cutting dozens of programs entirely and slashing funding by over 90 percent.

Now, thankfully, his view is not shared by all Republicans. Instead of drastic cuts, we worked across the aisle on substantial increases in our recent bipartisan budget deal. We increased funding for the National Health Service Corps by over one-third. We increased funding for behavioral health training by one-half. We made substance use disorder experts eligible for workforce loan repayment programs, and I hope we can continue to build on that bipartisan work.

I also hope we remember that in strengthening our health care workforce means addressing harassment and sexual assault in the workplace too. Our health care practitioners need safe workplaces to do their jobs and I am particularly concerned about how we provide the safety for home health care aids who work in very isolated environments.

I have reached out to industry stakeholders about this and started some good conversations, and I hope we continue that conversation here in this Committee as well because it is hard to encourage people to go into a field or to stay in it if they do not feel safe.

Thank you, Mr. Chairman.

I do ask unanimous consent to submit a letter for the record from the American Osteopathic Association.

I look forward to hearing from our witnesses today.

The CHAIRMAN. So ordered.

The CHAIRMAN. Thank you, Senator Murray.

I would note that this is another bipartisan hearing which means that Senator Murray and I have agreed on the hearing and on the witnesses. That is often a good way to help us move toward agreeing on solutions. So I thank her for that.

Each witness will have up to 5 minutes to give testimony. I welcome you all.

Our first witness today is Dr. Kristen Goodell, Assistant Professor of Family Medicine and Assistant Dean for Admissions at Boston University School of Medicine.

She is also the Chair of the Counsel on Graduate Medical Education, which provides assessments and recommendations to Congress, the Department of Health and Human Services, and the private sector on issues related to the physician workforce.

Next, we will hear from Dr. Julie Sanford. Senator Kaine is here, and I wonder if he would like to introduce her?

Senator KAINE. Thank you, Mr. Chairman. I am glad we are having this hearing today. I appreciate the Chairman and Ranking Member for working on it.

I am happy to introduce Dr. Julie Sanford. Julie is the Director, and also a Professor, at the School of Nursing at James Madison University in Harrisonburg, Virginia.

Over the course of her career, Dr. Sanford has implemented nursing programs in rural, diverse, and educationally disadvantaged areas of Mississippi, Alabama, and Virginia.

She started one of the first doctoral programs in the country for gerontological acute care nurse practitioners, and she also built an R.N., B.S.N. program online for students unable to work in classrooms following Hurricane Katrina.

She plays an integral role at J.M.U. in the Health Policy Collaborative, which was recently awarded the Innovations in Professional Nursing Award from the American Association of Colleges of Nursing. She received her bachelor's degree from the University of Alabama, Master's from the University of South Alabama, and Doctor of Science in Nursing from L.S.U.

We are really happy to have you here, Dr. Sanford.

The CHAIRMAN. Thanks, Senator Kaine.

Senator Murray will introduce Dr. Phelan.

Senator MURRAY. Good morning, Dr. Elizabeth Phelan. Thank you. She joins us from my home State of Washington.

She is an Associate Professor of Medicine, Gerontology, and Geriatric Medicine at the University of Washington, where she is teaching and training the next generation of health professionals to improve care for our seniors.

She is also Director of the Northwest Geriatrics Workforce Enhancement Center, where she is not only working to develop the next generation of professionals in geriatrics, but is also working to pioneer the next generation of innovative care delivery models for older adults, like Project ECHO, which allows specialized care providers, like geriatricians, to use telehealth to help reach patients and providers in our rural communities.

Dr. Phelan, I know it is a long flight from Washington State, so I am particularly grateful that you have come out here to join us today.

Thank you.

The CHAIRMAN. Thanks, Senator Murray.

We now will hear from our witnesses, and if you could summarize your remarks in about 5 minutes, that will leave time for questions.

Dr. Goodell.

STATEMENT OF KRISTEN GOODELL, M.D., F.A.A.F.P., ASSISTANT PROFESSOR OF FAMILY MEDICINE, ASSISTANT DEAN FOR ADMISSIONS, BOSTON UNIVERSITY SCHOOL OF MEDICINE CHAIR, BOSTON, MASSACHUSETTS

Dr. GOODELL. Thank you so much for inviting me to be here today. I am particularly gratified that this is a bipartisan hearing because I feel, I am sure we all feel, that taking care of people is something everyone can agree on.

The aging and growth of our population, as you mentioned, has led numerous groups to predict a significant workforce shortage. Now, figuring out exactly how many physicians we are going to need is a tricky business because there are so many different factors that go into those models.

But there are certain areas of workforce deficiency that we all can agree on that are really not in dispute. One of these important

ones is the proportion of rural physicians. As Senator Alexander outlined, 20 percent of Americans live in rural areas, but only 9 percent of physicians do. It is estimated that right now, if we were to fully staff all the health profession shortage areas, we would need an additional 13,000 physicians today. So rural America has a critical workforce problem.

In addition, as Senator Murray was talking about, we need to address issues of physician workforce diversity. Health care outcomes are not equal for different people in this country, but we have an opportunity here because we know that physicians who are themselves from underrepresented minorities are more likely to take care of poor people. They are more likely to work in underserved areas. Patients who see those doctors feel more satisfied with their health care and they also have better health outcomes.

Another issue that we should think about is the specialty mix of physicians and most of the physician models that predict the shortage are predicated on the idea that the specialty mix would stay constant, the same way it is today is the way it should be tomorrow.

But if we would like to reduce the cost of health care in this country, improve the quality of health care in this country, and reduce disparities, the way to do that is to increase the proportion of primary care physicians.

The final issue that I want to address is specific residency training models. Residencies were created way back when we thought what doctors did was intervene in serious and acute illness and injuries, often at the very end of life, and spending a lot of time in the hospital. But nowadays, that is actually not what most doctors spend our time doing.

We are trying to keep people out of the hospital. We are trying to focus on prevention. As much as we can, we keep care in peoples' communities and at home. It is less expensive and it is less risky. But the problem is we still train residents largely in inpatient settings in the hospital.

If we want our physicians to be able to deliver the kind of health care that our patients need right now and in the future, we need to address the specific programs, such as the ones funded by HRSA, that give residents additional training in these care models.

There are a lot of different ways that we fund graduate medical education, as Senator Alexander mentioned. The largest pool of funding comes through Medicare and that is largely what determines the number of residents in the country, the specialty mix, and the geographic distribution.

However, HRSA's many programs—I think there are 80 of them, actually—do a phenomenal job at identifying and focusing on these critical issues. The programs are often flexible over time, and they look at emerging issues, and they really address the needs of the health care workforce.

There are a couple of specific programs that I will mention as an example. One of these is from my own institution, Boston University School of Medicine.

We have a Primary Care Training Enhancement Grant that has medical students working with physician assistant students, and social work students, and nutrition students. These students are

put together in interprofessional teams and they see patients that have complicated health care needs.

They see patients for a whole hour, so that is about four times more time than their doctor has to spend with them. What they do is address things that the doctor does not have a chance to do. They focus on social determinants of health. They try and work with people to figure out how to get them to eat better, how to get people to exercise, to take their medications.

As it turns out those, more than the time spent with the physician, are things that actually determine peoples' health care outcomes.

In my program, patients are getting care they otherwise would not have received. Students are getting trained in specific interventions that they otherwise would not have been trained in. They also get the meta message that, "By the way, taking care of people is a team effort."

The coolest thing about this program, actually, is the outcomes they are tracking. So a lot of the programs that you mentioned, it can be hard to figure out what sort of an impact they are having. Some of them are easy.

If you have a pipeline program, you can count the number of physicians that end up in a rural area or count the number of physicians from diverse backgrounds. But a lot of the programs seem to have diffused outcomes of improved health care quality.

This program at B.U. is actually tracking things like obesity rates, depression indices, and blood sugar rates for diabetes. So that is the holy grail of health care programs. They are able to really see that the work they are doing is making a difference for patients.

I have a lot more stories and I am hoping that people ask me about some more of these programs, but the big take home message is that physicians do in practice what they are trained to do in residency.

If you spend 3 years, the highest yield years of your training in a big academic medical center with all the expert consultants you could want and the very best technology, and then you graduate, and somebody offers you a great job in a rural area, even with an awesome loan repayment program, there is no way you are taking it.

That is because the idea of you going out and being "the only expert" in the place where you are working is terrifying and nobody thinks they are qualified to do that.

We need to create some support programs that train physicians to practice the way we need them to practice.

Furthermore, if most of your education within your residency program focused on the newest care models, the most important interventions, if your seminars dug into the literature and found out what is the best new emerging treatment? Well, then you are extremely well qualified to take care of the patient that is sitting in front of you today.

If you never did a quality improvement project or assessed the needs of your community, then you do not even know that that is your job. So we need some of these training enhancements to help convince residents that that is their job too.

Thanks very much and I urge everyone to support the HRSA workforce programs.

[The prepared statement of Dr. Goodell follows:]

PREPARED STATEMENT OF KRISTEN GODELL

Statement of the Problem

At present and increasingly, our health care workforce is not adequately meeting the needs of our citizens. Population aging and growth ensure that our country will require significantly more medical care. Expanded insurance means that more citizens will be able to access the care they need. Of particular concern are

- Rural areas of the country which have had an inadequate healthcare workforce for 80 years and counting
- The proportion of primary care providers because they
 - (a) Improve health outcomes, decrease health care costs, and reduce health disparities
 - (b) Care for the majority of the health care needs of a population
 - (c) Provide care to underserved populations at higher rates than non-PCPs
- Diversity of our physician workforce
- Preparedness of physicians to practice in new care delivery models, to address patient safety concerns, and to ensure that the quality of their care is improving over time

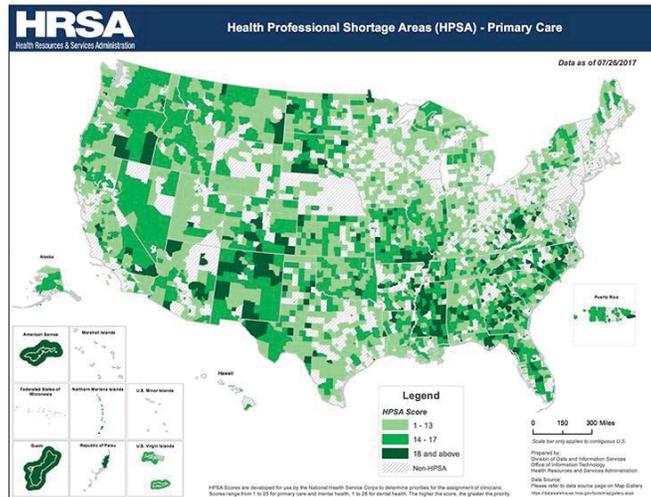
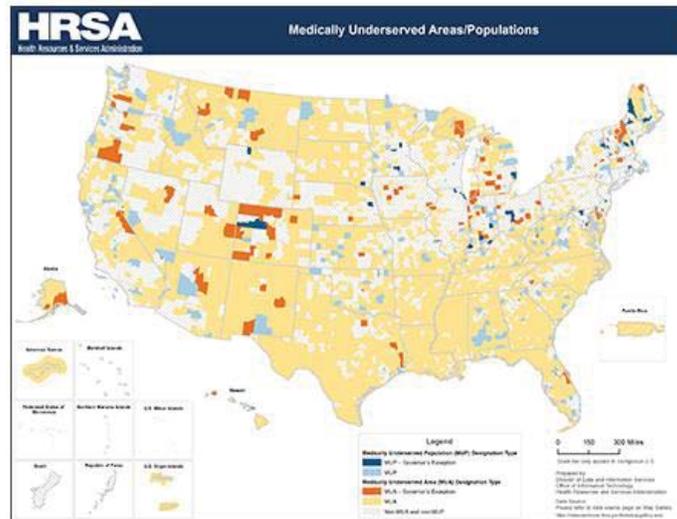
Introduction and Background

The most recent projections from the Association of American Medical Colleges describe a shortage of 42,600–121,300 physicians by 2030. Included in this number is a shortage of 14,800–49,300 primary care physicians. These careful, thorough, and highly sophisticated prediction ranges account for many scenarios of care provision—increasing presence of physician assistants and advance practice nurses, increased efficiencies from team-based care, shorter work hours/earlier retirement among younger physicians, and different rates of health insurance.¹ Despite the uncertainty and the variation between these predictions and others,^{2,4} there are no major models which suggest that the supply of physicians at current levels will be adequate.

While the total number of physicians needed is uncertain, it is abundantly clear that we have a physician workforce distribution problem in terms of geography, specialty mix, and workforce diversity. In addition, the very nature of the practice of medicine has shifted from largely intervening in acute and serious injuries and illness, often in hospital settings, to emphasizing health maintenance and care of chronic diseases, and doing as much as possible in the outpatient setting. Because of the rapid evolution in how medicine is practiced and health care is delivered, physicians may complete residency training and find themselves ill-equipped to practice in the settings where patients most need them.

- **Geography**

Wide swaths of the United States, mostly in rural areas, are designated as Health Professional Shortage Areas.⁵ Small but population-dense urban regions are often designated medically underserved because of the high prevalence of poverty and elderly patients and high infant mortality rates.⁶ HRSA estimates that it would require an additional 13,800 primary care physicians needed today to provide a minimum level of care that would remove the HPSA designations.¹ That number reflects a current shortage of care providers, rather than a projection for the future. Access to health care in rural areas has been a problem for more than 80 years. While 20 percent of Americans live in rural areas, only 9 percent of physicians do.⁷ The rural maldistribution is expected to worsen without significant intervention, as growth in urban residencies has far outpaced growth in rural training programs;⁸ and the majority of physicians ultimately practice close to where they trained.⁹



- Specialty Mix

Primary care is defined as the provision of integrated, accessible health care services by clinicians who are accountable for addressing the large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community. It is the foundation of high-quality and cost effective health care systems. Among OECD countries, those with stronger primary care systems have better health outcomes than those with weaker primary care systems.¹⁰ Comparison of counties within the US showed the same correlation between improved quality/lower cost care and a higher proportion of primary care physicians.¹⁰ A review of 35 studies showed that higher ratios of primary care providers led to reduced mortality from 5 major causes (infant, stroke,

heart, cancer, total). Adults who see a primary care provider have a 19 percent lower risk of premature death. Patients who see a primary care provider first save 33 percent compared to their peers who see only specialists, and it's estimated that if everyone in the US saw a primary care provider first it would save an estimated \$67 billion per year.¹¹ Unfortunately, fewer than 30 percent of physicians in the United States practice primary care. Generally, predictions of physician shortages assume maintenance of our current specialty mix, but if we are to achieve the triple aim of improved quality, lower costs, and more patient satisfaction, we must increase the proportion of primary care physicians. Furthermore, primary care physicians are what is needed in rural America, where low population density won't support multiple specialists. As the emphasis in health care shifts from treatment of acute and serious illness and injuries to prevention and chronic disease management, the need for primary care providers will only increase.

- Diversity

Racial and ethnic diversity in the healthcare workforce has been shown to increase access to health care and to improve outcomes for underserved populations.¹² African-American, Hispanic, and Native-American physicians are much more likely than are white physicians to practice in underserved communities and to treat larger numbers of minority patients, regardless of income.¹³ African-American and Hispanic physicians are more likely to provide care to the poor and those on Medicaid.¹⁴ Racial and ethnic minority patients are generally more satisfied with their care, and are more likely to report receiving higher-quality care, when treated by a health professional of their own racial or ethnic background.^{15,16} A 2015 report from the National Center for Workforce Analysis described diversity in the health workforce overall, noting that racial and ethnic diversity is greatest (and increased over the preceding 10 years) among the least paid, lowest-income, lowest-prestige occupations. In contrast, graduating physicians are about 6.5 percent black or African-American (compared to 14.3 percent of Americans) and 8 percent are Hispanic (compared to 17 percent of the US population).¹⁷ The AHRQ tracks health care disparities between groups with its annual National Healthcare Quality and Disparities Report, and demonstrates the persistence of lower quality care (based on 250 outcome measures) for minorities underrepresented in medicine.¹⁸ In order to address deficiencies in health care access and quality among poor Americans and those from minority groups, we must improve the diversity of the physician workforce.

- Changing healthcare delivery models

Graduate Medical Education programs are not adequately preparing new MD graduates to practice in the future. Despite the fact that fewer than 1 person per thousand in a population is hospitalized in an Academic Medical Center (AMC) each month, and despite the fact that 60 percent of procedures are performed in the outpatient setting, residency training focuses heavily on inpatients in large AMCs. Residents have inadequate opportunities to care for patients with chronic diseases longitudinally, and topics like health systems, quality improvement, and practice transformation are consigned to the margins of an intensive curriculum.¹⁹

Effectiveness of Interventions

The problems described here are neither new nor unknown. For decades, the Federal Government has funded programs to address these needs and others as a way to try and encouraged improved health outcomes for our country. Currently, 80 programs are largely administered through HRSA's 5 bureaus and 10 offices, and run the gamut from loan repayment programs, pipeline programs, direct support for residencies and fellowships, and advanced training initiatives for new models of care, among others.²⁰ The key question is which of these programs are the most effective and should be supported? What can be changed, and what should be dropped?

This testimony focuses primarily on programs administered through the Bureau of Health Workforce funded through Title VII of the Public Health Service Act, though the goals of some programs align or even overlap with programs administered through other centers. Because of the wide variety of program types and their respective goals, it is difficult to make a comparative assessment about program efficacy. Some programs have outcomes that are easy to measure. For example, the

Health Careers Opportunity Program establishes pipeline programs which nurture students from backgrounds underrepresented in health professions. Success can be determined by counting the ultimate number of health professionals produced and by monitoring the attrition rate. Evaluation of other programs is more challenging, for example Centers of Excellence. Such centers can count the number of people they “touch” but because their mission is to collect and provide resources and enhance training opportunities it can be difficult to produce data that describes their success. Finally, many of the intended outcomes are years away from the inception of any program. Initiatives to increase diversity among physicians may begin in high school; with a minimum of 8 years before becoming a physician and another 3 before participants are ready for independent practice. Loan repayment and other inducements to increase the number of physicians in rural areas may look effective at 1 year after the commitment is repaid, but the true need is physicians with an enduring commitment to their community—and that’s not measurable until years later. Our ultimate goal is improved health for people, however those effects are sufficiently downstream that collecting information is extremely challenging, and proving causation even more so given the dozens of factors in addition to workforce programming that are likely to influence an individual’s health. Despite the difficulty of tracking and measuring, however, it is essential that Health Workforce and other programs be monitored so that we can eventually determine which programs are functioning most effectively. Examples of the kind of outcomes being currently monitored are below:

Program Metrics for 2016-2017

Program Name	Number of Awardees	Number of Trainees	Trainee Characteristics	Program Characteristics
Area Health Education Centers Develop and enhance training networks that provide pipeline programs and advanced training to expand diversity, enhance health care quality, and improve access in rural and underserved areas.	52	437,267 at all levels	30.9% URM 39.7% disadvantaged	62.8% MUC 62.5% Primary Care 42% Rural
Primary Care Training and Enhancement Training for primary care providers in new models of care delivery.	68	7,344 residents	23.4% URM 34.2% disadvantaged	63.5% MUC 61.7% Primary Care 29.7% Rural
Teaching Health Centers Direct funding for new residencies designed for improved care delivery models in MUCs or primary care settings *Funded under Title III.	57	771 residents	20% URM 23% from rural backgrounds 20% disadvantaged 68% of completers are practicing primary care (30% national average) 55% are practicing in rural settings or MUCs	99% train in a primary care setting 600,000 patient-contact hours 83% train in a rural setting or MU
Health Careers Opportunity Programs Multiple initiatives to increase diversity and provide care to underserved communities.	17	1,284	83% URM 97% disadvantaged	36% trained in MUCs 68.2% trained in primary care settings

Fortunately, significant effort is being made to clarify and monitor program outcomes. HRSAs strategic plan for 2016–2018 lists clear goals, breaks the goals down into measurable objectives, and describes strategies for reaching the objectives. For each goal, performance measures are spelled out. This is an excellent strategy that will allow monitoring for success, and could be replicated at smaller scale for individual programs. In addition, there is solid data that in the big picture, Title VII is having the desired effect. Exposure to a Title VII program during medical school increases the likelihood of working in a Community Health Center or joining the National Health Service Corps. 50 percent more students chose family medicine as a specialty (the specialty most likely to produce primary care physicians) in schools where there is Title VII funding compared with schools where there is no such funding. Students from Title VII schools are also 30 percent more likely to practice in a rural area, and 30 percent more likely to practice in a physician shortage area. On the whole, then, and for perhaps our most significant health workforce problem (the maldistribution problem) Title VII programs are having a positive effect.²¹

Examples of Successful Title VII Programs

- **FMR of Western Montana**

This program is a perfect example of how traditional GME funding and HRSA enhancement funding work together to address workforce needs. The FMR of Western Montana is a new residency program (started in 2013) sponsored by the University of Montana, 2 community health centers, 3 primary hospitals, and 9 rural communities. FMRWM serves a population that is so rural it's actually designated as a frontier. Thus far, 90 percent of its graduates are practicing in rural areas. Recognizing that health care delivery is changing and that its graduates needed to be prepared to practice in the future, the FMRWM received a HRSA Title VII grant for Primary Care Training and Enhancement. Project directors leveraged carefully built and nurtured existing community relationships between schools, hospitals, and the residency program to identify and disseminate innovations and best practices from one site to the whole network. Intensive and longitudinal team training was provided to all participants, including residents, who came to understand quality improvement and innovation as part and parcel of their jobs as rural physicians. Self-reliance and local expertise were celebrated by having participants determine the needs of their communities and decide which projects would be adopted locally. In this example, the PCTE grant took a residency that was successful in mitigating a critical personnel shortage and improved it by giving residents training that they wouldn't have had.

- **BUSM interprofessional teams**

Boston University School of Medicine hosts a Title VII program that trains teams of interprofessional students to provide care to underserved (urban poor) patients with complex medical needs including obesity, diabetes, and eating disorders. Students of medicine, social work, nutrition, and physician assistant programs work with a family medicine resident to see complex patients in a team for an hour at a time to provide care that keeps patients engaged and that addresses their social determinants of health (such as nutrition and housing security) as well as their medical needs. A curriculum for these learners has been developed and is being refined which, once optimized, can be easily disseminated to other interprofessional programs. About half of students' time is spent in direct patient care in this project, and half is in training for how to provide that care including very specific skills like SBIRT (screening, brief intervention, referral, and treatment) and motivational interviewing that are best practices in behavioral health and can be applied in any setting. This project is notable for its emphasis on monitoring patient centered outcomes—in addition to tracking the number of participants that ultimately practice in MUAs and primary care, and measures of patient engagement, this study is tracking patient outcomes such as weight, HbA1c (glucose monitoring for diabetes), and depression index scores.

- **Project ECHO: Opioids**

Project Echo is a successful national program that provides advanced specialized care through primary care providers by connecting specialists at an Academic Medical Center "Hub" with their remote primary care colleagues for education and patient case conferences. In this program, primary care providers meet with a specialist via videolink for 2 hour weekly conferences,

of which the first 30 minutes is a formal educational presentation and the last 90 minutes involves case presentations by PCPs in which the specialists provide consultations. In this way, patients can receive much-needed expertise of specialists without traveling, and the specialists can provide consultations on many more patients in a shorter time (relying on the expert assessment and reporting of their PCP colleagues) than if they were seeing them in their offices. Over time, PCPs develop enhanced expertise in the specific subject being addressed, and are able to provide the needed care without consultation. A 2016 paper,²² reviewed the 10-year substance abuse disorder project ECHO based in New Mexico and found that 950 cases had been discussed and more than 9000 hours of continuing medical education credits had been awarded to participants. Physicians in that region became licensed to prescribe buprenorphine (currently the best treatment for opioid addiction, but requires special licensure) extremely rapidly, increasing far more than most states, and are now 4th in the Nation for the number of licensed buprenorphine prescribers per capita. Currently, a project ECHO focused on Opioids is running nationally, including a hub at Boston Medical Center.

Conclusion

Essentially, physicians do in practice what they were trained to do in school and residency. Hospital vs. Outpatient, urban/superserved vs. rural/underserved, new care models, etc. If you have spent your three most intensive years of training taking care of desperately ill people in a large medical center surrounded by resources and other experts; the idea of moving out to a location where you are the only expert around is terrifying and isolating. If your case conferences and presentation and exams have only dealt with the ins and outs of treating specific illnesses, or on the newest technological advances and you never do a quality improvement project or identify the needs of the community beyond the hospital then you don't have any idea that it's your job to do those things. One of the reasons physicians are so bad at tracking health care quality metrics for our patients is that we didn't see it done, and didn't know we were supposed to. Residents must be trained in the full array (and in the correct proportion) of settings where we need them to practice, and they must be trained in the skills they'll need tomorrow; including team-based care and practice improvement. In addition to strategies for re-allocation of GME funding (which is covered elsewhere in statute) HRSA Health Workforce programs make critical contributions to ensuring an optimally-prepared physician workforce.

References

1. Association of American Medical Colleges, April 2018. The Complexities of Physician Supply and Demand: Projections from 2016 to 2030.
2. Petterson SM, Liaw WR, Tran C, Bazemore AW. Estimating the Residency Expansion Required to Avoid Projected Primary Care Physician Shortages by 2035. *Ann Fam Med* March/April 2015 vol. 13 no. 2 107–114.
3. Robert Graham Center. Trends in physician supply and population growth. <https://www.graham-center.org/rgc/publications-reports/publications/one-pagers/trends-physician-growth-2013.html>. Accessed May 16, 2018.
4. Streeter, R. A., Zangaro, G. A., & Chattopadhyay, A. (2017). Perspectives: Using Results from HRSA's Health Workforce Simulation Model to Examine the Geography of Primary Care. *Health Services Research*, 52, 481–507. DOI: 10.1111/1475-6773.12663.
5. Johansen ME, Kircher SM, Huerta TR Re-examining the Exology of Medical Care *N Engl J Med* 2016; 374:495–496.
6. <https://datawarehouse.hrsa.gov/topics/shortageAreas.aspx> accessed 5/16/2018.
7. Howard K. Rabinowitz, MD, James J. Diamond, PhD, Fred W. Markham, MD, and Jeremy R. Wortman, Medical School Programs to Increase the Rural Physician Supply: A Systematic Review and Projected Impact of Widespread Replication. *Academic Medicine*, Vol. 83, No. 3 / March 2008.
8. Locations and Types of Graduate Training Were Largely Unchanged, and Federal Efforts May Not Be Sufficient to Meet Needs. GAO-17-411: Published: May 25, 2017. Publicly Released: Jun 26, 2017.
9. Fagan EB, Gibbons C, Finnegan SC, Petterson S, Peterson KE, Phillips RL, Bazemore AW. Family Medicine Graduate Proximity to Their Site of Training: Policy Options for Improving the Distribution of Primary Care Access. *Family Medicine (Fam Med)* 2015;47(2):124–30.
10. <https://www.graham-center.org/content/dam/rgc/documents/publications-reports/presentations/bphilps-acadhltlth-primary.pdf> accessed 5/16/2018.

11. <https://www.primarycareprogress.org/primary-care-case/> accessed 5/16/2018.
12. Council on Graduate Medical Education, Supporting Diversity In the Health Professions (resource paper) May 2016.
13. Kington R, Tisnado D, Carlisle DM. Increasing racial and ethnic diversity among physicians: an intervention to address health disparities? In Smedley BD, Stith AY, Colburn L, Evans CH, (eds.). *The Right Thing to Do, The Smart Thing to Do: Enhancing Diversity in the Health Professions*. Washington, DC: National Academy Press, 2001.
14. Cantor JC, Miles EL, Baker LC, Barker DC. Physician service to the underserved: implications for affirmative action in medical education. *Inquiry*. 1996; 33: 167–180.
15. Cooper-Patrick L, Gallo JJ, Gonzales JJ, Vu HT, Powe NR, Nelson C, Ford DE. Race, gender, and partnership in the patient-physician relationship. *JAMA*. 1999; 282: 583–589.
16. Cooper LA, Powe NR. Disparities in patient experiences, health care processes, and outcomes: the role of patient-provider racial, ethnic, and language concordance. Washington DC: The Commonwealth Fund, 2004.
17. <http://aamcdiversityfactsandfigures2016.org/> accessed 5/17/2018.
18. 2016 National Healthcare Quality and Disparities Report. Rockville, MD: Agency for Healthcare Research and Quality; July 2017. AHRQ Pub. No. 17–0001.
19. Goodman D, Robertson R, Accelerating Physician Workforce Transformation Through Competitive Graduate Medical Education Funding. *HEALTH AFFAIRS* 32, NO. 11 (2013): 1887–1892.
20. HRSA Strategic Plan at <https://www.hrsa.gov/sites/default/files/about/strategicplan/strategicplan.pdf>. Accessed 5/17/2018.
21. Rittenhouse DR, Fryer GE, Phillips RL, et al. Impact of Title VII Training Programs on Community Health Center Staffing and National Health Service Corps Participation. *Annals of Family Medicine*. 2008;6(5):397–405. doi:10.1370/afm.885.
22. Komaromy M, Duhigg D, Metcalf A, et al. Project ECHO (Extension for Community Healthcare Outcomes): A new model for educating primary care providers about treatment of substance use disorders. *Substance Abuse*. 2016;37(1):20–24. doi:10.1080/08897077.2015.1129388.

[SUMMARY STATEMENT OF KRISTEN GOODELL]

Population aging and growth have led multiple government and professional associations to predict significant physician shortages. While predicting the overall number of physicians needed is tricky due to the number of variables involved, there are several clear and persistent physician workforce needs that must be addressed if we are to meet the healthcare needs of our citizens. Even more certain than a physician deficit is a physician mix and distribution problem. Needs include:

- Longstanding and worsening shortages of physicians in enormous rural areas of the country
- Primary care/specialty ratio must be improved to improve health outcomes, reduce cost, and decrease disparities
- Diversity of the physician workforce must be increased in order to improve access to care for poor Americans and those from minority backgrounds
- Training in new models of care delivery, patient safety, quality improvement, and emerging “crisis” topics

The total number of physicians trained in the US, and to some extent the specialty mix and geographic distribution of them, is determined by residency programs. We need and don’t currently have a national strategic plan for graduate medical education that would address these deficiencies, but residencies are almost entirely funded and regulated elsewhere in statute. That is a behemoth issue that will take years to figure out. Today’s focus is on supplemental programs which seek to mitigate these problems now, in ways that are nimbly responsive to current needs and which allow individual programs, communities or networks to address their most pressing issues in the way they know will be most effective.

HRSA has been funding these types of programs for decades. One would think we could identify the “best” programs and spread those; but the challenge is that their goals, timeframe, and structures vary widely, so measuring success and making comparisons is difficult. For example

- Some program outcomes are specific (number of physicians in rural areas) and some are diffuse (physicians' ability to perform quality improvement projects)
- Some effects take years to measure (for example, if you have a pipeline program to increase minority high-schoolers' interest in medicine, it will be 12 years before they enter practice)
- Some outcomes (such as reduced rates of diabetes or opioid dependency) are impossible to attribute to a single intervention program.

A centralized data research program, such as the one outlined in HRSA's '16-'17 strategic plan, will be enormously helpful in monitoring programs over time. In the meantime, however, we do have evidence that HRSA-funded workforce programs are successful. Exposure to a Title VII program during medical school increases the likelihood of working in a Community Health Center or joining the National Health Service Corps. 50 percent more students chose family medicine as a specialty (the specialty most likely to produce primary care physicians) in schools where there is Title VII funding compared with schools where there is no such funding. Students from Title VII schools are also 30 percent more likely to practice in a rural area, and 30 percent more likely to practice in a physician shortage area.

In addition to tracking outcomes, we can learn from some best-practice examples of HRSA-funded title VII programs:

- Family Medicine Residency of Western Montana—a new residency on the frontier which has 90 percent of its graduates practicing in rural areas and which used a PCTE grant to set up a learning network among far-flung partners to learn from each others' successes and train up its faculty, community hospital partners, and residents in how to identify needs of the community and perform quality improvement projects.
- Project Echo: Opioids connects an academic medical center (where there are specialists with advanced training) to providers of all sorts in local communities to help them care for opioid-addicted patients. Live videolinks are used for 90-minute conferences that include a 30-minute education presentation and then participants describe cases and receive consultation. This is a way to amplify the impact of specialists so they can help more people (without anyone traveling) and to quickly train up PCPs and other health workers to respond to a crisis.
- Boston Medical Center's Interprofessional Teams program—creates teams of students from different health professions and has them see patients with complex medical and psychosocial needs for an hour at a time to try and address key social determinants of health. Trainees also complete a curriculum in these topic areas and in teamwork.

In summary, physicians do in practice what they were trained to do in school and residency. If you have spent 3 years of training taking care of desperately ill people in a large medical center surrounded by resources and other experts; the idea of moving out to a location where you are the only expert around is terrifying. If your curriculum has primarily dealt with specific illnesses and technological advances, and you never serve on a patient safety committee or identify the needs of the community beyond the hospital then you don't have any idea that it's your job to do those things. Residents must be trained in the full array (and in the correct proportion) of settings where we need them to practice, and they must be trained in the skills they'll need tomorrow; including team-based care and practice improvement. HRSA Health Workforce programs make critical contributions to ensuring an optimally prepared physician workforce.

The CHAIRMAN. Thank you, Dr. Goodell.
Dr. Sanford, welcome.

STATEMENT OF JULIE SANFORD, D.N.S., R.N., F.A.A.N., DIRECTOR AND PROFESSOR, SCHOOL OF NURSING, JAMES MADISON UNIVERSITY, HARRISONBURG, VIRGINIA

Dr. SANFORD. Thank you, Chairman Alexander, Ranking Member Murray, and Members of the Committee for the opportunity to provide testimony on how the nursing profession is helping to improve

health and health care through the support of Federal investments, such as the Title VIII nursing workforce development programs.

I am Julie Sanford, Director and Professor of James Madison University's School of Nursing in Harrisonburg, Virginia.

I am honored to have been selected to provide you with examples of how these programs address workforce shortages, not only as a current Academic Nursing Director with Title VIII funding, but as a recipient myself.

I am a first generation college student from a rural farming community in Mobile County, Alabama. During my doctoral program, I received a Title VIII grant that enabled me to pursue what would become a life in higher education.

I have spent my career using innovation as a key element to ensure nursing care reaches vulnerable populations. A cornerstone to this success has been the Title VIII Nursing Workforce Development programs.

Access to quality health care in underserved, rural communities is challenging, and a principle barrier to meeting health care needs is the shortage of clinicians.

Recruiting providers to the most rural and remote areas of the country is paramount, but it is not an easy task. My own experience has shown a different approach.

I know that the secret lies in not necessarily recruiting more nurses to underserved communities, but bringing opportunities to educationally disadvantaged students in those areas.

In the late 1990's and early 2000's, I worked on Title VIII grants in Alabama and Mississippi that helped Associate Degree-prepared nurses obtain their Baccalaureate Degree. We transitioned our programs from being offered in-person to online platforms.

At the time, the use of the Internet as a method of educational delivery was new and very different. By moving these programs online, we reached rural Alabama and Mississippi nurses by removing barriers they faced while completing their baccalaureate degree.

The majority of these newly graduated nurses, who were from underrepresented backgrounds, lived in rural communities that were medically underserved. All were educationally disadvantaged. Most stayed in their communities to work and improve patient outcomes.

The Title VIII programs help nurses pursue their education, but it is the outcomes of those educated nurses that make a difference: improved patient care.

In 2014, James Madison University obtained Title VIII funding to begin an online Doctor of Nursing Practice program with a focus on interprofessional education. At the time of grant completion, 10 doctoral students had graduated and an additional 35 students were enrolled.

One of our graduates, Dr. Patra Reed, worked at our local community hospital that serves the rural Shenandoah Valley. As a part of her doctoral study, she developed a community health worker program to assess patients with chronic heart conditions. This program decreased readmissions and saved her hospital \$300,000 in the first 6 months of the program's existence.

Recently, James Madison University was awarded funding for a proposal where we will partner with Valley Health Page Memorial Rural Health Centers in counseling and psychological services in rural Page County, Virginia to address shortages in primary, mental health, and substance opioid abuse treatment.

The Title VIII programs allow for innovation and can be tailored year to year to meet pressing health care priorities like the opioid epidemic.

The reality of the nursing profession is clear. The demand for nurses is projected to increase by 28 percent by 2030. We know that the nursing workforce is aging and retiring, which is a central contributor to the impending shortage. This is of particular concern as it relates to the profession's ability to educate a new generation of nurses.

According to the American Association of Colleges of Nursing, U.S. nursing schools turned away 68,000 qualified applicants in 2017 citing faculty shortages as a top reason for not accepting those who were qualified.

These are challenging times as health care demands are increasing exponentially. Today, I am here to reinforce the message the Title VIII nursing workforce development programs work and they are key in our profession's ability to improve America's health. They must be reauthorized and the Title VIII Nursing Workforce Development Reauthorization Act will help us achieve this goal.

Thank you for allowing me to share my perspectives on the critical importance of these programs.

[The prepared statement of Dr. Sanford follows:]

PREPARED STATEMENT OF JULIE TANNER SANFORD

Thank you Chairman Alexander, Ranking Member Murray, and Members of the Committee for the opportunity to provide testimony on the nursing workforce and its ability to meet the Nation's healthcare demands as well as the importance of the Nursing Workforce Development Programs (Title VIII of the Public Health Service Act [42 U.S.C. 296 et seq.]). I am Julie Sanford, Director and Professor of James Madison University's School of Nursing. As an awardee of Title VIII grants, I am honored to have been selected to provide you with the impact and success of these programs on increasing not only the number but also the geographic distribution of nurses able to care for patients, families, and communities in our most underserved areas. As a first generation college student from a rural farming community in Mobile, Alabama, I know first-hand how receiving a Federal grant can change your life. During my doctoral program, I received a Title VIII grant that enabled me to pursue what would become a life in higher education, helping to educate the next generation of nurses.

The demand for nurses inevitably varies by state, but the national need is projected to increase by 28 percent by the year 2030.¹ This projected nursing shortage is intensified in certain areas due to the inequitable distribution of the workforce. According to the Health Resources and Services Administration's *Supply and Demand Projections of the Nursing Workforce: 2014-2030*, four states, including California, Texas, New Jersey, and South Carolina, are expected to have a nursing deficit of over 10,000 nurses.² In addition to those states, there are 7,243 designated Primary Care Health Professional Shortage Areas (HPSAs) throughout the country that impacts over 84 million Americans. There are also 4,243 designated Medically Underserved Areas (MUAs) in the country.³

¹Health Resources and Services Administration. *Supply and Demand Projections of the Nursing Workforce: 2014-2030*. Retrieved from: https://bhwh.hrsa.gov/sites/default/files/bhw/nchwa/projections/NCHWA_HRSA_Nursing_Report.pdf.

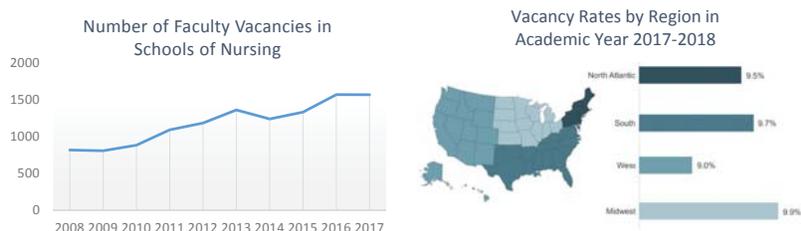
²Ibid.

³Health Resources and Services Administration. Designated Health Professional Shortage Areas Statistics. Retrieved from: <https://datawarehouse.hrsa.gov/topics/shortageAreas.aspx>.

Further exacerbating this shortage is the increasing age of nurses currently practicing. Since 2000, the number of active Registered Nurses (RNs) older than 50 has accounted for 30 percent of RNs working in hospital settings and for 40 percent of RNs working in nonhospital settings.⁴ By 2022, it is projected that 70,000 baby boomer RNs will retire each year, with them approximately 1.7 million experience years will be lost annually.⁵ This is expected to cause a 1.3 percent reduction in the growth of the workforce annually from 2015–2030.⁶

This is of particular concern as it relates to the profession's ability to educate a new generation of nurses. According to the American Association of Colleges of Nursing (AACN), U.S. nursing schools turned away 68,922 qualified applicants from baccalaureate and graduate nursing programs in 2017, citing faculty shortages as a top reason for not accepting those who were qualified.⁷ This past academic year, there were 1,565 faculty vacancies in schools of nursing. These vacancies are due to aging faculty, a spike in faculty retirements (which is expected to continue over the next 10 years), competition with clinical and private-sector settings, and a diminishing pool of potential nurse educators.⁸ This past year, 31 percent of nursing faculty were aged 60 or older and that same cohort of faculty are expected to retire over the next 10 years. The faculty currently slated to replace them are largely in the 50–59 years old age range as younger faculty are more likely to lack doctoral degrees and experience needed to teach graduate students.⁹ Worsening this faculty shortage, AACN found 11,959 qualified applicants were turned away from master's and doctoral programs, further constraining the pipeline for future faculty.

In the State of Virginia, 54.6 percent of nursing schools responding to AACN's survey reported a need for additional faculty. One of the most critical issues noted by Virginia nursing schools struggling to recruit faculty was a willingness to move to a rural, underserved area, such as the Shenandoah Valley where James Madison University is located.



Source: American Association of Colleges of Nursing. "Special Survey on Vacant Faculty Positions." <http://www.aacnnursing.org/News-Information/Research-Data-Center/Annual-Surveys>.

The Title VIII programs have been successful in both the short-and long-term as a way to not only increase the supply of nurses able to care for patients, but also increase the number of nurse educators and reduce the nursing workforce bottleneck. For the past decade, these programs have remained steadfast in their ability to be flexible and alleviate the stressors patients and communities feel by having nursing shortages. These programs are structured to address education, recruitment, retention, and faculty preparation, while being nimble enough to focus on the most pressing concerns nationally, and equally as critical, locally. It is imperative each of these six programs remain authorized and funded.

The Title VIII Nursing Workforce Reauthorization Act (S. 1109/H.R. 959) is critical to making sure these programs continue to meet the care demands of rural and

⁴Peter Buerhaus, Lucy Skinner, David Auerbach, Douglas Staiger, et al. 2017. "Four Challenges Facing the Nursing Workforce in the United States." *Journal of Nursing Regulation*, Volume 8, Issue 2.

⁵Ibid.

⁶David Auerbach, Peter Buerhaus, and Douglas Staiger. "Millennials Almost Twice as Likely to be Registered Nurses as Baby Boomers Were." *Health Affairs*, Volume 36, Issue 10.

⁷American Association of Colleges of Nursing. (2017). *2016-2017 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing*. Washington, DC.

⁸American Association of Colleges of Nursing. *Nursing Faculty Shortage as of April 26, 2017*. Retrieved from: <http://www.aacnnursing.org/News-Information/Fact-Sheets/Nursing-Faculty-Shortage>.

⁹Ibid.

underserved communities by the largest healthcare workforce, nurses. Supported by 51 national nursing organizations, this legislation has resounding support by the profession. In a recent letter to this critical Committee of jurisdiction, the Nursing Community Coalition reinforced that passing the Title VIII Nursing Workforce Development Act is their main priority in the 115th Congress.¹⁰ The Nursing Community Coalition and the legislation's congressional champions, Senators Jeff Merkley (D-OR), Richard Burr (R-NC), Tammy Baldwin (D-WI), and Susan Collins (R-ME) agreed that these programs work. The American Association of Colleges of Nursing, of which my school is a member, sought feedback from us as constituents and I am here today to attest to that feedback, which is that the Title VIII programs are essential and work.

The Title VIII Nursing Workforce Reauthorization Act includes three areas of modernization and authorizes the funding for these programs through 2020. The first modernization recognizes all four Advanced Practice Registered Nurse (APRNs) roles in statute by adding Clinical Nurses Specialists under the Advanced Nursing Education section and under the National Advisory Council on Nursing Education and Practice section. Historically, only three (Nurse Practitioners, Certified Registered Nurse Anesthetists, and Certified Nurse-Midwives) of the four APRN roles were included in statute. This change came out of the work by national nursing organizations to standardize APRN licensure, accreditation, certification, and education through the APRN Consensus Model in 2010.¹¹ Second, the legislation adds a definition of nurse-managed health clinics to ensure these vital health centers are an eligible entity to receive grants under Title VIII. Finally, the Clinical Nurse Leader role, which evaluates patient outcomes, and assesses cohort risk, was added to the statute to allow for parity with the other master's degree programs that can apply for the Advanced Nursing Education program. These modernizations are slight. However, as noted, the core Title VIII programs work.

ADVANCED NURSING EDUCATION PROGRAMS

The demand for care provided by clinicians with advanced education is mounting, particularly as the population ages and public health crises need immediate attention. From January 1, 2011 to December 31, 2029, it is projected that 10,000 baby boomers will turn 65 each day.¹² As rates of chronic illnesses associated with aging, such as heart disease, stroke, cancer, diabetes, and arthritis, rise, the gravity of increasing the healthcare workforce comes into view. The Centers for Disease Control and Prevention (CDC) states that about half of all adults across the Nation (117 million individuals) have one or more chronic health conditions.¹³ Access to quality care is paramount and more providers, including advanced practice registered nurses, are needed, particularly in our Nation's most rural and underserved populations. The healthcare workforce needs in these areas of the country can be acutely seen as we work to address the opioid epidemic. The CDC states that the rate of drug overdose deaths in rural areas is higher than in urban areas. From 1999 to 2015, death rates due to opioid overdose in rural populations quadrupled among those 18–25 years old and tripled for females.¹⁴

The Advanced Nursing Education Workforce (ANEW) Program, Advanced Nursing Education (ANE) Program, Nurse Anesthetist Traineeship (NAT) Program, and Advanced Education Nursing Traineeship (AENT) Program, support those studying to become nurse practitioners, clinical nurse specialists, certified nurse-midwives, certified registered nurse anesthetists, nurse educators, administrators, public health nurses, and other nurses requiring a master's or doctoral degree through traineeships, as well as, curriculum and faculty development. These programs help prepare a workforce ready to meet the challenges of today and tomorrow. Collectively, these four programs supported 10,537 students in the 2016–2017 academic

¹⁰Nursing Community Coalition letter to Senate HELP Committee, May 14, 2018. https://docs.wixstatic.com/ugd/148923_c39d891d5adf41c80554b97d304a0af.pdf.

¹¹American Association of Colleges of Nursing. *APRN Consensus Model*. Retrieved from: <http://www.aacnnursing.org/Education-Resources/APRN-Education/APRN-Consensus-Model>.

¹²Pew Research Center. (2010). *Baby Boomers Retire*. <http://www.pewresearch.org/fact-tank/2010/12/29/baby-boomers-retire>.

¹³U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2016). *Chronic Diseases: The Leading Causes of Death and Disability in the United States*. Retrieved from <https://www.cdc.gov/chronicdisease/overview/>.

¹⁴U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2017). *Rural America in Crisis: The Changing Opioid Overdose Epidemic*. Retrieved from <https://blogs.cdc.gov/publichealthmatters/2017/11/opioids/>.

years, over 3,700 of whom graduated this year.¹⁵ Just as critical to the students supported, these programs offer schools of nursing, particularly one like mine, the opportunity to innovate so that our educational programs can meet the needs of the community in real time.

The programs give preference for supporting those in rural and underserved communities. This past year, 40 percent of ANE, 75 percent of NAT, and 61 percent of AENT grantees received their training in an MUA. Additionally, of the graduating students receiving NAT and AENT funding, over 50 percent reported they planned to pursue employment in MUAs.¹⁶

In 2014, James Madison University obtained funding through the ANE program to begin an online Doctor of Nursing Practice (DNP) program, with a focus on inter-professional education. At the time of completion, one class of 10 doctoral students had graduated and an additional 35 students were enrolled in the DNP program. One of our graduates, Dr. Patra Reed, works at our local community hospital that serves the rural Shenandoah Valley. As a part of her doctoral study, Dr. Reed developed a community health worker program to assist patients in the community with chronic heart conditions. This program decreased readmissions and saved her hospital \$300,000 in the first 6 months of the program's existence. Other graduates have done similar projects that have improved patient care and health outcomes, while reducing costs.

Additionally, grant faculty began a "Suitcase Clinic" that provides healthcare to the homeless population via a nurse practitioner rolling a suitcase full of medical supplies to the area's homeless shelters to see patients. Nursing and psychology faculty are collaborating to address patients' mental health needs and chronic illnesses, such as diabetes. Emergency room visits by the homeless population have decreased dramatically in our local hospital as a result of this program. This is what the ANE programs are helping to achieve: educate students to build an evidence-based practice that creates positive health outcomes in the community.

NURSING WORKFORCE DIVERSITY GRANTS

There is a strong connection between the diversity of the nursing workforce and the ability to provide quality, culturally sensitive patient care. Significant movement has occurred in diversifying the nursing profession, yet current national demographics and projected trends clearly indicate that more efforts must be placed on attracting individuals from all backgrounds to pursue nursing. Research shows that health professionals from underrepresented populations are more likely to serve in underrepresented and medically underserved areas, which would help close these ethnic and racial gaps in treatment.¹⁷ The profession must consider how individuals' career paths are supported at an early age and how candidates are reviewed as they apply to nursing school to enhance diversity and inclusion in the student body.

The Nursing Workforce Diversity Grants help schools recruit and retain students from diverse and disadvantaged backgrounds to work in the nursing profession. Through stipends, scholarships, a variety of pre-entry preparation, advanced education preparation, and retention activities, these programs increase access to quality, culturally sensitive patient care. In the 2016–2017 academic year, a total of 57 collegiate programs were supported and 38 training programs were conducted. This helped to support 4,416 nursing students at 571 training sites, 49 percent of which were located in MUAs, through 7,800 clinical training experiences.¹⁸

NURSE EDUCATION, PRACTICE, QUALITY, AND RETENTION PROGRAMS

As evidenced by the current and impending demand for nurses as highlighted above, recruitment and retention are chiefly important to meet the economic and societal trends that impact workforce development. The Nurse Education, Practice, Quality, and Retention (NEPQR) Program has helped address these trends through innovation and excellence by testing new strategies and calling on academic institu-

¹⁵Health Resources and Services Administration. *Fiscal Year 2019 Budget Justification*. Retrieved from: <https://www.hrsa.gov/sites/default/files/hrsa/about/budget/budget-justification-fy2019.pdf>.

¹⁶Ibid.

¹⁷The Sullivan Commission. (2004). *Missing persons: Minorities in the health professions*. A report of the Sullivan Committee on diversity in the healthcare workforce. Retrieved from <http://www.aacnursing.org/Portals/42/Diversity/SullivanReport.pdf>.

¹⁸Health Resources and Services Administration. *Fiscal Year 2019 Budget Justification*. Retrieved from: <https://www.hrsa.gov/sites/default/files/hrsa/about/budget/budget-justification-fy2019.pdf>.

tions, healthcare settings, and the community to be nimble in their approach to preparing a highly educated workforce ready to practice now and in the future.

NEPQR includes the Interprofessional Collaborative Practice (IPCP) program and the Bachelor of Science in Nursing Practicum in Community-based Settings (BPCS) program, both of which help schools of nursing, academic health centers, nurse-managed health clinics, state and local governments, and healthcare facilities meet shifting demands in health care through pioneering programs. In the past academic year, the IPCP program partnered with 148 clinical sites to train 6,430 individuals from a variety of professional backgrounds. Of the clinical sites where this training occurred, 71 percent were in MUAs. Meanwhile, the 11 BPCS awardees trained 681 students, 26 percent of whom reported coming from rural backgrounds. Awardees partnered with 57 clinical sites, 75 percent of which were located in MUAs.¹⁹

In the late 1990's, I worked as part of a grant team to transition a program that helped associate degree prepared nurses obtain their baccalaureate degree from one that was in-person to one that was online at the University of South Alabama. At the time, the use of the internet as a method of educational delivery was a newly charted territory. Transitioning the program to an online platform helped to reach rural Alabama nurses by removing access issues, time constraints, and other barriers they faced while completing their baccalaureate degree. The program was very popular, the college of nursing became a leader in online nursing programs, and many rural nurses were able to complete their degree. Evidence supports that patients receiving care from higher educated nurses experience better outcomes.²⁰ Most importantly, the vast majority of these newly graduated, rural, baccalaureate-prepared nurses stayed in their communities to work and improve patient outcomes.

In 2006, I was project director of a similar NEPQR grant that transitioned a face-to-face program designed to help practicing RNs obtain their baccalaureate degree to an online program at the University of Southern Mississippi in Hattiesburg, MS. The focus and outcome mirrored that of the program at the University of South Alabama. Our goal was to remove barriers for adult students, many of whom were from underrepresented backgrounds, lived in rural communities that were medically underserved, and met the criteria for being educationally disadvantaged. The program was highly successful in reaching and educating the nursing students who participated.

Recently, James Madison University was awarded funding for a proposal that was submitted to educate baccalaureate prepared nurses to work in community settings. For this proposal, we partnered with Valley Health Page Memorial Rural Health Centers, and Counseling and Psychological Services to address shortages in primary, mental health, and substance/opioid abuse treatment in Page County, Virginia. Through this grant, our goal is to partner with the clinics to help educate baccalaureate nurses in the community setting and place a much needed focus on the opioid epidemic. As you can see by these examples, workforce development remains constant, but the programs allow for innovation and can be tailored year-to-year to meet pressing healthcare priorities.

NURSE FACULTY LOAN PROGRAM

As noted, the national nursing faculty shortage is causing significant barriers to schools of nursing accepting all qualified applications. In the State of Virginia, our vacancy rate is 5.5 percent, but some states, like Alaska (16.7 percent), California (13.6 percent), and Washington (12.6 percent) have some of the highest in our country.²¹ Academic and practice employers are competing for the same pool of nurses with master's and doctoral degrees who have clinical and research expertise. This past year, 84 schools received new Nurse Faculty Loan Program grants.²² These awards are granted to schools of nursing that, in turn, provide loans to graduate students committed to serving as faculty members to educate the next generation of nurses, by repaying up to 85 percent of their loans. Close to 2,000 nursing students were supported in 2017. In my own faculty, I have a large number of individuals who received this grant during their career and said it was the linchpin for

¹⁹ Ibid.

²⁰ American Association of Colleges of Nursing. *Creating a More Highly Qualified Nursing Workforce*. Retrieved from: <http://www.aacnnursing.org/Portals/42/News/Factsheets/Nursing-Workforce-Fact-Sheet.pdf>.

²¹ Health Resources and Services Administration. *Fiscal Year 2019 Budget Justification*. Retrieved from: <https://www.hrsa.gov/sites/default/files/hrsa/about/budget/budget-justification-fy2019.pdf>.

²² Ibid.

allowing them to pursue a career in academia, and most importantly for us, help educate nurses who will go on to serve in rural and underserved areas.

NURSE CORPS PROGRAMS

The NURSE Corps Loan Repayment (LRP) and Scholarship (SP) Programs ensure nursing students and nurses entering the workforce are placed in areas that need them most, HPSAs and MUAs. In exchange for scholarship or loan repayment, these nurses fulfill their service obligation in underserved areas. In 2016, 55 percent of participants voluntarily extended their service requirement by a year and 86 percent of participants remained at their Critical Shortage Facility for over 2 years beyond their commitment.²³

COMPREHENSIVE GERIATRIC EDUCATION PROGRAM

The aging population needs nursing care, plain and simple. The Comprehensive Geriatric Program supports nurses who are interested in focusing their career on the care of the elderly. Now under the Comprehensive Workforce Enhancement Program (GWEP) in the Title VII Health Professions Programs, the language in the Title VIII statute is still supported and provides training across the provider continuum focusing on education in interprofessional and team-based care.

As demonstrated by my own background and experience with the programs, support from Title VIII is essential to the sustainability of the nursing workforce. Each of these programs help to provide students, faculty, schools, clinical training sites, and community partners the resources necessary to ensure the supply of nurses remains strong to provide care to millions of patients in every corner of the country. I am honored to provide testimony on the programs that have been foundational to my own success and that of countless nurses before and after me. I urge you to pass S. 1109, The Title VIII Nursing Workforce Development Reauthorization Act. Thank you for your continued sponsorship of America's health and wellness through nursing care.

[SUMMARY STATEMENT OF JULIE TANNER SANFORD]

THE NATION'S DEMAND FOR NURSES

The demand for nurses inevitably varies by state, but the national need is projected to increase by 28 percent by the year 2030 with four states expected to have a nursing deficit of over 10,000 nurses. This projected nursing shortage is intensified in certain areas due to the inequitable distribution of the workforce. There are 4,243 designated Medically Underserved Areas (MUAs) as well as 7,243 designated Primary Care Health Professional Shortage Areas (HPSA) in America that impacts over 84 million Americans.

Further exacerbating this shortage is the increasing rate of nurses retiring. By 2022, it is projected that 70,000 baby boomer registered nurses will retire annually. This is expected to cause a 1.3 percent reduction in the growth of the workforce each year from 2015–2030. This is of particular concern as it relates to the profession's ability to educate a new generation of nurses. According to the American Association of Colleges of Nursing (AACN), U.S. nursing schools turned away 68,922 qualified applicants from baccalaureate and graduate nursing programs in 2017, citing the 1,565 faculty vacancies as a top reason for not accepting qualified applicants. Worsening this faculty shortage, AACN's data shows 11,959 qualified applicants were turned away from master's and doctoral programs, further constraining the pipeline for future faculty.

SUMMARY OF TITLE VIII PROGRAMS AND CHANGES TO LEGISLATION

The Nursing Workforce Development programs (Title VIII of the Public Health Service Act [42 U.S.C. 296 et seq.]) have been successful in increasing the supply of nurses and the number of nurse educators. These programs are structured to address education, recruitment, retention, and faculty preparation while being nimble enough to focus on the most pressing concerns nationally and locally in communities that need broader access to care. In the past academic year, thousands of students have been supported through one of these programs, with a majority of those students receiving clinical training in MUAs. It is important each of these six programs remain authorized and funded.

²³ Ibid.

The Title VIII Nursing Workforce Reauthorization Act (S. 1109/H.R. 959) is critical to making sure these programs continue to meet the care demands in every corner of the country. This legislation makes essentially three modernizations to the programs and authorizes the funding through 2020. The first modernization recognizes all four Advanced Practice Registered Nurse (APRNs) roles in statute by adding Clinical Nurses Specialists under the Advanced Nursing Education section and under the National Advisory Council on Nursing Education and Practice. Historically, only three (Nurse Practitioners, Certified Registered Nurse Anesthetists, and Certified Nurse-Midwives) of the four APRN roles were included in statute. Second, the legislation adds a definition of nurse-managed health clinics to ensure these vital health centers are an eligible entity to receive grants under Title VIII. Finally, the Clinical Nurse Leader role, which evaluates patient outcomes and assesses cohort risk, was added to the statute to allow for parity with the other master's degree programs that can apply for the Title VIII Advanced Nursing Education program.

These programs allow awardees to be innovative in their approaches to educate nurses and offer them critical exposure to providing high quality, cost-effective care in our Nation's most rural and underserved communities.

The CHAIRMAN. Thank you, Dr. Sanford.
Dr. Phelan, welcome.

STATEMENT OF ELIZABETH PHELAN, M.D., M.S., NORTHWEST GERIATRICS WORKFORCE ENHANCEMENT CENTER, ASSOCIATE PROFESSOR OF MEDICINE, GERONTOLOGY AND GERIATRIC MEDICINE, AND ADJUNCT ASSOCIATE PROFESSOR OF HEALTH SERVICES, UNIVERSITY OF WASHINGTON, SEATTLE, WASHINGTON

Dr. PHELAN. Good morning, Chairman Alexander, and Ranking Senator Murray who, I am proud to say, is my Senator, and distinguished Members of the Committee.

It is my pleasure to be here and to speak with you today about the value of the Geriatrics Workforce Enhancement Program. The Geriatric Workforce Enhancement Program is the only U.S. Government program dedicated to preparing primary care providers to care for older adults.

My name is Elizabeth Phelan and I am a clinically active, fellowship-trained geriatrician. I direct one of the only fall prevention clinics in the country, and I am also the Director of the Northwest Geriatrics Workforce Enhancement Center, one of 44 so called GWEP's nationally.

I have devoted my career to improving primary care of older adults through research and teaching, and particularly the care of conditions that disproportionately afflict adults in later life, conditions like falls, osteoporotic fractures, and dementia.

May is Older Americans Month, a time to recognize and celebrate the value and contributions of older adults in all of our lives. But unfortunately, many older adults are suffering from conditions that, if not properly managed, will rob them of their well-being and independence.

I am going to give you just two examples, from a myriad that I could cite from around the country, to illustrate this nationwide challenge that we are facing.

First, there is Mr. H., a 68-year-old gentleman from Montana. He lives in his own home. He was taking Ambien, a sleeping aid. He got up one night. He fell. He broke his pelvis, and he was transported to the University of Washington Medical Center for surgical management of that fracture.

At the hospital, we discovered that he was likely suffering from undiagnosed obstructive sleep apnea. Obstructive sleep apnea in people who are at high risk, in those people, only about 8 percent of those people receive actual testing to make the diagnosis.

If he had been properly diagnosed and treated, Mr. H. might have avoided using Ambien and the injurious fall that he sustained.

Another example is Mrs. W., an 80-year-old female, also living in her own home in rural Florida. She is absolutely paralyzed by anxiety and panic attacks. Because of the anxiety and panic, she no longer drives. She does not see friends. She has become very socially isolated.

Her doctor is treating her anxiety with a pill called Xanax. This is a very risky medication for adults in later life, and it is ineffective for treatment if anxiety and panic are chronic. In essence, it is just putting a band-aid on this condition.

In Washington State, in our Geriatric Workforce Enhancement Center, we are partnering with two area agencies on aging, and we are using about one-third of our GWEP dollars to fund a position within those agencies that we call the Primary Care Liaison.

The Primary Care Liaison's role is actively outreach to primary care practices with education about how area agencies on aging can support the work of primary care to deliver high quality care to older adults. Area agencies on aging do this by providing access to critical community programs and resources that primary care has little awareness of at this point, but which are critical to keeping older adults staying in their own homes, living in the community, and to avoid unnecessary costs of hospitalization and long term care that oftentimes otherwise will result.

We are trying to break down the silos of care between clinic and community, because care that bridges between community and clinic can optimize the health of an older adult and his or her caregiver to keep them living in the community, and active, and connected.

We are finding that even minimal exposure to geriatrics principles of care is making a big difference. Our trainees are citing increased knowledge and confidence to bring these agencies on aging, community resources, and services to bear on the care of their older patients.

We all know we have a shortage of primary care workforce and that there are a number of ways to address this, but all need training in geriatrics.

Because older adults will continue to receive primary care from frontline providers in the fields of family medicine, general medicine, and from nurse practitioners—and not geriatricians—we must support the training of providers in those disciplines to have this care, high quality care become a reality.

We have a very long way to go to realize this imperative because current training for most health professionals does not include dedicated training in geriatrics care.

We need programs like the Geriatrics Workforce Enhancement Program to fill that gap. It is a critical gap and doing this will have a large impact on how well the older adult lives if he or she encounters a primary care provider who is prepared, and equipped,

and competent to address the specific needs of that aging individual.

Just to sum up, I urge the entire Committee to support the Geriatrics Workforce Enhancements continuation.

Thank you for this opportunity to testify. I look forward to answering your questions.

[The prepared statement of Dr. Phelan follows:]

PREPARED STATEMENT OF ELIZABETH A. PHELAN

Good morning, Chairman Alexander and Ranking Member Murray, whom I am proud to say is my Senator, and distinguished Members of the Committee. Thank you for this opportunity to speak with you today about the value of the Geriatrics Workforce Enhancement Program (or "GWEP"), administered by the Health Resources and Services Administration (HRSA). The GWEP is the only U.S. Government program dedicated to preparing primary care providers to care for older adults. My name is Elizabeth Phelan, and I am a clinically active internist and fellowship-trained geriatrician. I direct one of the only fall prevention clinics in the country, and I am also the director of the Northwest Geriatrics Workforce Enhancement Center, one of 44 GWEPs nationally. Our GWEP is a member of the National Association for Geriatric Education (NAGE), and our GWEP leaders are members of The Gerontological Society of America (GSA). I have devoted my career to improving primary care of older adults, particularly care of conditions that disproportionately afflict adults in later life, such as falls, osteoporotic fractures, and dementia.

May is Older Americans Month,—a time to recognize and celebrate the value and contributions of older adults in our lives. Unfortunately, many older adults are suffering from conditions that, if not properly managed, will rob them of their well-being and independence. Conditions like falls, depression, and heart failure. I will give you just two examples, from a myriad of examples that I could cite, to illustrate the nationwide challenge that we face. First, there is Mr. H, a 68 year old from Montana who lives in his own home, was taking Ambien, a sleeping pill for insomnia, who got up one night and fell, breaking his pelvis. At the hospital, it was discovered that he was likely suffering from *undiagnosed sleep apnea*. If sleep apnea had been diagnosed and treated, Mr. H may have avoided Ambien and the injurious fall he sustained. Recent data has found that obstructive sleep apnea is diagnosed in just 8 percent of older adults. As another example, Mrs. W, an 80 year old female, widowed for the past 10 years, who lives in a rural part of Florida and also in her own home, who is absolutely paralyzed by anxiety and panic attacks. Because of the anxiety, she no longer drives and has become very socially isolated. Her doctor is treating her with Xanax. Xanax and other medications in this same class are very risky for people in later life, and Xanax is *ineffective for anxiety and panic*. In essence, it is just putting a band-aid on the condition.

Why does medical mismanagement of older adults like this occur? Is it that there are bad apples in medical practice? No. Most health care providers want to do the right thing for their patients. But when it comes to care of older adults, most don't know what the right thing is. That is because geriatrics, or the clinical care of the elderly, has not been a part of the training of most health professionals in practice today. And even those in current training for health professions careers usually still get to the end of their training and never receive *any formal exposure to geriatrics*. With GWEP funding, *we have the opportunity to change that*.

GWEPs focus on enhancing the ability of America's primary care workforce to provide high-quality care for older adults. Our Northwest Geriatrics Workforce Enhancement Center is working to achieve the vision that wherever an older adult goes for primary care, he/she will encounter a provider who is prepared to meet his/her needs and to provide the right care at the right time—that is, care that is tailored to the older adult's health and functional status, and his/her personal goals and preferences. Our Center has chosen to focus training on the next generation of primary care providers, and we are taking a comprehensive, inclusive view of primary care. A key target for our educational activities are the resident physicians in the Family Medicine Residency Network, a network of 25 independent residency training programs in a five-state region known as "WWAMI" (Washington, Wyoming, Alaska, Montana, and Idaho). We are also training nurse practitioner and physician assistant students and those on the front lines of hands-on, daily care, including family caregivers and home care workers.

How exactly is our Center preparing the next generation of primary care providers to provide high-quality, evidence-based care for older adults? We are doing this in a number of ways. For example, we have adopted the ECHO model to teach

general principles of geriatrics and reach family medicine resident physicians and nurse practitioner and physician assistant trainees across the Pacific Northwest. We have partnered with two Area Agencies on Aging and are using about a third of our GWEP dollars to fund a position within those agencies that we call a Primary Care Liaison, whose role is to actively outreach to primary care practices with education about how Area Agencies on Aging can support the work of primary care by bringing community resources to bear. We are trying to break down silos of care between clinic and community, because care that is tuned into the resources that the community can bring to bear can optimize the health of an older adult and keep him/her living in the community—AND avoid the unnecessary costs of hospitalizations and long-term care that so often otherwise results. And we are finding that *even minimal exposure* to geriatrics principles of care makes a difference in trainee knowledge and confidence to bring AAA resources to bear on the care of their older patients. For example, with our AAA Practicum, family medicine residents who spent just 1 day with an AAA staff member, after exposure to a standard curriculum developed by our AAA partners about the role of AAAs, significantly increased their likelihood to access family caregiver resources, elder abuse resources, and mental health resources on behalf of their patients.

We know we have a shortage of primary care workforce, and there are a number of ways that we can address this, but ALL need training in geriatrics. Because most older adults will continue to receive primary care from frontline providers from the fields of family medicine, general internal medicine, and nurse practitioners,—not geriatricians,—we must support the training of providers in those disciplines to make good care a reality. We have a long way to go to realize this imperative. Doing the right thing does have a large impact on how well an older adult lives and how long he/she stays living in the community. For this reason, I urge the entire Committee to continue to support the Geriatrics Workforce Enhancement Program. Thank you again for this opportunity to testify, and I look forward to answering your questions.

[SUMMARY STATEMENT OF ELIZABETH A. PHELAN]

Good morning, Chairman Alexander and Ranking Member Murray, whom I am proud to say is my Senator, and distinguished Members of the Committee. Thank you for this opportunity to speak with you today about the value of the Geriatrics Workforce Enhancement Program (or “GWEP”), administered by the Health Resources and Services Administration (HRSA). The GWEP is the only U.S. Government program dedicated to preparing primary care providers to care for older adults. My name is Elizabeth Phelan, and I am a clinically active internist and fellowship-trained geriatrician. I direct one of the only fall prevention clinics in the country, and I am also the director of the Northwest Geriatrics Workforce Enhancement Center, one of 44 GWEPs nationally. Our GWEP is a member of the National Association for Geriatric Education (NAGE), and our GWEP leaders are members of The Gerontological Society of America (GSA). I have devoted my career to improving primary care of older adults, particularly care of conditions that disproportionately afflict adults in later life, such as falls, osteoporotic fractures, and dementia.

May is Older Americans Month,—a time to recognize and celebrate the value and contributions of older adults in our lives. Unfortunately, many older adults are suffering from conditions that, if not properly managed, will rob them of their well-being and independence. Conditions like falls, depression, and heart failure. I will give you just two examples, from a myriad of examples that I could cite, to illustrate the nationwide challenge that we face. First, there is Mr. H, a 68 year old from Montana who lives in his own home, was taking Ambien, a sleeping pill for insomnia, who got up one night and fell, breaking his pelvis. At the hospital, it was discovered that he was likely suffering from *undiagnosed sleep apnea*. If sleep apnea had been diagnosed and treated, Mr. H may have avoided Ambien and the injurious fall he sustained. Recent data has found that obstructive sleep apnea is diagnosed in just 8 percent of older adults. As another example, Mrs. W, an 80 year old female, widowed for the past 10 years, who lives in a rural part of Florida and also in her own home, who is absolutely paralyzed by anxiety and panic attacks. Because of the anxiety, she no longer drives and has become very socially isolated. Her doctor is treating her with Xanax. Xanax and other medications in this same class are very risky for people in later life, *and Xanax is ineffective for anxiety and panic*. In essence, it is just putting a band-aid on the condition.

We know we have a shortage of primary care workforce, and there are a number of ways that we can address this, but ALL need training in geriatrics. Because most older adults will continue to receive primary care from frontline providers from the

fields of family medicine, general internal medicine, and nurse practitioners,—not geriatricians,—we must support the training of providers in those disciplines to make good care a reality. We have a long way to go to realize this imperative. Doing the right thing does have a large impact on how well an older adult lives and how long he/she stays living in the community. For this reason, I urge the entire Committee to continue to support the Geriatrics Workforce Enhancement Program. Thank you again for this opportunity to testify, and I look forward to answering your questions.

The CHAIRMAN. Thank you, Dr. Phelan, and thanks to all three of you.

We will now move to 5 minute rounds of questions from the Senators. We will begin with Senator Murkowski.

Senator MURKOWSKI. Mr. Chairman, Ranking Member Murray, thank you for this very, very, very important hearing.

We, again, are a place of extremes. We are a long ways away. We do not have a medical school. We have the most rapidly aging population per capita in the state right now. We are not ready for it. We do not have geriatrics training. We do not have providers that are willing to take new Medicare eligible individuals.

The way it is referenced around the state is, “When you hit 65, you are given a bus ticket,” but there is never a bus that will show up because we do not have sufficient providers. So what we are talking about today is of extreme interest to me.

Dr. Goodell, I want to begin with you. And again, thank you each for your comments this morning and your contributions.

One of the complaints that I am hearing from providers in the state, and other rural areas, is that all the GME money gets sucked up by the big teaching hospitals in urban areas. And so, it is very hard for us to be able to support residency programs, not only in the one urban center in Anchorage, but in the smaller towns outside of Anchorage and very, very difficult in hub cities in rural areas like Nome or Bethel.

Our state legislature helps pay for 20 residency slots through the University of Washington Medical School. But there is no guarantee that those 20 come back to the State of Alaska.

The resident training issue for us is, in terms of the impact to the cost of care, it can cost one hospital in Fairbanks between \$750,000 to \$1 million to recruit a midcareer physician, and these jobs can take years to fill.

The point that you have made, all of you, about doctors tending to practice where they do residency really prompts my question. You left the door open to be able to speak to more of these programs that can help allow for residencies in these areas where we need the doctors.

I would be curious to hear about more of the programs, but also whether or not you think we need to move more of these GME dollars out of the hospitals to perhaps clinics, or outpatient facilities, or small group practices in our rural areas.

How do we avoid this concentration? Because we see firsthand that you have people who come to the state. They are excited about the adventure. They are there for a year, and then they leave, and the investment that we have made, and then we have to start all over.

Dr. GOODELL. Right. I completely agree with you. And taking care of the people of Alaska, no doubt, is going to require a multi-level approach.

To address your first point, I think that the State of Alaska is a perfect example of where the Teaching Health Center Program can make a major impact. You have one big university hospital and it is in the big city. The problem is most of the people that live or many of the people that live in Alaska are much more widely spread.

The Teaching Health Center Program is a separately funded program that locates residencies, not in the big university setting, but has them spend, primarily spending their time in community health centers.

When residents go there for training, they spend at least 3 years there. They really get a feel for the community. They become connected with their patients and especially in primary care. That is actually why we do it so that we can get connected with our patients.

Having residents have the potential to make the connection with the community and their patients over time vastly increases the likelihood that they will actually stay practicing there.

I also would give a shout out to some additional programs that can help provide care in slightly different ways.

Dr. Phelan, I think, mentioned briefly Project ECHO, or somebody mentioned Project ECHO, which is a terrific way to leverage the expertise that is based in big academic medical centers and use that expertise to train up primary care providers, not just physicians, but other sorts of providers that are more widely spread. So you can train people in how to take care of opioid addiction and how to manage complicated psychiatric illness, how to manage hepatitis C, everything.

Focusing on Teaching Health Centers is probably the single most impactful thing.

Senator MURKOWSKI. Think about raising the cap on residency slots. Does that help? Or are you still stuck with the fact that these people are not going to be comfortable because they have not really experienced life in that rural and remote setting?

Dr. GOODELL. Simply raising the cap at one hospital may increase the number of people that you have that stay in the state. But generally, the data shows that people tend to practice, the majority of people stay within 100 miles of where they were trained after residency. So it depends on how widely spread you need people.

Senator MURKOWSKI. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Murkowski.

Senator Murray.

Senator MURRAY. Thank you all very much for your excellent testimony.

As Baby Boomers age and health providers retire, there is a serious crisis in our geriatric workforce, which is brewing. Our senior population is expected to nearly double from 48 million to 88 million by 2050 and more than 40 percent of practicing physicians are 55 years or older. As a result, HRSA is now projecting a national shortage of more than 27,000 geriatricians by 2025.

Recognizing this problem back in 2015, HRSA created the Geriatric Workforce Enhancement Program, GWEP, which called on geriatricians to collaborate with primary care providers and community-based organizations to deliver the care and the support seniors need to age in their own communities.

I am really pleased that Washington State is leading the way in utilizing programs like GWEP to develop best practices to help communities care for seniors, particularly in our underserved areas and to further implement innovative models, like we just talked about, Project ECHO.

Dr. Phelan, maybe you can share with the Committee how you have been able to leverage the GWEP program to expand the reach of geriatric care into our underserved areas.

Dr. PHELAN. I would be glad to speak to that, and thank you for the question.

To build peoples' understanding of Project ECHO, our model is modeled after other ECHO programs in the country. But we are unique in that we focus on training around general geriatrics issues for the primary care population. So not long term care, not hospital inpatient relevant conditions, but general geriatric issues that our primary care providers would face in his or her clinic on a daily basis and practice.

Actually, our strategy has been to target the next generation of primary care providers. We are reaching across a network that is known as the WWAMI network, which is a network of between 20 and 30 family medicine residencies, independent residencies, in the five state regions: Washington, Wyoming, Alaska, Montana, and Idaho.

We, once a month, have what is essentially a case conference where people join in, sign on using zoom technology. So they are in the room with us and we are speaking directly to them. It gives the person presenting a case an opportunity to bring a challenging patient case, or just a question about management or diagnosis, before a panel of geriatrics experts.

We have on our panel, in addition to some of our faculty, who are funded. Part of their salary is paid through the GWEP dollars to work as part of our Center. These are faculty that I work closely with who are excellent educators in geriatrics. Geriatricians are typically educators of other providers around older adults.

But in addition to a couple of geriatricians, we have a geriatric psychiatrist, a social worker, nursing, and we also have representatives from each of our agencies on aging who always discuss relevant community programs that are offered, hopefully, in the settings where those providers presenting their cases are practicing.

We try to tailor our recommendations so that we can give very useful, practical suggestions in addition to increasing the general competence of a particular condition. We talk about everything from safe prescribing, to prevention of falls, screening for falls, management of behavioral problems for people who are suffering from dementia, caregiver issues, caregiver burnout, caregiver stress.

To build on the question that Senator Murkowski asked a bit ago as well, for people to stay in rural areas and practice where they are. The person on the frontlines of care on a year to year basis

to have access to that community of learning and shared knowledge is really critical.

Senator MURRAY. Thank you very much.

The CHAIRMAN. Thank you, Senator Murray.

Dr. Cassidy.

Senator CASSIDY. I am also a physician. And it is interesting, I still am getting emails from the hospital where I have practiced, and they did a survey on burnout. It is amazing the burnout rate.

It is not burned out when you are 75 years old and one foot in the grave, although I hope I am not that way at 75, but it is somebody who is 50 to 55, or it is the mom who is 45 and she just wants to quit. In fact, I think I know that women leave practice at an earlier age on average than do men; competing pressures of family and work just make it difficult.

Now, I am concerned that a lot of what we have done here, although well-meaning, has contributed to that. When I look at, again, the survey at the hospital where I have practiced, the electronic medical record, meaningful use, other administrative burdens, and if they can afford it, they walk. Or, if they are an OB-GYN, they start doing Botox for cash as opposed to delivering babies.

Dr. Goodell, any thoughts about that, and agree or disagree, and if so, any thoughts? Is that a contribution to our looming shortage, our worsening shortage?

Dr. GOODELL. Yes, burnout is an enormous problem among physicians. It is a big problem, certainly, among family physicians, which is my specialty. There are a number of causes for this and no doubt, the administrative burden that you are talking about is a big one of them. This is on everyone's radar.

One thing that we need to think about, and you asked if it was contributing to physician workforce problems. And yet, it is because one thing that we know for sure is that people are choosing to practice fewer hours a week. So back in the day, a physician would practice 60, 70 hours a week and today, people are not able to do that. It is simply too exhausting.

One of the things that we need to do is think about how we can increase physician flexibility. One way to do that is by changing the way we pay physicians to do their work so that instead of paying them by volume, instead of collecting money based on every patient they see in a day, we collect money for the quality of care they are delivering overall.

Senator CASSIDY. Let me stop you for a second though, because there is something about if you see somebody, you get more money. If you earn a salary, it does not matter how many you see. There is a very profound incentive there.

A friend of mine is an obstetrician and he wanted the folks in his practice to start counseling regarding the human papillomavirus vaccine. But really, in everything they had to cover, the only way he made it happen is he said, "Okay. If you do the HPV counseling and administer first dose, I will give you a little extra."

You are nodding your head. It sounds like you agree that positive incentive is a positive thing in terms of getting more productivity.

Dr. GOODELL. As long as you do not mind burning people out in 5 years, then yes. You can incentivize people to work as fast as possible.

What I was nodding to is the idea that the enormous number of tasks we are requiring people to do is crowding out things that are really important.

For example, we were talking about taking care of older patients. Older patients typically have many medical needs. A lot of them are really complicated. Patients from medically underserved areas have a lot of psychosocial determinants of health. Those are not problems that can be addressed in a really short timeframe.

The issue with paying people for volume is that you cut down the number of minutes you have per person and a lot of really necessary health care falls right off the agenda.

Senator CASSIDY. To my colleagues, there will be folks here from the Direct Primary Care today, you may run into them, DPC is blue collar concierge, and so they kind of take that model, and run with it, and improve access.

Let me ask one more thing. I forget if it is in your testimony or your testimony, by the way, great admirers of the people at Project ECHO. My wife has worked with them on the issue of dyslexia in transmitted, et cetera. I once spoke to their conference and got roundly booed, but that is another story.

Your testimony or another is about the geographic maldistribution of training slots. You pointed out that most folks practice within 100 miles of where they wish to be.

Now the northeast, of course, is a high concentration of training slots. New York City, I think, the highest of all, maybe Boston is a little bit higher per capita. And a lot of those in New York City go unfilled. In fact, it takes someone graduating from a foreign medical school in order to fill, whereas if you are in Anchorage, I suspect that there is a shortage. There is a shortage in some of my towns in Louisiana.

Any thoughts about maldistribution? Because frankly it is the perception of the rest of the country that the northeast jealously guards that maldistribution, and no offense, whereas Virginia would not get, Tennessee would not get, et cetera.

Any thoughts on that?

Dr. GOODELL. I believe that we need to think about Graduate Medical Education as a priority in the Nation overall.

Right now, we do not really have a GME system. We have a payment structure which gives funding to hospitals.

Senator CASSIDY. I accept that, but speaking specifically, and I am over, so I have to hustle you a little bit, speaking specifically about the maldistribution where per capita, states like New York and Massachusetts have far more per capita than a state like Virginia or Louisiana.

Dr. GOODELL. We need to change the way we allocate slots so that we allocate more residency training slots in places where we need them.

Senator CASSIDY. Good, thank you. I yield back.

The CHAIRMAN. Thanks, Senator Cassidy.

Senator KAINE.

Senator KAINE. Thank you.

Excellent testimony. I have about an hour's worth of questions, but I have a hearing to co-chair at 11, so I am going to get right to it.

Dr. Sanford, I want to ask you about your testimony. In your written and delivered testimony, you talked about the faculty vacancies in nursing faculties now. I dealt with a similar issue when I was Governor of Virginia. What we found in the state was that the salaries of faculty members were, frankly, very disadvantageous to what they could earn if they were practitioners, and that led to big faculty vacancies. I don't know if that is the reason for the current faculty vacancy issue nationally, but tell me a little bit about that and how we solve it.

Dr. SANFORD. Well, that is a problem, Senator Kaine. Thank you for the question.

Our nursing faculty at James Madison University, I polled a question before I came, and I asked, "How many of you have received nurse faculty payment, or repayment support, or training support?" Roughly 40 percent of our faculty had.

I see those programs to support the loans that are required to help repay those as being really critical to us to be able to maintain the faculty that we have.

I do think there are some problems between the service side and the academia side. There is a disparity there with the salaries.

Having the ability to know that your loans—about 70 percent of our graduate students take out loans—having the ability to know that your loan is going to be repaid sometimes is the tipping point or the tipping factor for faculty for nurses to choose to go into academia.

I see those programs as critical to helping us address faculty shortage.

Senator KAINE. Let me ask all of you one last question, which is some of the ways we deal with shortages.

We have a misallocation, more people here than we need and less people there, is sort of extending the work ability of people. Not necessarily moving them into a location, but extending their ability to work and I am thinking of telemedicine.

In Virginia, we have very active telemedicine programs that do reach into some of the underserved parts of our state, Appalachia in particular. And we see it maybe having some specific benefit in areas that already have too few practitioners like behavioral health as we are trying to tackle the opioid related challenge. To try to have behavioral health practitioners at the University of Virginia, for example, be able to interact with nurses and other allied health professionals in southwest Virginia to deal with folks.

Talk a little bit about telemedicine as part of an extender of the health care workforce. Do we need to think differently about even reimbursement models, et cetera, to allow reimbursement models that would incentivize appropriate use of telemedicine?

Dr. Sanford, I will start with you since you started an online curriculum for training of nurses.

Dr. SANFORD. Yes, that is true and one of the things that we have found is that whenever we offer programs where the students can live in their communities and do their clinical in their communities, they stay in those communities.

We are taking the programs to those who are educationally disadvantaged, which would help with the issue that you are citing, Senator. It would help us educate those individuals to stay in their communities, which is highly, highly impactful.

We have had success with that model here at James Madison University as well as other universities across the country.

Within the Nursing Workforce Development Programs, I can say that there is distribution of those funds across the country. They are not centrally located in one geographical area versus another.

We have an equal opportunity to submit for funding and we are giving funding preference if those areas are rural and they are underserved. So I would say that these programs are reaching underserved areas.

Dr. GOODELL. Yes, there are a number of excellent models of how you can extend expertise over a wide geographic area.

A really interesting one in the realm of mental health and primary care integration actually happened in Arizona. Now, this was a program that was established to train psychiatric nurse practitioners to deliver care in some of the rural and remote areas.

They developed field placements for these folks so they can go out and be part of their communities. And then also, while they were there, they utilized video link technology to do case conferences and ongoing training. A really powerful model, again, that is getting people in the communities where they need to be doing the work they need to do.

The Project ECHO for opioids that was in New Mexico was the first one studied. A 10-year study of that program showed that New Mexico, after that program was running, had the fastest growing rate of physicians that were able to provide medication associated treatment for opioid use disorders.

A really powerful model and a great way to leverage technology to get more people the care they need.

Senator KAINE. Thank you.

Thanks, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Kaine.

Senator COLLINS.

Senator COLLINS. Thank you, Mr. Chairman.

First, let me apologize to the witnesses. I have been in and out because we have an Appropriations subcommittee meeting going on at the same time.

The CHAIRMAN. One of these witnesses has a Maine background.

Senator COLLINS. Really? I did not know that.

The CHAIRMAN. I think Dr. Phelan.

Senator COLLINS. Dr. Phelan does? Well, as luck would have it, all of my questions are directed to you. So there must have been this sort of a mind merge here.

[Laughter.]

Senator COLLINS. First, let me thank the Chairman and Ranking Member for holding this very important hearing on developing the workforce to care for both an aging America and a rural America.

In Maine, we are reaching that aging milestone faster than most states. Within the next 2 years, our seniors will outnumber our children, 15 years ahead of the national projections. Much of Maine

is also rural, so this hearing really hits home on both of these fronts.

Yesterday, I introduced a bill with Senator Casey, the Geriatrics Workforce Improvement Act, which would reauthorize the GWEP programs and reinstate the Geriatric Academic Career Awards program.

Obviously, we want to build a workforce to provide geriatric care and ensure that older adults, and their families in rural America, are provided with the resources that they need to care for aging loved ones.

I would ask unanimous consent that there be two letters of support entered into the record. It is from the National Association for Geriatric Education and the National Association of Geriatric Education Centers.

The CHAIRMAN. So ordered.

Senator COLLINS. Thank you, Mr. Chairman.

My question for you, Dr. Phelan, could you expand on why it is critical to infuse geriatrics training across health professions and in settings of care?

Dr. PHELAN. I would be glad to. Thanks for that question.

For pretty much every health care provider in practice, unless he or she is a pediatrician, he or she will encounter an older adult as part of their day to day practice. And having the basic understanding of how caring for older adults differs from care of people who are younger is very critical to making safe choices about treatment, and also understanding with aging, changing functional and health status, the role of patient preferences in care decisions.

Senator COLLINS. One of the main metrics for gauging our progress in developing a health care workforce to care for older adults is a certification in geriatrics. But when you look across the health care professionals, I believe it is fewer than 1 percent of physicians and registered nurses are certified in geriatrics. So the vast majority of practitioners do not obtain that broad certification.

Should we look at other metrics to show progress in improving our readiness to care for an aging population?

Dr. PHELAN. I think patient level outcomes, like what we are in the process of measuring through the Geriatrics Workforce Enhancement Centers, would be one way to go with that. So actually looking at the level of, for example, prescribing practices, safe prescribing practices, numbers, rates of hospitalizations related to falls. Those are all important outcomes that should be measurable.

Our Geriatric Workforce Enhancement Centers could partner to collect data to measure common outcomes that really do make a difference in terms of older adults' health and well-being.

Senator COLLINS. Thank you. And let me just remind you that it rains far less often in Maine than it does in Washington State. [Laughter.]

Senator COLLINS. It is much sunnier, brighter, and we would welcome you back.

Dr. PHELAN. Thank you.

The CHAIRMAN. Thank you, Senator Collins.

Senator Smith.

Senator SMITH. Thank you, Senator Alexander. And thank you, also, Ranking Member Murray.

I have been so excited about this hearing because these issues are just uppermost in the minds of so many Minnesotans.

Just a week or so ago, Senator Heitkamp and I did a roundtable on the challenges around rural health right in Breckinridge, Minnesota, which is right on the border between North Dakota and Minnesota. We were talking about these exact same issues.

What we heard there is many of the same issues we are talking about, challenges in rural areas, treating older, sicker people, also challenges around the opioid issues, and drug issues, and mental and behavioral health generally. Also, we heard a lot about the challenges of hospitals trying to keep it all together, and then, of course, this workforce issue. So I am just so appreciative of this.

One of the things that was a point that was made in Breckenridge is how hard it is to recruit people, as you have been talking about, all of you. And that there are auxiliary factors related to recruiting that make it even more difficult.

If you are in a rural area and there is no childcare, how are you going to be able to recruit people to come when you have that challenge?

There is no broadband. Then the people are trying to figure out, especially if you have couples, spouses that want to move together, how to make that work in a family when that is not what you are used to. And then, of course, just the challenges that hospitals have recruiting people who need to work different hours.

I would just really appreciate if you could, in your experience, talk a little bit, Dr. Sanford or any of you, really talk about how you see that and what you have seen that helps us address those issues when it comes to recruiting.

Dr. SANFORD. Well, thank you, Senator Smith, for the question. I do see that as a problem, and it is a challenge that we all work very hard to address.

One of the things that we are doing at J.M.U. is we just recently were awarded a Title VIII Nursing Workforce Development Grant. We are going to be partnering with our rural health clinics in Page County. So we are going to longitudinally put pre-licensure B.S.N. nurses in every health care facility in that county.

We are very excited about the program because we think that having that partnership over a period of time will encourage our nurses to want to go into the community in the rural settings to make a difference.

I think that, as we have said before, taking the programs to the residents in those areas is really important and impactful as well.

Senator SMITH. Yes, thank you.

Does anyone else want to comment on that? Dr. Goodell, you look like you have something to say. I was curious.

Dr. GOODELL. One of my favorite programs that I found out about, as I was preparing for this hearing, is the Family Medicine Residency of Western Montana, so a different state, I know.

That is a perfect example of how Federal funding through typical Medicare pathways and then the types of programs that we are talking about that are HRSA-supported work together to produce really good outcomes.

The Family Medicine Residency of Western Montana is a new program. It was started in 2013 and it has the goal of producing

rural physicians. And, in fact, the residency is located in an area that is so rural, it is not even designated as rural. It is designated as frontier. So far, 90 percent of their graduates continue to work in these rural areas. So that is a huge success.

Now, another thing that they have done is they have pulled together these community hospitals that are hundreds of miles apart and they have created a network between the community hospitals. Turns out, each of these hospitals was doing specific things really well, but they did not really have any way to communicate.

They put their residents in the middle as the communicators and assigned their residents to do improvement projects at these different hospitals.

With the residents as the glue and a couple of meetings a year, and lots of video links, they were able to learn from each other. The residents were able to learn how to do improvement projects, and they got that meta message that, "By the way, taking care of your system and making sure that it is progressing and getting better and better is part of your job."

That is an example of the multipronged approach that we need to adopt if we are going to make these sorts of improvements, especially in rural areas.

Senator SMITH. Right. It is not just one thing that you do. You have to do a multitude of things.

In Minnesota, the University of Minnesota Duluth has a really excellent medical school that focuses on training physicians who are prepared to serve in rural areas. It is only 60 people in a class. I do not know how that compares to the big medical schools, but I am suspecting it is a lot smaller.

It works because the students who go there connect to the community. They connect to the fieldwork that they do, and then more than half of them stay, which is, I think, what we are trying to achieve.

Thank you very much.

The CHAIRMAN. Thank you, Senator Smith.

Senator HASSAN.

Senator HASSAN. Well, thank you, Senator Alexander and Ranking Member Murray for having this hearing.

Thank you to our panelists for just excellent testimony and for the work you do.

I am the mom of a young man who is approaching his 30th birthday, who happens to experience very severe cerebral palsy and a whole bunch of related conditions that come with that.

I have observed over the course of his lifetime, he lives at home supported with an awful lot of direct care, but also at home because of medical technology and pharmaceuticals that we did not have a generation or two ago.

I am always reflecting on the fact that the model of training and workforce deployment that we have—and the kind of conditions that patients now have and the settings in which they are living their lives—are somewhat misaligned. We have more people with severe disabilities, more people who are aging, and we also have some different kinds, now, of diseases like opioid use disorders that we are trying to treat.

What this hearing, to me seems more than anything to be about is really how we let our deployment models catch up to the population we are really trying to treat and the settings that they all live in.

I have three questions about that, that I probably will not get through all three, but let me start, Dr. Sanford, with you.

In your testimony, you describe a new grant that James Madison University was just awarded relating to the nursing workforce. It is a partnership to educate baccalaureate prepared nurses to work in community settings to address the opioid crisis.

Rivier University, a school in Nashua, New Hampshire, just received a Title VIII Nurse Education, Practice, Quality, and Retention grant for the upcoming fiscal year. The goal of Rivier's grant is similar to a grant you described in your testimony, to prepare nurses to go into careers in community-based primary care settings to help them address the opioid epidemic.

One aspect of Rivier's grant is to increase nursing students' clinical rotations in primary care settings.

In your experience, how has exposure to community settings changed the ability of nurses to be ready to care for patients and families impacted by public health crises like opioid addiction?

Dr. SANFORD. Thank you, Senator Hassan, for the question.

In my experience, whenever we have clinical rotations in community settings, it exposes our nursing students to the opportunities that, sometimes, they do not consider. A lot of times when we are going through acute care facilities for our clinical, they think of nursing as being in the hospital, but we all know that health care is shifting out into the community, and more and more needs are in the community.

Partnering with rural health clinics, partnering with critical access hospitals is very important as we look at training the next generation of nurses. Anecdotally, students tell us that if they have strong preceptors, preceptor training is important as well.

Senator HASSAN. Right.

Dr. SANFORD. If they have strong preceptors, that will impact the choice of where they choose to practice.

Senator HASSAN. Excellent. Well, thank you for that answer and thank you for your work.

Dr. Phelan, in your testimony, you discussed the work of the Northwest Geriatrics Workforce Enhancement Center. While your main focus is on training for primary care providers in geriatrics, you also mentioned that workers on the, quote, "Frontlines of hands-on daily care include family caregivers and home care workers."

In New Hampshire, it is estimated that 70 to 80 percent of paid hands-on care for older adults and individuals who experience disabilities is provided by direct care workers, including personal care aides, home health aides, and nursing assistants.

The demand for direct care workers is expected to increase 49 percent between now and 2022, further exacerbating a workforce shortage that already exists in many communities across the country.

Beyond high quality primary care, we know many individuals' long term success in the community hinges on the direct support that they get at home.

Dr. Phelan, drawing from your experience with geriatric workforce initiatives, what can Congress do to support the recruitment, training, and retention of high quality, direct care workforce now and in the future?

Dr. PHELAN. Part of the issue is, again, fundamentals, making sure that those individuals are well-prepared for the position that they are seeking to fill.

Senator HASSAN. Yes.

Dr. PHELAN. Direct care workers, as you say, are at the frontlines doing hands-on daily care for people who are at home, living with chronic illnesses, if they are elderly, often with dementia.

There are competencies around care, for example, of a person with dementia and understanding of their particular health risks and safety concerns that are necessary and integral to preparing a homecare worker to be there and be that person, that one-on-one person on a daily basis.

One of the ways that we are currently doing this through the Geriatrics Workforce Enhancement Programs, at least speaking of our GWEP in Washington, is we are taking the broadest view of who is primary care. We are including home care workers as part of our audience for training.

Just recently, we have a program called Full Life, which is an adult day health program in western Washington. Adult day health is an entity similar to daycare for children, except it has more of a health orientation and its audience is older adults or people living at younger ages with disabilities in the community.

The staff of Full Life is now participating in a number of our training activities that we offer so that they are getting the same exposure to the geriatrics competencies that, say, the family medicine residents that we are reaching across the family medicine residency network are getting.

Senator HASSAN. Thank you very much.

Thank you, Mr. Chairman, for allowing me to go over.

The CHAIRMAN. No, thank you, Senator Hassan.

I am struck by the obvious here, which you seem to agree, that maybe the best way to locate medical professionals in underserved areas is to train them where they live.

I think of a visit I made recently to the Lewis County Community Health Center, a county of 12,000 in Tennessee. They had a big fight. They decided they could not support a hospital, but they have a terrific, clean, open community health center that everybody can go to; one doctor, two nurse practitioners. It is open, from my guess, like 7 in the morning until 8 or 9 at night.

They estimate they can deal with about 90 percent of what comes in the door, and the rest goes 45 miles away, and the open heart surgery goes to Vanderbilt, which is 60 miles away.

Now, in that county, that is one doctor, two nurse practitioners, 12,000 people. The estimate, according to National Rural Health Association is 39 primary care doctors for every 100,000 people. There might be two or three other doctors in Lewis County, but

there are probably not many. There are 10,000 community health centers.

I guess, first, in terms of nurses, then in terms of doctors, how can we be more aggressive here appropriately without interfering too much in the practice of medicine to encourage more clinical training where you live and where you might practice?

I think of a restaurant, a large restaurant company where the CEO said that he wanted the headquarters to be thought of as a service center, and the headquarters were really the restaurants. I would think that maybe the community health centers, of which there are 10,000 in the country, could be the headquarters and the training hospitals could be the service centers.

What can we do to aggressively do that? I would think it might be easier with nurses and nurse practitioners than it would be with physicians because there would be a resistance, I would think, from the medical centers to losing too much control over the training.

What works best? Dr. Sanford, let us start with you.

Dr. SANFORD. Well, I will share, Senator Alexander, and thank you for the question, I will share that we have a community health center, a federally qualified community health center in Harrisonburg, Virginia and they are gracious, and they have our nurse practitioner students, and we do training in that area.

What is so wonderful for our nurse practitioner students is most of them choose to work in rural and primary care.

The CHAIRMAN. But that is just one center. But could they work in all the centers in Virginia and still be affiliated with you?

Dr. SANFORD. Absolutely, because we have some distance components. We have students all over Virginia. They are not just in Harrisonburg.

The CHAIRMAN. How long is your training? Two years?

Dr. SANFORD. Two years, right, full time.

The CHAIRMAN. Two years.

Well, how much of the time could they spend in a clinical setting out of your hospital? I guess that is where you train people?

Dr. SANFORD. Well, there are different kinds of nurse practitioners and we have a family nurse practitioner program that is primary care focused, so all of their clinical is in primary care. So the federally qualified health centers or community health centers, they could spend almost 100 percent of their clinical in those settings.

The CHAIRMAN. What percent of their total time with you is clinical? What percent of the 2-years could they be out in the rural area?

Dr. SANFORD. Sure. It is roughly about 16 months of the 2-years.

The CHAIRMAN. That much?

Dr. SANFORD. Yes, so nurse practitioners, the wonderful thing about nurse practitioners is that they often choose to go into primary care in underserved areas.

The CHAIRMAN. You would agree that that turns out to be, just in terms of human nature, a very strong way to populate underserved areas?

Dr. SANFORD. Yes, sir.

The CHAIRMAN. Dr. Goodell, what about doctors? How do you get them out of the university center? How much of their time can be

spent in underserved areas and still get the proper training at the hospital?

Dr. GOODELL. Yes, so there are actually a number of models looking at this and several of them actually come from the Midwest, Upper Midwest where the big medical schools—and this is at the student level rather than residents—but big medical schools now have specific programs that focus on rural primary care training.

The students will do their classroom work, which is the first year and a half, sometimes two years, in the big medical school with all their classmates. And then a select few students, who apply to this program, do most of their clinical work out in much more rural settings.

Just as we see happening in other kinds of training programs later on, they build relationships with those folks. They come to feel comfortable and they like it there.

The CHAIRMAN. That would be the third and the fourth year of medical school, basically?

Dr. GOODELL. Yes. Usually there is clinical basics, like a clinical skills training course that happens in the first year or two of medical school, and so some of these programs have their students doing that initial clinical training. It is like 1 day a week, often, and they will do that in a rural area, but then a lot of their time is in the classroom.

Then for their third year, which is really the core clinical training, they will spend all or part of that, again, out in a community health center or several of their rotations are made to be longitudinal and so they go there for months at a time.

The CHAIRMAN. But it seems like it would be important not just to have a single clinical health center, because the idea would be to get them to a place where they might stay.

Dr. GOODELL. That is right. And actually, most of the programs that I am aware of have several different options. So students will elect to do the rural track, and then there are a number of different site placements in addition to Wisconsin and Minnesota, I know they have the same thing in Maine that is affiliated with Tufts Medical School.

The CHAIRMAN. How much of their 4 years in medical school might they spend in that sort of clinical setting outside of the university hospital, say?

Dr. GOODELL. Let us see, I would say maybe it is 10 percent in the first 2 years, average, and then maybe a third of the time of their second 2 years.

The CHAIRMAN. Then during the residency, how much time could they spend?

Dr. GOODELL. Residency totally depends on where they match. And so, that is a whole separate endeavor.

The CHAIRMAN. Yes.

Dr. GOODELL. You apply to all these programs. And then residency programs, you can either work in a teaching health center, which is, by definition, outside of a hospital. Or, much more commonly, you are affiliated with a big university hospital and then sometimes, but much, much less frequently, you have the option to do some rural training.

Looking at models, and these are the innovative models where you have your longitudinal continuity clinic in a more rural setting, is an innovative idea to do that. But I do not know of specific programs where they have done that yet to produce rural physicians.

The CHAIRMAN. Thank you.

Senator Murray.

Senator MURRAY. Thank you, very much, Mr. Chairman.

We spend a lot of time talking about rural underserved areas. It is critically important. Good testimony. But I wanted to focus on something else and that is workplace diversity.

We know that while people of color represent more than 25 percent of our population, they represent only 10 percent of health professionals. That lack of diversity is really important to address because we know having a diverse workforce improves patient satisfaction, patient-clinician communication, and access for people who are minorities. There are some really devastating health disparities in our country today.

For example, black women are three to four times more likely to die in childbirth than white women.

I think it is really imperative that Congress prioritize efforts to improve workforce diversity. Our 2018 spending bill increased funding for programs that provide scholarships and supports recruitment and training of minority students to join the health care workforce. But I really believe Congress has to do more.

Dr. Goodell, let me start with you.

How can we leverage our workforce programs to better address the health disparities that I talked about?

Dr. GOODELL. You are absolutely right. If we are going to reduce health disparities in this country, it is essential that we diversify the physician workforce.

Probably the biggest way to do that is by focusing on pipeline programs like the Health Careers Opportunities program.

I recently was at a medical conference, and I met some students and their mentor from a program in the Bronx. This was a program that was located in a community health center. It was started by a family physician for students in that community. And these are students who are in college or college graduates who are potentially interested in health professions.

The students in this program sign up. They commit to a certain number of volunteer hours. I want to say it is 100 volunteer hours over either a semester or a year. They also get one-on-one mentoring to figure out how to apply to go to graduate school. They get help with their entrance exams. Moreover, they get a really good community that supports them through that process.

Applying to graduate school and the health profession is a relatively grueling enterprise. If you come from a community where you are the first person that ever went to college, you do not have anybody around telling you how to do it and kind of commiserating with you over your long nights.

This program has done that for these students. They have, so far, a 93 percent success rate in getting their students into medical school. I am the Dean of Admissions. It is 40 percent nationwide.

I met five of these students. Three of them had gotten into medical school already. Two of them are applying this year. I gave both

of them my card. These are students that are people of color. They have been living in the Bronx. They are socioeconomically disadvantaged. They did not go to Ivy League colleges, Bronx Community College, other places like that. These are exactly the students that we need to be focusing on.

We need a lot more programs like that that help train up students and support them so we can get them into the school where they need to be so they can provide care.

Senator MURRAY. Dr. Sanford, do you want to comment?

Dr. SANFORD. I would like to add some information from a nursing perspective. One-third of graduate students are from diverse backgrounds who are nursing students. So we are really excited about the progress we have made in nursing. We have a ways to go.

But we have also, in nursing, been focused on holistic mission processes. This has helped us increase our diversity. And also, we have pipeline development programs in nursing that are similar that my colleague is speaking to, and those pipeline programs are supported by Title VIII Nursing Workforce Development program.

I would say that the impact of the Title VIII Nursing Workforce Development program is very important for diverse clinicians in helping us with increasing patient outcomes.

Senator MURRAY. Thank you.

Thank you to all of our witnesses. A really good hearing today.

Mr. Chairman, I look forward to working with you on this Committee on addressing this. Thank you.

The CHAIRMAN. Thank you, Senator Murray.

Thanks to all three of you for your time, and your good advice, and for being here today.

Our hearing record will remain open for 10 days. Members may submit additional information within that time, if they would like.

Our Committee will meet again tomorrow, Wednesday, May 23 at 10 a.m., for an executive session to vote on the Pandemic and All-Hazards Preparedness and Advancing Innovation Act.

Thank you for being here.

The Committee will stand adjourned.

[Whereupon, at 11:30 a.m., the hearing was adjourned.]