

IMMIGRANTS | *IN* HEALTH CARE

KEEPING AMERICANS HEALTHY
THROUGH CARE AND INNOVATION



Marcia D. Hohn, EdD

Retired Director, The Immigrant Learning Center, Inc. Public Education Institute, Malden, MA

Justin P. Lowry, PhD

Post Doctoral Research Fellow Institute for Immigration Research, George Mason University, Fairfax, VA

James C. Witte, PhD

Director, Institute for Immigration Research, George Mason University, Fairfax, VA

José Ramón Fernández-Pena, MD

Associate Department Chair, Department of Health Education, San Francisco State University, San Francisco, CA

June 2016

CONTENTS

- 1 Executive Summary
- 4 Introduction
- 7 Immigrants in Medicine and Medical Science
- 25 Immigrants in Long-Term Care
- 37 Immigrants in Nursing
- 44 Conclusions and Key Recommendations
- 49 References

IMMIGRANTS | *IN* HEALTHCARE



EXECUTIVE SUMMARY

The Importance of Immigrants

The importance of immigrants to health care in the United States cannot be emphasized enough. They have vital roles in medicine, medical science and long-term care, and they have a growing presence in nursing. Immigrants fill critical vacancies, bring education and skill from their homeland, and help to provide culturally competent care to an increasingly diverse patient population. They also play a critical role in innovations to improve the health of all Americans.

Immigrants are 13% of the U.S. population, and:

28% of physicians and surgeons

40% of medical scientists in manufacturing research and development

50%+ of medical scientists in biotechnology in states with a strong biotechnology sector

22% of nursing, psychiatric and home health aides

15% of registered nurses

Forty-six percent of foreign-born (immigrant) physicians and surgeons go into internal medicine where there are vast shortages of practitioners, whereas only 15% of U.S. medical graduates do so. Immigrant physicians also practice in rural and inner-city areas where physician shortages persist.

The American Medical Association predicts the demand for physicians will exceed supply by a range of 46,000 to 90,000 individuals by 2025. Many roles will need to be filled as an aging longer-lived population puts increased demand on the medical system, as well as the Affordable Care Act, making healthcare available to more people. Foreign-born physicians and surgeons will be a critical part of meeting this demand for physicians.

International health work is dramatically increasing due to the global economy. American immigrant physicians working abroad often act as cultural bridges and brokers, which creates goodwill toward the U.S.

Foreign-born medical scientists work in the development of drugs and therapeutic interventions to cure diseases and improve human health. They are 42% of researchers in the top seven cancer research centers in the U.S., a disease that touches most of our lives.

Immigrants fill critical vacancies and bring cultural and linguistic skills to an increasingly diverse population.

Immigrants also keep the U.S. on the cutting edge of innovation in the pharmaceutical industry comprising 33% of the entire research and development occupational group in pharmaceutical manufacturing.

Immigrants are crucial to the long-term health care market, where the age group 65 and older will be 20% of the total population by 2030 (72 million persons). Many Americans are living into their 80s and 90s. As a result, a longer living population is likely to have a need for more medical care.

The 65 year and older population is also diversifying in race and ethnicity, while the non-Hispanic white population is projected

to decline from 88% in 2010 to 58% of the total population by 2050.

The foreign-born are particularly concentrated in home health care, the fastest growing sector in health care, which is fundamental to making it possible for the rapidly increasing senior population to “age in place.” These health care workers are predominately female and are in jobs with low pay and no benefits.

The foreign-born have consistently remained from 13% to 15% of working nurses. They are currently concentrated in just five states and work primarily in hospitals. Licensure of foreign-born nurses has been difficult because there is no international definition of what it means to be a nurse. This is further compounded by multiple accreditation levels in the nursing occupational spectrum.

There is no question that immigrants (foreign-born individuals) play critical roles in both the high-skilled professions and in low-skill positions in long-term and home health care. They fill critical vacancies at each end of the spectrum and bring cultural and linguistic skills that build bridges to an increasingly diverse group of health care consumers. High-skilled immigrants also play key roles in medical science where they are developing life-saving drugs and treatment protocols and keeping the U.S. on the cutting edge of innovation.

Immigrants are equally important to nursing, where culturally competent care is critical to effective medical treatment. However, foreign-born doctors and nurses face substantial barriers to licensure. The U.S. is losing the talent and skills of these professionals in an industry that is growing and needs more practitioners, particularly practitioners who reflect the racial and ethnic composition of the health care consumers they serve.

Immigrants play a crucial role in keeping America healthy.

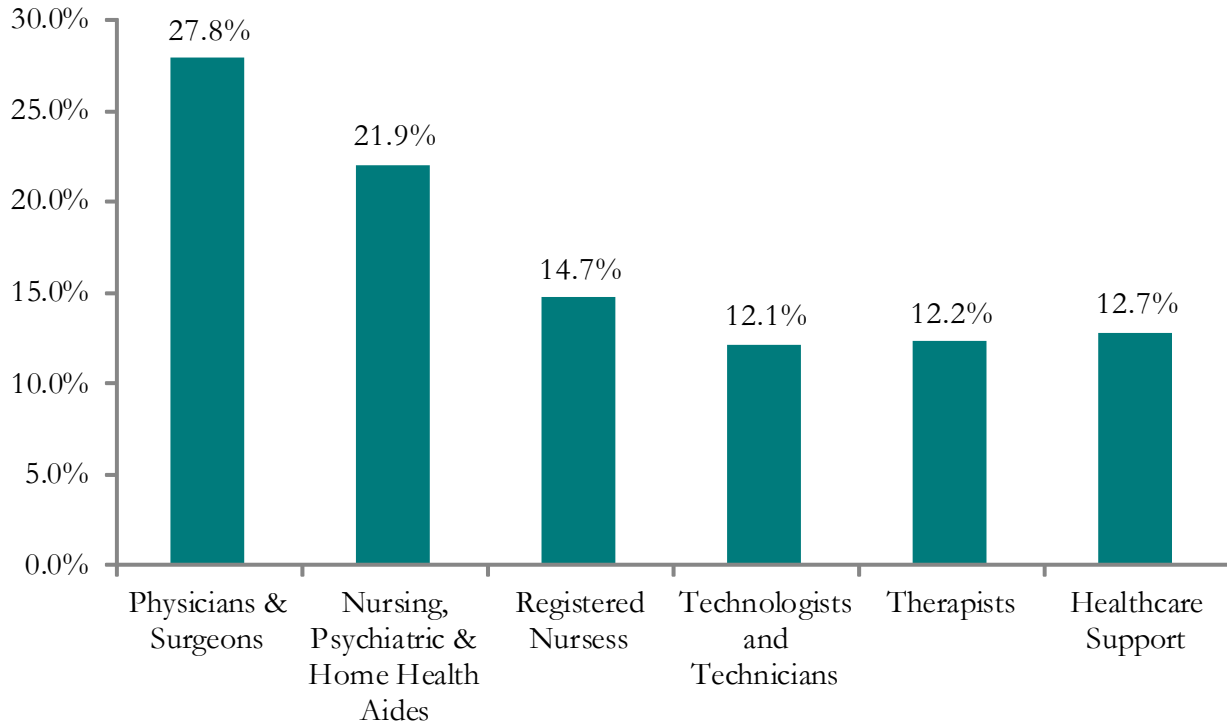
Introduction

The importance of immigrants to health care cannot be overstated. A 2012 report from the Migration Policy Institute notes that immigrants are 13% of the U.S. population, but are 16% of all civilians in health care occupations. These occupations are projected to account for one in six, or 3.5 million, newly created jobs in the United States between 2010 and 2020. Accompanying this growth has been a steady rise in the number of foreign-born health care workers, increasing from 1.5 million to 1.8 million between 2006 and 2010. More dramatic increases exist in particular occupations. In 2010, more than one-quarter of physicians and surgeons were foreign-born and 22% of persons working in health care support jobs were also foreign-born.¹

Clearly, immigrants are playing a crucial and increasingly important role in keeping America healthy. The foreign-born are distributed at all ends of the health care occupational spectrum as physicians, surgeons, nurses, technicians and therapists, as well as aides in nursing, psychiatric and home health disciplines (Figure 1).²

This report combines data and personal stories to show the vital presence of immigrant health care workers and to make these workers and their journeys visible and real to readers. We offer a picture of immigrants at both the high-skilled and low-skilled ends of the health care spectrum. The main body of the report is divided into three sections. First, we evaluate the role of immigrants in medicine, pharmacology and medical science. Next, we present an examination of immigrant workers in long-term care, where they play critical roles as nursing, psychiatric and home health aides as well as personal care attendants. In the third and final section, we focus on the nursing industry. A conclusion section of the report includes key recommendations.

Figure 1
Foreign-Born Share of Healthcare Workers by Occupation, 2010



Source: American Community Survey 5-year Estimates (2010-2014) and IPUMS-USA, University of Minnesota, www.ipums.org.

This report combines data and personal stories to show the vital presence of immigrant health care workers and to make these workers and their journeys visible and real to readers.

IMMIGRANTS | IN



MEDICINE & MEDICAL SCIENCE

The United States may be facing a shortage of more than 90,000 physicians by 2025.

American Medical Association

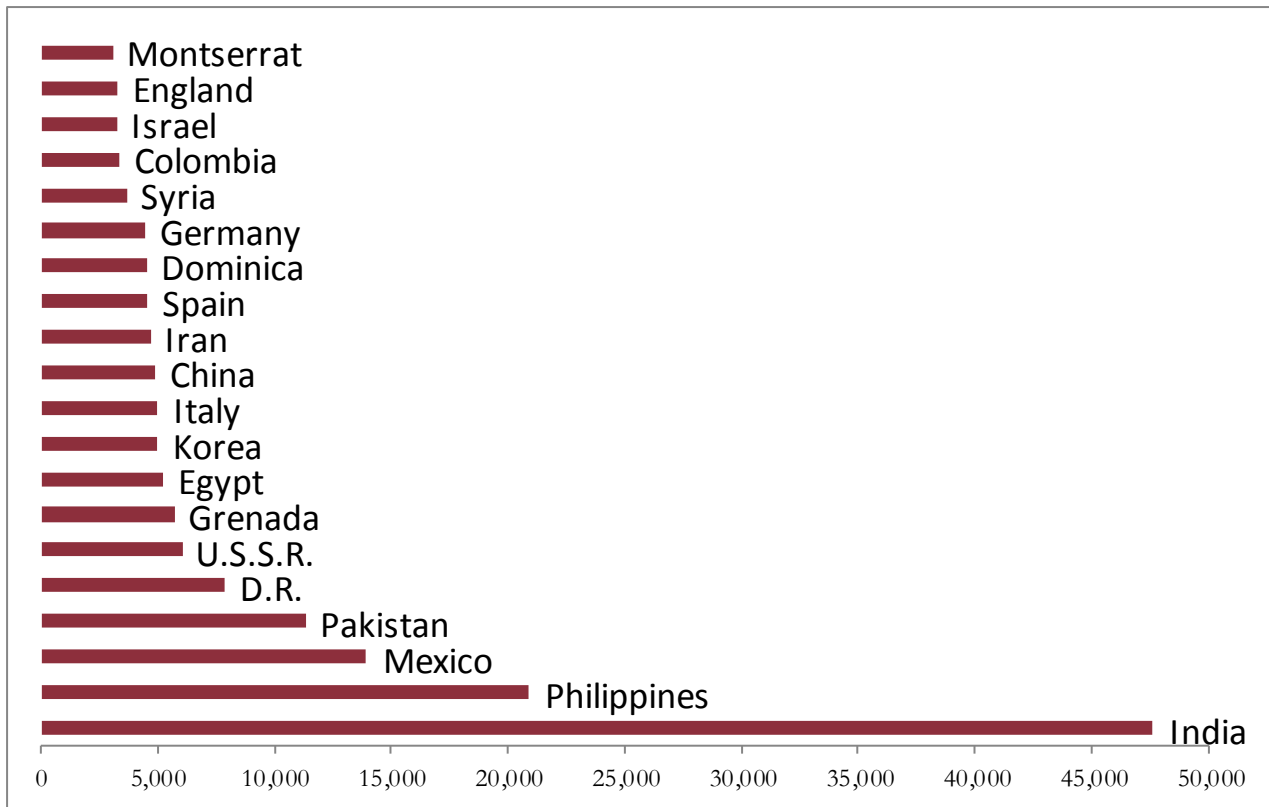
Physicians and Surgeons

International Medical Graduates

The population of the U.S. is aging. In May of 2014, a U.S. Census Bureau report estimated that the population of people 65 years and older was 55 million and projected to increase by 27% by 2050. Added to the increased demand of an additional 34 million individuals from the Affordable Care Act (ACA), the American Medical Association (AMA) predicts that the United States may be facing a shortage of more than 90,000 physicians by 2025. There will be especially high demand for physicians in Internal Medicine.³

Immigrant physicians and surgeons play an outsized role in the physician workforce. Multiple research studies report that International Medical Graduates (IMGs) comprise almost 27% of the physician workforce. IMGs are physicians who obtained their medical degrees outside of the United States and come to this country as fresh graduates or experienced practitioners to enter a medical residency program in a particular medical specialty, usually under a J-1 visa. The definitive profile of IMGs, developed by Roa on behalf of the AMA, reports that they are a diverse group with origins in more than 20 different countries with different cultural and linguistic backgrounds. India and the Philippines command the top two places for countries of origin (Figure 2).⁴

Figure 2
Top 20 Countries of Origin for IMG Physicians



Source: R.N. Rao, ed., *International Medical School Graduates in American Medicine* (Washington, DC: American Medical Association, 2013)

International Medical Graduates - J1 Visa Holders

According to data from the Institute for Immigration Research at George Mason University, foreign-born physicians in the country on J-1 visas usually enter residencies for training in high-demand areas in which there are often shortages of U.S.-born physicians. This is particularly true of Internal Medicine, where nearly 46% of J-1 physicians pursue such residencies, as opposed to only 15% of U.S. Medical Graduates (USMGs). It is also true of Pediatrics and Family Medicine, where J-1s also pursue residencies at significantly higher rates than USMGs (Table 1).⁵

International Medical Graduates - Clinicians

Additionally, the 2013 AMA report found that the majority of IMGs practice in clinical settings, with 78% in direct patient care. About 75% of IMGs remain in the United States after completing their residencies. They are then more likely than USMSGs to serve in rural and inner-city settings where there are significant physician shortages. They help to provide a “safety net” of care for at-risk and older

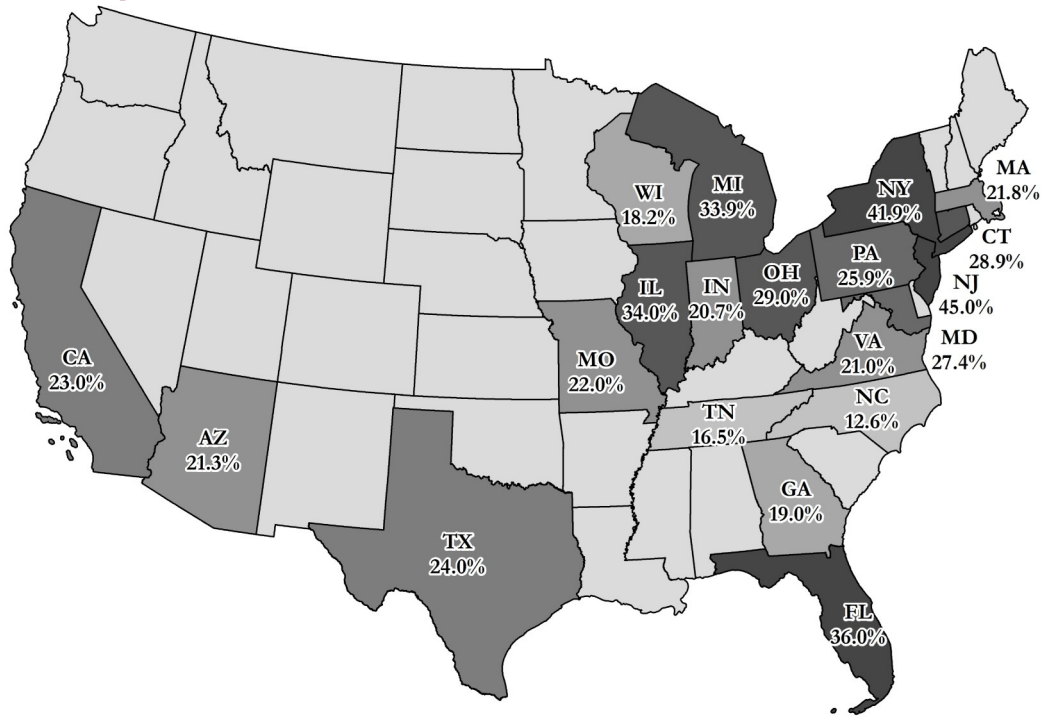
populations. The numbers, specialties and locations of IMGs are critical to health care in the United States, not only in shortage areas but also in meeting the growing demands of an aging population as well as people who are newly insured under the ACA. Figure 3 illustrates the dramatic presence of foreign-born physicians in key states.⁶

Table 1
Specialties Pursued by J-1 Physicians and USMGs, 2010-2011 Academic Year

	J-1 Visa Physicians	US Medical Graduates
Internal medicine	45.8%	15.0%
Pediatrics	11.0%	7.4%
Family medicine	7.9%	5.8%
General surgery	7.2%	8.4%
Psychiatry	5.2%	3.8%
Neurology	4.1%	1.5%
Obstetrics and gynecology	1.9%	5.0%
Orthopedic surgery	1.4%	4.5%
Diagnostic radiology	1.4%	5.5%
Anesthesiology	1.3%	5.9%
Other specialties/subspecialties	12.9%	37.2%
Total	100%	100%

Source: Z.S. Khan, *Immigrants and the Medical Profession: Good for Our Health* (Fairfax, VA: Institute for Immigration Research, George Mason University, May, 2015)

Figure 3 Percentage of All Physicians Who Are IMGs - Top 20 States, 2012



Source: Association of American Medical Colleges: State Physician Workforce Data Book, 2015

IMGs are somewhat older than USMSGs. According to the AMA, 87% of IMGs are 35 years or older – similar to the age of second-career physicians in the United States. The AMA speculates that the maturity of the IMGs may exert a stabilizing influence on younger colleagues in residency programs. Gender distribution is unequal with female IMGs making up only 31% of the total. This may reflect the lack of educational

opportunities for women in some of the originating countries.⁷

An increasingly diverse population needs culturally competent care. IMGs bring different world views and awareness of differences in cultural orientations to health and health practices as well as knowledge of other countries, which brings greater competence to the practice of medicine with an increasingly diverse patient population. As Hamid Jafari, Medical Officer at the Centers for Disease Control, puts it:

“Medical officers from the U.S., who are immigrants from different ethnic backgrounds, are great ambassadors. They break the stereotypes about Americans and help navigate difficult environments with language and cultural skills to gain the hearts and minds of people the initiative is trying to reach.”

Not all IMGs pursue further training and residency programs in the United States. Instead, some apply their knowledge and skills in other settings where they can act as a cultural bridge. This was true of Dr. Elisa Garibaldi from Brazil, who graduated medical school in 1993 and became skilled in general and pediatric surgery. She was inspired by community work in Brazil while also a visiting surgeon at Children’s Hospital in Boston. When she came to the United States in 2001 to seek a better life for herself and her children, she did not immediately pursue a residency. Instead, Dr. Garibaldi chose to work in health promotion programs for Latinos and Asians in Lowell, Massachusetts, where she has found great satisfaction.

Dr. Elisa Garibaldi, Former Surgeon, Now in Public Health, Lowell, MA Country of Origin: Brazil



Photo Credit: Massachusetts Alliance of Portuguese Speakers

“I found that I am a good teacher and [these programs] are like a child to me. Asians and Latinos have the same objective to be healthy, and when I help them make small changes to be healthier and make their lives a little better it makes me feel good. I miss my practice as a physician, but what I am doing

now is so important. Sometimes I worry that I am losing my abilities and skills but I can give more here. I understand the immigrant community – their feelings, the stress, how hard it is to adapt and missing your family.”

She recently moved to managing volunteers and patient information for a large health system. However, she keeps her hand in community health work through direct service and working with health advisors, which she finds deeply satisfying. Elisa is undecided if she will pursue licensure as a physician or go further into public health. The path to licensure is very difficult, even requiring another residency. “I am a single mom of two teenagers and have limited time and money to do this now,” she said.

Foreign-Born Physicians Trained in the United States

IMGs are not the only foreign-born physicians in the United States who are playing a critical role in the delivery of health care. Physicians who were born in other countries and attended U.S. medical schools are also a vital part of the physician workforce. Like IMGs, they bring talent, hard work, skill and cultural awareness to the practice of medicine, where they often build bridges to increasingly diverse population of patients. The stories of Joyce Sackey at Tufts Medical School and Sokharith Mey at Lynn Community Health Center exemplify the contributions of these foreign-born physicians.

Dr. Hamid S. Jafari, Medical Officer, Centers for Disease Control and Prevention, Atlanta, GA
Country of Origin: Pakistan

"After graduating from medical school in Pakistan, I came to the U.S. in 1984 to seek post-graduate medical education because the U.S. has the best training in the world. I was also looking to leave the increasingly difficult political situation in Pakistan, where the safety of doctors is an issue. But it is very difficult to get into U.S. medical residency programs and I had to wait two and a half years for an opportunity. Fortunately, I was able to live with my brother in the Boston area where he already established his life. I worked for free in a hospital laboratory where I learned the basics of science research in cell biology. Then I was awarded a paid fellowship at Harvard University to do research for identifying and isolating cells to inhibit cancer cell growth. A residency in pediatric research at the Dartmouth School of Graduate Medical Education program followed, where I developed an intense interest in infectious diseases. At the University of Southwest Texas, I worked on pediatric infectious diseases and a Senior Health Epidemiologist from the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, introduced me to the world of Public Health.

I entered into their training for Epidemic Intelligence Service where I joined others as 'Super Sleuths' in rooting out causes and treatment programs for infectious disease.

"I am so grateful to the U.S. for providing the education, work ethic and, most importantly, ii



freedom to develop my knowledge and skills. I have strived to give back in my 22 years at the CDC and have worked in their Global Health Initiative spending six years in Egypt and more recently in India for polio eradication. Eradicating polio internationally is crucial for the U.S. not only for humanitarian reasons but to protect against polio making a resurgence in this country.

"Medical officers from the U.S. who are immigrants from different ethnic backgrounds are great ambassadors. They break the stereotypes about Americans and help navigate difficult environments with language and cultural skills to gain the hearts and minds of people the initiative is trying to reach."

In recognition of this work, Hamid was awarded the 2013 National Security and International Affairs Medal that recognizes a federal employee for a significant contribution to the nation related to national security and international affairs.

Dilemmas and Assistance for High-Skilled Immigrant Professionals

There are 7.2 million immigrant adults in the United States who have college degrees, approximately half of whom received their degrees abroad. Of this group, a Migration Policy Institute analysis reveals that approximately 23% are un- or under-employed in low-wage jobs. This is of particular concern given that many immigrant professionals have backgrounds in health and medicine in critical shortage areas. Moreover, they bring both language and cultural diversity that is vital to caring for an increasingly diverse patient population.

There are a number of effective interventions that can help qualified immigrants return to professional employment. They include advanced English classes, educational counseling and guidance on re-credentialing, bridge coursework, test preparation for licensure exams, targeted internships and more. What all of these efforts have in common is a purposeful process for 1) screening potential participants, assessing their personal, educational and professional experience; 2) presenting them with U.S. career options; and 3) providing the guidance necessary to pursue their chosen path.

Depending on the size and resources of the program, participants may receive vocational, educational, social, financial or other support as they pursue their professional goals. There are several sources of expertise available to communities seeking to launch such programs. IMPRINT, a national coalition of non-profit

organizations based in New York City, provides policy guidance and advocacy resources for local providers. WES Global Talent Bridge, an initiative of the credential evaluation service World Education Services, provides training to practitioners who serve immigrant populations such as adult educators and community college instructors. Global Talent Bridge also provides in-person workshops for immigrant professionals in collaboration with local partners. At the more intensive end of the spectrum, the Welcome Back Initiative, a national network of 10 centers based in San Francisco, has developed a detailed participant-centered model for serving foreign-trained health professionals.



Joyce Sackey, Dean of Multicultural Affairs and Global Health, Tufts University School of Medicine, Boston, MA

Country of Origin: Ghana



Born in Ghana, Dr. Joyce Sackey developed an early passion to improve access to health services for remote villages. At a young age, she became aware that people in far-flung rural areas of Ghana did not have the access to health care that she enjoyed in the urban area where she lived. Her journey began by obtaining a strong science education in high school, which inspired her to think about medicine as a career. Her father had previously moved to the U.S. and had become a U.S. citizen. This made it easier for her to apply to college in the United States and she attended Dartmouth College and Dartmouth Medical School. The academics were not too difficult because of her science background, but she was continuously challenged by the social environment. She did well, however, and obtained a medical residency in internal medicine at Beth Israel Deaconess, where she became chief resident and practiced primary medical care. Later on, she became an assistant professor of medicine at Harvard Medical School.

Marriage and children kept her in the United States, but her dream of improving medical care in rural Ghana did not die. While at Harvard Medical School, she co-founded the Foundation for African Relief and directed a

collaborative project on AIDS as well as a visiting scholar's exchange program. These programs contributed to the fight against AIDS in Ghana and Sudan by training African physicians. These were doctors at the forefront of providing clinical care to people living with HIV/AIDS. Through this work they were able to establish free mobile clinics that regularly go to remote areas of Ghana.

When Tufts University School of Medicine (TUSM) invited her to apply for her current position, she saw another door opening to leverage her skills and relationships with institutions and communities to improve health access both in the U.S. and in Ghana. Now in her sixth year at TUSM, she sees the medical students as the future. The medical students, she says, are of the highest caliber and see the world without borders, recognizing that health across the world is vital to good health in the United States. They have a sense of responsibility to the global village she finds exciting and inspiring. These students are going all over the world to provide access to good health care. Working together, they can open international doors to improve global health equity.

Sokharith Mey, Physician in Family Practice, Lynn Community Health Center, Lynn, MA Country of Origin: Cambodia



When Sokharith Mey sat in a room wearing a white coat with fellow residents in family medicine on their first day of residency, he could not believe it. He had come so far from the frightened little boy who came to the United States in 1981 barely speaking English. His family settled in New York City after years in the United Nation's refugee camps in Thailand and the Philippines. The family had been forced to flee to the camps after Sokharith's father, a physician, was taken away and never heard from again. Under the Khmer Rouge, it was truly a brutal and terrible time for Cambodians.

The family trekked through mine-infested jungles to the United Nation camps in Thailand. A meager education was provided inside the camps as Sokharith describes: "I was at a second grade level and it was my older brother who learned English and to read and write in English. No one in the family spoke English except my brother and he facilitated all of our settlement in the United States. We came here with empty hands."

Nonetheless, the family progressed rapidly, especially Sokharith, who learned English and graduated from Brandie High School in Manhattan in 1988. He then went on to a program in radiology and worked in that field for a year before starting college at Brooklyn

Health Sciences. There, he completed work to become a physician assistant and worked in orthopedics for a year to support his family. Then, he further climbed the ladder in medical school and started his residency in family medicine in 2001.

After residency, he and his wife moved to Lowell, Massachusetts, to join other family members. An opportunity became available to work at the Lynn Community Health Center, where Sokharith has been for the last seven years. "I am thrilled to work here and serve the Cambodian community," he said. "They appreciate me because many do not speak English and have many problems such as depression, heart issues, high blood pressure and diabetes. This is especially true for the elderly Cambodian population. They do not have English and won't seek help or take their medications. I can reach out to them, sometimes visiting them in the temple. I give them my cell number to call. They are a vulnerable population, but they are also my family. Who can they call when they are sick? They can call me."

Medical Scientists

There is another side to health care in which immigrants play a critical role. While the majority of foreign-born physicians and surgeons are in direct patient care, many like doctors Alfredo Quinones-Hinosjosa and Nam Tran (profiled below) are also combining breakthrough research and innovations with their clinical practice to improve treatment for critical diseases such as cancer.

A 2009 study on *Immigrant Workers in the Massachusetts Health Care Industry* found that 51% of the medical scientists in the state were foreign-born. Massachusetts is a state rich in the life sciences, particularly biotechnology, where immigrants do research and establish companies to bring life-saving drugs and products to market. However, Massachusetts is not the only place where critical research is taking place. A 2013 study by the National Foundation for America Policy (NFAP) found that 42% of the researchers at the top seven cancer research centers across the country were foreign-born. Cancer is a group of diseases in which there is uncontrolled growth of abnormal cells and it touches just about everyone's life at some point. And, immigrants are playing a critical role in health care by researching ways to combat cancer with an important presence in the research centers across the U.S.⁸

Dr. Alfredo Quiñones-Hinojosa, profiled here and in the NFAP study, is author of a book about his journey from an undocumented farm worker from Mexico to a professor of neurosurgery at John Hopkins University. He provides a gripping story about immigrants as medical scientists.⁹



Dr. Alfredo Quiñones-Hinojosa
Associate Professor of
Neurosurgery and Oncology,
John Hopkins University,
Baltimore, MD

Country of Origin: Mexico

Dr. Quiñones-Hinojosa, well known as Dr. Q, has a long journey from being an undocumented farm worker in California to a renowned neuro-surgeon and cancer researcher at John Hopkins University, documented in his book *Becoming Doctor Q*. At age 14, he became a migrant farm worker with the goal of earning enough money to support his family in Mexico. The 1986 Immigration Reform and Control Act under President Ronald Reagan gave him the opportunity to gain legal status. Recognizing that education would be a vital avenue to a better life in the United States, he signed up for English classes at a community college. One of his teachers encouraged him to apply to the University of California, Berkeley, where he thrived in science education. This led to Harvard Medical School and to training as a neuro-surgeon. Although he continued to be plagued by doubts about his intelligence and ability to perform in such a demanding area of medicine, perform he did.

“The research is really the most exciting part of what I do,” Alfredo said. “I’m not only trying to save lives in the operating room. The research we are doing with this



For Alfredo Quiñones-Hinojosa, his journey was difficult, but greatly supported by teachers and mentors along the way who recognized his talent and determination.

tissue is to try and find out whether or not there are stem cells within brain cancer – stem cells that are going crazy, stem cells that cannot regulate their own growth and are therefore killing patients. That’s my research.”

Alfredo tells his story so that other immigrants from poor countries can take hope.

“I wanted to tell the story about this underdog, this kid, who came to the United States with nothing and now based on hard work, mentorship, doors being opened, opportunities being given, and my taking those opportunities, I was able to show the world that you can still fulfill the American Dream and that America is still the most beautiful country in the world.”

Dr. Nam Tran, Neuro-Oncology Surgeon, Moffitt Cancer Center, Tampa, FL Country of Origin: Vietnam

"I came to the U.S. when I was eight on one of the first evacuations out of Vietnam prior to the fall of Saigon because my father worked with the U.S. government as a photographer and interpreter. Our journey to the U.S. brought us through Guam, the Philippines, Hawaii and Camp Pendleton Marine base in San Diego, where we awaited sponsorship. We were then sponsored by the generous Hurt family to settle in Phoenix."

Nam does not minimize the difficulty of growing up as an Asian immigrant in Phoenix with limited English and the family strife that came from straddling two cultures. Racism in Arizona against Asian immigrants was strong then, says Nam, not unlike the current racism directed at Mexican immigrants. But there was a family emphasis on education and learning English, and Nam was fortunate to have some teachers who encouraged and supported him. Although there were low expectations for Asian immigrant students throughout the Phoenix Public Schools, one teacher in particular recognized his talent in elementary school and made sure he got into the gifted and talented program. "I had an early interest in science and in each grade had a teacher who took a special interest in me through the 12th grade," says Nam.

After graduating high school, he struck out on his own for Northwestern University just outside of Chicago. He put himself through

college by working in a research lab as well as a bicycle shop.

He then completed a doctoral program in neuroscience at the University of Southern California. In order to stay in touch with the clinical side of medicine and not lose sight of the reasons for doing science research, he entered medical school in Arizona. His love of neuroscience and mentorship by the medical school faculty inspired his journey to neurosurgery.

Now a neuro-oncology surgeon at the Moffitt Cancer Center in Tampa, FL. Nam treats many patients with complex brain and spinal cancers that challenge him to push the boundaries of surgical practice, treatment strategies, and clinical research. At Moffitt, there is a strong emphasis on personalized medicine that uses individual genetic profiles as a framework to fight tumor cells. "We use genetics," says Nam, "to modify viruses that specifically target the individual's tumor cells and inject them directly into the tumor while ramping up the immune system with drugs. The individual's body then recognizes tumor cells as foreign bodies and harnesses the power of the body to fight them." This is an exciting new frontier in the treatment of cancer and Nam is a vital contributor to the discipline.



A 2007 report on *Immigrant Entrepreneurs in the Massachusetts Biotechnology Industry* found that 26% of the state's biotechnology firms had an immigrant founder or co-founder, although immigrants were only 14% of the state's population. These immigrant-founded firms specialize in the most complex, risky, life science-intensive aspects of biotechnology to seek knowledge directly applicable to human health.¹⁰ Amar Sawhney and Sonny Vu are founders of two such biotechnology firms.

Amar Sawhney, Ocular Therapeutix, Inc. Bedford, MA County of Origin: India

As a biotechnology entrepreneur, Amar is both a science pioneer and a champion businessman. More than 120 patents are linked to his innovations. This has created a demand for the companies he's founded like Confluent Surgical, which developed sealants to be used in surgery. Further spearheading "in situ polymerization" (making materials that come into contact with human tissue), he founded Ocular Therapeutix. There, he and his 45 employees are developing the world's only ocular sealant as well as technology to replace most eye drops with an absorbable drug depot placed non-invasively in the eye. This product has great potential to improve the drug delivery system for treatment of glaucoma, an eye disease with increasing presence in the aging U.S. population.

Amar studied in India and continued with graduate work in Texas. He came to love America for its openness to newcomers and the opportunities it provides. When he

decided to become a biotechnology entrepreneur, he found the U.S. to be a welcoming environment.

"I was a 32-year-old kid going out to raise money," Amar said. "Who would be crazy enough to lend me money without a long lineage or history? But in this country, they do. I found they support you, they share your vision and work beside you."



Sonny Vu, AgaMatrix, Salem, NH

Country of Origin: Vietnam

Sonny Vu is co-founder of AgaMatrix, a company that makes a blood glucose monitoring device called the “next generation” of monitoring products for diabetes. Working with Sridhar Iyengar, a second-generation immigrant from India, they developed a biosensor product line that resulted in a mobile medical device for monitoring blood glucose using an iPhone. This product is a boon for the many Americans who have diabetes and need to test their blood sugar levels frequently.

This did not happen easily. AgaMatrix was founded in 2001, a particularly hard time to be a biotechnology start-up with the downturn in the technology marketplace. The early days of AgaMatrix were shaped by the fact that both men lived and worked out of a cramped apartment in the Boston area with \$1.25 budgeted for lunch. But the very Spartan-like character of their operation impressed would-be investors who saw that these young men knew how to work and would not waste their money.

Being in Boston with connections to the Massachusetts Institute of Technology and Cambridge University in England were advantages for their fledgling company. Close to sources of student interns and investment money, and with serious academic credentials in their own right, Sonny and Sridhar developed a smart team, worked cheaply and had a product with a



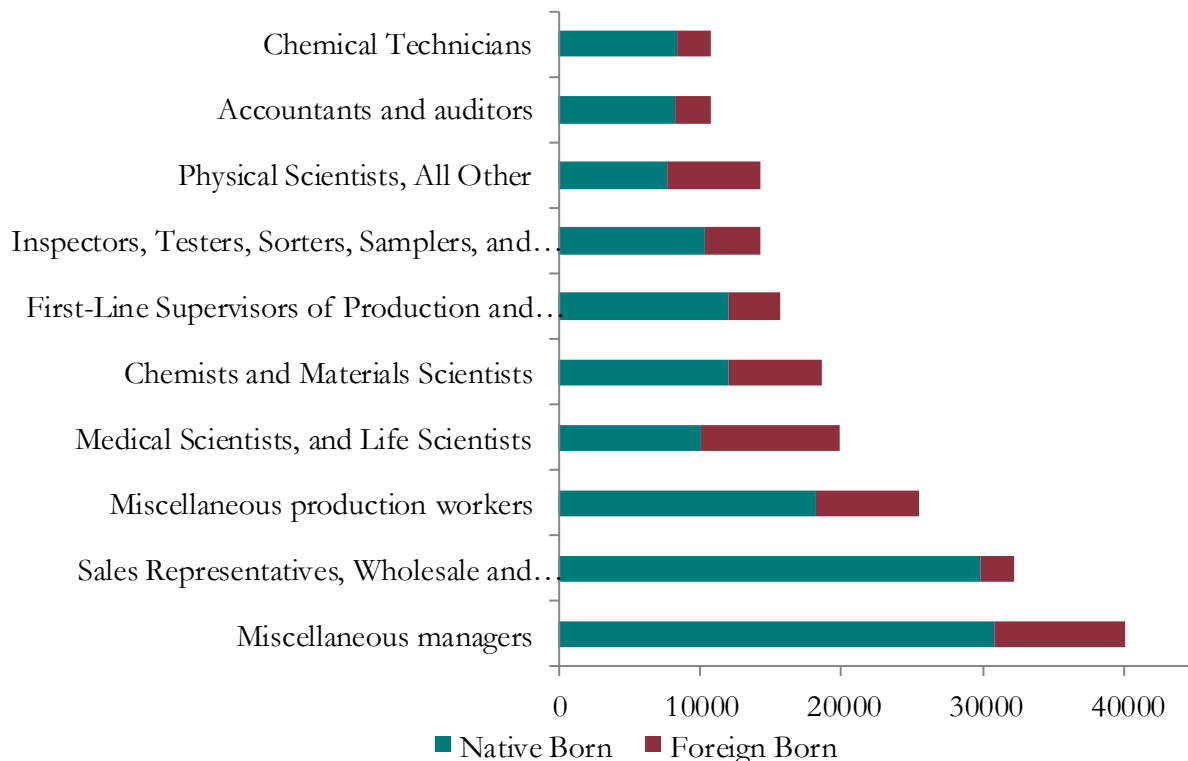
large market potential in both the United States and internationally. They are convinced that their immigrant backgrounds made the five years from a good idea to creating a product line bearable, if not easy. The immigrant’s desire to “make it” and start his or her own business, coupled with the ability to find other like-minded young men and women who are often immigrants themselves or children of immigrants, greatly aided them in the struggle to start their business.

Now, AgaMatrix produces a mainstream medical device that can connect to an iPhone or iPod with test results for the individual that can be immediately sent to a patient’s doctor. It also provides a history of readings to spot trends in glucose levels. Now available through such retail giants as Amazon, Target and Walmart, the cost of the medical device is supported by many insurers including Medicare.

The Foreign-Born in the Pharmaceutical Industry

Allied to biotechnology is the pharmaceutical industry. Both Amar Sawhney and Sonny Vu emphasize that immigrants are helping to keep the United States on the cutting edge of innovation. This edge is critical for the nation to remain competitive internationally especially in the pharmaceutical industry. A 2014 report from George Mason University’s Institute for Immigrant Research found that 17% of the employed labor force in pharmaceutical manufacturing is foreign-born. The largest occupational category is Research and Development (R&D), with immigrants comprising 33% of the labor force. Within R&D, about 40% of the Chemical/Material Scientists and Medical Scientists are foreign-born.

Figure 4
Top Occupations in Pharmaceutical Manufacturing Research and Development



Source: American Community Survey 5-year Estimates (2010-2014) and IPUMS-USA, University of Minnesota, www.ipums.org.

The top birthplaces of immigrants in the pharmaceutical industry are India, China, Mexico, the Philippines, South America, the West Indies, Africa, Vietnam, Central America and Eastern Europe. According to the Institute's report, many of these countries are also among the emerging pharmaceutical-producing countries. The fastest growing countries are China, India, Mexico and Vietnam—with each showing annual growth of \$250 million. From 2006 to 2011, the U.S. share of the global pharmaceutical market declined 7%, from 41 to 34%, while the emerging nations' share grew from 14% to 20%.¹¹

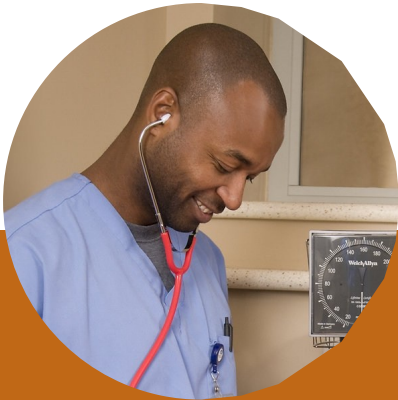
According to James Witte, PhD, director of the Institute for Immigration Research, two important points come to light: "Given that success in the pharmaceutical industry is so dependent on research, it is truly striking how much research and development labor is provided by immigrants." Moreover, the Institute observes that "because some of the origin countries of these workers coincide with the fastest-growing pharmaceutical manufacturing countries, the U.S. may well find that these emerging markets will present a significant source of competition for the talents and skills represented by the workers."¹²

Wherever one looks in the high-skilled arena of health care, from physicians and surgeons to medical scientists to researchers in the pharmaceutical industry, immigrants are playing a robust and vital role with a presence far outpacing their population share. They are truly bringing care and innovation that will improve the health of all Americans. As important as this is, however, this is not the only health area where immigrants play a critical role that is crucial to the health of Americans. This is in long-term care.

It is striking how much research and development labor is provided by immigrants.

James Witte, PhD

IMMIGRANTS | IN



LONG-TERM CARE

An American turns 65 every eight seconds.

American Association of Retired Persons, 2014

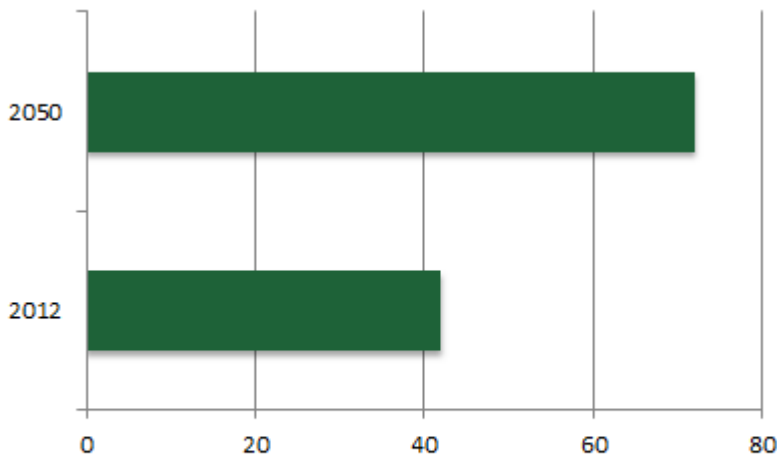
Changing Demographics Driving the Need for Long-Term Care

In 2008, the Institute of Medicine (IOM) issued a clarion call for health care workers to provide long-term care to America's aging population in a report called *Retooling for An Aging America: Building the Health Care Workforce*. Other studies have amplified this call many times over.

The IOM report projects that the number of Americans turning 65 will almost double between 2005 and 2030 and create multiple challenges for the delivery of health care. One particularly difficult challenge noted by IOM is that the majority of older adults suffer from at least one chronic condition and rely on health care services to a much greater extent than other population groups. Increased longevity due to medical advances compounds the challenge. Many Americans are now living into their 70s, 80s and beyond. Additionally, these adults are the most diverse the nation has ever seen, making their needs different from those of previous generations.

The rapid rise in older adults is primarily a result of baby boomers reaching age 65. “Boomers” are Americans born between 1946 and 1964, numbering 76 million. The first baby boomer turned 65 on January 1, 2011. As a result, the U.S. Census Bureau projects the numbers of Americans aged 65 and older will rise dramatically from 42 million in 2012 to 72 million by 2050 (Figure 5).²

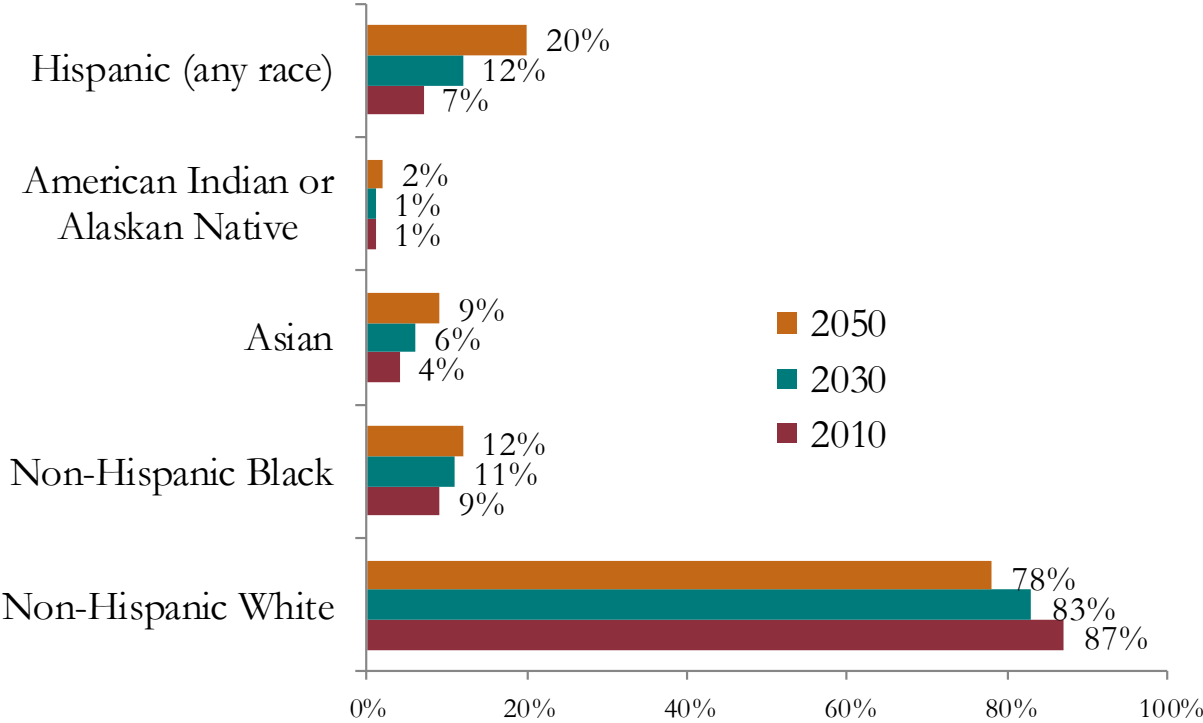
Figure 5
U.S. Population 65 Years or older,
2012 and 2050 (in millions)



Source: Ortman, M., Velkoff, V., & Hogan, H. *An Aging Nation: The Older Population in the United States, Population Estimates and Projections, Current Population Reports P25-1140*, May 2014

Accompanying the aging of the population is a shift in its racial and ethnic diversity. According to the Centers for Disease Control and Prevention (CDC), 80% of the adults aged 65 and older in the United States were non-Hispanic white in 2010. By 2030, this share will decline to 71%. Hispanics will make up 12% of the 65-plus population, non-Hispanic blacks more than 10% and Asians close to 6%. By 2050, non-Hispanic whites will be only 58% of the 65-plus population. Between 2010 and 2050, the Hispanic share will have almost tripled to 20%, the Asian American share will also triple to 12%, and the non-Hispanic Black population share will increase from 9% to 12% (Figure 6).^{13, 14}

Figure 6
Projections of Diversity of U.S. Population 65 Years or Older, 2010-2050



Source: Adapted from CDC Report "Aging in America," 2013

Within this diverse population, anyone who doesn't fall within the non-Hispanic white category is more likely to experience the effects of disparities in health and health care more than younger people. The result is poorly diagnosed and poorly managed chronic conditions such as heart disease, cancer and diabetes, as well as degenerative diseases such as Parkinson's and multiple sclerosis. Language barriers, differing cultural norms and low socio-economic status increase the complexity of improving health care for this aging and diverse group. Chronic diseases can also diminish the quality of life for the aging population by affecting a person's ability to perform essential daily tasks, such as shopping, preparing meals and taking medications properly. The need for caregivers for older adults will sharply increase in the next several decades.¹⁴

The Paraprofessional Healthcare Institute (PHI) reports that the fastest growing sector in health care is Home Care and Personal Assistance:



“Home care aides represent one of the nation’s largest and fastest growing occupations. We see them every day: carefully guiding a wheelchair down a city sidewalk, accompanying an older woman waiting to see her doctor, or alongside a man with spinal cord injury at work so he can provide for his family. And there are millions more we don’t see—in people’s homes and apartments, fixing dinner, helping with bathing and dressing, doing laundry. This is caring in America.”¹⁵

Workers in home care and personal assistance numbered 2.3 million workers in 2010. Most of these workers were home health aides (about 983,000). Approximately an additional 686,000 were agency-based personal care aides and 630,000-plus were independent providers in public programs. In the decade between 2008 and 2018, the home health and personal care aide occupations are projected to increase by 46% and 50% respectively. There is also a substantial “grey market” of workers who make private arrangements with individuals or families.¹⁶

According to PHI, the home care and personal assistance workforce is largely invisible in spite of its growing size and importance. Pay is low, and benefits, training and support are largely non-existent. The average age of workers is in the mid-40s. A Brookings Institution report found that education levels among workers are low, with only 35% of nursing aides and 32% of personal care aides having completed high school. Income levels are also low (\$21,000 to \$25,000 annually).¹⁷

The field is also heavily populated by ethnic minorities. A PHI analysis shows that, as of 2009, the race/ethnicity of home health aides was as follows:¹⁸

53% White, non-Hispanic

35% Black

8% Hispanic/Latino

4% Other

Among Personal Care Aides, the racial/ethnic background was as follows:²³

22% African American

18% Spanish, Hispanic, Latino

51% White, Non-Hispanic

9% Other

Workforce Challenges

The Paraprofessional Health Institute (PHI) emphasizes that little effort is being put into the development of home workers despite their numbers, the essential services they provide, and their growing importance in caring for older Americans and the disabled. PHI notes that “we invest too little in the preparation, compensation and support of those who enter this field leading to high turnover and recruitment challenges. The infrastructure for providing in-home services is underdeveloped and uneven.” The Brookings Institution, the Institute for Medicine and the Institute for

Women’s Policy Research also call for greater investment in the training and support of home caregivers. Home care workers, says PHI, see things in the home that “other providers are not trained to see – what is happening for the client, the aide, the family members...and in ways health care professionals could never achieve.” Immigration reform could also be instrumental in helping to stabilize this workforce by providing a pathway to legalization and/or citizenship for its undocumented workers.

Moreover, 23% of personal care aides were foreign-born with considerably higher foreign-born shares of the personal care workforce in the Pacific and Mid-Atlantic regions (42% and 30%, respectively) and more than 45% in California and New York.¹⁸

A report from the Institute for Women's Policy Research sheds further light on the presence of the foreign-born in home care. The report indicates that immigrants were 28% of the overall in-home care workforce as of 2010-2011—more than double their 13% share of the national population. This is a workforce that is overwhelmingly female. In certain metropolitan areas, the presence of female home caregivers was much greater: for example, 83% in Miami, 61% in Los Angeles and 53% in Washington, D.C. Among all home health workers, 56% were from a minority racial or ethnic group. The largest share comes from Central America and the Caribbean followed by Mexico, Asia, and Europe. It is estimated that one in five of these immigrant home care workers is undocumented, but the number may be higher, as many are likely to be employed directly by families seeking a caregiver and so their numbers go unreported.²⁰

Immigrants are:

13% of the population and
28% of the overall
in-home care workforce.

Marie Joseph Samon, In-Home Care Worker, Boston, MA Country of Origin: Haiti

Marie came to this country four years ago in the aftermath of the earthquake that devastated Haiti in 2010. The United States took in many Haitian refugees at that time to be resettled in various states under Temporary Protected Status. In 2012, Marie took advantage of free English classes at The Immigrant Learning Center in Malden, MA. She was successful in obtaining a job as a home health aide with an agency that provides multicultural home care.

Marie now cares for two Haitian clients in their homes on a part-time basis. Both clients have been in the United States for a long time and are now disabled, requiring home health care. One client is diabetic with hypertension and requires daily dialysis. A medical transportation service takes her to and from dialysis. While she is able to eat, talk and walk without assistance, her vision is very poor, and she needs extensive assistance in daily living. Marie prepares her food, assists with bathing, does light housework and even fixes her hair. She takes care of her for three hours per day during the week and four hours on Saturday. Marie and her client usually speak a combination of French and

English together as well as sharing a mutual understanding of Haitian culture.

Her other client is wheelchair-bound as a result of crippled knees and obesity. She is confined to the house and Marie comes in two hours every day to do food preparation, cleaning and to assist with bathing. This gives some respite from care to the client's daughter and son. The same is true for her other client, whose son lives with her but often needs to be away for work. Both her clients would like her to be able to stay nights, but there is no financial support for this.

Marie says she likes the work and enjoys helping people. But the pay is low at \$10 per hour and she is not eligible for benefits, although she is working 33 hours per week. She hopes to get benefits when she has more experience and can increase her hours. If she is able to earn more, she can get a car and that will open up additional jobs for her. If she can become a Certified Nursing Assistant, then jobs in nursing homes or as a live-in assistant will open up for her. In the meantime, Marie continues to improve her English at The Immigrant Learning Center so she can take advantage of future opportunities.

Where would health care be without immigrants? An interview with Jerry Rubin, Director, Jewish Vocational Services of Greater Boston, Boston, MA

Immigrant paraprofessionals play a huge role in health care delivery, says Jerry Rubin, director of Jewish Vocational Services of Greater Boston. In acute care settings, they are the backbone of the hospitals in environmental services, transportation and food services. In both acute care and community health centers, they are also patient care technicians/ liaisons and Certified Nursing Assistants. In Boston, they completely dominate the long-term care arena as home caregivers. They are on the front lines of contact and care. Health care is the dominant industry in Massachusetts and one of the biggest employers. Immigrants are a crucial paraprofessional workforce in sheer numbers, as well as being language and cultural assets. There are many skill issues to address, especially around English-language and use of technology, but

investing in developing this workforce really pays off for the state in delivering health services and containing costs. In fact, he says, "I think the health care system in Boston would collapse without immigrants."

Indeed, immigrants are vital to the health of all Americans. They are providing crucial medical services, especially in under-served geographies, as well as innovations in pharmaceuticals, medical devices and treatment options. Immigrants are taking care of our 65-year-plus and disabled populations allowing them to stay in their homes. Across all sectors, immigrants bring cultural and language know-how that enhances the delivery of care. Where would the health care system be without immigrants?



I think the health care system in
Boston would collapse
without immigrants.

Jerry Rubin

Maria P., Undocumented In-Home Care Worker, Boston, MA

Country of Origin: Bolivia

“My only crime was to come here to improve my life and the lives of my children,” says Maria. She had nursing training in her native country of Bolivia equivalent to being a Licensed Practical Nurse in the United States. Her intent was to stay only one to three years because she and her son did not have U.S. residency. Two daughters remained in Bolivia, and she needed to pay for their schooling and send money home. Then another daughter was born in the U.S., forcing them to remain here.

Maria and her husband struggled to build a life in this country and care for their children by stringing part-time jobs together, learning a new language and adjusting to a new culture. After years of hotel work in which Maria felt abused, she decided to further her nursing education at Bunker Hill Community College in Boston, MA, although her English remained weak, especially in reading and writing. Although it was difficult, teachers and neighbors helped her by taking care of her son while she attended classes. Ultimately, because of her strong nursing skills from her experience in Bolivia, she was successful in becoming a Certified Nursing Assistant (CNA). “It was my pleasure to do this work,” says Maria.

Prior to 9/11, she had little trouble obtaining work as a CNA in a nursing home that accepted her driver’s license for identification. But after 9/11, new requirements mandated

employers to provide a Social Security number for each employee, which Maria could not provide. She was also unable to renew her license. The nursing home gave her excellent references and as a result she worked in a private Jesuit Health Center for seven years. The Jesuit Center also helped her with letters to immigration services, but eventually had to let her go because of further restrictions on the immigration status of employees. However, they did connect her with a client who needed in-home services for whom she has provided more than seven years of in-home care. She even followed her client to an assisted living center where her client now resides. “My hours are reduced, but it is not just about the money. People just need love, and someday I will be like her [needing care].”

Maria is hopeful that President Obama’s executive actions on immigration will open the door for her to gain lawful status. She has a U.S.-born daughter who served in the army. She has resided here for 20 years and can show a strong work history, in-demand skills and more than 20 years’ tax payments. Then Maria and her son, who has applied for DACA (Deferred Action for Childhood Arrivals), can come out of the shadows and use their talents to increase their productivity to the benefit of all Americans.



Elizabeth Mande, Certified Nursing Assistant, Boston, MA Country of Origin: Democratic Republic of the Congo



“To save my life, I escaped from Congo, my native country in Africa. My mother is Rwandan and my father is Congolese. I lived all my life in Congo and married a Congolese man and we had 10 children together. But when the internal fighting between Congolese and Rwandans began hard in 1997, things got very bad. There was no food, no money, and people were angry. One day, some people came to my house and said I had to leave right then because I was part Rwandan and would be killed as a traitor if I stayed in Congo. They said I had to go or I would be burned to death.

“It was so terrible to leave. We had a very good life in Congo. I was taken to Catholic Charities a couple of hours away where I stayed for one year. I was so depressed. I could not eat or sleep and cried all the time thinking about my husband and my children. I

could not talk to any of them and it was so terrible for my children. Catholic Charities advised me to go to America and then work to bring my family there.”

After two hard years in the United States, which included a bout with homelessness, Elizabeth made contact with her family in Congo and began the gradual process of bringing them to America. She was also learning English through free classes at The Immigrant Learning Center, Inc. in Malden, MA, and subsequently paid \$1,000 to enroll in a Certified Nursing Aide (CNA) program. As a CNA, Elizabeth works in long-term care. Her current job is working exclusively with patients with Alzheimer’s in an assisted living facility. The work is hard, she says. She is responsible for seven patients at a time in an eight-hour work shift without breaks. Patients with Alzheimer’s are often like babies, she says, needing constant care and unable to communicate well. Nonetheless, Elizabeth always finds a way to show them the respect, love and attention they deserve.

Her job has some good features that are unusual in long-term care. She has paid vacation and sick time, health insurance and a 401K program. Regular monthly training are another benefit, and deal with such topics as medications, safety devices, fire procedures and food allergies. Nevertheless, Elizabeth would like to find work that is less strenuous but where she could still use her skills and compassion.

I think of myself as the rock in America,
the foundation for my children,
my grandchildren, to build their life here.

Elizabeth Mande

Elizabeth Mande, continued

The bright light in Elizabeth's life is the accomplishments of her children in America. She was able to bring four of her children to the U.S. in 2002 and the remainder between 2004 and 2008. They are all working hard in school and enjoying academic success. Three of her daughters have followed her into health care, seeking degrees in nursing. One is in a combined four-year program in science and nursing; another will graduate from a two-year program in 2016; another is attending an out-of-state two-year nursing program. It is a family that is giving back to America.

As Elizabeth says:

"I want to thank Americans because they didn't know me, but they accepted me. To help Americans understand how hard it is to leave your country, I want them to think about their grandparents and great grandparents, how hard it was for them to come here. I think of myself as the rock in America; the foundation for my children, my grandchildren, to build their life here. I want to stay in this land that doesn't have a problem with me because of where I was born and where we can live in peace."

IMMIGRANTS | *IN*



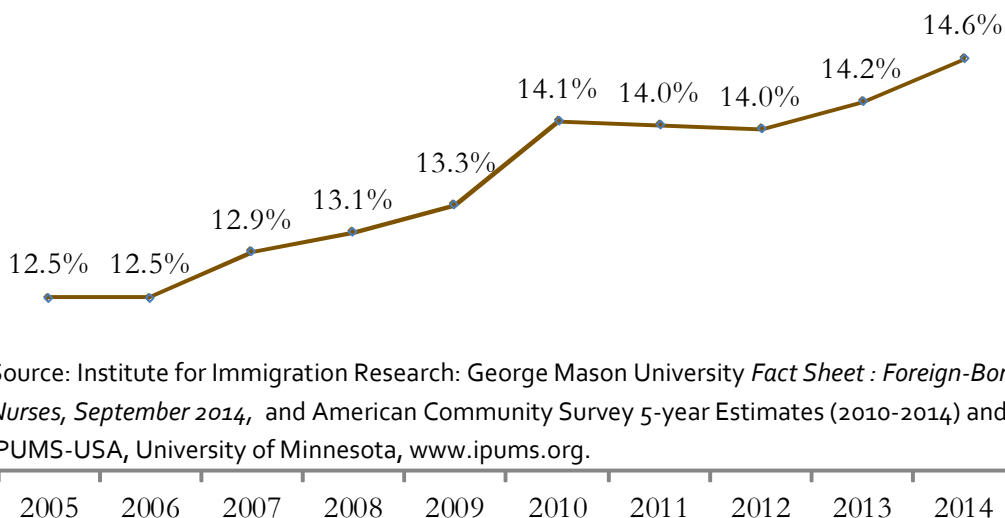
NURSING

There is projected need for more than one million new and replacement nurses in the U.S. by 2022.

Foreign-Born Registered Nurses in the United States and Projected Demand

This section was developed from data provided by the Institute for Immigration Research at George Mason University with perspectives from IMPRINT (Immigrant Professional Integration). Foreign-born nurses in the United States make up about 15% of all Registered Nurses (RN). The percentage has risen only slightly by 1.9% between 2005 and 2012, in spite of a projected job growth for RNs of 19% between 2012 and 2022. Moreover, one-third of the nursing workforce is reaching retirement age. This sluggish growth rate of foreign-born nurses in the U.S., combined with replacement needs, will result in more than a million job openings for RNs by 2022.

Figure 7
Percentage of Foreign-Born Nurses in the United States, 2005-2012



Source: Institute for Immigration Research: George Mason University *Fact Sheet : Foreign-Born Nurses, September 2014*, and American Community Survey 5-year Estimates (2010-2014) and IPUMS-USA, University of Minnesota, www.ipums.org.

Foreign-born RNs work primarily in hospitals: 67% of the overall foreign-born RN workforce is in hospital settings, followed by 9.5% working in nursing care facilities and smaller percentages in outpatient care (3.3%), home health care (3.8%) and physician offices (1.6%) (Table 2).

Not surprisingly, in 2012, the majority of foreign-born RNs were concentrated in just five states, which when combined employ more than half of the overall foreign-born RN workforce. California had the largest percentage at 26% followed by New York at 14% and Florida at 11%. Texas and New Jersey had somewhat more modest percentages at 9% and 6% respectively (Figure 8).

The majority of foreign-born RNs were concentrated in just five states: California, New York, Florida, Texas, and New Jersey.

Table 2
Industry Distribution of Native-Born and Foreign-Born RNs, 2012

	Foreign-Born RNs	Native-Born RNs
Hospitals	67.3%	63.7%
Nursing care facilities	9.8%	7.8%
Outpatient care centers	3.7%	4.7%
Home health care services	4.2%	4.4%
Other health care services	5.1%	4.2%
Offices of physicians	1.8%	4.3%
Elementary and secondary schools	0.9%	2.3%
Employment services	1.9%	1.5%
Administration of human resource programs	1.0%	1.3%
Insurance carriers and related activities	0.5%	1.1%
All other RNs	4.8%	4.0%
Total	100.00%	100.00%

Source: American Community Survey 5-year Estimates (2010-2014) and IPUMS-USA, University of Minnesota, www.ipums.org.

Recruiting Foreign-Born Nurses

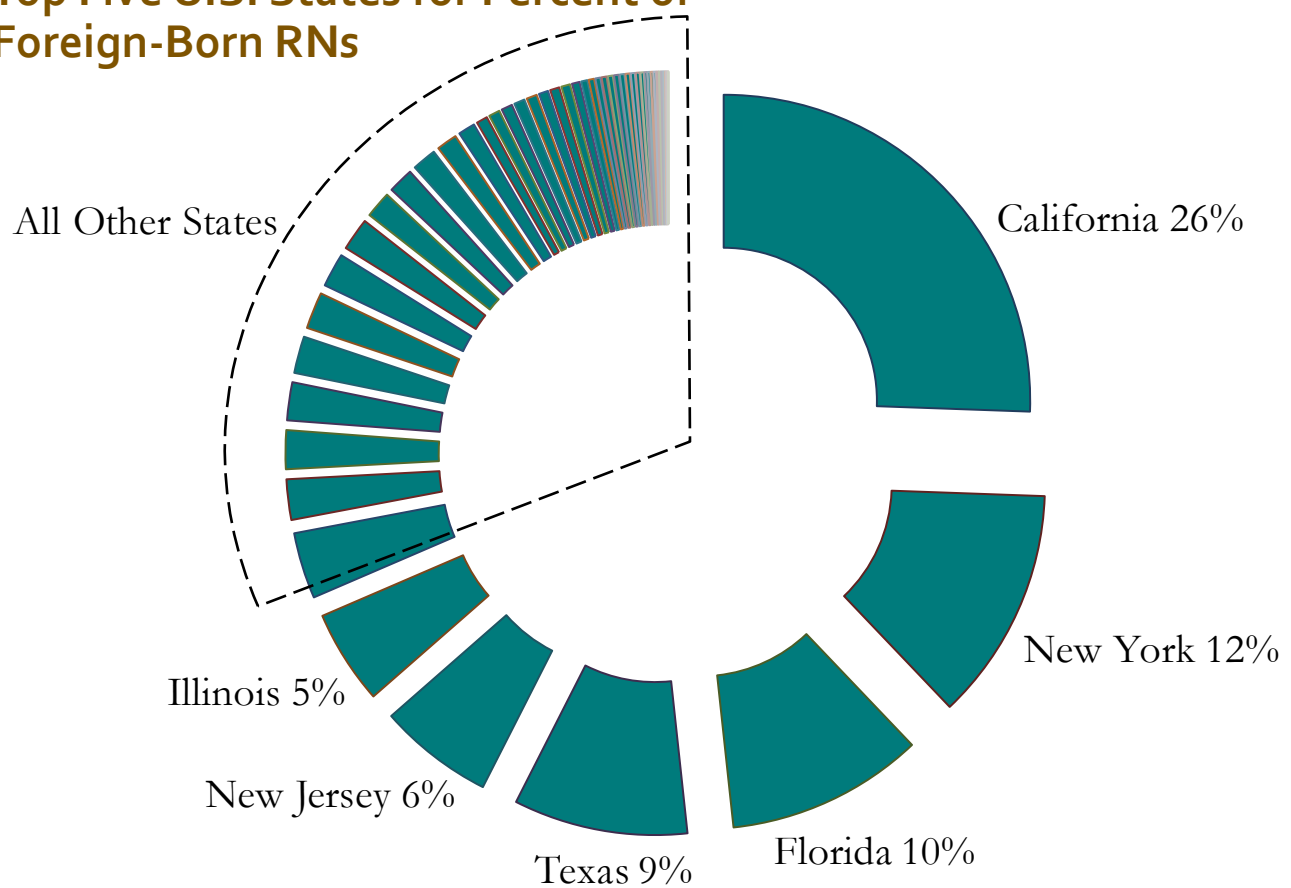
In 2012, the top five countries of origin for foreign-born RNs were the Philippines (33%), India (6%), Jamaica (5%), Canada (4%) and Nigeria (4%). These countries of origin reflect compatible definitions of nursing and training systems. One of the significant problems with foreign-born nurses is that there are no international standards for what it means to be a Registered Nurse or a nurse in general. According to IMPRINT (Immigrant Professional Integration), nurses are typically licensed according to the professional

standards of the individual nation in which they practice. Every country has its own rules and regulations.

To further complicate matters, many countries classify more than one occupation under the general heading of nursing. For example, the U.S. has Licensed Practical Nurses and Registered Nurses. Even within a single occupational category, such as Registered Nurses, individuals may have different levels of training, such as a two-year vocational program versus a bachelor's degree.

All these factors create a complex picture for recruiting foreign-born nurses to work in the United States. This country has often looked to other nations to help supply RNs in periodic times of nursing shortages, but it has had to draw on those few countries that have the training necessary to work as an RN here. The best known of these countries is the Philippines, which provides one-third of foreign-born nurses. The U.S. also frequently recruits from English-speaking countries such as Ireland, Nigeria and India.

Figure 8
Top Five U.S. States for Percent of Foreign-Born RNs



Source: American Community Survey 5-year Estimates (2008-2012)

Language and Cultural Issues

However, nursing shortages are not the only reason for recruiting foreign-born nurses. These professionals can play a vital role in improving the ability of the U.S. health care system to serve immigrant and ethnic minority patients. As articulated by the Sullivan Commission, “the lack of diversity in the health professions is compounding the national racial and ethnic health disparities.”²¹ The U.S. Office of Minority Health’s National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care (the National CLAS Standards) emphasize the importance of providing care that is accessible and effective for a diverse range of patients.²⁷ Institutions such as the Robert Wood Johnson Foundation have taken these efforts a step further and have begun to document the ways in which providing culturally appropriate care can reduce racial and ethnic health disparities.

Foreign-born health professions may encounter linguistic and cultural challenges as well, in pursuing their professions in the United States. For example, they may struggle to find and access high-level English classes to polish or improve their oral communication skills in the health care workplace. Even those who received their nursing training in English may find themselves tripped up by different cultural practices in the workplace, different scopes of work, or issues



related to regulations. Foreign-born health professionals may be unfamiliar with U.S. expectations regarding patient and family privacy laws and the American health insurance system. They may also be unfamiliar with the size and proliferation of roles among the typical “health care team” serving the U.S. patient.

Meeting the Demand for RNs in the Workforce

Health care was the only sector of the economy that continued to grow when the Great Recession started in 2008, and it continues to expand at a brisk pace. The continuing implementation of the Affordable Care Act has substantially increased the population of Americans with health insurance, further driving up the demand for health care services. RNs will be in particular demand. As noted above, there is projected need for more than one million new and replacement nurses in the U.S. by 2022.

The U.S. educational pipeline will not be able to meet this demand, nor provide the linguistic and cultural competence needed. Foreign-born nurses will be needed in increasing numbers. There are efforts underway to standardize nursing credentials across national borders referred to as “qualification harmonization.” Canada joined the U.S. in using the U.S. exam National Council Licensure Exam-RN (NCLEX-RN) to license its registered nurses in 2015. Mexico is part of ongoing discussions on harmonization of qualifications, and European countries have been

participating in the Bologna Process to coordinate the recognition of higher education credentials across national borders.

Here in the U.S., there are multiple efforts to help foreign-trained nurses become licensed to practice. One intensive program is the Welcome Back Initiative (WBI). This national network, based in San Francisco, has 10 centers across the country that provide a detailed, participant-centered model for serving foreign-trained health professionals. Each WBI site operates independently, but staff members participate in monthly conference calls to share best practices and use a common database to report on outcomes. WBI's model includes the English Health Train curriculum, an accelerated health-focused English for Speakers of Other Languages curriculum that has been adopted as a non-credit, or for-credit course by more than 50 institutions nationwide. WBIs also provide exam preparation services.

There are an additional number of effective interventions to help foreign-born health professionals, including nurses, gain credentials in the U.S. They include advanced English classes, educational counseling and guidance on re-credentialing, bridge coursework, test preparation for licensure exams and targeted internships. Many of these practices are detailed in a 2011 report *Talent is Ready: Promising Practices for Helping Immigrant Professionals*

Establish their American Careers. Many of these programs are housed within existing immigrant service organizations, refugee resettlement agencies, or communities. Some are stand-alone organizations, such as Upwardly Global and IMPRINT.

IMPRINT, a national coalition of non-profit organizations based in New York City, provides policy guidance and advocacy services for local providers. The Global Talent Bridge, an initiative of the World Education Services, provides training to practitioners who serve immigrant populations, such as adult educators and community college instructors. Global Talent Bridge also provides in-person workshops for immigrant professionals in collaboration with local partners. Upwardly Global, based in Chicago, provides similar services.

Communities and organizations that seek to draw on the talented pool of foreign-born health professionals, including nurses, can draw on all the fore-mentioned program models and resources to foster the economic and social integration of new Americans, while ensuring that the wider society benefits from their full talents.



The lack of diversity in the health professions is compounding the national racial and ethnic health disparities.

Immigrants fill critical vacancies and build bridges to increasingly diverse health care consumers.

Conclusions and Key Recommendations

There is no question that immigrants (the foreign-born) play critical roles in the high-skilled and low-skilled segments of the health care workforce in the U.S. They fill critical vacancies at both ends of the spectrum and bring cultural and linguistic skills that build bridges to an increasingly diverse group of health care consumers. High-skilled immigrants also play key roles in medical science, where they are developing life-saving drugs and treatment protocols and in so doing are keeping America on the cutting edge of innovation.

Immigrants are equally important to nursing, where culturally competent care is critical to effective medical care. However, foreign-born doctors and nurses face substantial barriers to licensure. The U.S. is losing the talent and skills of these professionals in a health care environment that is growing in its demand for more practitioners especially practitioners who reflect the racial and ethnic composition of the consumers they serve.

In long-term care, immigrants are a key labor force in home health care, which is essential to making it possible for the rapidly increasing senior population to “age in place” and to lighten the burden on family caregivers.

Beyond these direct contributions, immigrants in health care bring other levels of giving. They often embody many values that mainstream Americans hold dear as seen in the stories of immigrants told in this report. These include ambition, hard work, the persistence to “make it,” and the courage and willingness to take risks to overcome long odds.

They also show gratitude to America for the opportunities it affords them and to their families, which often establish a support network that makes their work and accomplishments possible. They further acknowledge teachers who recognized their intelligence and talent. Their encouragement and support played a key role in many of these stories. Many want to “give back” to the country that made it possible for them to succeed. In the words of long-term health worker Elizabeth Mande:

“I want to thank Americans because they didn’t know me but they accepted me...I want to stay in this land that doesn’t have a problem with me because of where I was born and where I can live in peace.”

It is clear that the immigrant health workforce is worthy of investment to keep Americans healthy. The following key recommendations are made to begin this process.



For the Health Care Field

- The level of awareness among upper-level managers and organizations of the importance of foreign-born workers in the health sector is uneven. Important stakeholders in the health sector, ranging from large hospitals to pharmaceutical companies and trade associations, should pay close attention and devote resources to facilitate the meaningful incorporation of foreign-born workers into the health sector.

For Health Care Workforce Development



- Facilitating the incorporation of these workers entails investments in workforce development. It is necessary to give institutional support to broader issues of occupational mobility, quality of work-life and the stewardship role, which foreign-born workers can play to improve the quality of the sector as a whole especially in reducing health disparities of multiple kinds.
- Invest in programs to improve their long-term labor market prospects. Differentiated workforce development strategies are critical to improving the insertion of new entrants especially in low-wage occupations of the sector such as nursing aides.
- Increase investment in national model programs such as the Welcome Back Centers and IMPRINT for immigrant professionals.
- Develop new programming and increase investment in existing programs to assist long-term health care workers especially in home health occupations through practice redesign and training on team-based care. Examples of this practice re-design approach include the California “Care Team Integration of the Home-Based Workforce” and the New Jersey Atlantic Health System’s team-based model for patients with chronic diseases. In this program, medical assistants take the role of health coaches.*
- Invest in the continued development of health care career ladders education and training programs starting at the aid level, such as Certified Nursing Assistant, to professional levels at community colleges and other public education/ nonprofit institutions. Link to job re-design with investments in promotions and wages increases. Include transitional education programs for under-educated workers.

*Based on recommendations from the Brookings Institution 2014 report *Part of the Solution: Pre-Baccalaureate Healthcare Workers in a Time of Health System Change*

For Labor Market Analysis

- Fund a neutral organization to research and develop a clearinghouse that shares best practices and data about health care practices to effectively utilize and support development of the immigrant health care workforce, emphasizing findings on health outcomes, process redesign, training, wages and cost.*
- Entrepreneurial activities to produce more nurses abroad for export to the United States are increasing. Processes to ensure the quality of this nursing education and support for integration of its graduates into the U.S. health care system need to be developed.
- It is essential to analyze the labor market situation of foreign-born workers in the health sector using multiple methods, research strategies and sources of data. By themselves, conventional supply and demand analyses provide an incomplete picture of the labor market situation and the strategic importance of foreign-born workers in the health sector.
- An example of a diversified approach can be found in the recent study from IMPRINT about what inhibits and facilitates foreign-born health professionals' integration into the U.S. health care workforce (*Steps to Success: Integrating Immigrant Professionals in the U.S.*, September 2015).



For the State Level

- Bring together health care institutions and regulatory bodies to begin the process of redefining and standardizing clinical tasks in given health care occupations for the best delivery of care to meet patient needs. For example, medical assistants may or may not be able to give vaccines, start an IV or perform an allergy scratch test depending on their location.*

*Based on recommendations from the Brookings Institution 2014 report *Part of the Solution: Pre-Baccalaureate Healthcare Workers in a Time of Health System Change*

For Federal Action

- Support the bill introduced on June 11, 2015, by Congresswoman Lucille Roybal-Allard entitled the Professional Access to Health (PATH) Workforce Integration Act. It is designed to create a place in America's health workforce for internationally trained health professionals who legally reside in the U.S. but do not work in the health field. The PATH Workforce Integration Act will provide these professionals with counseling and training opportunities to reduce their barriers to the health workforce, access to accelerated courses in English and assistance in having their foreign credentials evaluated. The bill will also help educate employers about the competency of health professionals trained outside of the U.S.
- Provide a new temporary special or provisional visa for home care workers that could transition to a permanent visa after a specified period of time and meeting of criteria.
- Legalization for undocumented care workers currently residing in the U.S. who meet specified criteria.
- Develop a state-federal hybrid system that combines a state-based selection system with a points-based system. Under this hybrid system, the federal government would give each state a set number of visas based on demographic and business data. States would share authority with the federal government to use these points to choose potential immigrants with the right qualifications to meet regional labor needs such as the need for direct care workers.**
- Pass comprehensive immigration reform that includes a pathway to legalization for the undocumented population and increases the number and type of visa categories.

**Based on recommendations from the Institute for Women's Policy Research 2013 report *Increasing Pathways to Legal Status for Immigrant In-Home Care Workers*

REFERENCES

1. Kristen McCabe, [*Foreign-Born Health Care Workers in the United States*](#) (Washington, DC: Migration Policy Institute, June 27, 2012).
2. Ortman, M., Velkoff, V. & Hogan, H., [*An Aging Nation: The Older Population in the United States, Population Estimates and Projections, Current Population Report P25-1140, May 2014.*](#)
3. R.N. Rao, ed., [*International Medical School Graduates in American Medicine*](#) (Washington, DC: American Medical Association, 2013), p. 21.
4. *ibid*, p. 13.
5. Z.S. Khan, [*Immigrants and the Medical Profession: Good for Our Health*](#) (Fairfax, VA: Institute for Immigration Research, George Mason University, May 2014).
6. Association of American Medical Colleges: [*State Physician Workforce Data Book*](#) (Washington, D.C. AAMC, 2015). Available at aamc.org/data/workforce/reports/profiles.
7. R.N. Rao, ed., [*International Medical School Graduates in American Medicine: Contemporary Challenges and Opportunities*](#) (Washington, DC: American Medical Association, 2010), p. 5
8. Stuart Anderson, [*The Contributions of Immigrants to Cancer Research in America*](#) (Arlington, VA: National Foundation for American Policy, 2013).
9. Alfredo Quiñones-Hinojosa, [*Becoming Dr. Q*](#) (Berkeley and Los Angeles, CA: University of California Press, 2011).
10. Daniel J. Monti, et al., [*Immigrant Entrepreneurs in the Massachusetts Biotechnology Industry*](#) (Malden, MA: The Immigrant Learning Center, June 2007).
11. Shaun Michel and James Witte, [*Immigrants Working for US: The Pharmaceutical Industry*](#) (Fairfax, VA: Institute for Immigration Research, George Mason University, August 2014).
12. Anne Reynolds, [*"Immigrant Impact on the American Pharmaceutical Industry"*](#) (Institute for Immigration Research, George Mason University, August 11, 2014).
13. Institute of Medicine of the National Academies, [*Retooling for an Aging America: Building the Health Care Workforce*](#) (Washington, DC: Nation Academies Press, 2008).
14. Centers for Disease Control and Prevention, [*The State of Aging and Health in America 2013*](#) (Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 2013), p. 1.
15. Dorie Seavey and Abby Marquand, [*Caring in America: A Comprehensive Analysis of the Nation's Fastest-Growing Jobs: Home Health and Personal Aides*](#) (Bronx, NY: Paraprofessional Health Institute, December 2011), p. 4.
16. *ibid*, p.4.
17. *ibid*, foreword.
18. *ibid*, pp. 4-11.
19. Martha Ross, Nicole Prchal Svajlenka, and Jane William, [*Part of the Solution: Pre-Baccalaureate Health Care Work in Time of Health System Change*](#) (Washington, DC: Brookings Institution, July 24, 2014).
20. Cynthia Hess and Jane M. Henrici, [*Increasing Pathways to Legal Status for Immigrant In-Home Workers*](#) (Washington, DC: Institute for Women's Policy Research, February 2013).
21. Sullivan Commission on Diversity in the Healthcare Workforce, [*Missing Persons: Minorities in the Health Professions*](#), 2004.
22. U.S. Department of Health and Human Services, Office of Minority Health, [*National Culturally and Linguistically Appropriate Services \(CLAS\) Standards: #3*](#) "Recruit, promote and support a culturally and linguistically diverse governance, leadership, and workforce that are responsive to the population in the service area."
23. IMPRINT, [*Talent is Ready: Promising Practices for Helping Immigrant Professionals Establish Their American Career*](#) (Chicago, IL: IMPRINT, 2011).



Institute for
Immigration Research



Published June 2016