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# Task Force on Foreign-Trained Physicians

## Minnesota Department of Health

***Report to the Minnesota Legislature 2015***

**January 2015**

# Task Force on Foreign-Trained Physicians: Report to the Minnesota Legislature

## January 2015

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*Protecting, maintaining and improving the health of all Minnesotans*

January 23, 2015

The Honorable Matt Dean
Chair, Health and Human Services Finance
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The Honorable Kathy Sheran
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Honorable Chairs:

I am pleased to present this report from the Task Force on Foreign-Trained Physicians, offering its recommended strategies for integrating refugee, asylee and other immigrant physicians into the Minnesota health care delivery system, as authorized by 2014 Minnesota Session Laws, Chapter 228, Article 5, Section 12.

At its first meeting six months ago, I urged Task Force members to think boldly and creatively about how the state could tap the talents of these clinicians. I likened the possibilities to the innovation that created the dental therapist profession in Minnesota: a situation where our state thought beyond the limits of the existing system to meet the health needs of its citizens and make the most of its talented workforce. In these recommendations, the Task Force has risen to that challenge, bringing us thoughtful, feasible and groundbreaking strategies that could fortify our physician workforce for years to come.

Once again, Minnesota could lead the nation in health care innovation. We have both an opportunity and an obligation to address this issue, as much for these professionals so eager to serve their state as for the thousands of citizens who would benefit from their care and the disparities and costs this diverse workforce could help reduce.

I urge you to consider these recommendations in the next legislative session, and welcome your questions and thoughts on how we can work together to strengthen Minnesota's health workforce.

Sincerely,

Edward P. Ehlinger, M.D., M.S.P.H.
Commissioner
P.O. Box 64975
St. Paul, MN 55164-0975

## Acknowledgements

MDH staff would like to thank the members and chair of the Task Force on Foreign-Trained Physicians for their dedication and collaboration over the past six months. So many gave so much, all on a volunteer basis and all in the spirit of helping our state break new ground in expanding health access and health equity. Many others deserve recognition and thanks, too, including our colleagues at the Board of Medical Practice and the Department of Employment and Economic Development, the Refugee Health Program at MDH, New Americans Alliance for Development and Women's Initiative for Self Empowerment staff and volunteers, and the representatives from health care associations, hospitals, insurers and providers who followed the work of the Task Force and offered suggestions. We would also like to express special thanks to the numerous immigrant physicians who attended Task Force meetings, participated in the Task Force survey, and shared their stories.

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# Executive Summary

## Background

Pursuant to 2014 Minnesota Session Laws, Chapter 228, Article 5, Section 12, in July 2014 the commissioner of health convened an advisory task force to develop strategies to integrate refugee, asylee and other immigrant physicians into the Minnesota health care delivery system.

The challenge of integrating foreign-trained physicians is complex and long-standing. In Minnesota, the issue has recently gained urgency as policy makers seek to address several major issues facing the state:

- Shortages in the supply of physicians.
- An aging and diversifying population.
- Persistent health disparities.
- Rising health care costs.

Integrating more immigrant physicians into Minnesota's health workforce could help address each of these issues.

## Findings

The Task Force completed the following tasks assigned by the Legislature:

1. **Comparison of the licensed physician workforce to the population overall**.
   - The licensed physician workforce is older than Minnesota's population.
   - The physician workforce does not mirror the state's racial and ethnic composition.
   - Licensed foreign-trained physicians represent 16 percent of the physician workforce, but most of Minnesota's largest immigrant and refugee communities are underrepresented.

2. **Identification of immigrant physicians seeking to enter the health workforce**.
   - Minnesota is currently home to an estimated 250-400 unlicensed immigrant physicians.
   - In a survey of the state's immigrant physicians, 87 percent of respondents were interested in entering medical practice or other health careers in Minnesota.
   - Among the survey respondents, 37 countries were represented and over 30 languages.
   - Just over half of the survey respondents were eligible to apply for medical residency, but only a small minority (17 percent) has been accepted into a residency program.

3. **Identification of barriers to practice**. Immigrant physicians face a range of barriers, with the following most significant:
   - *Growing competition for limited residency spots*: While 95 percent of seniors in U.S. medical schools get into medical residency, most immigrant physicians do not. This

competition will get even tougher with the "residency bottleneck": increasing numbers of medical graduates competing for a capped number of residency slots.
- *"Recency" of graduation from medical school*: Most U.S. residency programs consider only those who have recently graduated from medical school (within 3-5 years). Consequently, many of the most highly qualified immigrant physicians – those who have practiced extensively since medical school – are essentially disqualified at this point in the path to licensure.
- *Lack of recognized clinical experience*: Most American residency programs prefer or even require that applicants have clinical experience acquired in the U.S., but such hands-on experience is nearly impossible to obtain outside of medical school or residency.
- *Complexity and costs of testing and other steps needed to qualify for residency*: Foreign-trained physicians often need assistance in English proficiency, exam preparation and navigating the path to licensure. Assistance programs are crucial, but will continue to have only limited success if other structural barriers go unaddressed.

4. **Exploration of alternative professions**. Most immigrant physicians would prefer to practice as physicians, but 64 percent of respondents to the Task Force survey said they would also be interested in exploring other health professions. The physician assistant profession is likely the best alternative for most considering non-physician occupations. Barriers and costs should be removed or diminished, however, so these physicians can appropriately meet physician assistant education and licensure standards more quickly and cost effectively.

5. **Identification of costs and possible funding sources**. It currently costs $7,500-$15,000 for a foreign-trained physician to get as far as applying to residency programs, and even then, most fail to secure a residency and therefore never become licensed to practice. **The strategies recommended by the Task Force would entail greater initial investments – from $10,000-$60,000 per immigrant physician depending on his/her skills and readiness for residency – but are expected to bring significantly more physicians into the workforce and therefore a greater return on investment.**

Possible funding sources include (1) new State funding; (2) private funding and (3) philanthropic support.

# Recommendations

The Task Force recommends the following strategies, which it concludes will produce a larger and more diverse primary care workforce capable of reducing both health disparities and health costs in Minnesota:

- Create a **statewide council** on immigrant physician integration.
- Provide **gateway and foundational support** to immigrant physicians.
- Develop a standardized and rigorous **assessment process** to evaluate the readiness of immigrant physicians.
- Create a **Minnesota certificate of clinical readiness**.
- Develop a **clinical preparation program** for those needing it.

- Create **dedicated Minnesota primary care residency positions** for immigrant physicians willing to serve in rural or underserved areas of the state.
- Encourage or require Minnesota medical residency programs to revise their graduation **"recency" guidelines** to take into account other measures of readiness.
- Develop a structured **apprenticeship program** for highly experienced immigrant physicians willing to serve in rural or underserved areas.
- Develop **new licensing options** for immigrant physicians.
- Explore and facilitate more streamlined pathways for **non-physician professions**, including the physician assistant role.

# Background

## Charge

Pursuant to 2014 Minnesota Session Laws, Chapter 228, Article 5, Section 12 (Appendix A), in July 2014 the commissioner of health convened an advisory task force to develop strategies to integrate refugee, asylee and other immigrant physicians into the Minnesota health care delivery system.

Within this overall charge, the Task Force undertook the following tasks, as outlined in the law:

1. Analyze demographics of current medical providers compared to the population of the state.
2. Identify, to the extent possible, foreign-trained physicians living in Minnesota who are refugees or asylees and interested in meeting the requirements to enter medical practice or other health careers.
3. Identify costs and barriers associated with integrating foreign-trained physicians into the state workforce.
4. Explore alternative roles and professions for foreign trained physicians who are unable to practice as physicians in the Minnesota health care system.
5. Identify possible funding sources to integrate foreign-trained physicians into the state workforce as physicians or other health professionals.

The Task Force included representatives from health care, higher education, community-based organizations, workforce development, finance and government, as well as foreign-trained physicians themselves (see Appendix B). The Minnesota Department of Health (MDH) provided staff support, with additional support from the Board of Medical Practice (BMP) and the Department of Employment and Economic Development (DEED).

Between July and December 2014, the Task Force met monthly. It also held an open forum attended by over 50 immigrant physicians, and additional discussions with the Legislative Health Care Workforce Commission; the Minnesota delegation to the Health Care Workforce Policy Academy of the National Governors Association; immigrant community leaders; and the University of Minnesota's Graduate Medical Education Committee.

In addition, the Task Force convened four working groups that met between monthly meetings, including a group that examined strategies already in place to integrate immigrant physicians in Minnesota, in other states in the U.S., and in other countries, including Canada, Germany and Australia. The group investigated the nature and outcomes of these programs and pathways, distilled those most applicable to the Minnesota context, and used these findings as the basis from which to develop recommended strategies. A summary of these is provided in Appendix F, "Promising programs and pathways."

Detailed materials from the Task Force meetings are also available on the Task Force website.

# Definitions

At its first meeting in July 2014, the Task Force moved to use the terms "Immigrant International Medical Graduate (IIMG)" or "immigrant physician" rather than "foreign-trained physician" to describe more precisely the population of physicians referred to in the session law. Foreign-trained physicians, also known as International Medical Graduates (IMGs), are defined as individuals who obtained their basic medical degree outside the U.S. and Canada.[1] IMGs in the U.S. include several distinct subsets: (1) U.S.-born citizens who obtained their medical degree overseas (most commonly in the Caribbean or Central America); (2) IMGs who are foreign-born and reside in the U.S. on non-immigrant visas (such as J-1, O-1 or H1-B visas) and (3) IMGs who are immigrants to the U.S. classified as either permanent residents ("green card" holders), U.S. citizens, asylees or refugees.

**Pursuant to the law authorizing it, the task focused specifically on category (3) - referred to in this report as immigrant physicians[2] - and specifically immigrant physicians not licensed to practice medicine in the U.S.**

# Current Pathway to Licensure

To practice in the U.S., foreign-trained physicians must complete an intensive process that takes an average of 3-5 years (sometimes as long as 10 years) and costs roughly $7,500-15,000.[3]

Figure 1 depicts the steps an immigrant physician currently must complete to practice in Minnesota. The four overall stages are as follows:

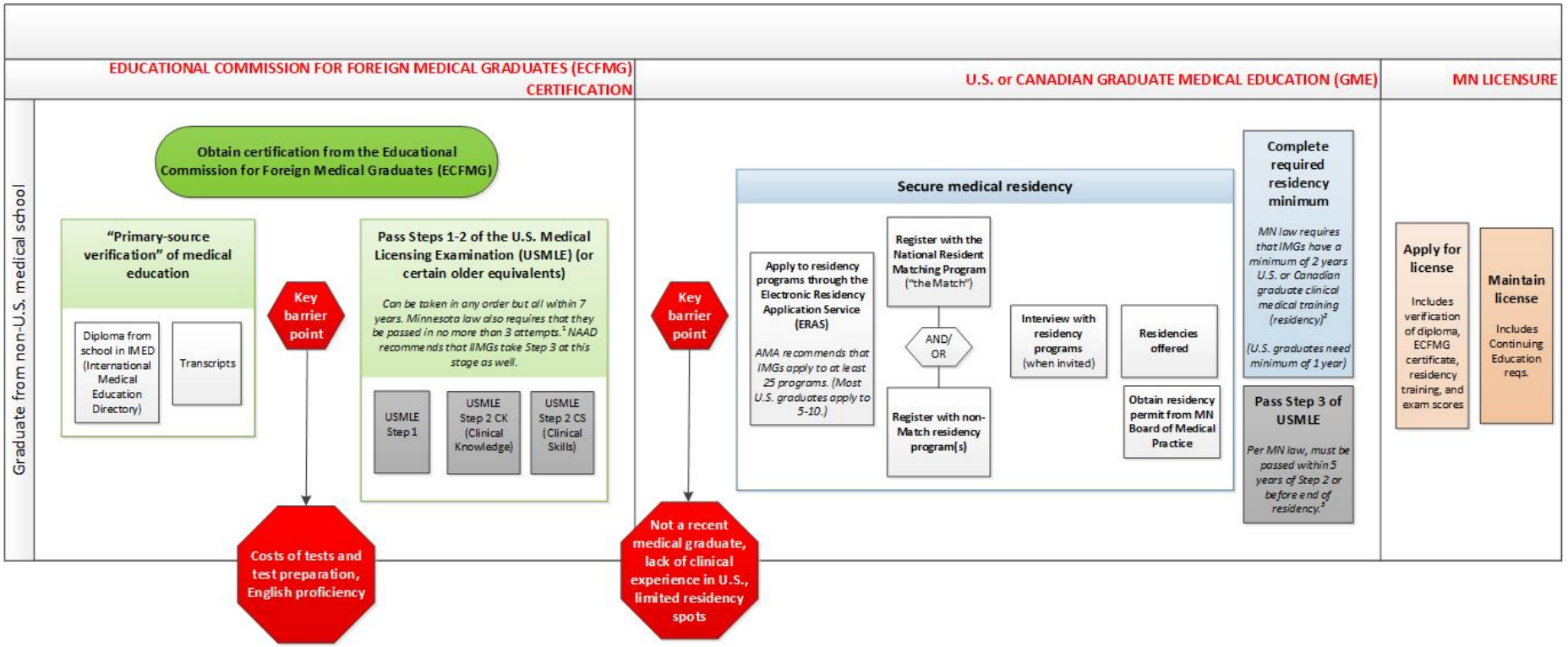
A. **Certification from the Educational Commission for Foreign Medical Graduates (ECFMG)**.
   The ECFMG is a U.S. nonprofit formed in 1956 to certify foreign-trained physicians as ready to enter American residency or fellowship programs. To be certified, a foreign-trained physician must (a) obtain "primary source" verification of their diploma and transcripts from their medical school, which must be included in the International Medical Education Directory; and (b) pass two of three "steps" in the United States Medical Licensing Exams (USMLEs). Becoming ECFMG certified takes an average of four years for foreign-trained physicians generally, but can take much longer for immigrant physicians specifically.[4]

B. **Completion of at least two years of graduate clinical medical training (most commonly, a medical residency) in the U.S. or Canada**.
   This includes securing a medical residency permit from the Board of Medical Practice if the residency program is in Minnesota. Most U.S. residency programs require applicants to be recent graduates of medical school, typically defined as graduation within 3-5 years of applying for residency.

C. **Passing Step 3 of the United States Medical Licensing Exams**.

D. **Application for a Minnesota license**.
   Minnesota statutes require completion of all the steps above before a foreign-trained physician can apply for licensure.

**Figure 1**. Pathway requirements for an immigrant physician to obtain a physician license in Minnesota.




[1] Some exceptions for physicians who are licensed in other states and are board certified (they are allowed four attempts in any one step of the USLME). Minnesota Statutes Section 147.037.

[2] Does not apply to an applicant admitted as an immigrant under certain conditions on or before October 1, 1991 as "a person of exceptional ability in the sciences or as an outstanding professor or research." Also does not apply to applicants licensed in other states under certain conditions. Minnesota Statutes Section 147.037, subdivision 1, paragraph (d).

[3] Combinations of FLEX, National Board, and USMLE may be accepted only if approved by the Board of Medical Practice as comparable to existing exam sequences, and all exams are completed prior to the year 2000. Minnesota Statutes Section 147.02, subdivision 1, paragraph (c).

**Immigrant physicians face a range of challenges along this pathway, which at key points can disqualify even those with extensive graduate medical training overseas (what is known in the U.S. as residency) and those who have practiced for many years internationally**.

These challenges will be discussed in more detail under Findings.

# Policy Drivers

The challenge of integrating foreign-trained physicians into the health care system is complex and long-standing. The number of foreign-trained physicians in the U.S. has ebbed and flowed over the past 70 years, largely in response to demographic shifts, workforce needs and immigration policies, and has been intertwined in many ways with the evolution of American graduate medical education.[5] Since 2005, various efforts at both state and national levels have sought to facilitate integration of foreign-trained physicians into the health workforce, including a similar task force in Massachusetts that issued recommendations toward this goal in December 2014.[6]

To date, such efforts have fallen into two main categories: (1) support services for immigrant physicians as they navigate the many steps and costs toward licensure, and (2) educational programs, including pre-residency preparation programs. As discussed in more detail under Findings, these initiatives have had limited success in integrating immigrant physicians.

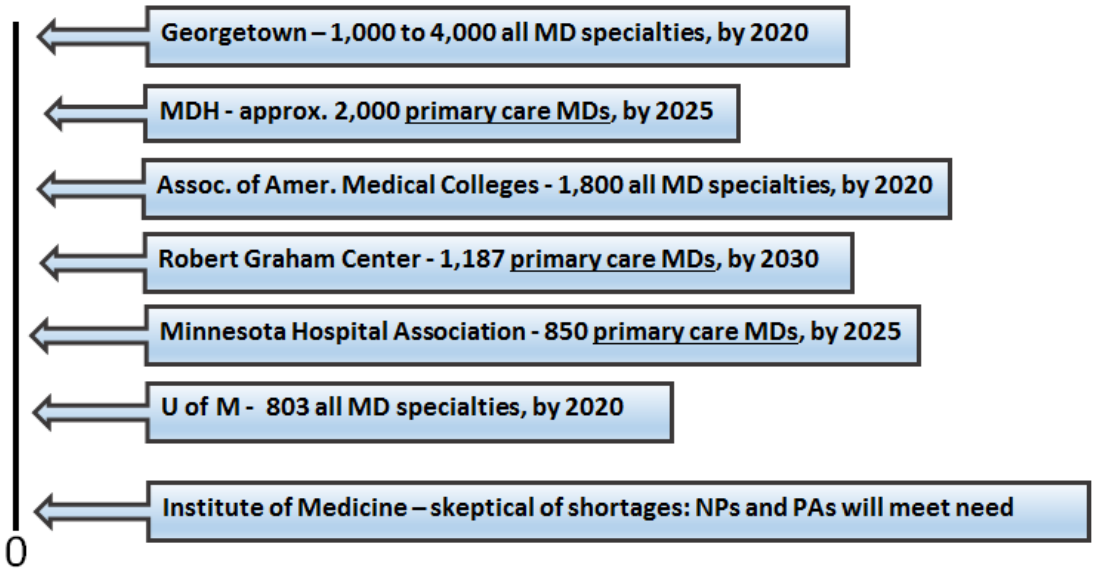
In Minnesota, the issue has gained urgency as policy makers seek to address several major, interconnected issues facing the state:

- Shortages in the supply of physicians.
- An aging and diversifying state population.
- Persistent health disparities.
- Rising health care costs.

## Physician shortage

Various academic, government, professional and industry organizations have projected shortages of physicians in Minnesota over the next 5-15 years, as summarized in Figure 2.

**Figure 2**. Physician shortage projections for Minnesota[7]



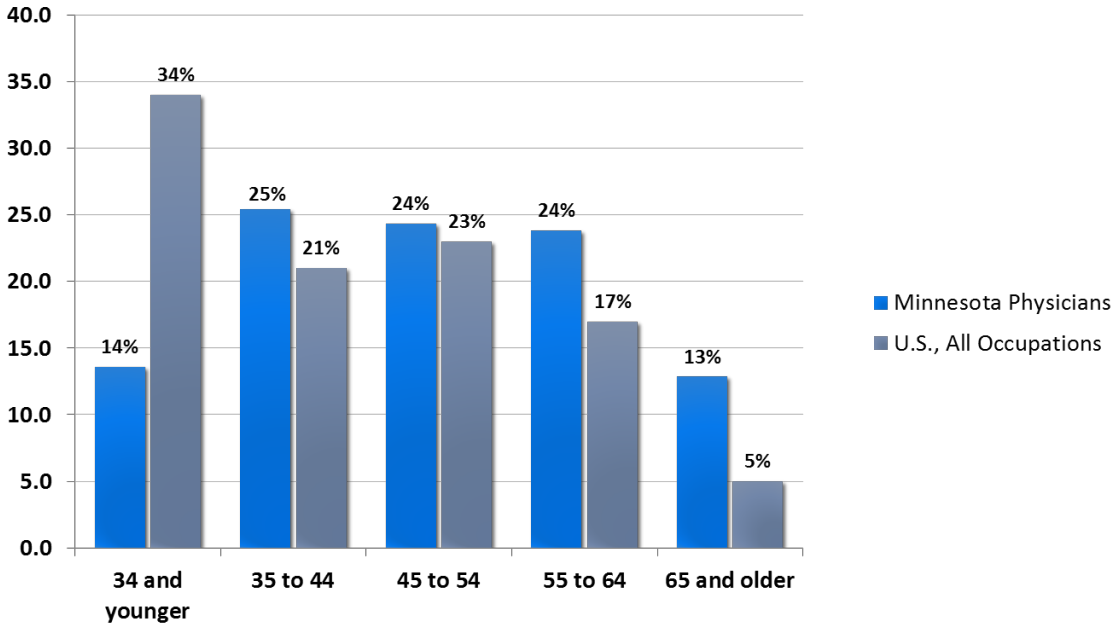

Analysts base these projections on variables such as medical school and residency cohort sizes, changing or growing demand for physician services, and changing work hour preferences by younger physicians.

The most important factor in the impending physician shortage is the aging of the U.S. population, which is expected to affect both demand (as a population with more seniors uses more health services) and supply (as a greater proportion of physicians age out of the workforce than will be replaced through the existing pipeline).

As Minnesota's state demographer has recently noted, this aging of the Baby Boomer generation will slow the labor force growth rate considerably, not only here in Minnesota but across the U.S. and in most developed countries. As a result, "**there will be heightened international competition for labor, particularly talented workers that can take on the mantle of highly skilled and complex job functions**. … Immigrant workers will be increasingly necessary to supply the labor force in Minnesota with ready hands and talented minds."[8]

This may be especially true in the physician workforce. In Minnesota, more than one-third (37 percent) of licensed physicians are 55 or older, and roughly 40 percent of primary care physicians say they intend to practice only 10 years or less into the future. [9] This is high relative to U.S. occupations overall, where only 21 percent are 55 or older (Figure 3), and higher than the overall state population (of which 26 percent of Minnesotans are 55 or older).

**Figure 3**. Age of Minnesota physicians vs. U.S. workforce overall




*Sources: Minnesota Board of Medical Practice, May 2014 and Current Population Survey, Employed Persons by Detailed Occupation and Age, 2013 (http://www.bls.gov/cps/occupation_age.htm).*

Beyond any future deficits, Minnesota already has physician shortages in many parts of the state, particularly in rural areas. A common indicator of geographic availability is the federal government's Health Professional Shortage Area designation. Substantial areas of Greater Minnesota are designated shortage areas in the fields of primary care, dentistry and mental health, as shown in the maps in Appendix C.

**If key barriers can be addressed, integrating more immigrant physicians into Minnesota's health workforce could help fill the most pressing of these shortages in a relatively short period of time**. Foreign-trained physicians are more likely than U.S. medical graduates to provide primary care and to work in underserved and rural areas, including in very isolated rural communities and Critical Access Hospitals.[10] In 2002, over half of the nation's Critical Access Hospitals employed at least one foreign-trained physician on their medical staff, including 62 percent of CAHs located in "persistent poverty" rural counties.[11]

> *Minnesota has a shortage of doctors coming. We can solve that. There are hundreds of immigrant medical graduates ready for residency here to contribute to their full capacity and serve Minnesota. We can be a solution to Minnesota's medical problems.*
>
> Immigrant physician at community meeting hosted by the Task Force

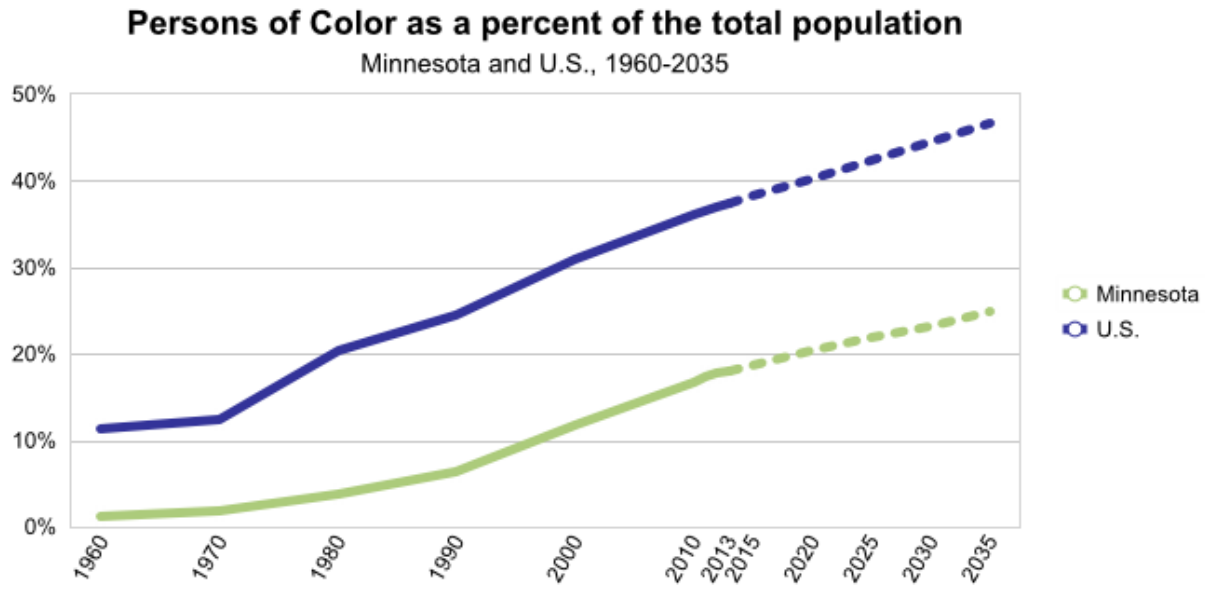
## Demographic shifts

Minnesota's population is undergoing major shifts, and will continue to do so over the next 15-20 years. As noted above, the state's aging population is growing rapidly, with the number of adults age $65^{+}$ expected to nearly double between 2010 and 2030, and to surpass the school-age population of the state for the first time.[12]

**This will have enormous implications for the state's health care system. Not only will it affect the health workforce supply as described above, it will create unprecedented demand for health care services, particularly primary care**. On average, seniors need and use health care services much more than those younger than 55; health care spending on Americans between the ages of 65 and 74 averages $9,017 per year compared to $2,747 for those between 25 and 34.[13] The number of people with chronic conditions will also increase dramatically, as discussed in more detail under Costs, below. Overall, as Minnesota's senior population grows, the burden on the state's health care system – including its publicly supported health care programs – will balloon, just as its physician workforce is shrinking.

At the same time, Minnesota's population is growing increasingly diverse (Figure 4).

**Figure 4**.




*Source: Minnesota State Demographic Center and U.S. Census Bureau, Decennial Census and Population Estimates, as compiled by Minnesota Compass.*

The state's immigrant and refugee population is growing especially quickly (Figure 5):

- **Minnesota's foreign-born population is increasing faster than the national average**: Since 1990, the foreign-born population has doubled nationally but tripled in Minnesota.[14]
- Among the state's youngest children (0-4), nearly one in every five is a child of an immigrant.[15]
- Minnesota has one of the largest African-born populations in the U.S., including the largest Somali and Liberian communities in the country.[16]
- The state is home to 33,000 refugees, representing 8.9 percent of Minnesota's immigrants, a far greater portion than the national average of 1.7 percent.[17]
- Last year, Minnesota was 13th in the nation for the number of refugees resettled, and 1st for secondary refugee resettlement (ssecondary refugees are refugees who originally resettled to another state before moving to Minnesota).[18]

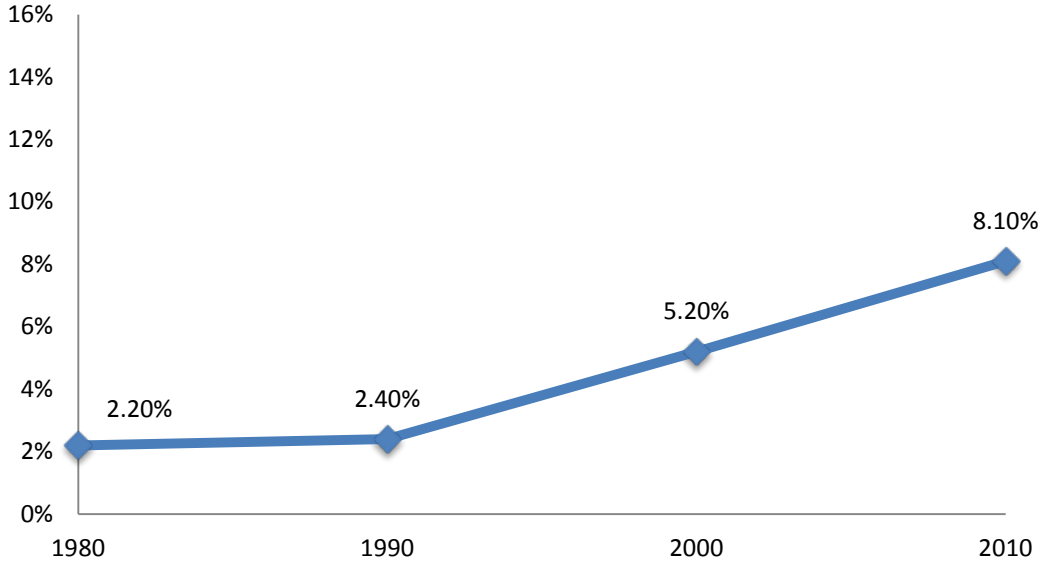
**Figure 5.** Foreign-born population and their children, Minnesota, 1980-2012


*Source: Integrated Public Use Microdata Series from the U.S. Census Bureau, American Community Survey, as compiled by Minnesota Compass.*

> *Minnesota is different from other states in that it has a lot of immigrants and refugees. These immigrants really need doctors who can represent and help them. A lot of messes come from using only interpreters, and this creates significant disparities.*
>
> Survey respondent originally from Ethiopia

This influx of immigrants has shaped Minnesota's labor force as well. According to the state demographer, **it is only because of new international arrivals that Minnesota experiences positive total migration of workers each year.** The state loses 12,000 residents between the ages of 16 and 64 annually due to domestic migration, but because of 20,000 international immigrants, gains about 8,000 working-age people overall.[19] These immigrants tend to be younger, too: 60 percent of Minnesota's foreign-born population is in the prime working years of 25-54, compared to 40 percent of its U.S.-born population.[20]

**Figure 6.** Foreign-born as a percentage of Minnesota's workforce, 1980-2010




*Source: Migration Policy Institute Data Hub; American Community Survey 2007-2011, as compiled in Corrie B, and Radosevich S, "The Economic Contributions of Immigrants in Minnesota." Minnesota Chamber of Commerce, Sept. 2013. Available at: http://cdn2.hubspot.net/hub/172912/file-371412567-pdf/Economic_Contributions_of_Immigrants_in_Minnesota_2013.pdf*

The immigrant workforce tends to be concentrated at two ends of the spectrum, in low- and high-skill industries, and in occupations and geographies that have difficulty attracting sufficient numbers of qualified native-born residents.[21] In 2013, roughly one-third of Minnesota's immigrants held a four-year college degree or higher, a similar proportion as the overall population.[22] Overall, Minnesota immigrants contribute an estimated $793 million in state and local taxes and bring a purchasing power of $5 billion to the state.[23]

Despite this growing diversity and high-skilled immigrant workforce, however, Minnesota's current physician workforce does not mirror the racial and ethnic composition of the state's population, in some part because immigrant physicians have struggled to join the physician workforce. **Currently only 14 percent of the state's physicians are individuals of color,[24] and certain racial and ethnic groups are especially underrepresented, including most of Minnesota's largest refugee and immigrant communities**. This imbalance is discussed in greater detail under Findings.

## Health disparities

Despite Minnesota's relatively high ranking in key health measures,[25] significant racial disparities persist. For some populations of color, rates of certain chronic diseases, sexually transmitted infections, and health risk behaviors can be as much as five times worse as those for the population groups with the best rates.

Examples of these disparities include the following:

- African American and American Indian babies die in the first year of life at twice the rate of white babies in Minnesota. While infant mortality rates for all groups have declined, the disparity in rates has existed for over 20 years.
- The rate of HIV/AIDS among African-born persons is nearly 16 times higher than among white, non-Hispanic Minnesotans.
- American Indian, Hispanic/Latino and African American youth have the highest rates of obesity.
- African American and Hispanic/Latino women in Minnesota are more likely to be diagnosed with later-stage breast cancer.[26]
- Nationally, foreign-born individuals are significantly less likely to receive cancer screening and other preventive health services.[27] Minnesota-specific studies have found Somali immigrants experience disparities in diabetes management[28] and have significantly lower rates of colorectal cancer screening, mammography, pap smears and influenza vaccination than non-Somali patients.[29]

These disparities have been stubbornly persistent. As a recent report to the Legislature on health equity in Minnesota put it: "Multiple efforts have been made to try to close the significant gaps in health outcomes across populations, but essentially we have been running in place."[30]

**Adding more immigrant physicians to the Minnesota health workforce offers an opportunity to tackle these disparities in more effective ways**. Research suggests that greater diversity in the health workforce, particularly better racial and cultural "concordance," or similarity between health care providers and the patients they serve, can improve clinical outcomes for racial minorities.

Evidence suggests this can happen in two ways. First, there is ample evidence that minority physicians are more likely to be accessible to diverse or underserved communities. Minority physicians are more likely than their white counterparts to practice primary care.[31] And while communities of color (Black and Hispanic communities, for example) are far more likely to face physician shortages,[32] physicians of color are more likely to locate their practice in areas of ethnic and racial diversity, and to serve patients not only of their own race but of other populations of color as well.[33] One study indicates that race is a stronger predictor than even socioeconomic status of the share of Medicaid or uninsured patients a physician treats.[34]

The second way a diverse physician workforce leads to better health outcomes is through patient-practitioner "concordance." That is, physicians who are "like" their patients in certain key ways can be better positioned to provide culturally competent, patient-centered care. There is a large and growing body of work studying the relationship between cultural similarities and health care access, quality and outcomes. **This literature supports an association between racial concordance and health care quality and outcomes, [35] and an even stronger association between language concordance and health care access/utilization, quality and outcomes**. A provider speaking the same language as his/her patient can lead to better outcomes through increased trust and better comprehension of care instructions.[36]

> *I am available and eager to contribute with my knowledge and skills to the U.S. health system. For all Hispanic/Latino groups, linguistic isolation can pose barriers*

> *to access the health system. Having invested many years in health services in Venezuela and worked many years as clinical researcher in Mayo Clinic, I am passionately committed to helping patients in my community who would benefit most from my expertise. I trust that the Minnesota health system could help foreign-trained physicians get into the system.*
>
> Survey respondent originally from Venezuela

This research has prompted many, including the Association of American Medical Colleges (AAMC), to recommend increasing the racial and ethnic diversity of the physician workforce as a way of addressing health disparities.[37] The Institute of Medicine specifically recommends increasing the diversity of language ability, background and experience, and notes that increasing health care provider diversity improves the cultural competence of health professionals and health systems both directly and indirectly: not only through the care delivered by providers of diverse backgrounds, but through the educational experiences those providers make possible for their colleagues.[38]

**Integrating more of Minnesota's diverse immigrant physicians offers a direct way to diversify the physician workforce and thereby help address the state's long-standing goal of reducing health disparities**. As the Sullivan Commission, a bipartisan initiative that examined diversity in the U.S. health workforce, put it 10 years ago: "The fact that the nation's health professions have not kept pace with changing demographics may be an even greater cause of disparities in health access and outcomes than the persistent lack of health insurance for tens of millions of Americans."[39]

> *Right now we can't give back to the community. We have a lot to offer. We are Minnesota residents willing to do what we can to solve the problems of disparities and inequity.*
>
> Immigrant physician at community meeting hosted by the Task Force

## Rising health care costs

Health care is increasingly expensive, both in the costs of its services and in the training required of its providers. **Greater integration of immigrant physicians could have an impact in these realms as well**.

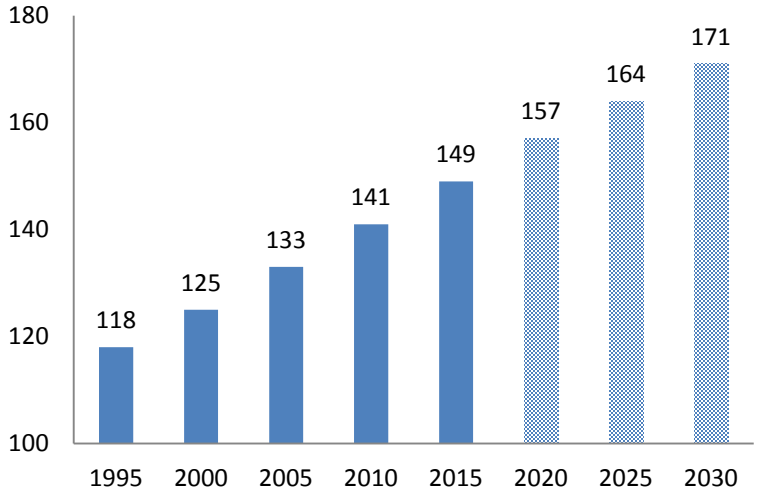
**Health care costs**. In 2011, health care spending in Minnesota grew to $38.3 billion, accounting for 13.6 percent of the state's economy, and is projected to more than double over the next decade if no changes occur in the drivers of health care spending or reforms to curb spending growth.[40]

A significant portion of these costs come from potentially preventable hospitalizations – those caused by deficits in timely access to high quality care in primary care settings, patient education and/or compliance with provider recommendations. The Agency for Healthcare Research and Quality has stated that "reducing preventable hospitalization rates is crucial to controlling health care costs."[41] In Minnesota, such cases resulted in roughly 53,000 potentially avoidable

hospitalizations in 2007 alone, at a cost of about $400 million, or 8 percent of inpatient cost for Minnesota adults. [42]

A related, but even more substantial, portion of U.S. health care costs are associated with chronic medical conditions. A majority of adult and youth populations in Minnesota exhibit at least one risk factor for chronic diseases, and obesity is rising in Minnesota as it is nationwide, as are rates of diabetes.[43] Such conditions account for 85 percent of the nation's health care costs overall,[44] including half (51 percent) of the potentially preventable hospitalizations in Minnesota noted above.[45] Treatment costs for chronic disease in Minnesota are estimated at $5 billion annually.[46] A higher priority on prevention and preventive care is widely seen as critical to controlling these costs, particularly since the number of Americans with such conditions is expected to grow dramatically (Figure 7).[47]

**Figure 7.** Number of people with chronic conditions in U.S., 1995-2030 (in millions)




*Source: Wu, Shin-Yi and Green, Anthony. Projection of Chronic Illness Prevalence and Cost Inflation. RAND Corporation, October 2000.*

Immigrant physicians could play a powerful role in reducing costs in both of these areas – preventable hospitalizations and chronic disease care – particularly since the rates of such hospitalizations are higher among patients of color and low-income individuals, and patients of color with chronic conditions are more likely to receive conflicting advice, duplicate tests or conflicting prescriptions, **all issues that can be exacerbated by language barriers and cultural factors**.[48]

Immigrant physicians could also improve health care access and outcomes more broadly, particularly in Minnesota's sizeable immigrant and refugee communities, where the ability to provide care in the same language could lead to better patient follow-through, diminished complications and fewer visits to health care facilities. While many health care settings use interpreters to accommodate non-English speaking patients, the presence of an interpreter is not as effective as direct communication between patient and provider. A 2004 study, for example, found that language concordance for Hispanic individuals improved physician-patient agreement

with regard to physician-recommended changes in patient-health behavior.[49] In another, Asian patients in visits with interpreters avoided asking questions more often than patients in visits where the patient and the doctor spoke the same language.[50]

Apart from the efficacy of care provided, one study concluded that simply by integrating more foreign-trained physicians to address existing physician shortages in areas designated as underserved, Minnesota could save $62.56 million.[51]

**Training costs**. For the Class of 2013, the median in-state four-year cost of medical school in the U.S. (including tuition, fees and living expenses) was $228,200. The median debt upon graduation was $170,000, with 86 percent of graduates carrying some level of debt.[52] A medical graduate must then complete a clinical residency, which in Minnesota in 2012 averaged roughly $153,000 per trainee (costs borne by the training site, which pays each resident a salary plus benefits, and incurs additional costs for their training and supervision).[53]

These high costs are often cited as one of the main reasons for the decline in the number of primary care physicians.[54] Primary care specialties pay less than other medical specialties, yet medical students considering practicing primary care shoulder the same student debt levels as all other medical students.[55]

**Immigrant physicians, in contrast, enter the U.S. health workforce pipeline with a medical degree already completed, and many wish to practice primary care**. The cost of preparing them for licensed practice is limited to the expense of becoming certified by the Educational Commission for Foreign Medical Graduates (which includes taking the first two steps of the United States Medical Licensing Exams); any related test preparation, coaching and support; and medical residency application fees. Currently, these expenses come to $7,5000-15,000 for an individual physician. They must then complete at least two years of medical residency, costs also required for U.S. medical graduates (USMGs), although in Minnesota, foreign-trained physicians are required to have at least two years of graduate clinical medical training while USMGs technically need only one.[56]

With new, more efficient pathways to licensure, these training costs could be further reduced. These options are discussed in more detail under Findings and Recommendations.

> *This could be a big win. A win for the Minnesota medical community, a win for Minnesotans needing culturally appropriate health care, a win for immigrant physicians, and a win for all taxpayers.*
>
> Immigrant physician at community meeting hosted by the Task Force

# Findings

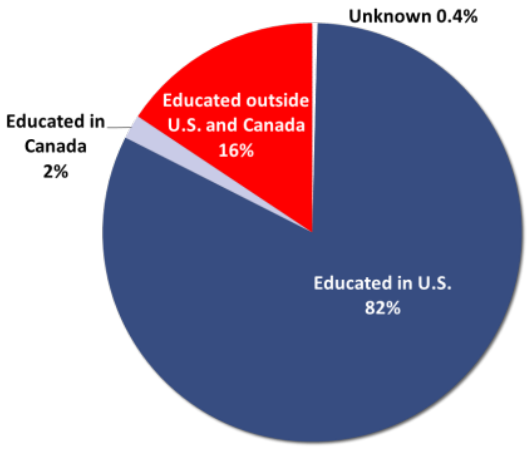
In developing its recommendations, the Task Force completed the following specific tasks assigned by the Legislature:

## Demographic Analysis

As context to the issue of unlicensed foreign-trained physicians, the Legislature requested that the Task Force also examine the demographics of the physicians who *are* licensed and compare those to the state's population. The Task Force examined data from a variety of sources to conduct this analysis, including licensing data from the Minnesota Board of Medical Practice (BMP), physician workforce surveys MDH conducts in partnership with the BMP, U.S. Census and refugee resettlement data, and immigrant community estimates.

Overall, foreign-trained physicians represent 16 percent of the state's licensed physician workforce (this includes all foreign-trained physicians, including U.S.-born physicians who went to medical school overseas and foreign-trained physicians who came to the U.S. on a visitor visa for their residency) (Figure 8). This is somewhat low compared to the U.S. overall, where foreign-trained physicians represent approximately 25 percent of the overall licensed physician workforce. It is also important to note that few of the licensed doctors are the immigrant physicians who are the subject of this report and who often arrive unexpectedly in the U.S. due to hardship (the category of physicians educated outside the U.S. and Canada also includes American-born citizens who went to foreign medical schools, and international medical graduates who come to the U.S. on non-immigrant visas, such as J-1, O-1 or H1-B visas).

**Figure 8.** Share of Minnesota-licensed physicians educated outside U.S./Canada, 2014.




*Source: May 2014 licensing data from the Minnesota Board of Medical Practice. The chart includes 21,669 Minnesota-licensed physicians, 90 of whom did not report a country of education.*

As discussed under Background, **the state's physician workforce is older than the state's population overall**: Over one-third (37 percent) of Minnesota's licensed physicians are age 55 or older (Figure 3), compared to a quarter (26 percent) of the state's population.[57]

The Task Force also compared race and ethnicity data. **Overall, the state's licensed physician workforce does not mirror the racial and ethnic composition of its population**. This is true even though the total proportion of licensed Minnesota physicians of color is roughly equal to the state's populations of color overall (14 percent of licensed physicians vs. 14.7 percent of the state population).

As in the case of the state's health disparities, it is in looking more closely – at specific racial and ethnic groups – that imbalances emerge. Two major racial groups are underrepresented in the current (licensed) physician workforce: African-Americans (2 percent of physicians vs. 5 percent of the population) and Latinos (2.4 percent of physicians vs. 5 percent of the population).

A similar dynamic is true in the case of the foreign-born population. Overall, foreign-born licensed physicians appear to over represent the state's foreign-born population: 14 percent of licensed physicians were born outside the U.S., compared to 8 percent of the Minnesota population. However, **most of Minnesota's largest immigrant and refugee communities are significantly underrepresented** (Table 2).

It is important to note that population estimates based on U.S. census data likely undercount immigrant and refugee communities. As the state demographer cautions: "These estimates … likely underestimate the size of our immigrant populations because trust and language issues depress response rates to Census surveys."[58] For this reason, estimates from community-based sources were included as well (Table 2). Data from additional countries from which immigrants come to Minnesota, and the number of currently licensed physicians from those countries, are provided in Appendix D.

**Table 2. Minnesota immigrant populations compared to Minnesota licensed physicians[1]**

| Country | Estimated foreign-born populations in Minnesota, 2010-2012 | Number of MN-licensed physicians educated in these countries[7] | Number of MN-licensed physicians born in these countries[7] |
|---|---|---|---|
| Mexico | 70,988[1] | 87[8] | 43 |
| Laos | 24,408[1]-66,200[2] | 0 | 19 |
| Somalia | 21,227[1]-77,000[2] | 7 | 28 |
| Vietnam | 18,548[1] | 3 | 64 |
| Thailand | 15,014[1] | 27 | 35 |
| Liberia | 12,216[1]-35,000[3] | 2 | 8 |
| Ethiopia | 12,503[1]-45,000[4] | 20 | 35 |
| Burma (Myanmar) | 4,183[1]-8,200[5] | 10[9] | 15[9] |
| El Salvador | 7,233[1] | 1 | 4 |
| Honduras | 4,534[1] | 0 | 1 |
| Cambodia (Kampuchea) | 3,045[1]-8,000[6] | 0 | 1 |

The Task Force concludes that the imbalances between Minnesota's population and its physician workforce are significant and warrant new and innovative action.

**[1]Sources for table**:

[1] Population estimates from the Minnesota Compass Project, citing Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010. Available from: http://usa.ipums.org/usa/.

[2]Population estimates cited by Arrive Ministries, a refugee resettlement agency and affiliate of World Relief (U.S.), on its website: http://arriveministries.org/who-we-serve/refugee-populations/somalis/. Estimate for Laotian community in Minnesota includes Laotian Hmong refugees.

[3] Population estimate from the Organization of Liberians in Minnesota, cited by Stratis Health, Liberians in Minnesota. Culture Care Connection series. Available at: http://www.culturecareconnection.org/matters/diversity/liberian.html

[4] Population estimate from the Ethiopian Community in Minnesota (ECM), correspondence from Mesfin Negia, Vice President and Board Member, December 23, 2014. Another source has estimated the Minnesota Oromo community alone (an ethnic group that makes up an estimated 34-40 percent of the population in Ethiopia) at 40,000, cited by Hirsi, I., in MinnPost, "Killings in Ethiopia outrage Minnesota's Oromo community." May 8, 2014. Available at: http://www.minnpost.com/community-sketchbook/2014/05/killings-ethiopia-outrage-minnesota-s-oromo-community

[5] Population estimate from the Karen Organization of Minnesota, cited in personal correspondence from Mimi Oo, December 23, 2014. Estimate includes all ethnicities from Burma, including Karen refugees living in Minnesota.

[6]Minnesota State Demographic Center, cited by Stratis Health, Cambodians in Minnesota. Culture Care Connection series. Available at: http://www.culturecareconnection.org/matters/diversity/cambodian.html

[7]Number of Minnesota licensed physicians comes from Minnesota Board of Medical Practice licensing data, October 2014. Note these totals may overstate the number of physicians from each country currently in active practice in Minnesota. Some physicians choose to maintain a Minnesota license even if they now practice in another state, have retired or are in a medical residency or fellowship program.

[8] Includes a significant number of non-Mexican individuals (including U.S. citizens) who attended medical school in Mexico.

[9] Experts on the Minnesota Burmese community report only eight physicians from Burma are currently practicing in Minnesota. Personal correspondence from Mimi Oo, December 23, 2014.

# Identification of Foreign-Trained Physicians Living in Minnesota

**The Task Force estimates that Minnesota is currently home to between 250 and 400 immigrant physicians who are not able to practice because of barriers to licensure**. New Americans Alliance for Development (NAAD), in partnership with the Women's Initiative for Self-Empowerment (WISE), two community-based nonprofits with extensive experience serving immigrant physicians in Minnesota since 2005, estimates that of the 300,000 refugees and immigrants who have made Minnesota their home since 1990, an estimated 300 are trained physicians who practiced in their home countries and of these, only about 20 have been able to practice as licensed physicians in Minnesota (leaving approximately 280 unlicensed).[59] A 2006 report estimated that 80 percent of African immigrants with medical training are "relegated to entry-level medical positions such as nursing aides – or, worse, unskilled jobs such as taxi drivers or parking attendants – simply because they lack the necessary licensing required for professional medical employment."[60]

Another important source of information on Minnesota immigrant physicians is the Foreign-Trained Health Care Professionals program administered by the Department of Employment and Economic Development (DEED). This program currently funds two sets of organizations – one in the Twin Cities (WISE in partnership with NAAD) and one in Rochester (Workforce Development Inc.) – to assist foreign-trained physicians and other health care professionals in obtaining licenses and certifications. As of December 2014, 146 immigrant physicians were enrolled in these programs. This total, however, does not include immigrant physicians who have previously participated in these programs (the two organizations have worked with over 300 physicians since 2006) or the many immigrant physicians who have never contacted the organizations, either because they are recent arrivals to Minnesota or because they arrived in the state before the programs were established and have been working in other occupations.

The Task Force is confident in its estimate of the number of unlicensed immigrant physicians living in the state. However, because there is currently no official, ongoing count of the total number of unlicensed immigrant physicians living in the state, the Task Force is recommending that a central roster be created (see Recommendations).

The Task Force also conducted a statewide survey of immigrant physicians between August and December 2014 to obtain deeper qualitative information about this population. A total of 69 immigrant physicians participated in the survey (out of 275 invited). Of these, **87 percent (60 individuals) indicated an interest in "meeting the requirements to enter medical practice or other health careers" in Minnesota**.

Just over half of the survey respondents have been certified by the Educational Commission for Foreign Medical Graduates (ECFMG), and are therefore eligible to apply for medical residency training. **The great majority (83 percent), however, have not been accepted into a residency program.** This is the most common and often impenetrable barrier for immigrant physicians, as will be discussed in more depth below under Barriers.

The survey also demonstrated the great diversity of skills and experience that Minnesota's immigrant physicians bring to the state. **Among the survey respondents, 37countries are represented and over 30 languages spoken** (Figures 9 and 10). Nearly half (43 percent) of the immigrant physicians surveyed speak more than three or more languages.

**Figure 9. Countries of birth, Task Force survey respondents, by count**

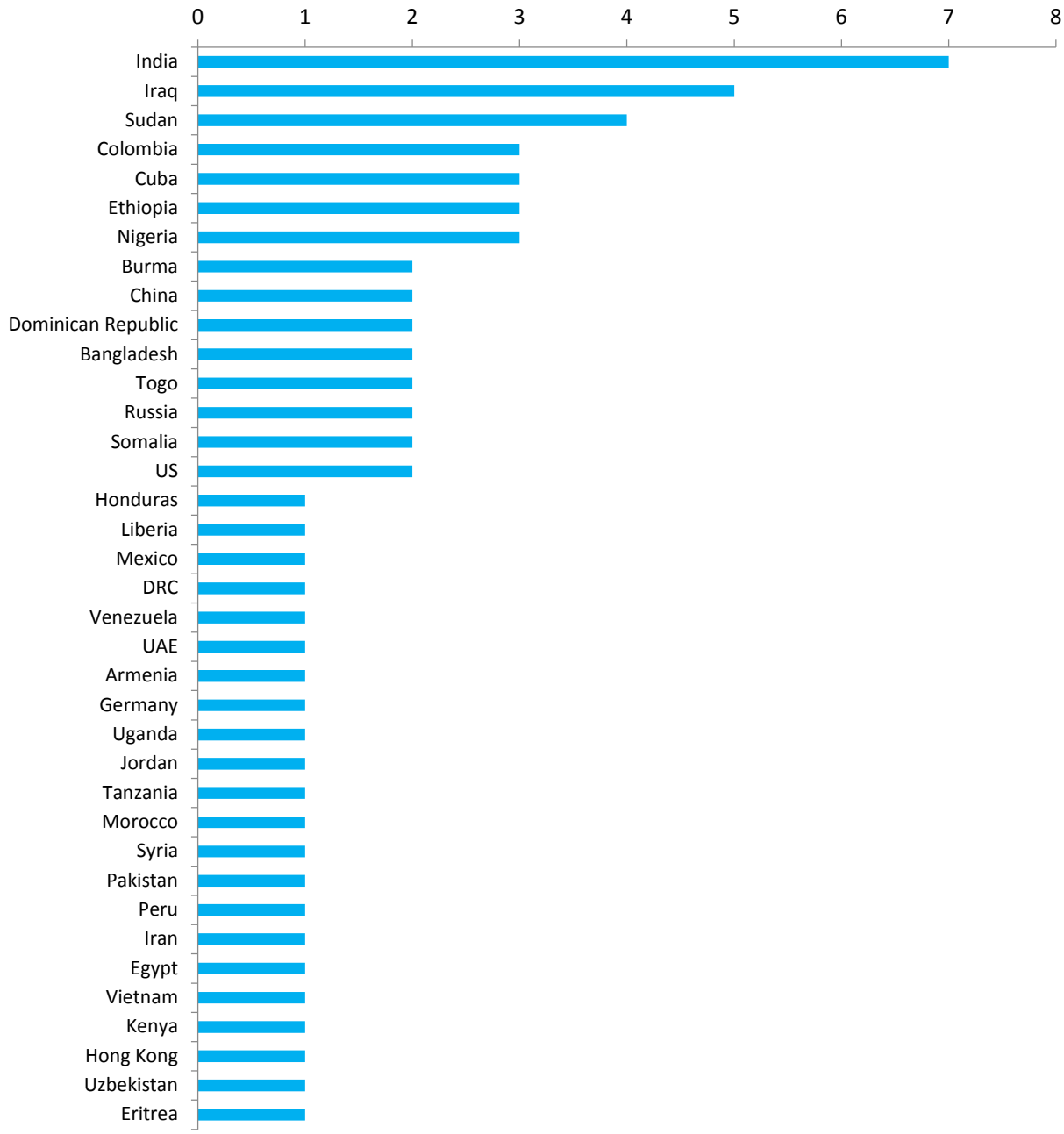
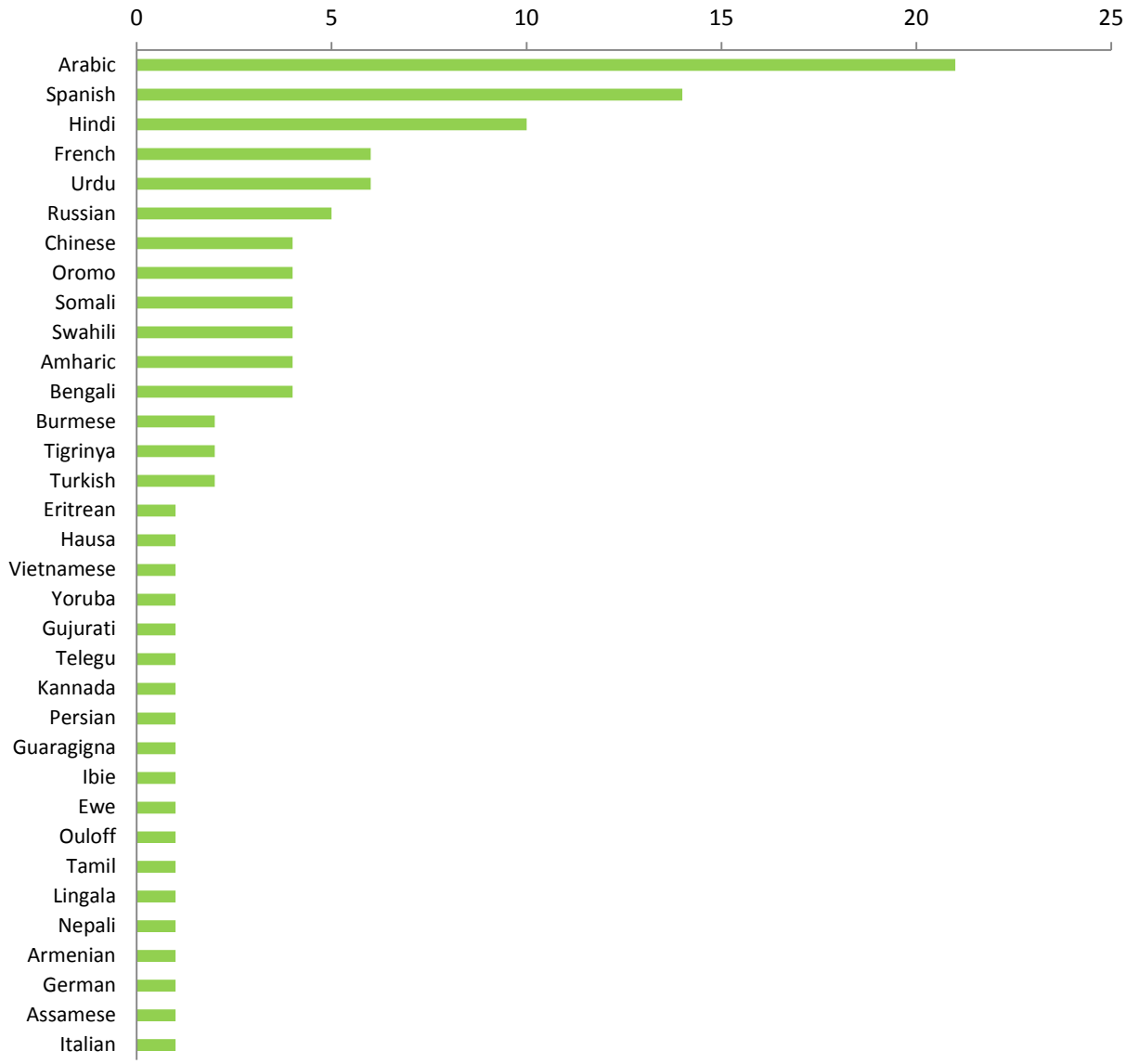
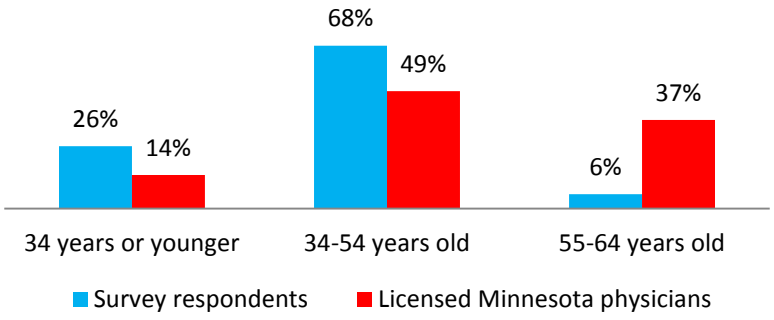


**Figure 10. Languages spoken, Task Force survey respondents, by count**



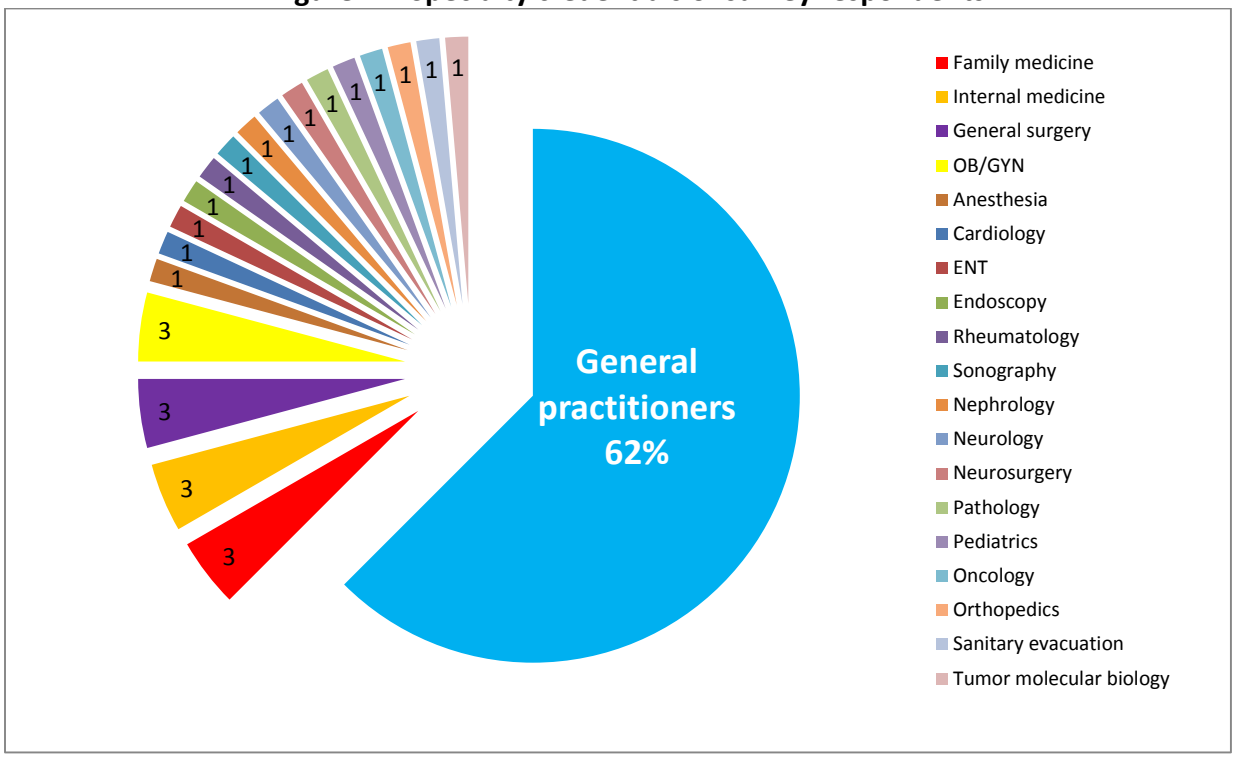

The immigrant physicians responding to the survey on the whole are younger than the current population of licensed physicians in Minnesota, with only 6 percent over 55 (Figure 11).

**Figure 11. Age of Task Force survey respondents vs. licensed MDs in MN**



Most survey respondents are trained as general practitioners, though over a third have credentials in specialties as well, and these span a large range of practice areas (Figure 12).

**Figure 11. Specialty credentials of survey respondents**




More survey results are discussed below and in Appendix E.

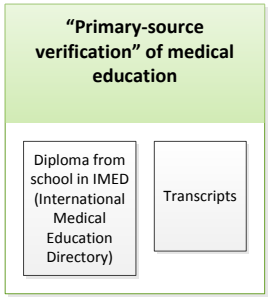
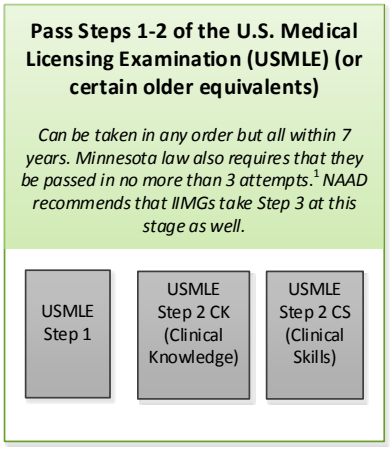
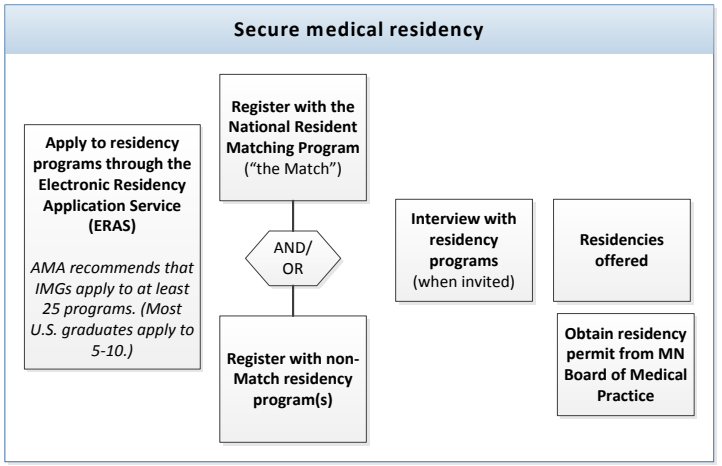
Foreign-trained physicians also shared their experiences at each Task Force meeting, and the Task Force held one evening and one weekend public forum to hear from foreign physicians. The information collected at these meetings is consistent with the survey results.

> *America is home. We have the education and have been struggling to stay within the health care industry so we can make a difference. Help us get back to doing what we love most: being a doctor.*
>
> Survey respondent originally from Tanzania

## Barriers to Integrating Foreign-Trained Physicians

The Task Force identified a range of barriers faced by immigrant physicians seeking to practice. It then analyzed these barriers according to where they obstruct the pathway to licensure and at what level they might be addressed: at the individual level, within the higher education system, within state policy, or at the federal or national level. The following table summarizes these findings.

**Table 3.** Barriers along pathway to licensure

| | EDUCATIONAL COMMISSION FOR FOREIGN MEDICAL GRADUATES (ECFMG) CERTIFICATION | | U.S. or CANADIAN GRADUATE MEDICAL EDUCATION (GME) | MN LICENSURE |
|---|---|---|---|---|
| |  |  |  |  |
| **BARRIERS** – Faced at individual level | • Expense of obtaining and translating credentials.<br>• Difficulties accessing home country medical school transcripts/ credentials. | • Cost of test preparation courses/materials and test fees (including any repeat tests needed), and cost of registering with ECFMG.<br>• Loss of income while preparing for and taking tests, and other financial stresses (e.g., lack of other employment, and past debt), often exacerbated when IIMGs have family obligations and arrive impoverished.<br>• Limited English proficiency (and fees + time needed for classes).<br>• Need to refresh clinical knowledge if didn't graduate or practice recently.<br>• Unfamiliarity with U.S. medical culture, vocabulary, treatment methods, protocols and technology.<br>• Need for social and emotional support amid stress of extended personal and professional dislocation. | • Lack of recognized clinical experience (often have extensive experience in home country but not in U.S.), and lack of opportunities to obtain it.<br>• Lack of faculty references and course/performance evaluations like those available to USMGs, and/or lack of current professional references.<br>• Language difficulties during application process (e.g., writing effective personal statement and responding to interview questions).<br>• Costs of applying to residencies (IIMGs are encouraged to apply to many).<br>• Difficulty navigating complex application and selection process. | • Cost of license application and renewal fees.<br>• Costs associated with certifications and assessments. |

| | EDUCATIONAL COMMISSION FOR FOREIGN MEDICAL GRADUATES (ECFMG) CERTIFICATION | | U.S. or CANADIAN GRADUATE MEDICAL EDUCATION (GME) | MN LICENSURE |
|---|---|---|---|---|
| | | • Lack of mentors/coaches and professional networks.<br>• Difficulty navigating complex certification and testing process.<br>• Other practical barriers: Lack of computer skills, transportation.<br>• Time limit (7 years) on completing all certification steps. | | |
| **BARRIERS** – Within higher education system | | | • "Recency" of graduation: Many residency programs require graduation from medical school within 3-5 years (many IIMGs have been out far longer).<br>• Fierce competition for limited residency spots; the worsening "residency bottleneck."<br>• Reported preference given to USMGs and other IMGs, and/or bias against IIMGs.<br>• Lack of recognition for prior clinical experience (often have extensive experience in home country but not in U.S.), and lack of opportunities to obtain experience that will carry weight in applications.<br>• Confusion/lack of transparency over application and selection process, including lack of info on Match and ranking criteria, and non-Match options. | |
| **BARRIERS** – State policy | | • Minnesota requirement that USMLEs be passed in more than 3 attempts. | • Regulatory issues limiting hands-on clinical experience prior to residency. | |
| **BARRIERS** – National & federal policy | • Home country medical school not included in IMED. | • Time limit (7 years) on completing all certification steps. | • Limited residency spots with Medicare cap; the worsening "residency bottleneck." | |

Among these barriers, the following are the most significant:

- Growing competition for limited residency spots.
- "Recency" of graduation from medical school.
- Lack of recognized clinical experience.
- Complexity and costs of testing and other steps needed to qualify for residency.

## Growing competition for limited residency spots

As discussed under Background, a key requirement for medical licensure in Minnesota is graduate clinical medical training in a U.S. or Canadian program accredited by a national accrediting organization approved by the state Board of Medical Practice. **With rare exceptions, immigrant physicians are required to complete at least two years of such training, typically in a residency program, regardless of whether they completed similar clinical training outside the U.S**. [61]

Obtaining such a position, however, is a difficult feat for a variety of reasons. One is the sheer number of medical graduates vying for an essentially static number of residency positions. Medicare funding for residency training (which covers about 25 percent of GME costs in the U.S.) has been capped at the number of slots that existed in 1997, and funding by Medicare is less than what it costs to provide care and training, according to the Metro Minnesota Council on Graduate Medical Education. Even as the number of slots remains capped, however, the number of medical school graduates is increasing as many schools expand enrollments in anticipation of the physician shortages. Sometimes referred to as the "residency bottleneck," this is a major reason cited by both the University of Minnesota and Mayo medical schools for why they do not plan to expand their medical school class sizes.[62]

Foreign-trained physicians who immigrate to the U.S. following medical school or international practice do not generally fare well in this competition. **The Task Force found that most immigrant physicians repeatedly fail to be accepted into a medical residency program through the National Resident Matching Program ("the Match"), while nearly all (95 percent) of seniors in U.S. medical schools find a "match."**[†]

Foreign-trained physicians often get screened out even before the interview or "ranking" phases of the Match.[63] Nearly all (99 percent) of residency program directors in 2014 reported interviewing and ranking U.S. medical seniors, but only half said they typically do so for foreign-trained physicians.[64]

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[†] Foreign students graduating from international medical schools frequently apply to U.S. residency programs and, if admitted, come to the U.S. on a visitor, or "J-1" visa. These physician trainees must return to their home country upon finishing their studies. Some of these foreign physicians are allowed to remain in the U.S. for three years on a "J-1 visa waiver" if they practice in underserved areas. The residency match data for medical students applying while reading in their home countries shows that 50 percent of these applicants are accepted into residency.

The immigrant foreign-trained physicians who are the subject of this report are those who did not have the opportunity to pursue medical careers through this prearranged route, but who arrived in the U.S. due to hardship without access to the J-1 visa career path.

The odds of a foreign-trained physician getting into a U.S. residency program, even if he or she has high USMLE scores and has become a U.S. citizen, are poor enough that the American Medical Association recommends that foreign-trained physicians apply to a minimum of 25 residency programs (U.S. medical graduates typically apply to 5-10).[65]

> *Being an International Medical Graduate instantly puts you into a different category regardless of your own attributes.*
>
> Survey respondent originally from Nigeria

The University of California-San Francisco echoes many schools when it explains that foreign-trained physicians are at a disadvantage "partly because of large variation in the formal training and clinical experiences offered by foreign medical schools, when compared to the relatively uniform curriculum and clinical requirements offered by U.S. medical schools."[66]

Representatives from the University of Minnesota Medical School described similar challenges to the Task Force, explaining the difficulties program directors face in choosing a relatively small number of residents from a very large pool. Their goal is to choose applicants who will successfully complete residency, and because they are not as familiar with non-U.S. systems, they feel unequipped to judge whether an immigrant physician's education and training have prepared them adequately. In contrast, they know the relatively standard U.S. medical education system well.

**The Task Force found that policies and processes within the current graduate medical education system – even those created with the best intentions to be as fair and objective as possible – have unintended consequences that advantage U.S. medical graduates and create structural inequities for immigrant physicians**. For example, residency programs receive up to 100 applications for each residency position, which can mean 2,000 applications for a 20-resident program, and need efficient approaches to screen out all but the most competitive candidates for interview invitations. Residency programs often set a preference for recent medical school graduates, for example, as a screening criteria (more on this below). The effect of this screening is that the experience of immigrant physicians may be automatically excluded from consideration, and immigrant physician applicants don't have the opportunity to communicate their unique abilities to admissions personnel.

There are also reports of preference given to USMGs and non-immigrant IMGs (such as those who arrive in the U.S. on a J-1 visitor visa) in the residency selection process, and associated biases against immigrant physicians based on assumptions about the quality of their medical education or other factors. These findings[67] and related concerns prompted the American Medical Association (AMA) to create a policy encouraging medical school admissions officers and residency program directors to "select applicants on the basis of merit, without considering an ethnic name as a negative factor."[68]

**The Task Force concluded that developing a way to assess and certify an immigrant physician's readiness for clinical training and practice is critical for an immigrant**

**physician integration effort to be successful, and its recommendations include a system that would make Minnesota a national leader in addressing this major barrier (see Recommendations).**

> *I am a foreign graduate, and the obstacle is to get a residency position. Programs should not look only at fresh graduates. Rather, they should consider the year of the USMLE Step 3 exam because this is a reflection of current clinical knowledge.*
>
> Survey respondent originally from Bangladesh

## "Recency" of graduation

One of the main reasons immigrant physicians struggle to secure a medical residency is one out of their control: Most U.S. residency programs consider only "recent" graduates from medical school, typically requiring graduation within 3-5 years of application to residency.

As a result, some of the most highly qualified immigrant physicians – those who have practiced extensively since medical school – are essentially disqualified at this point in the pathway to licensure. The Task Force learned that the primary rationale for this guideline is the need for residents to be as up-to-date as possible on medical knowledge, treatment methods and protocols, and technology, particularly given how swiftly the health care field is changing.

As will be discussed under Recommendations, **the Task Force concludes that these valid concerns could be addressed in new, more effective ways that would benefit residency programs and immigrant physicians alike**. These innovations alone could go a long way toward integrating more immigrant physicians into the health workforce.

> *The program directors put the criterion [requiring applicants to be recent medical school graduates] which is beyond any human being, as I am unable to change my age. The war and economic factors made me an old graduate involuntarily. Unfortunately, they do not take into consideration my naturalized American citizenship and being integrated within the American community for many years.*
>
> Minnesota immigrant physician from Iraq

## Lack of recognized clinical experience

Another major reason immigrant physicians are not accepted into residency programs, and also one largely out of their control given the current system, is a lack of hands-on clinical experience in the U.S.

Most American residency programs give preference to applicants with clinical experience acquired in the U.S. or Canada. However, **such hands-on experience with patients is nearly impossible to obtain outside of U.S. medical school or residency**, particularly since patient privacy and security regulations were strengthened under the 1996 Health Insurance Portability and Accountability Act (HIPAA).

Because of these barriers, immigrant physicians are generally limited to other ways of attempting to demonstrate clinical experience, such as volunteering in medical settings as volunteers, working as researchers or interpreters, or participating in observership rotations (programs in which medical graduates observe licensed physicians as they diagnose and treat patients, but do not examine patients or provide any care themselves). The AMA specifically recommends that foreign-trained physicians participate in observerships before application to residency,[69] but many residency programs specifically state that these do not qualify as clinical experience.[70]

The lack of U.S.-based clinical experience weakens another key part of immigrant physicians' applications to residency: letters of recommendations. Unable to obtain letters from U.S.-based supervisors with first-hand knowledge of their clinical skills, they must rely on recommendations either from individuals who know them only in non-clinical situations or from physicians who directed their clinical work overseas. The latter are often based on older experience (as immigrant physicians typically have lived in the U.S. for at least two years before being able to apply for residency), which in turn makes them less competitive to residency program directors, who prefer letters that measure an applicant's most current knowledge and skills.[71]

**The Task Force concludes that opportunities for hands-on clinical experience for immigrant physicians should be developed to address this major barrier toward licensure**. As further discussed under Recommendations, the Task Force proposes that a clinical preparation program be developed based in part on the past experience of the Preparation for Residency Program at the University of Minnesota, which provided seven months of orientation and clinical experience for immigrant physicians from 2010-2012, and similar programs at the University of California-Los Angeles and elsewhere (see Appendix F, "Promising Practices and Pathways").

> *The biggest barrier for me has been a lack of accredited clinical experience – not being able to get any experience in any capacity except as an interpreter or a medical assistant.*
>
> Survey respondent originally from India

## Complexity and costs of testing and other steps needed to qualify for residency

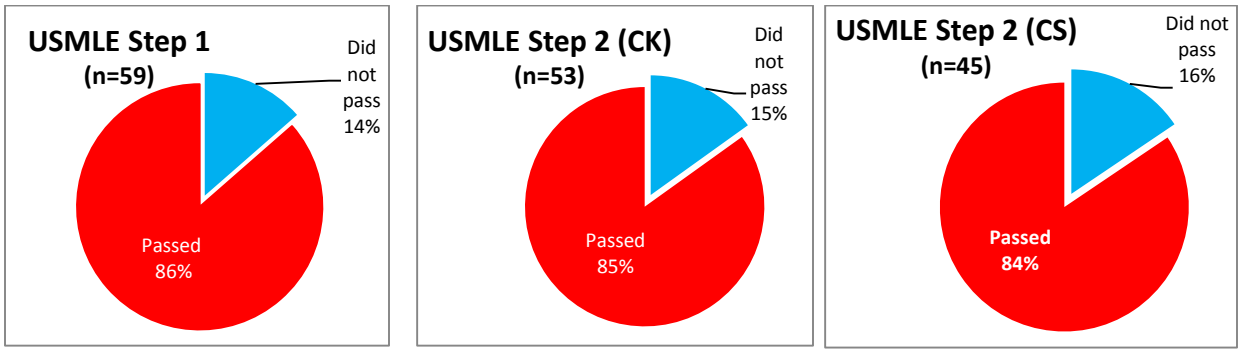
Practicing medicine in the U.S. requires a wide range of skills and knowledge, some specific to the rapidly changing and highly complex American health care system. Even immigrant physicians with extensive clinical skills and experience overseas have much to learn in order to qualify for residency and practice effectively in the U.S. In addition to passing the rigorous and highly technical USMLE licensing exams required for ECFMG certification, they must demonstrate to residency programs that their English proficiency, technological skills and understanding of U.S. medical culture make them qualified to train successfully in a graduate clinical setting and beyond.

The Foreign-Trained Health Care Professionals program administered by the Department of Employment and Economic Development (DEED) currently provides many Minnesota immigrant physicians with support for these foundational skills and the many steps needed to

qualify for residency, particularly assistance with English language proficiency, preparation for the USMLEs, and help navigating the ECFMG certification and residency application processes, as well as important social and peer support during the often grueling and lengthy experience of pursuing a residency. This program was funded with a one-time state appropriation for fiscal years 2014 and 2015, and will end on June 30, 2015.[72]

The Task Force investigated the impact of such programs – here in Minnesota and elsewhere around the world – and found they are very successful in helping immigrant physicians pass the USMLEs and become ECFMG certified (see Appendix F, "Promising Practices and Pathways"). This finding was supported by the Task Force's statewide survey, in which the majority of respondents – most of whom have worked with the current DEED grantees – have passed these tests successfully (see Figures 13-15).

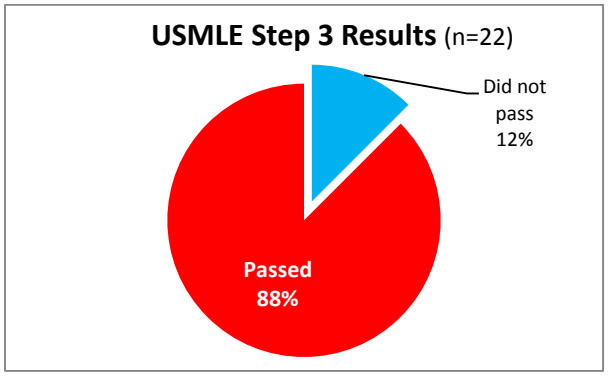
**Figures 13-15**. Share of immigrant physician survey respondents passing USMLE steps 1-2.

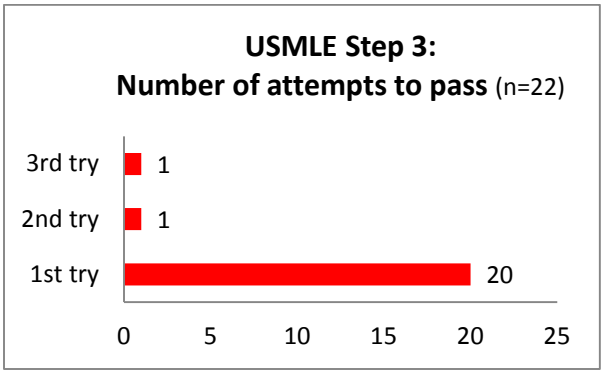



Just over half (55 percent, or 38 immigrant physicians) of those surveyed are fully certified through the ECFMG. Many have also gone on to pass Step 3 of the USMLEs, which is technically not required for ECFMG certification and is usually taken during residency, and most did so on their first try (Figure1 16-17).

> *I had to work at minimum wage jobs at Walmart in order to support myself but I passed all the exams, thankfully.*
>
> Survey respondent originally from Bulgaria

**Figures 16-17**. Share of immigrant physician survey respondents passing USMLE step 3.




**Few graduates of these programs are actually then admitted to residency, however, due to the barriers to residency described above**. One of the Minnesota nonprofit organizations in the Foreign-Trained Health Care Professionals program reports that of the 275 Minnesota immigrant physicians it has worked with since 2006, only about 35 (13 percent) have been able to obtain residency positions.[73] This is consistent with other, similar programs in the U.S., such as the Welcome Back Initiative program now operating in 10 states.[74] (See Appendix F, "Promising Practices and Pathways," for more detail on these and other programs the Task Force consulted).

> *It is not about passing the USMLE exams. The problem is after you pass, you have to compete with recent graduates to get a residency program space. It is very difficult to get a spot.*
>
> Survey respondent originally from Honduras

The Task Force concludes that such programs are a key component of integrating immigrant physicians into the health workforce, but will have only limited success unless there are changes elsewhere in the medical education system. **Evidence suggests that such programs will have a far greater impact if they work in concert with other key partners (including the medical education system, health care providers and employers, and regulatory bodies) and if key barriers on the pathway can be addressed (including opportunities for clinical experience and mechanisms for assessing clinical readiness)** (see Appendix F). The Task Force's recommendations therefore propose continuing support for these foundational programs but doing so within a coordinated statewide system, along with exploring new pathways to licensure.

> *I am double certified in surgery and oncology and I am considered among the top surgeons in my home country. I am able to speak fluently in five languages. I have passed the USMLE Step 1 and 2 exams. Now I am looking for a residency. I know I have the knowledge, skills and ability to be a good doctor in any country plus I have the drive and determination.*
>
> Minnesota immigrant physician originally from Russia

# Alternative Roles and Professions for Foreign-Trained Physicians

The Task Force heard repeatedly that most immigrant physicians would prefer to practice the profession they spent years training to perform: physician. Some feel this preference quite strongly, such as the immigrant physician from Morocco who wrote: "I worked hard to become a pediatrician and would like to achieve my dream."

Still, **64 percent of the immigrant physician survey respondents said they would be interested in exploring other health professions**. Of these, the largest group responded they would be interested in exploring the physician assistant (PA) role, with others indicating interest in serving as a nurse practitioner or registered nurse, or working in research, public health or medical counseling.

Based on these findings, and acknowledging that additional immigrant physicians may need or prefer an alternative profession in which to contribute their skills and experience, the Task Force studied the opportunities for some to become physician assistants, nurse practitioners or other advanced practice registered nurses in Minnesota.

The Task Force noted that nursing and medicine are two different yet complementary disciplines. Before becoming a nurse practitioner, candidates must first be or become a registered nurse; requirements for entrance into physician assistant programs tend to be much more flexible, with a range of degrees accepted. Currently, no expedited pathways into the advanced practice nursing field exist in Minnesota for foreign-trained physicians, and if they start at the beginning of this path, it will take longer than the 27-31 months of traditional physician assistant education. In addition, nursing's focus on helping individuals manage their health in the context of their environment, family and community is different than the medical focus on diagnosing and treating disease, with which immigrant physicians and all physicians are most familiar. The physician assistant curriculum and approach are based on and similar to medical education and practice, offering a potentially better alignment with the expertise of immigrant physicians.

**The Task Force concluded that the physician assistant profession would be the best alternative profession for most immigrant physicians considering non-physician occupations, if current barriers to entry can be removed or diminished so these physicians can appropriately meet physician assistant education and licensure standards as quickly and cost effectively as possible**.

Both Task Force members and immigrant physicians who contributed to this project concluded that assisting interested immigrant physicians to become physician assistants should be the initial alternative pathways strategy for those immigrant physicians who will not be pursuing physician practice (see Recommendations).

# Costs and Possible Funding Sources to Integrate Foreign-trained Physicians

The Task Force was charged with identifying both the costs and possible funding sources for integrating foreign-trained physicians into the health workforce. In doing so, it sought to paint as complete a picture as possible of what would be needed to bring a *significant* number of such clinicians fully into the Minnesota workforce. It concluded that such a system will need to be comprehensive and coordinated, and as such will require greater investment and innovation than past efforts. But it also concluded that such action is worth taking. **The Task Force believes the potential return on investment will far outstrip the initial costs, and will come in the form not just of financial benefits but also better health outcomes and greater health equity in the state. It also concludes that this return will be greatest if public and private entities join forces to coordinate and fund the new system**.

## Costs and return on investment

As discussed under Barriers, integrating immigrant physicians into the health workforce does entail initial costs. Some of these expenses – such as those required to prepare for the U.S.-specific licensing exams (the USMLEs) or to improve English language skills to clinical-level proficiency – will likely be necessary regardless of the integration strategies implemented. Others – such as the expense of repeatedly applying to numerous residency programs or the costs of public assistance to support unemployed or underemployed physicians unable to practice – could be reduced or potentially even eliminated depending on the pathways developed.

As noted above, it currently costs $7,500-$15,000 for a foreign-trained physician to get as far as applying to residency programs, and even after making such expenditures, most fail to secure a residency position and therefore cannot become licensed to practice, as discussed under Barriers. **Clearly the current system is only working for a relatively small number of physicians – a lost opportunity at a time when Minnesota cannot afford to limit its physician workforce, particularly when that untapped pool is uniquely qualified to serve the fastest growing segments of the state's population and is willing to serve in its rural and underserved communities**.

The strategies recommended by the Task Force would entail greater initial investments – from $10,000-$60,000 per immigrant physician depending on his/her skills and readiness for residency – but are expected to produce a much higher return on investment. That is, by investing in more effective, coordinated strategies, rather than the piecemeal efforts that have allowed relatively few immigrant physicians into practice, Minnesota could produce a significant increase in and diversification of its physician workforce, particularly in primary care.

It is also worth noting that some of these integration costs could be further reduced with more fundamental changes to the physician licensure pathway, which the Task Force is also recommending be explored (see Recommendations). Even at the levels required under the current pathway, however, the proposed investments would still be far less than the average expense of $228,000 to train a U.S. undergraduate to the same point (up to residency). While those U.S. medical school costs are largely paid by graduates themselves and other private

sources, there is still a significant level of public subsidy involved, including state and federal funding of medical schools, publicly funded scholarships, and public student loans.

The investments proposed by the Task Force are expected to bring significant benefits to Minnesota. Two analyses of existing programs reviewed by the Task Force illustrate the impact foreign physician integration efforts can have. The Welcome Back Initiative, now operating in 10 states and providing educational case management and other support services to foreign-trained health care professionals who are unemployed or underemployed, found that internationally trained nurses experienced a six-fold increase in earnings after graduating from their program.[75] Locally, Wilder Research estimated that the Foreign Trained Health Professionals Program (FTHP) of the Women's Initiative for Self Empowerment (WISE), operated in partnership with NAAD (formerly known as the African American Friendship Association for Cooperation and Development of Minnesota or AAFACD), generated $358,003 in net benefits and **a prospective return of $2.56 per every dollar invested in the program should a physician successfully become fully licensed**.[76]

As discussed under Policy Drivers, licensed immigrant physicians can also bring a variety of cost savings to Minnesota's overall health care system, including its government-funded health care programs, by providing a more culturally adept and better distributed physician workforce capable of helping reduce the costly hospitalizations and health disparities that have persisted for so long.

In addition, employing immigrant physicians to their full abilities would allow the state to take fuller advantage of the tremendous resources – both human and economic – that remain untapped in Minnesota's immigrant communities and are increasingly needed throughout the state. An estimated 21 percent of Minnesota's college-educated, foreign-born population is currently underutilized in the labor force, meaning they are either unemployed or underemployed in unskilled "survival jobs," a phenomenon also sometimes referred to as "brain waste" within the workforce.[77]

In contrast to such "brain waste," **developing better pathways for immigrant physicians to practice their profession would bring the state the many economic and social benefits known to come when highly skilled immigrants are successfully employed and well-integrated into their professions**.[78] A 1997 study found that highly educated immigrants in the U.S. averaged a net per capita benefit of $198,000 to society, and subsequent studies have confirmed that such immigrants confer a significant net benefit to the U.S.[79] One Minnesota-specific analysis estimated that the state's 2007 population of 40,638 immigrants with graduate or professional degrees would generate lifetime earnings of $134 billion.[80]

> *We are immigrant International Medical Graduates who are American citizens and permanent residents of Minnesota. We are taxpayers.*
>
> Immigrant physician at community meeting hosted by the Task Force

## Possible funding sources

The Task Force explored a variety of possible funding sources for its recommended strategies. It concluded that the most effective approach will be a public-private partnership, at both the governance and funding levels. State support and funding will be necessary, but the Task Force also believes it is important that the private sector also contribute to its operations, as well as immigrant physicians themselves.

### 1. Current Federal (Medicare) and State (MERC) Graduate Medical Education funding

The Task Force finds that current federal (Medicare) and state (MERC) Graduate Medical Education funding is not a realistic source of support for activities recommended in this report. Current funding does not fully support the current level of physician training, and redirecting it would reduce rather than expand the training capacity needed to meet growing demand. Financial resources to support additional primary care clinical training capacity for candidates such as immigrant physicians is already limited for clinics and other ambulatory settings best suited for primary care training because, among other reasons, the majority of Graduate Medical Education funds flow to hospital-based training.

### 2. New state funding

The Task Force believes additional State investments should be considered to implement its recommendations and achieve the goal to integrate immigrant physicians into the state's workforce as physicians or other health professionals. Successfully integrating foreign-trained physicians into the state's workforce will yield public benefit by better meeting the health care needs of citizens, contributing to state goals for health system improvement and contributing to economic development by more fully employing this group of underemployed professionals.

### 3. Private funding

Physician employers such as hospitals, clinics and health systems are working to add culturally competent providers to better serve their increasingly diverse patient populations. Though some health care employers may be experiencing financial stress, the Task Force believes it is in the interest of health care employers to invest through public-private partnerships in the type of cost-effective workforce diversity strategies offered in this report.

Immigrant physicians themselves could also be an important source of support. The Task Force heard from many physicians willing and even eager to "pay back" into a system that would allow them to practice their profession. Several of the strategies recommended therefore include both return-of-service obligations (in which participating physicians would commit to practicing in a rural or underserved area for a certain length of time, similar to obligations now built into loan forgiveness and repayment programs for U.S. medical graduates) and reimbursement obligations (in which the physicians would contribute to the costs of a given program, typically by receiving a graduated salary that increases with each year of service, though other reimbursement arrangements such as a revolving loan program may be feasible as well).

## 4. Philanthropic support

Several Minnesota private foundations have provided support to advance the goal of integrating foreign-trained physicians into the state workforce as physicians or other health professionals. The Task Force sees potential for further private and corporate foundation investment in implementing activities needed to implement this goal.

One specific effort already under way: In 2014, the Bush Foundation awarded a two-year Community Innovation Grant for a collaborative of Minnesota nonprofits and other health care stakeholders, led by the Women's Initiative for Self-Empowerment (WISE) and New Americans Alliance for Development (NAAD), to develop a public-private partnership initiative to fund additional medical residency opportunities for immigrant physicians. This group intends to use the Task Force's recommendations as a basis for its partnership development, and its work will leverage any public funding with additional private investment from Minnesota health care institutions, businesses and philanthropy.

> *We are ready to work in the health care system. Working as a health care provider is my only American dream. I bring passion, integrity and a pledge to work hard to bring my dream to reality.*
>
> Survey respondent originally from India

# Recommendations

The Task Force concludes that Minnesota has a valuable and underused resource in its population of immigrant physicians, many of whom stand willing and qualified to serve as primary care providers in rural and underserved communities of the state. These physicians currently face multiple barriers to practice, but these obstacles could be addressed effectively with strategic, coordinated, public-private action. **When implemented, these strategies could produce a larger and more diverse primary care workforce capable of reducing both health disparities and health costs in Minnesota**.

## Guiding Principles

In developing these recommendations, based on its findings, the Task Force adopted a set of guiding principles:

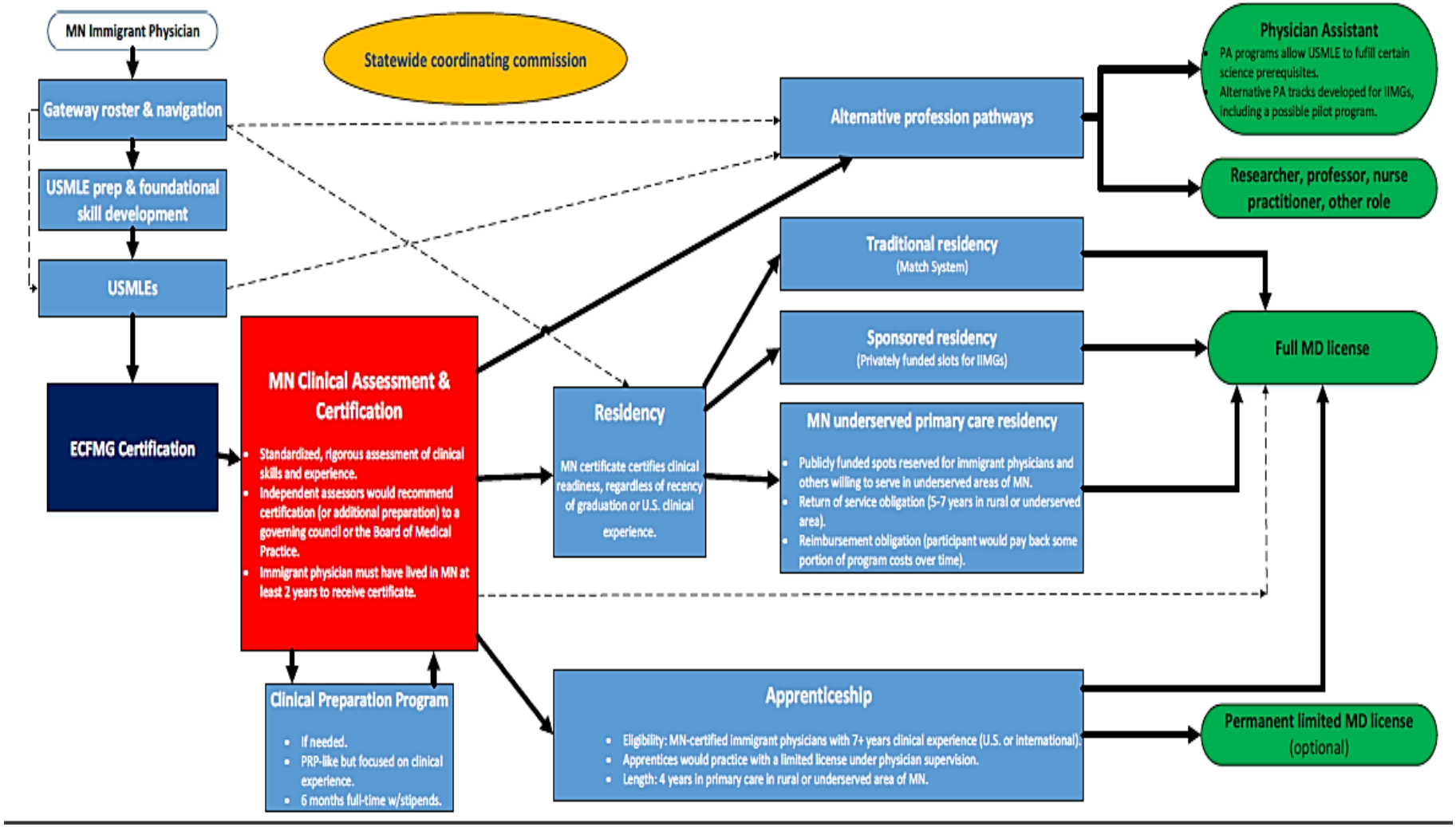
- Programs must be comprehensive (providing career direction, academic experiential and related activities and support) and provide multiple pathways to appropriate licensing and employment.
- Ideal programs will be collaborations between public and private entities.
- Admission procedures and criteria for services and programs should fully and objectively capture the knowledge, skills and experience of applicants.
- Programs should be affordable to participants.
- Participants who meet specified outcomes must have a reasonable assurance that they will be able to continue toward their goal of working as a physician, physician assistant or similar health professional, within the limits of the resources available for support services and programs.
- Programs and policies should include competency assurances comparable to Minnesota physician licensing requirements.
- Priority should be given to immigrant physicians who have lived in Minnesota at least 2 years and limited to those legally able to work.
- Programs should include return-of-service requirements, through which participants who succeed in becoming practicing physicians or similar professionals are obligated to work in an underserved area and/or contribute to funding ongoing services.

Specifically, the Task Force recommends the following set of strategies, which would work in concert as depicted in Figure 16. **The recommendations are presented as a comprehensive system of linked strategies, rather than isolated tactics, to address the key barriers in a cohesive, cost-effective way, and to allow multiple pathways into the workforce depending on a physician's qualifications, interests and level of readiness to practice**.

Importantly, key stakeholders in the state's health care system have been actively involved in developing these innovative solutions and have expressed interest in implementing them. The chair of the Task Force, Dr. Edwin N. Bogonko of St. Francis Regional Medical Center, represented the Minnesota Medical Association, and the medical schools of both the University of Minnesota and Mayo Clinic were active Task Force and work group members. Essentia

Health, a major hospital and clinic system with many facilities in rural Minnesota, served on the Task Force from the perspective of a rural health care employer already facing challenges finding physicians and other health care providers to fill vacancies within its system. Mayo, Hennepin County Medical Center, Fairview Health Services, North Memorial Health Care and other providers have also expressed interest in participating in the proposed clinical preparation program, and the Minnesota Hospital Association is interested in convening other member hospitals to facilitate their participation as well.

**Figure 18**. Proposed Minnesota immigrant physician system



*Note: Any funding amounts provided are general figures only, not formal state government fiscal notes, and are provided so as to be scalable, allowing the adjustment of program sizes and funding amounts as needed.*

## Strategy 1: Statewide coordinating council

The Task Force recommends the Legislature authorize the creation of a statewide Council on International Medical Graduates to provide overall coordination for the planning, implementation and evaluation of a comprehensive system to integrate immigrant physicians into the Minnesota health care system. The Council would be charged with addressing the barriers faced by immigrant physicians and facilitating pathways for their integration into the Minnesota health care delivery system. **Specifically, the Council would be responsible for implementing and evaluating the outcomes of Strategies 2-10 below, with an overall goal of increasing access to primary care in rural and underserved areas of the state**.

As part of its duties, the Task Force also recommends that the Council develop and maintain, in partnership with the Board of Medical Practice and community organizations working with immigrant physicians, a centralized, voluntary roster of those interested in entering the Minnesota health workforce. This would equip the Council with better and more consistent information about the pool of immigrant physicians in the state and their qualifications and interests, which could in turn guide Council planning and program administration for maximum impact.

The Council should include members from key stakeholders, including the following:

- State agencies (including MDH, the Board of Medical Practice, the Office of Higher Education, and the Department of Employment and Economic Development).
- Representatives from the health care industry (including a health care employer from a rural or underserved area and a health insurer).
- Community-based organizations, including those serving immigrant and refugee communities, such as the partnership between New Americans Alliance for Development and the Women's Initiative for Self-Empowerment.
- Higher education (including the University of Minnesota, the Mayo Clinic School of Health Professions and/or Medical School, a graduate medical education program not located at the University of Minnesota or Mayo, and a physician assistant education program).
- Immigrant physicians.

***Recommended action**: Authorize the Commissioner of Health to develop a statewide council, in collaboration with the Board of Medical Practice and key stakeholders, to design, implement and coordinate a comprehensive system for the integration of immigrant physicians into the Minnesota health care system. The authorization should include appropriation of funding for the programs and operations of the council (see Recommendations 2-10).*

## Strategy 2: Gateway and foundational support

The Task Force recommends that a state grant program be established to maintain and expand career guidance and support services for immigrant physicians, building on the current Foreign-Trained Health Care Professionals program administered by the Department of Employment and Economic Development (DEED). The program should seek to accomplish the following:

- Maintain and expand career guidance and support for immigrant physicians, including information on training and licensing requirements for physician and non-physician health care professions, and guidance in determining which pathway is best suited for an individual foreign-trained physician based on his/her skills, experience, resources and interests.
- Provide support to build foundational skills needed to practice in the U.S., including English health care terminology and information technology proficiency.
- Provide support for USMLE test preparation and expenses.
- Provide support for immigrant physicians interested in pursuing alternative professions, including a clearinghouse on pathway options and educational programs available.
- Register all participating immigrant physicians in the Council's Minnesota Immigrant Physician roster.

***Recommended action**: Allocation of $500,000/year for grant(s) to Minnesota nonprofit(s) to serve 50 immigrant physicians per year (at an average of $10,000 per immigrant physician served), coordinated through the proposed Council on International Medical Graduates, with the initial round of grants distributed by December 2015. This amount does not include administrative costs for the grant program. The Task Force bases this funding recommendation on costs of similar programs (particularly the existing Foreign-Trained Health Care Professionals program), but recommends providing additional funding to allow for more intensive, coordinated support services than is currently available.*

## Strategies 3 and 4: Clinical assessment & certification

The Task Force recommends that Minnesota develop a standardized assessment and certification program that would assess the clinical readiness of immigrant physicians. Key features should include the following:

- Standardized and rigorous assessment of clinical skills.
- Prerequisite that immigrant physicians first be certified by the ECFMG.
- Prerequisite that immigrant physicians have lived in Minnesota for at least two years.
- Upon successfully passing the assessment, physicians would receive Minnesota certification of clinical readiness for either residency or apprenticeship.
- The Council should further explore whether the assessment program could be extended to assess clinical readiness to practice medicine (assessment toward full licensure without the requirement of medical residency experience or an apprenticeship) (see also Recommendation 9).

***Recommended action**: Authorize the proposed Council on International Medical Graduates to work with the Commissioner of Health and the Board of Medical Practice, in consultation with*

*key stakeholders and experts, to develop a plan by December 31, 2015 for implementing an assessment and certification system, including proposed legislation, a proposed budget, and an implementation schedule that allows for assessment and certification of immigrant physicians by June 2016.*

## Strategy 5: Clinical preparation program

The Task Force recommends that a state grant program be established to support clinical training sites in providing hands-on experience and other preparation for Minnesota immigrant physicians needing additional clinical preparation or experience to become certified as ready for residency or apprenticeship. The grant program should include the following:

- Development of training curricula and associated policies and procedures for clinical training sites.
- Monthly stipends for participating physicians.
- Prerequisite that eligible participating physicians must have lived in Minnesota for at least two years and be certified by the ECFMG.
- Successful completion of the program would lead to Minnesota certification of clinical readiness for either residency or an apprenticeship (based on clinical assessment following program completion).
- Priority should be given to primary care sites in rural or underserved areas of the state, and participating physicians should have to commit to serving at least five years in a rural or underserved community of the state.

**Importantly, several Minnesota hospitals, clinics and medical education programs have expressed preliminary interest in participating in such a program**, including the following who have stepped forward to date:

- Fairview Health Services
- Hennepin County Medical Center
- Mayo Clinic College of Medicine
- Minnesota Department of Human Services (DHS) – Direct Care and Treatment (State Operated Services)
- North Memorial Health Care
- University of Minnesota Medical School, Department of Family Medicine and Community Health

The Minnesota Hospital Association has also expressed interest in working with its member hospitals, particularly those in rural and underserved areas of the state, to facilitate their participation in the program.

***Recommended action**: Authorize the proposed Council on International Medical Graduates to develop policies and procedures for a clinical preparation program by December 2015, including an implementation schedule that allows for grants to clinical preparation programs beginning in June 2016. Allocate $750,000/year for grants to training programs to serve and provide stipends to 15 immigrant physicians/year (two 6-month cohorts/year, at an average cost of $50,000 per participant). This amount does not include administrative costs for the grant*

*program. The Task Force bases this funding recommendation on historic costs and testimony provided by the administrators of the previous Preparation for Residency Program at the University of Minnesota, and the cost-per-physician experience of the similar University of California-Los Angeles International Medical Graduate program. The Task Force estimates that the average cost per immigrant physician would be $50,000, which would include a total stipend amount of $12,000 to the participant ($2,000/per month for six months) plus program costs (including expenses incurred by the clinical site for the training provided) totaling $38,000.*

## Strategy 6: Dedicated residency positions

The Task Force recommends that dedicated Minnesota primary care residency positions be created for immigrant physicians who are Minnesota residents and are willing to serve in rural or underserved areas of the state. These positions should be developed with the following key features:

- Prerequisite that participating physicians must have lived in Minnesota for at least two years and be certified by both the ECFMG and the Minnesota Council on International Medical Graduates.
- Participating physicians would commit to providing primary care for at least five years in a rural or underserved area of Minnesota.
- In addition to this return-of-service obligation, the residencies would also include some level of reimbursement obligation (with the participating physician committing to pay back a portion of program costs).
- Ideally, these new residency positions would be funded through a combination of public and private funding, including the following:
    a. Sponsored (privately supported) primary care residency spots dedicated for immigrant physicians.
    b. State-funded primary care residency spots reserved for immigrant physicians and others willing to serve in rural or underserved areas.

***Recommended action**: Allocation of $2.25 million/year for 15 primary care residency positions dedicated to immigrant physicians living in Minnesota, for implementation beginning in June 2016, and the development of sponsored (privately funded) residency slots. The Task Force bases this funding recommendation on the average cost of residency training in Minnesota, which according to the Metro Minnesota Council on Graduate Medical Education is currently $150,000 per resident (which includes $50,000 annual salary and benefits for the resident). This amount does not include administrative costs for the grant program.*

## Strategy 7: Changing "recency" guidelines

The Task Force recommends that Minnesota residency programs be encouraged or required to revise their graduation recency guidelines to take into account other measures of readiness. Specifically, instead of looking only at the recency of graduation from medical school, residency programs should consider:

- When an immigrant physician passed the USMLEs and/or became certified by the ECFMG.

- When an immigrant physician has been certified through the proposed Minnesota clinical assessment and certification program.

***Recommended action**: Charge the proposed Council on International Medical Graduates to work with Minnesota residency programs to accept the Minnesota immigrant physician certification and/or ECFMG certification as a measure of readiness for residency, regardless of recency of graduation or U.S. clinical experience.*

## Strategy 8: Apprenticeship program

The Task Force recommends that Minnesota develop a structured apprenticeship program for highly experienced immigrant physicians willing to serve in rural or underserved areas. The program should include the following features:

- Prerequisite that participating physicians have lived in Minnesota for at least two years and are certified by both the ECFMG and the Minnesota Council on International Medical Graduates.
- Prerequisite that eligible participating physicians would have at least seven years of clinical experience, in the U.S. or internationally.
- Development of a time-limited apprenticeship licensure by the Board of Medical Practice to allow an apprentice to practice under supervision of a licensed physician (see also Strategy 9).
- Apprentices would serve four years under physician supervision.
- In addition to this return-of-service obligation, apprenticeships would include a reimbursement obligation (with apprentices to receiving graduated salaries over the four-year period, with their salaries increasing with each year of service).
- Training sites would be part of a network of primary care clinics in rural and underserved areas and would receive $20,000/year per apprentice for their costs.
- Upon successful completion, participating physicians could choose to apply for (1) a full medical license, or (2) a permanent limited license, for practice under supervision of another physician.
- Participating physicians would commit to providing primary care for at least five years in a rural or underserved area of Minnesota.

***Recommended action**: Authorize the proposed Council on International Medical Graduates to develop and administer, in consultation with the Board of Medical Practice and other partners, an apprenticeship program for qualified immigrant physicians. The Council should work with the Board to develop policies and procedures for the program, including any additional admissions criteria, and proposed legislation for licensing changes needed, a proposed budget, and an implementation schedule that allows for the enrollment of eligible immigrant physicians as apprentices by June 2017. Allocate $100,000/year for the program to apprentice five immigrant physicians each year (providing for $20,000 grants annually to each of the five participating clinical sites). These grants would support the sites' costs of supervision and staffing (including salary and benefits for the apprentice, whose salary amount would gradually*

*increase with each year of service as part of their reimbursement obligation to the program). This amount does not include administrative costs for the program.*

## Strategy 9: New licensure options

The Task Force recommends that Minnesota develop new licensing options for immigrant physicians, in coordination with new programs and pathways developed by the Council on International Medical Graduates and key stakeholders. These new licensing options would not require completion of medical residency experience. Specific licensing options that should be explored include the following:

- Time-limited apprenticeship licensure, to practice under supervision in the apprenticeship program recommended under Strategy 8.
- Permanent limited licensure to practice under supervision, for those physicians choosing this option following the apprenticeship program described under Strategy 8.
- Full licensure following successful completion of the apprenticeship program.
- If deemed feasible by the Board of Medical Practice and the Council based on more in-depth study, the development of a full licensure option based on a clinical assessment process recommended under Strategy 3 (with the certificate of clinical readiness serving in whole or part as evidence a candidate is clinically qualified to practice medicine).
- In all cases, the participating physicians must be certified by both the ECFMG and the Minnesota Council on International Medical Graduates, pass all USMLE tests and be clinically qualified to practice medicine.

***Recommended action****: Authorize the Board of Medical Practice to work with the proposed Council on International Medical Graduates and other key stakeholders to develop and propose legislation to grant qualified immigrant physicians time-limited apprenticeship licensure, limited licensure to practice under supervision, and full licensure. The legislation need not require that candidates obtain United States medical residency experience. The Council and Board should submit recommendations and proposed legislation by December 15, 2016.*

## Strategy 10: Streamline paths to alternative professions

The Task Force recommends that Minnesota explore and facilitate more streamlined pathways for immigrant physicians to serve in non-physician professions in the Minnesota health workforce. Specifically, it recommends the following:

- Strengthening career counseling resources for alternative health professions for foreign-trained physicians, particularly through the community organizations providing the gateway and foundational skill support in Strategy 2.
- Working with physician assistant training programs in Minnesota to explore alternatives for admission requirements for foreign-trained physicians, including allowing a foreign-trained physicians scores on the United States Medical Licensing Exams to fulfill basic and higher science prerequisites in physician assistant program admissions.
- Working with at least one interested physician assistant education program in Minnesota, in partnership with the Board of Medical Practice and national physician

assistant accreditation and certification bodies, to create a program track that meets the existing professional standards for physician assistants, but is designed to meet the unique needs of the immigrant physician who wishes to practice as a physician assistant, including expedited training and specially designed clinical rotations.

***Recommended action**: Authorize the proposed Council on International Medical Graduates to work with physician assistant programs on alternatives for admission requirements for foreign-trained physicians, and to work with at least one interested physician assistant program based in Minnesota to develop a new or pilot FTP-to-PA track to include expedited training during the academic phase and specifically designed clinical rotations. Allocate $450,000 to support program development and accreditation of the new program track over two years, developing a program design by July 1, 2017 and any needed legislation for the program proposed by December 31, 2016, with an enrollment target of September 2017. This funding recommendation is based on a two-year development period requiring two full-time faculty (one to develop the didactic curriculum and one to secure clinical placements) plus one full-time administrative support person, and is based on historic costs and time required to develop Physician Assistant programs and secure accreditation from the appropriate national accreditation and certification bodies. This amount does not include administrative costs for the grant program.*

A summary of these recommendations follows.

## Summary of Recommended Strategies

| Strategy | Recommended action | Funding[3] and timetable |
|---|---|---|
| **Strategy 1: Statewide coordinating council** | Authorize the Commissioner of Health to develop a statewide council, in collaboration with the Board of Medical Practice and key stakeholders, to design, implement and coordinate a comprehensive system for the integration of immigrant physicians into the health care workforce. | Funding for the operations of the council beginning in June 2015. |
| **Strategy 2: Gateway & foundational support** | Establish a state grant program to maintain and expand career guidance and support services for immigrant physicians, building on the current Foreign-Trained Health Care Professionals program administered by the Department of Employment and Economic Development (DEED). | $500,000/year for grants to nonprofits to serve 50 immigrant physicians/year, with initial grants distributed by December 2015. |
| **Strategies 3 and 4: Clinical assessment & certification** | Develop a standardized assessment and certification program that would assess the clinical readiness of immigrant physicians. | Develop a plan by December 31, 2015, including proposed legislation, a proposed budget, and an implementation schedule that allows for assessment and certification of immigrant physicians by June 2016. |
| **Strategy 5: Clinical preparation program** | Establish a state grant program to support clinical training sites in providing hands-on experience and other preparation to Minnesota immigrant physicians needing additional clinical preparation or experience to qualify for residency or apprenticeship. | Develop policies and procedures by December 2015, including an implementation schedule that allows for grants to programs beginning in June 2016, allocating $750,000/year for grants to train 15 immigrant physicians/year. |
| **Strategy 6: Dedicated residency positions** | Develop dedicated residency positions for immigrant physicians, through both state and private funding. | $2.25 million/year for 15 primary care residency positions dedicated to immigrant physicians, for implementation beginning in June 2016, and the development of sponsored (privately funded) residency slots. |
| **Strategy 7: Changing "recency" requirements** | Encourage or require Minnesota medical residency programs to revise their graduation recency requirements to accept the Minnesota immigrant physician certification and/or ECFMG certification as a | Council will report progress on this and other activities in its annual report, due December 31, 2015. |

[3] Funding amounts provided are general figures only, not formal state government fiscal notes, and are provided so as to be scalable, allowing the adjustment of program sizes and funding amounts as needed. Amounts do not include grant program and other administrative costs.

| Strategy | Recommended action | Funding[3] and timetable |
|---|---|---|
| | measure of readiness for residency, regardless of recency of graduation or U.S. clinical experience. | |
| **Strategy 8: Apprenticeship program** | Authorize the Council to develop and administer, in consultation with the Board of Medical Practice and other partners, a structured apprenticeship program for highly experienced immigrant physicians willing to serve in rural or underserved areas. | Develop policies and procedures for the program, including admissions criteria, and proposed legislation for licensing changes needed, a proposed budget, and an implementation schedule that allows for the enrollment of eligible immigrant physicians by June 2017.<br><br>$100,000/year for the program to apprentice five immigrant physicians each year beginning in 2017. |
| **Strategy 9: New licensure options** | Develop new licensing options for immigrant physicians -- including a time-limited apprenticeship licensure, limited licensure to practice under supervision, and full licensure – that does not require U.S. medical residency experience. | Submit recommendations and proposed legislation by December 15, 2016. |
| **Strategy 10: Streamline paths to alternative professions** | Authorize the Council on International Medical Graduates to explore and facilitate more streamlined pathways for immigrant physicians to serve in non-physician professions in the Minnesota health workforce, including:<br>• Alternatives for foreign-trained physicians in admission requirements for physician assistant (PA) programs.<br>• A new (or pilot) immigrant physician-to-PA track to include expedited training during the academic phase and specially designed clinical rotations. | Work with PA programs on alternatives for admission requirements for foreign-trained physicians, and include progress in annual report due December 31, 2015.<br><br>$450,000 to support program development and accreditation of a new PA program track over two years, developing a program design by July 1, 2017 and any needed legislation for the program proposed by December 31, 2016, with an enrollment target of September 2017. |

# Appendices

A. Task Force session law
B. Task Force membership
C. Minnesota health professional shortage areas
D. Demographic analysis, additional detail
E. Survey findings, additional detail
F. Promising practices and pathways

# Appendix A: Task Force Charge

## 2014 Minnesota Session Laws, Chapter 228, Article 5, Section 12

(1) The commissioner of health shall appoint members to an advisory task force by July 1, 2014 to develop strategies to integrate refugee and asylee physicians into the Minnesota health care delivery system. The task force shall:

(a) analyze demographic information of current medical providers compared to the population of the state;
(b) identify, to the extent possible, foreign-trained physicians living in Minnesota who are refugees or asylees and interested in meeting the requirements to enter medical practice or other health careers;
(c) identify costs and barriers associated with integrating foreign-trained physicians into the state workforce;
(d) explore alternative roles and professions for foreign trained physicians who are unable to practice as physicians in the Minnesota health care system;
(e) identify possible funding sources to integrate foreign-trained physicians into the state workforce as physicians or other health professionals.

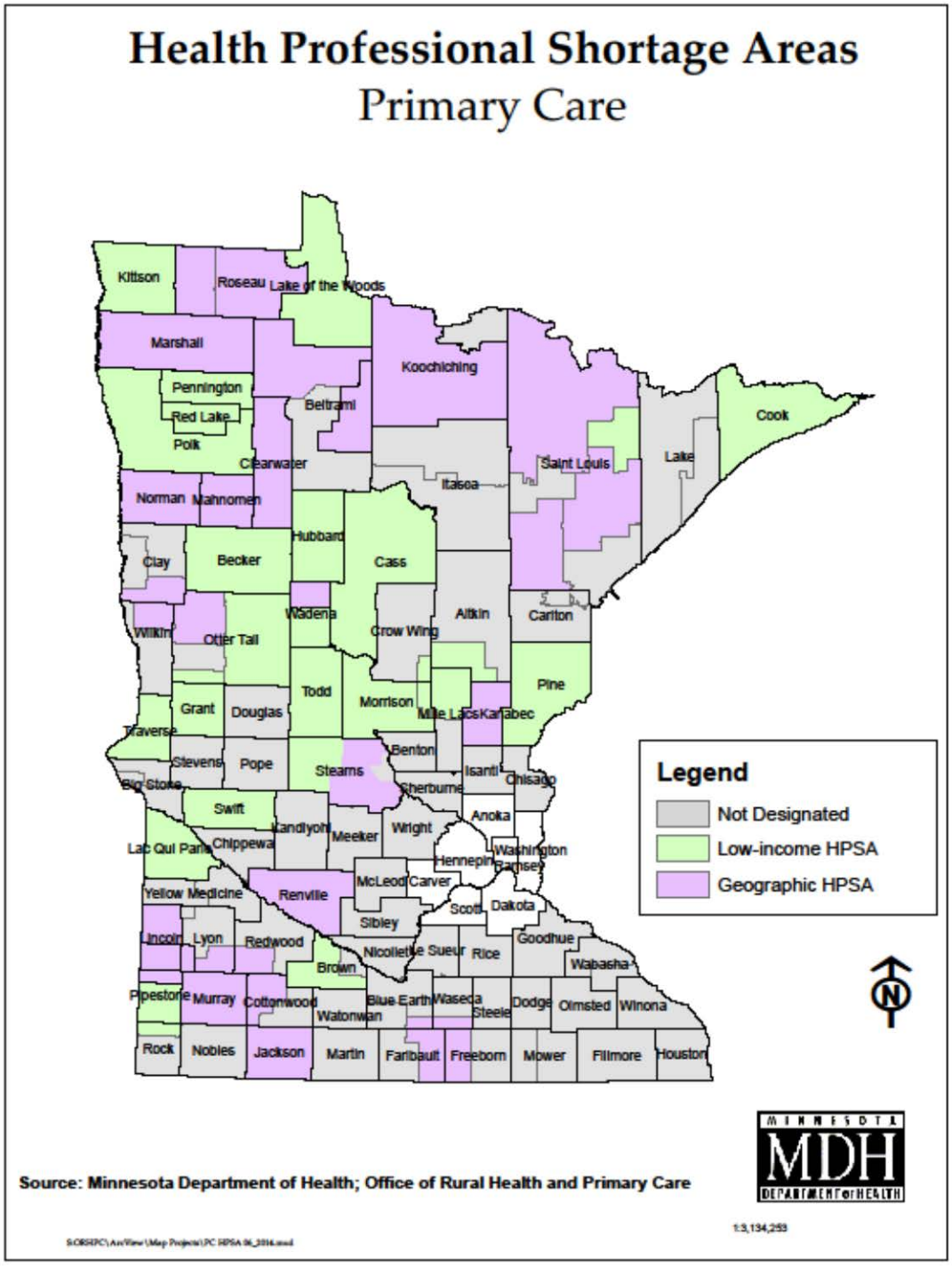
(2) The commissioner shall provide assistance to the task force, within available resources.

(3) **By January 15, 2015, the task force must submit recommendations** to the commissioner of health. The commissioner shall report findings and recommendations to the legislative committees with jurisdiction over health care by January 15, 2015.

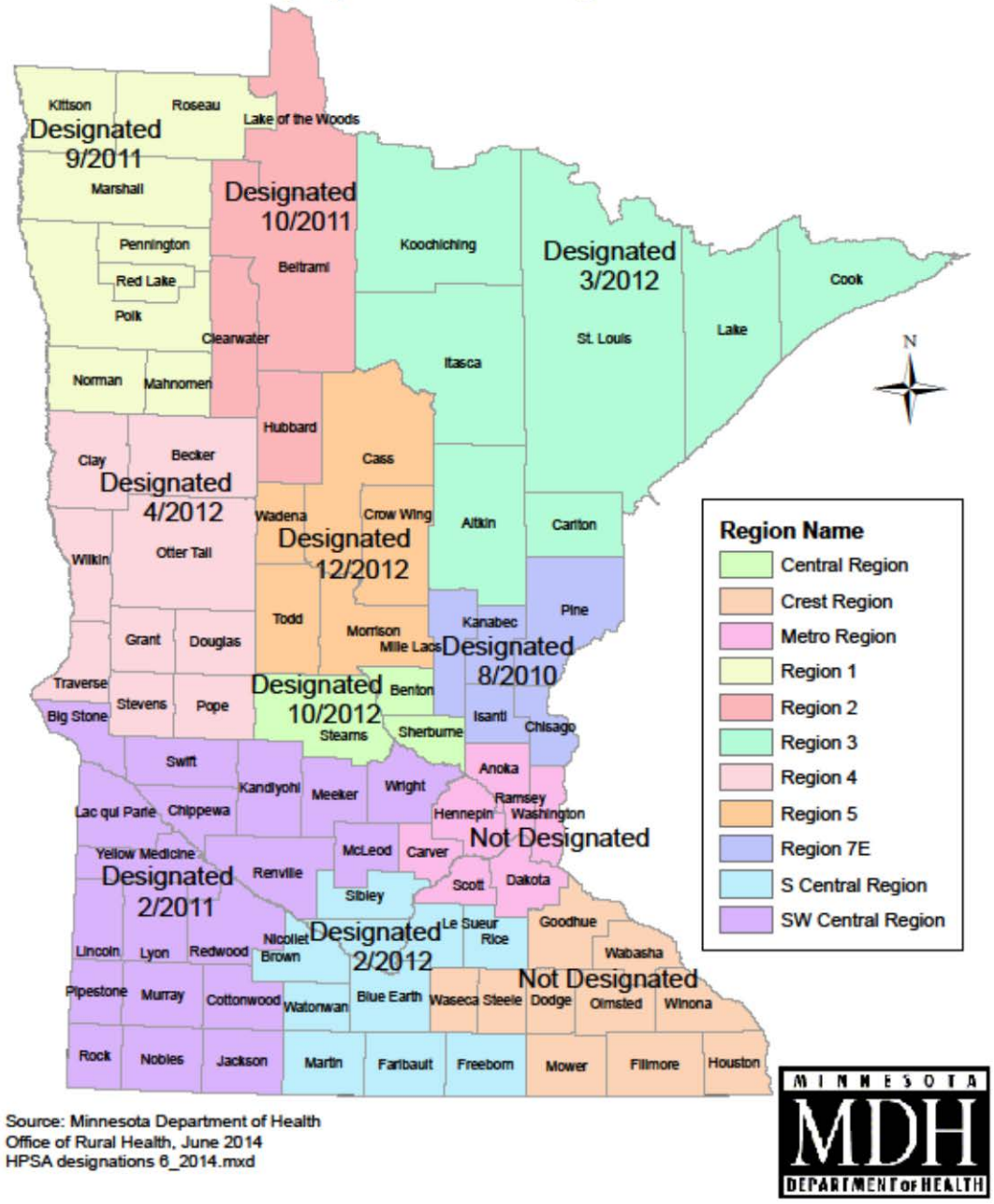
# Appendix B: Task Force Members

| | |
|---|---|
| **Yende Anderson**<br>Executive Director and Co-Founder<br>New Americans Alliance for Development | **Edwin Bogonko, Chair**<br>Physician<br>St. Francis Regional Medical Center Representative for the MN Medical Association |
| **Donna DeGracia**<br>Curriculum Director/Academic Coordinator<br>Master of Physician Assistant (PA) Studies Program<br>St. Catherine University School of Health | **Sue Field**<br>Nursing Accreditation Consultant<br>HealthForce Minnesota |
| **Jane Graupman**<br>Executive Director<br>International Institute of Minnesota | **Michael Grover**<br>Assistant Vice President<br>Federal Reserve Bank of Minneapolis |
| **Wilhelmina Holder**<br>International Medical Graduate<br>Executive Director, Women's Initiative for Self-Empowerment, Inc.<br>Co-Founder, New Americans Alliance for Development | **Barbara L. Jordan**<br>Administrator<br>Mayo Clinic College of Medicine<br>Office for Diversity |
| **Tedla Kefene**<br>International Medical Graduate<br>Volunteer, New Americans Alliance for Development | **Christine Mueller**<br>Professor & Assoc. Dean for Academic Programs<br>University of Minnesota, School of Nursing |
| **Kris Olson**<br>Vice President, Physician and Professional Services<br>Essentia Health | **Mimi Oo**<br>International Medical Graduate<br>Program Director/Coordinator<br>New Americans Alliance for Development, Foreign-Trained Health Care Professionals Program |
| **James Pacala**<br>Associate Department Head<br>University of Minnesota<br>Family Medicine & Community Health | **Jinny Rietmann**<br>Program Coordinator<br>Foreign-Trained Healthcare Professionals Workforce Development Inc. |
| **Michael Scandrett**<br>Minnesota Safety Net Coalition | |

# Appendix C: Health Professional Shortage Areas



# MN Rational Service Areas - Mental Health
## Geographic HPSA Designations

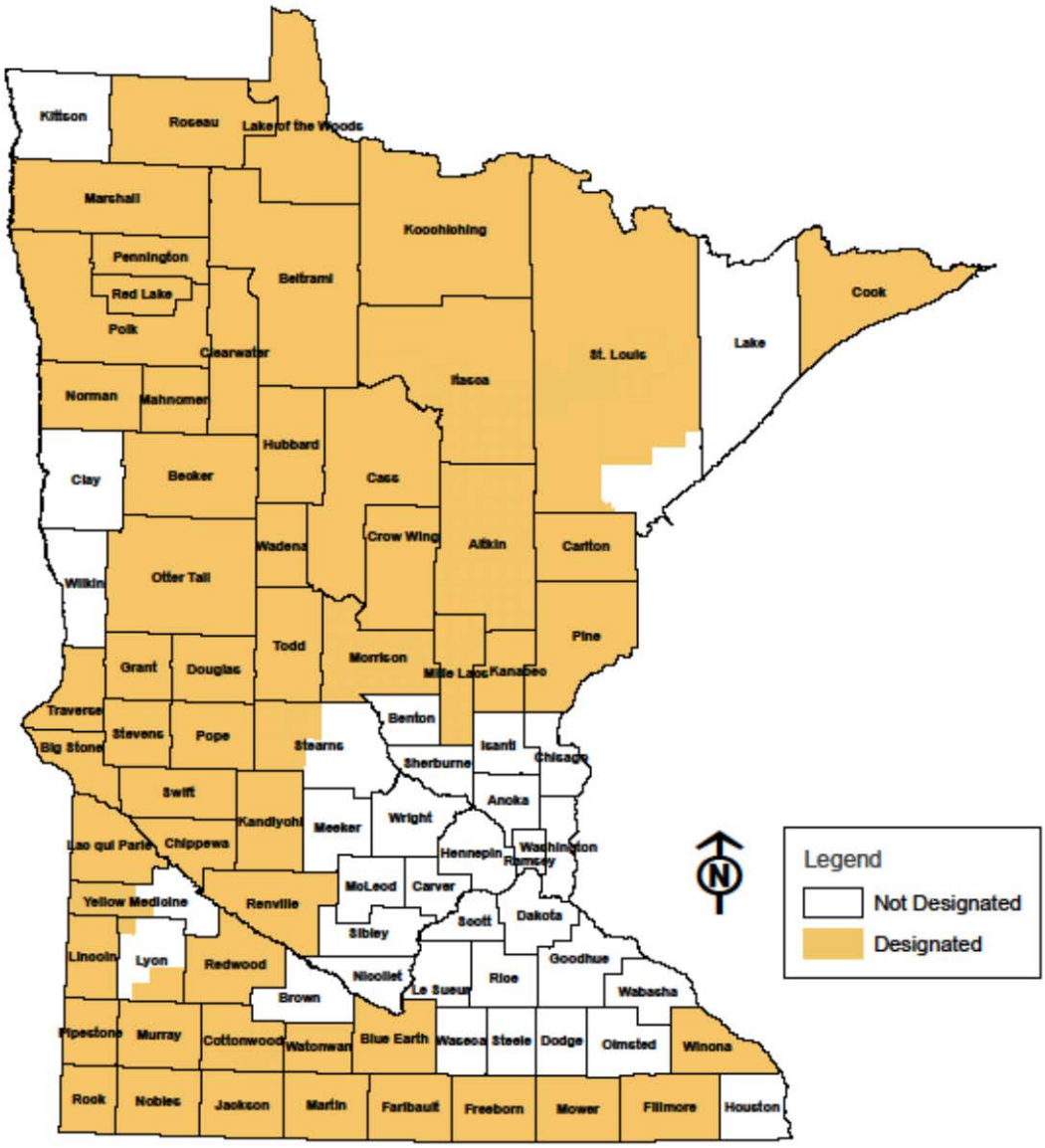



Source: Minnesota Department of Health
Office of Rural Health, June 2014
HPSA designations 6_2014.mxd

MINNESOTA MDH DEPARTMENT OF HEALTH

# Health Professional Shortage Areas

## Low Income Dental HPSA Designations



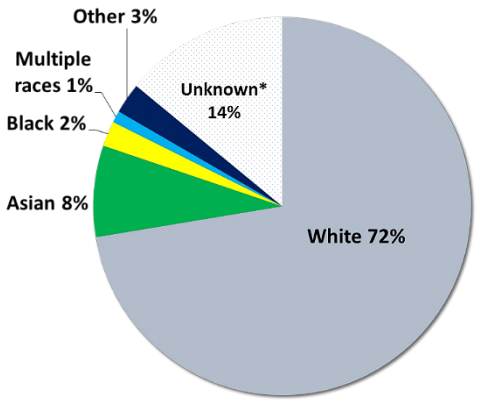

Data Source:
Minnesota Department of Health
Office of Rural Health and Primary Care
State DD HPSA Nov 2014

MINNESOTA MDH DEPARTMENT of HEALTH

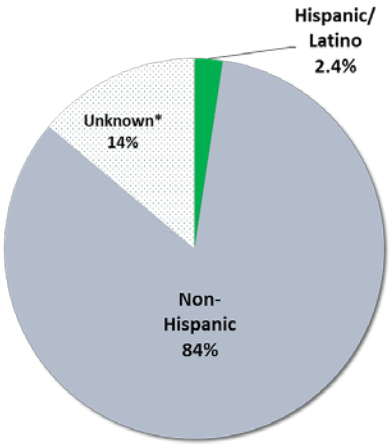
# Appendix D: Demographic analysis, additional detail

## Race and ethnicity of licensed physicians in Minnesota

### Race




### Ethnicity




Source: **2013 MDH Physician Workforce Survey.** Respondents may choose not to answer certain questions on the survey. 1,399 out of 10,809 (14 percent) did not answer the survey question about race. 1,388 (13.9 percent) of respondents did not answer the survey question about ethnicity.

## Race of licensed physicians vs. population, by region

| Economic Development Region | Share of physicians of color in the region* | Share of persons of color in region's population, 2010 Census | Total number of licensed physicians in region† |
|---|---|---|---|
| Central | 11% | 6% | 1,070 |
| Northeast | 7% | 7% | 917 |
| Northwest | 15% | 8% | 724 |
| 7-County Minneapolis/St. Paul metro | 14% | 21% | 8,632 |
| Southeast | 12% | 9% | 3,064 |
| Southwest | 23% | 7% | 570 |
| **Statewide** | **14%** | **14.7%** | **14,977** |

* Source: **2013 MDH Physician Survey.** 1,399 out of 10,809 (14 percent) did not answer the survey question about race. "Physicians of color" include American Indian, Asian, Black, Native Hawaiian physicians who identify as multiple races, and "other" races. † Source: May 2014 licensing data from the **Minnesota Board of Medical Practice**. The data in this column includes only those physicians who provided a business address in Minnesota (excludes physicians working out of state and who did not provide a business address to the Board.)

# Foreign-trained licensed physicians by Minnesota region

| Economic Development Region | Number of U.S. or Canadian-trained physicians in region | Number of foreign-trained physicians in region | Total number of licensed physicians in region | Share of foreign-trained physicians in region |
|---|---|---|---|---|
| Central | 943 | 124 | 1,070 | **12%** |
| Northeast | 844 | 69 | 917 | **8%** |
| Northwest | 606 | 112 | 724 | **15%** |
| Seven County Minneapolis/St. Paul | 7,75 | 1,116 | 8,632 | **13%** |
| Southeast | 2,473 | 585 | 3,064 | **19%** |
| Southwest | 432 | 135 | 570 | **24%** |
| **Statewide** | **12,773** | **2,141** | **14,977** | **14%** |

Source: May 2014 licensing data from the Minnesota Board of Medical Practice. Not all licensed physicians are working as physicians. This chart includes only those physicians who provided a business address that was in Minnesota (excludes 6,692 physicians who were working out of state and/or who did not provide a business address to the Board).

# Minnesota physicians by rural-urban location

| | U.S-trained Physicians (n= 12,541)* | Foreign-trained physicians (n=2,141)* | Share of Population in Area** |
|---|---|---|---|
| Metropolitan | 87% | 87% | 70% |
| Micropolitan/Large Rural | 8% | 8% | 13% |
| Small Town/Small Rural | 4% | 3% | 7% |
| Rural/Isolated | 1% | 1% | 10% |
| **Total** | **100%** | **100%** | **100%** |

**Note:** Rural-urban categories are based on Rural-Urban Commuting Areas (RUCAs). See **Defining Rural, Urban and Underserved Areas in Minnesota**.

Sources:

*Minnesota Board of Medical Practice licensing data, current through May 2014. A total of 2,445 physicians did not provide a business address.

**U.S. Census.

# Currently licensed physicians vs. Minnesota immigrant communities, by region of the world

The population estimates in this section are all from Minnesota Compass, which in turn used data from Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series from the U.S. Census Bureau, American Community Survey: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010. Available from: http://usa.ipums.org/usa/. The number of Minnesota-licensed physicians by education country and birth country comes from the MN Board of Medical Practice licensing data from May and October 2014, respectively.

Note: The population estimates here are based on U.S. Census estimates only. It is important to note that such estimates **likely undercount** immigrant and refugee communities. As the state demographer cautions: "These estimates … likely underestimate the size of our immigrant populations because trust and language issues depress response rates to Census surveys."[81] *For community-based estimates of some of the largest immigrant and refugee communities in Minnesota in addition to these census-based data, see Table 2 on Page 19.*

## Africa

| | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| **Somalia** | 21,227 | 7 | 28 |
| **Ethiopia** | 12,503 | 20 | 35 |
| **Liberia** | 12,216 | 2 | 8 |
| **Kenya** | 7,295 | 14 | 37 |
| **Sudan** | 3,327 | 14 | 15 |
| **Cameroon** | 1,303 | 3 | 7 |
| **Eritrea** | 1,197 | 0 | 5 |
| **Tanzania** | 1,028 | 4 | 12 |
| **Sierra Leone** | 772 | 0 | 2 |

## Southeast Asia

| | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| Laos | 24,408 | 0 | 19 |
| Vietnam | 18,548 | 3 | 64 |
| Thailand | 15,014 | 27 | 35 |
| Philippines | 6,346 | 146 | 158 |
| Burma (Myanmar) | 4,183 | 10 | 15 |
| Cambodia (Kampuchea) | 3,045 | 0 | 1 |
| Indonesia | N/A* | 3 | 9 |

*A value of N/A indicates that the number of people sampled in a given year was too small to provide a reliable estimate.

## South Asia

| | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| India | 26,273 | 783 | 914 |
| Pakistan | 1,556 | 256 | 248 |
| Sri Lanka (Ceylon) | 1,038 | 13 | 24 |
| Bangladesh | 897 | 15 | 16 |
| Nepal | 812 | 34 | 37 |

## East Asia

| | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| China | 13,634 | 90 | 155 |
| Korea | 13,419 | 39 | 138 |
| Other Asia* | 5,335 | 98 | 64 |
| Taiwan | 2,994 | 12 | 66 |
| Japan | 1,983 | 17 | 42 |
| Hong Kong | 1,361 | 1 | 19 |
| Malaysia | 714 | 1 | 18 |

*Includes all other Asian countries, not just those in East Asia.

## Latin America

| | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| Mexico | 70,988 | 87 | 43 |
| El Salvador | 7,233 | 1 | 4 |
| Colombia | 5,116 | 43 | 56 |
| Guatemala | 4,594 | 9 | 7 |
| Honduras | 4,534 | 0 | 1 |
| Ecuador | 4,080 | 15 | 20 |
| Guyana/British Guiana | 2,447 | 0 | 6 |
| Haiti | 1,358 | 4 | 11 |
| Trinidad and Tobago | 423 | 0 | 9 |

## Middle East

| Country | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| Iran | 1,711 | 44 | 112 |
| Egypt/United Arab Republic | 1,122 | 60 | 69 |
| Turkey | 940 | 49 | 41 |
| Iraq | 665 | 13 | 21 |
| Lebanon | 582 | 55 | 63 |
| Israel/Palestine | N/A* | 38 | 34 |
| Jordan | N/A* | 25 | 20 |
| Kuwait | N/A* | 1 | 8 |
| Syria | N/A* | 68 | 70 |
| Afghanistan | N/A* | 2 | 3 |

*A value of N/A indicates that the number of people sampled in a given year was too small to provide a reliable estimate.

## Eastern Europe

| | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| Russia/Other Former USSR | 6,710 | 26 | 83 |
| Ukraine | 3,766 | 14 | 26 |
| Byelorussia/Belarus | 2,737 | 3 | 10 |
| Poland | 1,898 | 52 | 63 |
| Bosnia | 1,624 | 7 | 6 |
| Romania | 1,385 | 41 | 52 |
| Latvia | 567 | 0 | 5 |
| Hungary | 531 | 24 | 16 |

## Western Europe

| Country | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| Germany | 7,617 | 83 | 155 |
| England | 4,161 | 59 | 68 |
| Sweden | 1,141 | 5 | 9 |
| Italy | 1,063 | 27 | 31 |
| Norway | 1,057 | 1 | 13 |
| Netherlands | 824 | 21 | 11 |
| Finland | 691 | 3 | 3 |
| Denmark | 602 | 5 | 8 |
| Ireland | 579 | 79 | 54 |
| Greece | 519 | 29 | 32 |
| Scotland | 424 | 7 | 14 |
| Spain | N/A* | 14 | 18 |
| Portugal | N/A* | 2 | 3 |

*A value of N/A indicates that the number of people sampled in a given year was too small to provide a reliable estimate.

## Oceania

| Country | Estimated Foreign-Born Population in Minnesota, 2010-2012 | Number of MN Licensed Physicians Educated in this Country | Number of MN Licensed Physicians Born in this Country |
|---|---|---|---|
| New Zealand | 627 | 9 | 7 |
| Australia | 913 | 21 | 21 |

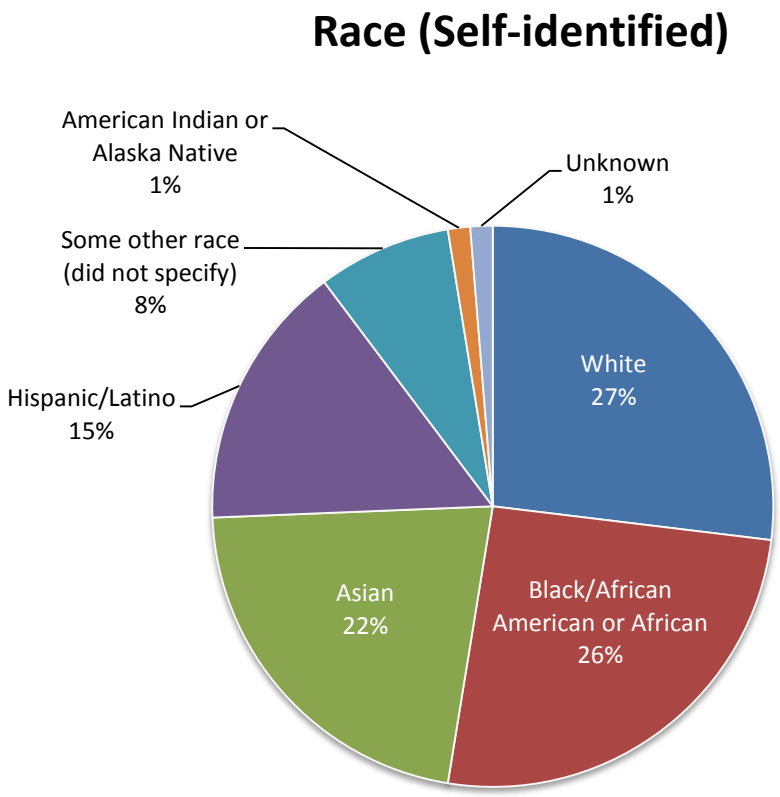
# Appendix E: Survey findings

From August-December 2014, the Task Force conducted a statewide survey of foreign-trained physicians with the goal of obtaining a better understanding of the immigrant physician population and their needs. MDH reached out to 275 immigrant physicians during the four months with a 25 percent survey completion rate.

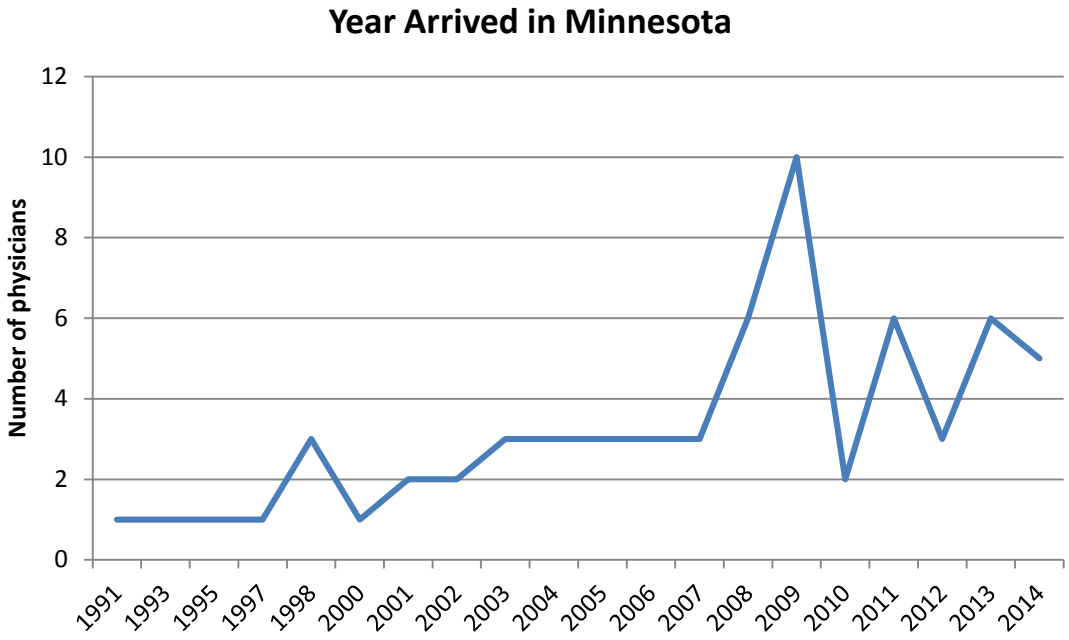
## Demographics

Survey respondents came from 37 different countries. Sixty-eight (68) percent of respondents were 35-54 years old, and the gender makeup was almost 50/50. Fifteen (15) percent of survey respondents identified as refugees or asylees.

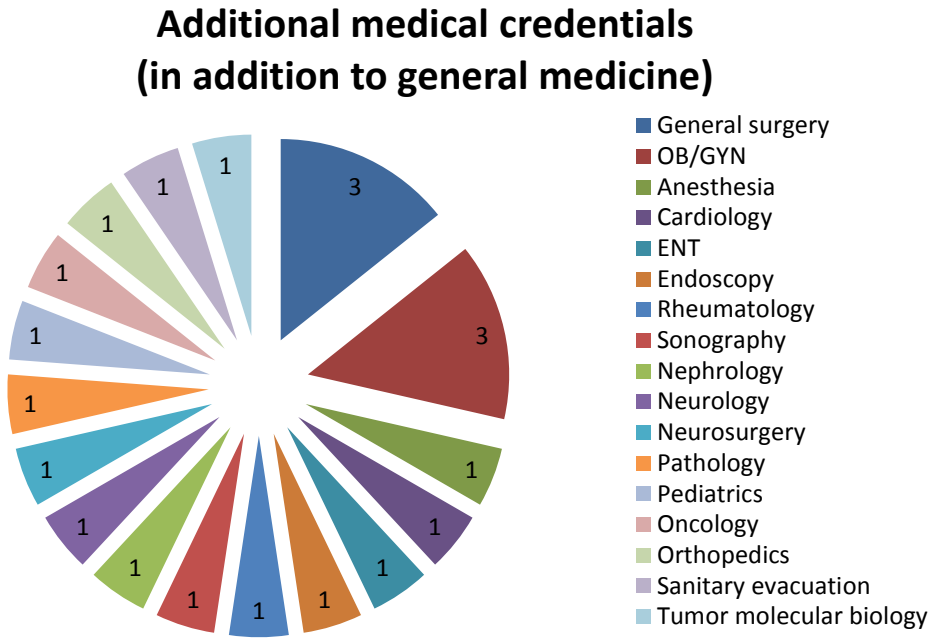
The figure below shows the racial diversity of the respondents.



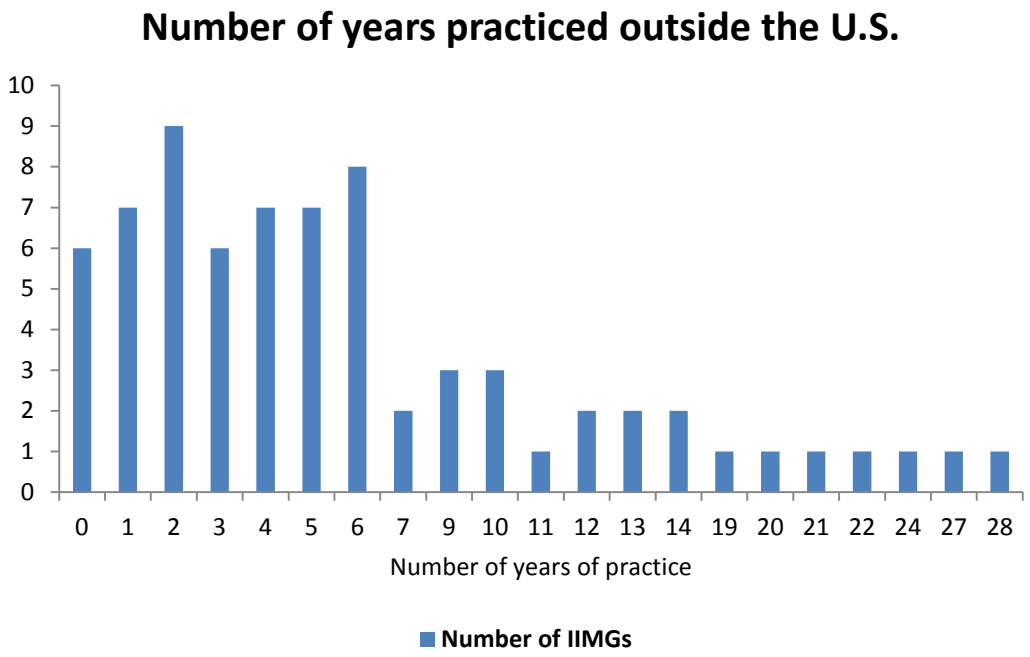
The trend of immigrant physician arrivals in Minnesota is difficult to discern, but appears relatively stable. Based on the survey responses, there was a notable spike in 2009 of 10 immigrant physicians.




The majority (71 percent of respondents, or 51 individuals) are trained as general practitioners and do not hold any additional medical credentials. The variety amongst those who do is seen below.

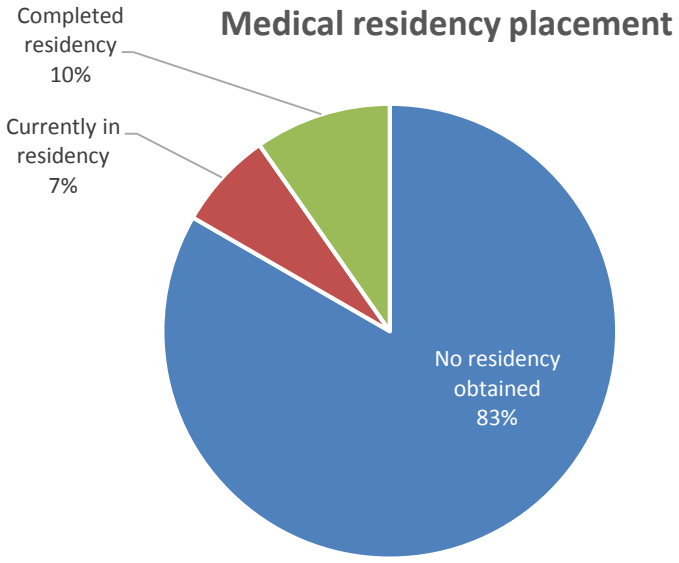


Respondents have a wide breadth of clinical experience outside of the U.S., from 0-28 years.




## Medical residency

While there is an overwhelming interest in "meeting the requirements to enter medical practice or other health careers" in Minnesota (87 percent), the majority of respondents have not been accepted into a residency program (83 percent).

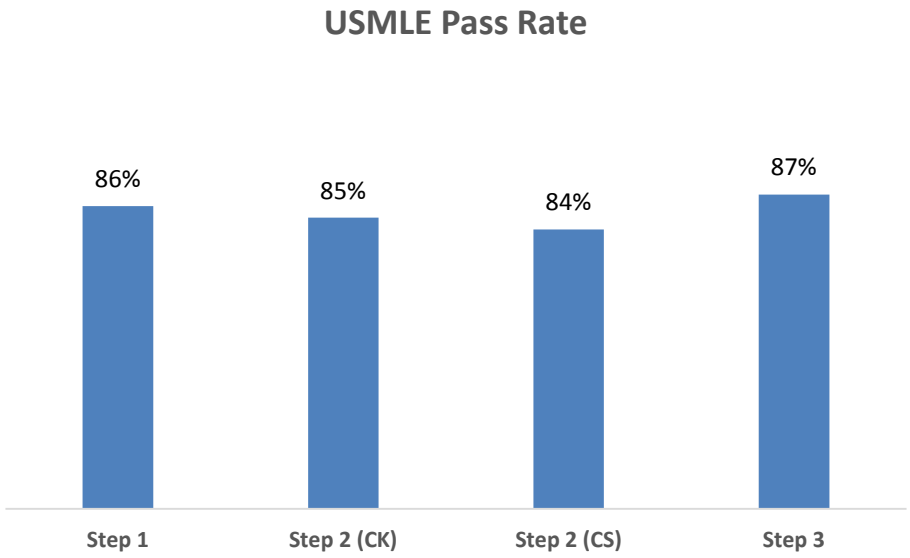


Of the seven respondents who have completed residency, five have a license to practice in Minnesota.

Of those who have not completed residency, 32 percent have spent less than a year looking for residency programs. The average search time has been 1.5 years, although two immigrant physicians have spent over 5 years trying. Respondents who have completed or are currently in residency programs stated that the most helpful factors throughout the application process were: (1) U.S. clinical experience and (2) having connections with people who can attest to your clinical skill set.

## Licensing Exams

The majority of respondents who attempted any or all of the three United States Medical Licensing Exams (USMLE) steps passed, usually on their first attempt.




Respondents cited the following challenges in preparing for the licensing exams (challenges listed by order of frequency of response).

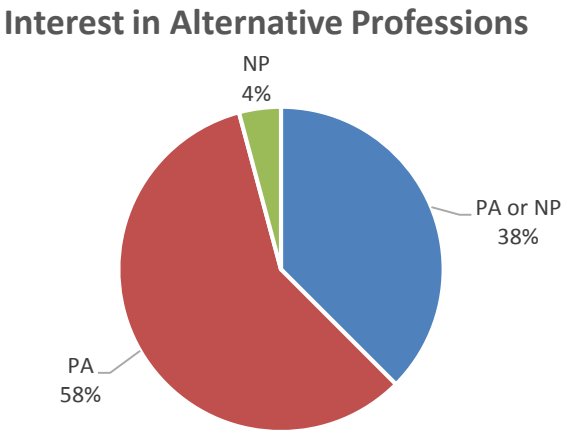
A. Money/financial barriers
B. Lack of resources, including but not limited to: preparation materials, government, institutional, and social support
C. Working and studying at the same time
D. Exam and exam prep fees
E. Language barriers
F. Lack of time
G. Residency barriers, including a lack of US clinical experience and recency requirements
H. Household problems
I. Exam rigor
J. Studying and taking care of children at the same time
K. Settlement issues, including legal barriers

L. Isolation
M. Political climate in home country

Only four respondents explicitly stated that there were no barriers to testing. The top three resources utilized were the USMLE website/Qbank (34 percent), Kaplan prep materials (19 percent), and New Americans Alliance for Development (NAAD) (9 percent).

## Alternative Professions

Just over one-third (35 percent of respondents or 24 individuals) were not interested in pursuing alternative medical professions. Of those 24 respondents, 15 explicitly stated they were determined to go down the physician route. Among the 65 percent interested in exploring alternative professions, just over half (58 percent) expressed interest in the physician assistant role.




Most (37 out of 45 respondents) are currently employed in the health field (excluding the physician profession). These positions include researcher (8), medical interpreter (6), medical assistant (4), and health service manager/administrator (4).

## Suggested Solutions

44 respondents suggested possible solutions:

- 15 suggested creating training programs (like the former Preparation for Residency Program at the University of Minnesota).
- 11 suggested clinical spots/opportunities for hands-on experience.
- 7 mentioned willingness to work in rural communities.
- 7 expressed interest in entering the PA/NP profession with limited to no extra training.
- 6 asked for support services (including financial).
- 5 explicitly asked for access to residency slots.
- 2 wanted to waive or lower recency requirements.
- 2 felt licensing/certification requirements overall needed to be changed.
- 2 wanted appropriate committees to count education and experience abroad.
- 2 voiced concerns about opportunities for the utilization of appropriate skills.

# Appendix F: Promising practices and pathways

| | KEY FEATURES | OUTCOMES | LEAD ORG. | IMPLEMENTATION ISSUES – WHAT WOULD BE NEEDED? |
|---|---|---|---|---|
| **PROGRAMS** | | | | |
| **U.S.** | | | | |
| Welcome Back Initiatives (various sites) | ▪ Educational and professional assessment and guidance.<br>▪ Courses and workshops to address key barriers.<br>▪ Group activities and support. | ▪ Good success in validating credentials (27%) and passing Board exams (16%).<br>▪ Low success rate in securing residencies (2.5% of the 4,022 physicians assisted between 2001 and 2011 at all Welcome Back sites, and 7-8% at the original site in San Francisco).<br>▪ Another 20% have pursued other health care professions. | Nonprofits (with government and other grant funding) | ▪ Most successful sites have strong relationships with community colleges, incl. for ESL classes and intro-to-U.S.-health-care classes.<br>▪ Partnerships with medical schools have been more difficult to establish. |
| NAAD + Workforce Development Inc. (Minnesota) | ▪ Career counseling and pathway navigation.<br>▪ Social and financial support.<br>▪ Test preparation support.<br>▪ English proficiency support, and other workshops/learning sessions.<br>▪ Group activities and support. | ▪ Good success in IMGs passing USLMEs and becoming ECFMG certified.<br>▪ Fairly low success rates in securing residencies (13%). | Nonprofits (with state grant and other grant funding) | ▪ Funding to serve more IMGs and provide more comprehensive support.<br>▪ Closer ties to residency programs.<br>▪ More opportunities for IIMGs to gain clinical experience and demonstrate competence. |
| UCLA IMG Program (California) | ▪ 9-21 month program.<br>▪ Prep for Steps 1-3.<br>▪ Clinical observership and hands-on clerkship.<br>▪ Specialized courses in English.<br>▪ Stipends.<br>▪ Counseling and prep for FM residencies in California, incl. 2 letters of recommendation<br>▪ Limited to Spanish speakers. | ▪ High success rate in placing graduates in residency (75-95%). | University (with funding from foundations, health systems and corporations), possibly also state Medicaid reform funding. | ▪ Costs $52,000-54,000 per student, with over 40% of that for stipends.<br>▪ Relies on private donations.<br>▪ May also receive support from the state's Medicaid reform program. |

| | KEY FEATURES | OUTCOMES | LEAD ORG. | IMPLEMENTATION ISSUES – WHAT WOULD BE NEEDED? |
|---|---|---|---|---|
| | ▪ After residency, IMGs commit to practicing for 2-3 years in a Calif. Medically Underserved Area. | | | |
| Prep for Residency (PRP) (Univ of Minnesota) | ▪ Orientation to the U.S. medical education system and Family Medicine (FM)<br>▪ 6 months of clinical experiences.<br>▪ English language enhancement.<br>▪ Simulation Lab training and residency-level workshops.<br>▪ Most instruction at individual or small group levels.<br>▪ $1,000/month stipends. | ▪ High success rate in participants securing residency (nearly 100%).<br>▪ Low # of applicants and participants. | University (with state grant and/or internal funding) | ▪ Funding (original program required $150,000+/year to support 3-4 participants; U's "ideal" PRP estimated at $550K for 4 participants, not including costs to hospitals/clinics that participate).<br>▪ Ways of finding and assessing qualified candidates.<br>▪ Support for English and typing skills.<br>▪ Issue of limited residency slots, competition w/ better-known USMGs. |
| Tufts University School of Medicine – sponsored residency positions | ▪ Residency positions for IMGs "sponsored" (funded) by their home countries.<br>▪ Example: Saudi Arabian government pays all travel and living expenses for their medical graduates in residency (amount unclear, though each resident costs a hospital around $60,000 a year, including a monthly stipend and benefits). | International Affairs office in School of Medicine generally places 20 foreign residents among a network of 10 affiliated hospitals. | University (with "sponsorships" funded by other countries) | ▪ Funding/sponsorships for the residency slots.<br>▪ Partnership with medical school(s) to add designated residency positions. |
| **CANADA** | | | | |
| Alberta IMG Program | ▪ Competitive application process.<br>▪ Pre-residency clinical assessment.<br>▪ Residency positions reserved for IMGs in the program and aligned with provincial physician needs.<br>▪ Residency positions are in a variety of disciplines, with half in family medicine and | Each year, 40 participants placed in designated IMG residency positions (20 at the University of Alberta and 20 at the University of Calgary). | University (with funding from the Alberta government) | ▪ Funding.<br>▪ Partnership with medical school(s) to do pre-residency clinical assessments and add designated residency positions. |

| | KEY FEATURES | OUTCOMES | LEAD ORG. | IMPLEMENTATION ISSUES – WHAT WOULD BE NEEDED? |
|---|---|---|---|---|
| | most of balance in other primary care fields (IM, peds, etc.). | | | |
| University of British Columbia | ▪ Competitive application process.<br>▪ Pre-residency clinical assessment over 8 week period.<br>▪ Residency positions reserved for IMGs in the program.<br>▪ Participants can do just the clinical assessment and then compete in the overall match, or apply for the residencies reserved for IMGs.<br>▪ Return-of-service obligation (1 year of service for every year of residency, up to 3 years). | ▪ Serves 60 IMGs each year.<br>▪ In 2014, 50% of the IMGs matched into a Canadian residency slot went through this clinical assessment program. | University (with funding from the British Columbia govt) | ▪ Funding (British Columbia govt pays the University of British Columbia $108,000 CAD per year per IMG residency slot).<br>▪ Partnership with medical school(s) to do pre-residency clinical assessments and add designated residency positions. |
| **PATHWAYS** | | | | |
| **CANADA** | | | | |
| College Des Medicins Du Quebec (CMQ) – Restrictive Permit | ▪ IMGs register with the RSQ at the Quebec health ministry, which serves as the "portal of entry" for IMGs who wish to practice.<br>▪ IMG undergoes a 3-month clinical assessment in a University-based or other approved site. Also must pass language test and a 3-hr class on Quebec health care system.<br>▪ RSQ helps the IMG find facility in underserved region willing to sponsor the IMG.<br>▪ Once an employer sponsorship is obtained, the IMG applies to the CMQ for restrictive permit.<br>▪ IMG issued restrictive permit for one year, which may be renewed each year or converted to a regular permit (after 1 year after passing an exam, or after 5 years with no exam). | ▪ About 60 restrictive permits have been issued each year since 2010, with about 13% of these in Family Medicine, though this number has been increasing (21% in 2013). | Govt agencies -- regulatory agency and health ministry<br><br>Universities and other clinical sites (for assessments)<br><br>Employers<br><br>ECFMG (for verification of credentials) | ▪ Mechanism for registry and matching to underserved sites.<br>▪ Partnerships with universities and other clinical sites for clinical assessments.<br>▪ Changes in licensing system – creation of new restrictive permit/licensing option. |

| | KEY FEATURES | OUTCOMES | LEAD ORG. | IMPLEMENTATION ISSUES – WHAT WOULD BE NEEDED? |
|---|---|---|---|---|
| **AUSTRALIA** | | | | |
| Standard pathway – AMC Exams | • IMG must have proof of English proficiency and medical education verified by ECFMG.<br>• IMG takes two tests via the Australian Medical Council (AMC): (1) clinical knowledge test; and (2) in-person clinical skills assessment. If passed, receives AMC certificate.<br>• IMG secures employment offer and then applies to Medical Board of Australia (MBA) for provisional registration to practice.<br>• With provisional registration, completes a 12-month period of supervised practice.<br>• After successful 12 months of supervised practice, can apply for general registration. | • Many IMGs need to take the in-person clinical skills exam twice, paying $4,000 each time and often having to wait 18-24 months to resit for the exam -- this is one of the reasons Australia is piloting the workplace-based assessment pathway (below). | Medical Board of Australia (MBA) (for permits)<br><br>Australian Medical Council (AMC) (for assessment)<br><br>Employers (for supervision)<br><br>ECFMG (for credentials) | • Mechanism for testing and clinical assessment.<br>• Partnerships with employers for supervised practice.<br>• Changes in licensing system – creation of new restrictive permit/licensing option. |
| Standard pathway – Workplace-based assessments | • Similar to Standard Pathway above, but the clinical assessment is done in a workplace setting after clinical knowledge test is passed. | Only in pilot stage now, at limited sites. | Same as above but employer plays greater role (for assessment) | Same as above, with more intensive role for employers (to conduct assessment). |
| Competent Authority Pathway | • For IMGs deemed eligible to practice by entities in particular countries (the UK, the US, Canada, Ireland and New Zealand).<br>• The IMG must secure an offer of employment and obtain verification of degree via the ECFMG.<br>• The IMG applies for a provisional registration with the Board. The IMG may need to take a pre-employment structural interview (PESCI) if the Board determines it necessary.<br>• After satisfactory completion of a 12-month period of supervised practice, the | | MBA<br><br>ECFMG (for verification of credentials)<br><br>Employers (for supervised practice) | • Mechanism for identifying "competent authorities."<br>• Partnerships with employers for supervised practice.<br>• Changes in licensing system – creation of new restrictive permit/licensing option. |

| | KEY FEATURES | OUTCOMES | LEAD ORG. | IMPLEMENTATION ISSUES – WHAT WOULD BE NEEDED? |
|---|---|---|---|---|
| | IMG is eligible to apply for general registration.<br>• Process was streamlined as of July 2014 (previously the Australian Medical Council did assessment and issued a certificate at the end of the 12 months of supervised practice). | | | |
| Specialist Pathway – Specialist recognition | • After verification of medical credentials, the IMG applies to a relevant specialist medical college, which assesses whether the IMG is (a) not comparable to Australian-trained specialists in that field; (b) substantially comparable; or (c) partially comparable.<br>• If deemed not comparable, the IMG can take Standard Pathway or Competent Authority Pathway.<br>• If deemed partially or substantially comparable, the IMG secures an employment offer and applies for limited or provisional registration.<br>• Depending on the specifics of the college's assessment, the IMG may need to undertake a period of peer review (oversight), which may involve a workplace-based assessment, or a period of supervised practice and further training.<br>• After completing the steps identified by the college, awarded a college fellowship or advised by college as eligible for fellowship.<br>• Applies to MBA for specialist registration. | | AMC + ECFMG (for verification of creds)<br><br>MBA (for registration)<br><br>Specialist medical colleges (for assessment) | • Assessment fees vary by specialist college, but seem to average about $5,000-6,000 (USD). Additional fees for AMC/MBA steps.<br>• Partnerships with specialist programs to conduct assessments.<br>• Mechanisms for follow-up assessments, training, etc.<br>• Changes in licensing system – creation of new restrictive permit/licensing option. |
| Specialist Pathway – Area of Need | • An employer IDs a specialist position needed and works with a specialist college to prepare the job description and criteria. | | AMC (for verification of creds) | Same as specialist pathway above. |

| | KEY FEATURES | OUTCOMES | LEAD ORG. | IMPLEMENTATION ISSUES – WHAT WOULD BE NEEDED? |
|---|---|---|---|---|
| | • The employer works with the state or territory health authority to have the position declared an area-of-need position.<br>• The IMG secures an employment offer for the position.<br>• The IMG obtains verification of medical credentials and applies to the relevant specialist medical college.<br>• The college assesses the IMG's qualifications and experience against the requirements of the specific position.<br>• If deemed qualified, the IMG applies for limited registration to practice.<br>• This pathway does not necessarily lead to specialist recognition. To obtain that, the IMG must complete the requirements for that recognition (see above). Alternatively, they can pursue the Standard Pathway. | | MBA (for registration)<br><br>Specialist medical colleges (for assessment)<br><br>Employer (to develop position)<br><br>State or territory health authority (to authorize area of need position) | Mechanism for approving/declaring positions in "areas of need" (could be similar to current designations under National Health Service Corps). |
| **GERMANY** | | | | |
| Pathway to licensure (approbation) | • Citizens of the European Union (EU) (with the exception of Bulgaria and Romania), the European Economic Area (EEA) and Switzerland are automatically recognized and allowed to practice.<br>• An IMG trained in another country (outside the EU, EEA or Switzerland) may apply for an equivalency review. The state (regional) health authority evaluates whether the basic medical training and qualifications are equivalent to training in Germany. Significant differences in qualifications can be offset by relevant professional experience.<br>• If deemed equivalent and other requirements are met (such as German | This is a relatively new system – a product of the 2012 German Recognition Act (an "Act to improve the assessment and recognition of foreign professional qualifications"). Before then it was more difficult for IMGs to become licensed in Germany. | State health authorities (for assessment, testing and licensing)<br><br>State chambers of physicians (for specialty assessment) | • Mechanism for equivalency review and testing.<br>• Changes in licensing system – creation of new licensing option based on equivalency review and testing. |

| | KEY FEATURES | OUTCOMES | LEAD ORG. | IMPLEMENTATION ISSUES – WHAT WOULD BE NEEDED? |
|---|---|---|---|---|
| | language proficiency), the IMG is granted an Approbation (license).<br>• If the health authority finds substantial differences between the IMG's qualifications and Germany's, the IMG may take an assessment test (a 60-90 minute clinical-practical test with patient presentation) to prove the equivalence of his/her professional knowledge. If they pass, they are granted a license (Approbation). Until the test is passed and a license is obtained, the IMG may obtain a provisional license for up to 2 years to work under supervision.<br>• Other requirements:<br>o Proof of spoken and written German. Some states require a "Medical German" test be passed as well.<br>o A certificate stating they are entitled to work as a doctor in their country.<br>o Documents proving they intend to practice in Germany – including confirmation of employment by a hospital or clinical employer.<br>• Specialists are assessed by specialty associations. They assess whether the content and duration of the IMG's training complies with German training regulations for that specialty. Specialists must also complete at least 12 months of specialty training in Germany. | | | |

# Notes

[1] Educational Commission for Foreign Medical Graduates [Internet]. *Definition of an IMG*. Available from: http://www.ecfmg.org/certification/definition-img.html. As the ECFMG notes, it is the location of the medical school that determines whether the physician is an IMG. Hence, if a non-U.S. citizen obtains their degree in the U.S., s/he is not considered an IMG.

[2] For the purposes of this report, "physician" refers to an individual with a medical degree from any part of the world, regardless of whether s/he is licensed to practice in Minnesota. It should be noted, however, that the designation "physician" has a specific, protected meaning under the Minnesota Medical Practice Act (Minnesota Statutes section 147.081, subdivision 3, Available from: https://www.revisor.mn.gov/statutes/?id=147.081).

[3] Includes total cost of professional examinations, residency application-related costs and licensing fees as calculated in Massachusetts. Costs for immigrant physicians in other states (including Minnesota) are similar, as the exam, certification and residency application fees apply nationally. Millona A, Erwin S, Krame B. *Tapping the Potential of Foreign-Trained Engineering and Health Care Professionals in Massachusetts*. Appendix B: Medical License Requirements. Boston (MA): The New Americans Integration Institute [Internet]; 2014. Available from: http://www.miracoalition.org/images/stories/pdf/tapping%20the%20potential_final_appendices.pdf.

[4] Rabben L. *Credential Recognition in the United States for Foreign Professionals*. Washington D.C.: Migration Policy Institute [Internet]; 2013. Available from: http://www.migrationpolicy.org/research/credential-recognition-united-states-foreign-professionals. Educational Commission for Foreign Medical Graduates. *2013 Annual Report*. Philadelphia (PA): Educational Commission for Foreign Medical Graduates [Internet]; 2014. Available from: http://www.ecfmg.org/resources/ECFMG-2013-annual-report.pdf.

[5] For more on IMG history in the U.S., see American Medical Association-IMG Section Governing Council [Internet]. *International Medical Graduates in American Medicine: Contemporary Challenges and Opportunities*. Chicago (IL): American Medical Association; January 2013. Available from: http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/international-medical-graduates.page. The AMA report in turn draws on Ludmerer KM. *Learning to heal: the development of American medical education*. Baltimore (MD): Johns Hopkins University Press; 1996 and Ludmerer KM. *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care*. New York (NY): Oxford University Press; 1999.

[6] Governor's Advisory Council for Refugees and Immigrants [Internet]. *RX for Strengthening Massachusetts' Economy and Healthcare System:* A *Report by The Governor's Advisory Council for Refugees and Immigrants Task Force on Immigrant Healthcare Professionals in Massachusetts*. Boston (MA): The Commonwealth of Massachusetts; December 2014. Available from: *http://miracoalition.org/images/stories/pdf/gac_task_force_report-final-12.18.14.pdf*

[7] Carnevale AP, Smith N, Gulish A, Beach BH. *Healthcare*. Washington DC: Georgetown University Center on Education and the Workforce; 2012. Georgetown's Center for Education and the Workforce has not conducted physician shortage analyses at the national or the state level. Their publication, *Healthcare*, only examines growth in physician employment from 2010 and 2020 (personal communication, A. Gulish, November 13, 2014). Schoenbaum M, Van Cleave E. Primary care is the heart of health reform in Minnesota. *Minnesota Medicine*. Minneapolis (MN): Minnesota Medical Association [Internet]; February 2013. Available from: http://www.minnesotamedicine.com/Past-Issues/February-2013/Primary-Care-is-at-the-Heart-of-Health-Reform. Association of American Medical Colleges [Internet]. *Physician shortages to worsen without increases in residency training*. Washington DC: Association of American Medical Colleges; 2010. Available from: https://www.aamc.org/download/153160/data/physician_shortages_to_worsen_without_increases_in_residency_tr.pdf. The Robert Graham Center [Internet]. *Minnesota: Projecting primary care physician workforce*. Washington DC: The Robert Graham Center; September 2013. Available from: http://www.graham-center.org/online/etc/medialib/graham/documents/tools-resources/minnesotapdf.Par.0001.File.dat/Minnesota_final.pdf. Minnesota Hospital Association [Internet]. *Registered nurses and primary care physicians: How will Minnesota fare in the next 10 years?* St. Paul (MN): Minnesota Hospital Association; July 2014. Available from: http://www.mnhospitals.org/Portals/0/Documents/news/RNPCPWorkforceFinal.pdf. University of Minnesota. *University of Minnesota's Medical School capacity*. Correspondence dated October 23, 2013. Available from: http://govrelations.umn.edu/assets/pdf/reports/2013MedicalSchoolCapacity.pdf. It is also worth noting that the University of Minnesota's Medical School Capacity report's supply projection corresponds to the projected physician

supply in 2020 by the Georgetown Center for Education and the Workforce.Eden J, Berwick D, Wilensky G. (Eds). *Graduate medical education that meets the nation's health needs*. National Academies Press; 2014.

[8] Minnesota State Demographic Center. *The Time for Talent: Why the Development, Recruitment, and Retention of Talent Is Key to a Prosperous Future for Minnesota*. St. Paul (MN): Minnesota State Demographic Center [Internet]; March 13, 2013. Available from: http://mn.gov/admin/images/the-time-for-talent-msdc-march2013.pdf.

[9] Minnesota Department of Health. *Minnesota's Primary Care Workforce, 2011-2012*. St. Paul (MN): MDH [Internet]; September 2013. Available from: http://www.health.state.mn.us/divs/orhpc/pubs/workforce/primary.pdf.

[10] Rabben L. Credential Recognition in the United States for Foreign Professionals. Washington D.C.: Migration Policy Institute [Internet]; 2013. Available from: http://www.migrationpolicy.org/research/credential-recognition-united-states-foreign-professionals. Jolly P, Erikson C, Garrison G, U.S. Graduate Medical Education and Physician Specialty Choice. *Academic Medicine*. 2013;88(4):468-474. Available from: http://www.medscape.com/viewarticle/781649_1. American College of Physicians. *The Role of International Medical Graduates in the U.S. Physician Workforce*. Philadelphia: American College of Physicians [Internet]; 2005: A Policy Monograph. Available from: http://www.acponline.org/advocacy/current_policy_papers/assets/img_paper.pdf. Mick SS and Lee SY. The safety-net role of international medical graduates. *Health Affairs*, 16, no. 4 (1997):141-150. Available from: http://content.healthaffairs.org/content/16/4/141.long. Polsky D, Kletke PR, Wozniak GD, Escarce JJ. Initial practice locations of international medical graduates. *Health Serv Res*. 2002;37:907-8. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1464010/.

[11] Hagopian A, Thompson MJ, Kaltenbach E, Hart LG. The role of international medical graduates in America's small rural critical access hospitals. *J Rural Health*. 2004;20:52-8. Baer LD, Konrad TR, Miller JS. The need of community health centers for international medical graduates. *Am J Public Health*. 1999;98:1570-4.

[12] Minnesota State Demographic Center and U.S. Census Bureau, Decennial Census and Population Estimates. Available from: http://mn.gov/admin/demography/data-by-topic/aging/

[13] Minnesota State Demographic Center, *The Long Run Has Become the Short Run: Budget Implications of Demographic Change*. St. Paul (MN): Minnesota State Demographic Center; February 2011. Available from: http://mn.gov/admin/images/long-run-has-become-the-short-run-msdc-feb2011.pdf

[14] Minnesota Compass. *Immigration – Overview*. Available from: http://www.mncompass.org/immigration/overview.

[15] Ibid.

[16] Gambino CP, Trevelyan EN, Fitzwater JT. *The Foreign-Born Population From Africa: 2008-2012*. American Community Survey Briefs. Washington DC: US Census Bureau [Internet]; October 2014. Available from: http://www.census.gov/content/dam/Census/library/publications/2014/acs/acsbr12-16.pdf

[17] Chicago Council on Global Affairs, Immigration Task Force. *Minnesota Demographic Characteristics, 2012*. Chicago (IL): The Chicago Council on Global Affairs [Internet]. Available from http://midwestimmigration.org/in-your-state/overview/state/minnesota cited in Corrie B and Radosevich S. *The Economic Contributions of Immigrants in Minnesota*. St. Paul (MN): Minnesota Chamber of Commerce [Internet]; September 2013. Available from: http://cdn2.hubspot.net/hub/172912/file-371412567-pdf/Economic_Contributions_of_Immigrants_in_Minnesota_2013.pdf

[18] U.S. Office of Refugee Resettlement: https://www.acf.hhs.gov/sites/default/files/orr/orr_populations_served_sorted_by_state.xlsx. A secondary arrival is a refugee who is no longer residing in the state listed as the initial point of destination with U.S. Citizenship and Immigration Services. Refugees are free to move from state to state, but sponsors, resettlement agencies, and state health departments are designed to serve only newly arrived primary refugees to the state.

[19] Minnesota State Demographic Center. In the Shadow of the Boomers: Minnesota's Labor Force Outlook. December 2013. Available from: http://mn.gov/admin/images/in-the-shadow-of-the-boomers-labor-force-outlook-msdc-dec2013.pdf. The demographer's analysis is based on data from IPUMS version of U.S. Census Bureau, 2007-2011 American Community Survey 5-year estimates. Available from: https://www.ipums.org.

[20] Ibid, citing U.S. Census Bureau, 2009-2011 American Community Survey. Available from American FactFinder. http://factfinder2.census.gov/.

[21] Ibid.

[22] Minnesota Compass, Workforce – Educational Attainment – Graph: Percent (age 25+) with a bachelor's degree or higher by nativity, Minnesota 2006-2013, citing U.S. Census Bureau, American Community Survey. Available from: http://www.mncompass.org/workforce/educational-attainment#1-6813-g.

[23] Corrie B and Radosevich S. *The Economic Contributions of Immigrants in Minnesota*. St. Paul (MN): Minnesota Chamber of Commerce [Internet]; September 2013. Available from: http://cdn2.hubspot.net/hub/172912/file-371412567-pdf/Economic_Contributions_of_Immigrants_in_Minnesota_2013.pdf

[24] Minnesota Department of Health, Physician Workforce Survey, 2013. Respondents may choose not to answer certain questions on the survey. 1,399 out of 10,809 (14 percent) did not answer the survey question about race. 1,388 (13.9 percent) of respondents did not answer the survey question about ethnicity.

[25] Minnesota places sixth among all 50 states for overall health according to the latest edition of America's Health Rankings, a national comparative health index sponsored by the United Health Foundation (UHF) in partnership with the American Public Health Association and Partnership for Prevention. Available from: http://www.americashealthrankings.org

[26] Minnesota Department of Health, *Advancing Health Equity in Minnesota: Report to the Legislature*. St. Paul (MN): MDH [Internet]; February 2014. Available from: http://www.health.state.mn.us/divs/chs/healthequity/ahe_leg_report_020414.pdf

[27] Morrison TB, Flynn PM, Weaver AL and Wieland ML. Cervical cancer screening adherence among Somali immigrants and refugees to the United States. *Health Care for Women International*. Vol 34, Issue 11, 2013. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23659268 Khadilkar A and Chen Y. Rate of cervical cancer screening associated with immigration status and number of years since immigration in Ontario, Canada. *J Immigr Minor Health*. 2013;15(2):244–8. Available from:10.1007/s10903-012-9711-6. Lofters A, Glazier RH, Agha MM, Creatore MI, Moineddin R. Inadequacy of cervical cancer screening among urban recent immigrants: a population-based study of physician and laboratory claims in Toronto, Canada. *Prev Med*. 2007;44(6):536–42. Available from:10.1016/j.ypmed.2007.02.019.PubMedCrossRef. Goel MS, Wee CC, McCarthy EP, Davis RB, Ngo-Metzger Q, Phillips RS. Racial and ethnic disparities in cancer screening: the importance of foreign birth as a barrier to care. *J Gen Intern Med*. 2003;18(12):1028–35. Available from: http://link.springer.com/article/10.1111%2Fj.1525-1497.2003.20807.x. Johnson CE, Mues KE, Mayne SL, Kiblawi AN. Cervical cancer screening among immigrants and ethnic minorities: a systematic review using the health belief model. *J Low Genit Tract Dis.* 2008;12(3):232–41. Available from: http://www.ncbi.nlm.nih.gov/pubmed/18596467?dopt=Abstract. Salman KF. Health beliefs and practices related to cancer screening among Arab Muslim women in an urban community. *Health Care Women Int.* 2012;33(1):45–74. Available from:10.1080/07399332.2011.610536.

[28] Wieland M., Morrison TB, Cha SS, Rahman S and Chaudhry R. Diabetes Care Among Somali Immigrants and Refugees. *Journal of Community Health*. Vol 37, Issue 3, pp 680-684. Available from: http://link.springer.com/article/10.1007/s10900-011-9499-7

[29] Morrison TB, Wieland ML, Cha SS, Rahman AS, Chaudhry. Disparities in Preventive Health Services Among Somali Immigrants and Refugees. *Journal of Immigrant and Minority Health* Volume 14, Issue 6, pp 968-974; December 2012. Available from: http://link.springer.com/article/10.1007%2Fs10903-012-9632-4#.

[30] Ibid.

[31] Association of American Medical Colleges. *Analyzing Physician Workforce Racial and Ethnic Composition Associations: Physician Specialties* (Part 1). 14(8) 2014. Available from: http://www.ohsu.edu/xd/education/schools/school-of-medicine/departments/clinical-departments/radiation-medicine/about/upload/AAMC_analyzing-MD-workforce-racial-ethnic-comoposion_pt-1.pdf

[32] Komaromy M, Grumbach K, Drake M, Vranizan K, Lurie K, Keane D, and Bindman AB. 1996. "The Role of Black and Hispanic Physicians in Providing Health Care for Underserved Populations." *New England Journal of Medicine* (334): 1305-1310.

[33] Rabinowitz, Howard K., James J. Diamond, J. Jon Veloski, and Julie A. Gayle. 2000. "The Impact of Multiple Predictors on Generalist Physicians' Care of Underserved Populations." *American Journal of Public Health*. August; 90(8): 1225–1228. Xu Gang, Sylvia K. Fields, Christine Laine, J. Jon Veloski, MS, Barbara Barzansky, and Carlos J. M. Martini. 1997. "The Relationship between the Race/Ethnicity of Generalist Physicians and Their Care for Underserved Populations." 1997. *American Journal of Public Health* 87(5) :817-822.

[34] Brotherton SE, Stoddard JJ, Tang SS. "Minority and nonminority pediatricians' care of minority and poor children. *Arch Pediatric and Adolescent Medicine*. 54(9):912-7.

[35] Recent studies remind us, for example, that providers and patients can be concordant or discordant (e.g., race, ethnicity, immigration status or language) in a variety of ways, and patients themselves bring a variety of culturally informed viewpoints and expectations to a clinical encounter. Those viewpoints shape *and are shaped* by the encounter in ways that are not always determined by a single status (such as race). Additionally, they operate differently across different cultural groups. For example, one qualitative study of Vietnamese and Mexican immigrants suggested that the Vietnamese patients exhibited a preference for white physicians because they themselves had assumed bias in favor of the dominant group. This was not the case for the Mexican immigrants in

the study. These patterns of preference and expectations may be affected by education and socioeconomic status of the patient, as well.

[36] In general, the relationship between concordance and health care access, quality and outcomes is strongest in the practice of mental health.

[37] Association of American Medical Colleges, *Addressing Racial Disparities in Health Care: A Targeted Action Plan for Academic Health Centers*. Washington, D.C.: AAMC [Internet]; 2009. Available from: https://members.aamc.org/eweb/upload/Addressing%20Racial%20Disparaties.pdf

[38] Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce*. Institute of Medicine [Internet]. Washington DC: National Academies Press, 2004. Available from: http://www.iom.edu/Reports/2004/In-the-Nations-Compelling-Interest-Ensuring-Diversity-in-the-Health-Care-Workforce.aspx

[39] The Sullivan Commission on Diversity in the Healthcare Workforce. *Missing Persons: Minorities in the Health Professions*. September 2004. Available from: http://www.aacn.nche.edu/media-relations/SullivanReport.pdf

[40] Minnesota Department of Health, *Minnesota Health Care Spending and Projections, 2011*. St. Paul (MN): MDH [Internet]; December 2013. Available from: http://www.health.state.mn.us/divs/hpsc/hep/publications/costs/healthspending2013.pdf

[41] Torio CM and Andrews RM. Geographic Variation in Potentially Preventable Hospitalizations for Acute and Chronic Conditions, 2005–2011. *Healthcare Cost and Utilization Project (HCUP) Statistical Brief #178*. Rockville (MD): Agency for Healthcare Research and Quality [Internet]; September 2014. Available from http://www.hcup-us.ahrq.gov/reports/statbriefs/sb178-Preventable-Hospitalizations-by-Region.pdf.

[42] Minnesota Department of Health, Health Economics Program, *Issue Brief: Potentially Preventable Hospitalizations Among Minnesotans, 2007*. St. Paul (MN): MDH [Internet]; November 2010. Available from: http://www.health.state.mn.us/divs/hpsc/hep/publications/costs/preventhospital112010.pdf.

[43] Minnesota Department of Health. *Internal document:* An "integrated" look at chronic disease data for Minnesota: a preview. July 30, 2012 (PPT).

[44] Robert Wood Johnson Foundation. *Chronic Care: Making the Case for Ongoing Care*. Princeton, NJ: Robert Wood Johnson Foundation [Internet]; 2010:16. Available from: http://www.rwjf.org/content/dam/farm/reports/reports/2010/rwjf54583.

[45] Minnesota Department of Health, Health Economics Program, *Issue Brief: Potentially Preventable Hospitalizations Among Minnesotans, 2007*. St. Paul (MN): MDH [Internet]; November 2010. Available from: http://www.health.state.mn.us/divs/hpsc/hep/publications/costs/preventhospital112010.pdf

[46] Minnesota Department of Health, Office of Statewide Health Improvement Initiatives, Division of Health Promotion and Chronic Disease. *Chronic Diseases and Their Risk Factors in Minnesota: 2011*. St. Paul (MN): MDH [Internet]; September 2011. Available from: http://www.health.state.mn.us/divs/hpcd/do/HPCDtrendreport2011.pdf

[47] Robert Wood Johnson Foundation. *Chronic Care: Making the Case for Ongoing Care*. Princeton, NJ: Robert Wood Johnson Foundation [Internet]; 2010:16. Available from: http://www.rwjf.org/content/dam/farm/reports/reports/2010/rwjf54583.

[48] Moy E, Chang E, Barrett M. Potentially Preventable Hospitalizations – United States, 2001-2009. *Morbidity and Mortality Weekly Report*, Supplements, November 22, 2013, 62(03);139-143, Centers for Disease Control and Prevention,. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/su6203a23.htm. Robert Wood Johnson Foundation. *Chronic Care: Making the Case for Ongoing Care*. Princeton, NJ: Robert Wood Johnson Foundation; 2010:16. Available from: http://www.rwjf.org/content/dam/farm/reports/reports/2010/rwjf54583.

[49] Clark T, Sleath B, and Rubin RH. 2004. ''Influence of Ethnicity and Language Concordance on Physician–Patient Agreement about Recommended Changes in Patient Health Behavior.'' *Patient Education and Counseling* 53 (1): 87–93.

[50] Green AR, Ngo-Metzger Q, Legedza AT, Massagli MP, Phillips RS, and Iezzoni LI. ''Interpreter Services, Language Concordance, and Health Care Quality. Experiences of Asian Americans with Limited English proficiency.'' 2005. *Journal of General Internal Medicine* 20 (11): 1050–6.

[51] Peterson B, Pandya S, Leblang D. *Doctors With Borders: Occupational Licensing as an Implicit Barrier to High Skill Migration*. University of Virginia, Department of Politics [Internet]; March 2013. Available from: http://www.batten.virginia.edu/sites/default/files/fwpapers/Leblang_Pandya_Peterson_Doctors.pdf

[52] Association of American Medical Colleges, *Physician Education Debt and the Cost to Attend Medical School*. Washington, D.C.: AAMC [Internet]; February 2013. Available from: https://www.aamc.org/download/328322/data/statedebtreport.pdf

[53] Metro Minnesota Council on Graduate Medical Education, cited in: The Legislative Health Care Workforce Commission. 2014 Report and Recommendations on Strengthening Minnesota's Health Care Workforce. St. Paul (MN): Minnesota Legislature; December 2014. Available from: http://www.lcc.leg.mn/lhcwc/legislative_healthcare_workforce_commission_report.pdf

[54] See, for example: Phillips JP, Petterson SM, Bazemore AW and Phillips RL. A Retrospective Analysis of the Relationship Between Medical Student Debt and Primary Care Practice in the United States. *Ann Fam Med* November/December 2014 12:542-549. Available from: http://annfammed.org/content/12/6/542.full
Harris S. *Primary Care in Medical Education: The Problems, The Solutions*. Washington DC: Association of American Medical Colleges [Internet]. Available from: https://www.aamc.org/newsroom/reporter/march10/45548/primary_care_in_medical_education.html.
[55] The Legislative Health Care Workforce Commission. *2014 Report and Recommendations on Strengthening Minnesota's Health Care Workforce*. St. Paul (MN): Minnesota Legislature; December 2014. Available from: http://www.lcc.leg.mn/lhcwc/legislative_healthcare_workforce_commission_report.pdf
[56] Minnesota Statutes Section 147.02.
[57] For physician age data: Minnesota Board of Medical Practice, 2014 licensing data. For population age data, for Minnesota 2010-2012: Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010. Available from: http://usa.ipums.org/usa/
[58] Minnesota State Demographic Center [Internet]. Immigration & Language: Key Findings. St. Paul (MN): Minnesota State Demographic Center. Available from: http://mn.gov/admin/demography/data-by-topic/immigration-language/
[59] New Americans Alliance for Development. Video: *Doctors becoming doctors*. St. Paul (MN): NAAD (2013). Available from: http://vimeo.com/59299147.
[60] Holder W and Omondi N. "Needs Assessment of Foreign-Trained Healthcare Professionals in Minnesota." CURA Reporter, Winter 2006. Available from: http://dx.confex.com/dx/8/webprogram/Handout/Paper1711/CURAReporter,Winter2006.pdf
[61] Minnesota Statutes section 147.0377, subdivision 1 (d). Available from: https://www.revisor.mn.gov/statutes/?id=147.037. The statute provides exceptions for people of exceptional ability in the sciences or as outstanding professors or research. Also does not apply to applicants licensed in other states under certain conditions. Minnesota Statutes Section 147.037, subdivision 1, paragraph (d).
[62] The Legislative Health Care Workforce Commission. *2014 Report and Recommendations on Strengthening Minnesota's Health Care Workforce*. St. Paul (MN): Minnesota Legislature; December 2014. Available from: http://www.lcc.leg.mn/lhcwc/legislative_healthcare_workforce_commission_report.pdf.
[63] For a description of the matching process, see National Resident Matching Program, "About the Main Residency Match." Available from: http://www.nrmp.org/residency/main-residency-match/.
[64] National Resident Matching Program, Data Release and Research Committee. *Results of the 2014 NRMP Program Director Survey*. National Resident Matching Program, Washington, DC. 2014. http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf
[65] American Medical Association, Residency Program Requirements (part of online guide for International Medical Graduates). Available from: http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/international-medical-graduates/practicing-medicine/residency-program-requirements.page?
[66]University of California, San Francisco, Department of Medicine. *Application Process for Graduates of Foreign Medical Schools* (website). Available from: http://medicine.ucsf.edu/education/residency/application/foreign.html
[67] See, for example, Louis WR, Lalonde RN and Esses VM. Bias against foreign-born or foreign-trained doctors: experimental evidence. 2010. *Medical Education*, 44: 1241–1247. Desbiens NA and Vidaillet HJ. (2010), Discrimination against international medical graduates in the United States residency program selection process. *BMC Medical Education*, 5. Available from: http://www.biomedcentral.com/1472-6920/10/5.
[68] American Medical Association Policy H-310.962, Residency programs prejudiced against applicants with ethnic names. Available from: https://ssl3.ama-assn.org/apps/ecomm/PolicyFinderForm.pl?site=www.ama-assn.org&uri=%2fresources%2fhtml%2fPolicyFinder%2fpolicyfiles%2fHnE%2fH-310.962.HTM
[69] American Medical Association, *Residency Program Requirements* (part of online guide for International Medical Graduates). Available from: http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/international-medical-graduates/practicing-medicine/residency-program-requirements.page?

[70] See, for example, the University of Wisconsin, School of Medicine and Public Health, Department of Family Medicine [Internet]. "How to apply to our residency program," Available from: https://www.fammed.wisc.edu/residency/apply#elig

[71] Educational Commission for Foreign Medical Graduates [Internet]. *Asking for a letter of recommendation*. Available from: http://www.ecfmg.org/echo/asking-for-lor.html

[72] This program built on earlier, similar programs in Minnesota. In 2005, the state legislature appropriated a one-year funding also administered by DEED for a pilot project for the Foreign Trained Health Care Professionals (FTHCP) Program that provided funding to three organizations: AAFACD (currently know as NAAD), the Minnesota International Institute and Rochester Workforce, Inc. This program was also funding and supported for six consecutive years (2006-2012) by the Federal Office of Refugee Resettlement (ORR). The FTHCP program was in turn planned and developed based on a needs and assets assessment conducted with three annual grants and technical support from the U.S. Department of Labor from 2003 to 2006.

[73] Personal correspondence from Mimi Oo, Program Director of New Americans Allied for Development (NAAD), December 19, 2014.

[74] In the Welcome Back Initiative, of the roughly 4,000 foreign-trained physicians participating between 2001 and 2011, only about 2.5 percent (100 out of 4,022) of the participating physicians secured residency training. Krupa C. "Foreign-trained health professionals put on path to practice in U.S." *American Medical News*, July 25, 2011. American Medical Association [Internet]. Available from: http://www.amednews.com/article/20110725/profession/307259952/2/

[75] Governor's Advisory Council for Refugees and Immigrants, *Rx For Strengthening Massachusetts' Economy and Healthcare System: A Report by The Governor's Advisory Council for Refugees and Immigrants Task Force on Immigrant Healthcare Professionals in Massachusetts.* December 2014. Available from: http://miracoalition.org/images/stories/pdf/gac_task_force_report-final-12.18.14.pdf

[76] Diaz J. *Prospective Return on Investment of the Foreign Trained Health Professional Program*. St. Paul (MN): Wilder Research; April 2012.

[77] Minnesota's "brain waste" estimate is based on a Migration Policy Institute analysis of the U.S. Census Bureau's pooled 2009-2011 American Community Survey data. Migration Policy Institute, Data Hub, State Immigration Data Profiles. *Minnesota: Workforce*. Washington DC: MPI [Internet]. Available from: http://www.migrationpolicy.org/data/state-profiles/state/workforce/MN

[78]Millona E, Erwin S, Kramer B. *Tapping the Potential of Foreign-Trained Engineering and Health Care Professionals in Massachusetts*. Boston (MA): The New Americans Integration Institute [Internet]. Available from: http://www.miracoalition.org/images/stories/pdf/tapping%20the%20potential_final.pdf. Citing: Gereffi G, Rissing B, Saxenian A. and Wadhwa V. "Skilled Immigration and Economic Growth." *Applied Research in Economic Development* 5, no. 1(2008): 6-14. Available from: http://ssrn.com/abstract=1141190; Fix M. and Kaushal N. *The Contributions of High-Skilled Immigrants*. Washington DC: MPI [Internet];2006. Available from www.migrationpolicy.org/ITFIAF/TF16_Kaushal.pdf. Friedberg R. "The Economic Impact of Knowledge Workers from India and China," in *Movement of Global Talent: The Impact of High Skill Labor Flows from India and China*, ed. Tambar U. Princeton (NJ): Policy Research Institute for the Region; 2007. Smith J. and Edmonston B. *The New Americans: Economic, Demographic, and Fiscal Effects of Immigration*. Washington, DC: National Academies Press, 1997. Available from: http://www.nap.edu/catalog/5779/the-new-americans-economic-demographic-and-fiscal-effects-of-immigration.

[79] Smith J. and Edmonston B. *The New Americans: Economic, Demographic, and Fiscal Effects of Immigration*. Washington, DC: National Academies Press, 1997. Available from http://www.nap.edu/catalog/5779/the-new-americans-economic-demographic-and-fiscal-effects-of-immigration. Cited in Corrie B and Radosevich S. *The Economic Contributions of Immigrants in Minnesota*. St. Paul (MN): Minnesota Chamber of Commerce [Internet]; September 2013. Available from: http://cdn2.hubspot.net/hub/172912/file-371412567-pdf/Economic_Contributions_of_Immigrants_in_Minnesota_2013.pdf

[80] Corrie B and Radosevich S. *The Economic Contributions of Immigrants in Minnesota*. St. Paul (MN): Minnesota Chamber of Commerce [Internet]; September 2013. Available from: http://cdn2.hubspot.net/hub/172912/file-371412567-pdf/Economic_Contributions_of_Immigrants_in_Minnesota_2013.pdf.

[81] Minnesota State Demographic Center [Internet]. Immigration & Language: Key Findings. St. Paul (MN): Minnesota State Demographic Center. Available from: http://mn.gov/admin/demography/data-by-topic/immigration-language/