COMMENTARY

Direct and Indirect Effects of Restrictive US Immigration Policies on Pharmacy Education

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Submitted December 29, 2020; accepted January 27, 2021; published June 2021.

Keywords: immigration, cultural competency, policy, international students, international faculty

INTRODUCTION

Immigration policy and enforcement in the United States has experienced many ebbs and flows over our 244-year history as an independent nation, with policies either supporting or opposing the influx of new citizens at different stages of development.\textsuperscript{1} No political party can claim the proverbial “high ground” when immigration policy is viewed through a greater historical lens, but the Trump Administration campaigned on a hardline anti-immigrant platform and effectively executed several actions to restrict immigration into the United States throughout his term in office.\textsuperscript{2} The nonpartisan Migration Policy Institute (MPI) cataloged more than 400 executive actions under the Trump Administration that effectively reshaped the US immigration system, including actions on border protection, asylum case administration, immigration courts, and visa processes.\textsuperscript{3} While immigration policy changes in the United States have broad implications on the economy, culture, and everyday life of millions of people, leaders in pharmacy education may not always connect these larger policy actions to the specific needs of our more focused pharmacy education stakeholders (students, faculty, staff, etc). However, when Immigration and Customs Enforcement (ICE) announced in July 2020 that students who were enrolled in schools that were shifting to online-only education because of the coronavirus identified in 2019 (COVID-19) pandemic would not be eligible to retain their student visas and could be subject to deportation procedures unless they were attending at least one in-person class, immigration policy became a major priority for higher education leaders.\textsuperscript{4} While this rule was revoked shortly after, this action and the preceding pattern of immigration restriction raises concerns for those who are involved in pharmacy education and brings about the question of how future immigration policies could impact pharmacy schools. In this commentary, we provide an overview of potential direct and indirect effects of more restrictive immigration policies on the system of pharmacy education within and outside the United States.

DISCUSSION

Direct Impact on Pharmacy Education

The most immediate direct impact of restrictive measures for immigration on pharmacy education is a decrease in the number of international students enrolled in US pharmacy schools and colleges. A reduction in international student enrollment could be explicitly the result of policy-based restrictions on whom may legally enter the United States as well as fewer applicants because international students choose to pursue their education elsewhere to avoid potential risk of deportation at some point in their education. The total number of reported pharmacy student applications received from non-US residents declined from 3,528 in 2017 to 2,788 in 2019.\textsuperscript{5} While this decline in nonresident applications is likely occurring for a myriad of reasons (eg, less demand to become a pharmacist as total applications are down across the board), the temporality of the decline with the anti-immigrant rhetoric at a national level may be concerning. A decline in non-US applicants to pharmacy school in 2020 may also be expected as a result of COVID-19, making it difficult to assess the true impact of restrictive immigration policies independent of the global pandemic. However, it would be reasonable to expect similar dissuasion for international PharmD program applicants in the same way that fewer non-US-born medical graduates are choosing to participate in the National Resident Matching Program.\textsuperscript{6}

Following graduation, non-US-born pharmacists may or may not stay in the United States to practice pharmacy. More restrictive immigration policies may discourage these pharmacists from remaining in the country. Whether this
effect is viewed as positive or negative may depend on the perspective of the stakeholder. From the perspective of US-born pharmacists, this could mean less competition for pharmacist jobs and thus have some positive implications for graduates born in the United States. In terms of seeking post-PharmD training, graduates not born in the United States have historically faced more costs and administrative hurdles related to the visa process than their US-born colleagues face, making it difficult for these graduates to remain in the United States.\textsuperscript{7} From the perspective of employers or postgraduate training programs seeking the most talented candidates, more restrictive immigration policies limit the pool. Finally, from a patient care or public health perspective, retaining these graduates may have a positive impact on reducing health disparities in the United States, and we discuss this in more detail below under indirect effects.\textsuperscript{8–10}

Another direct impact of changes in immigration policies involves the potential reduction in the number of international faculty employed by US schools of pharmacy. The accomplishments of foreign-born pharmacy faculty can be observed across all aspects of pharmacy education including research, clinical practice, education, and service to the profession. Economists have estimated that US college graduates who are immigrants contribute at least twice as much to patented discoveries and innovations as their US-born counterparts, as highly-skilled immigrants in science, technology, engineering, and mathematics (STEM) are often sought after and recruited to work in the United States.\textsuperscript{11}

In addition to recruiting disadvantages for US schools wanting to attract brilliant non-US scientists, restrictive immigration policies may make it more difficult for US schools to retain top faculty members who are currently on visas. Universities outside the United States that are located in countries with more relaxed immigration and travel policies may use these circumstances to recruit successful faculty away from US schools. Losing top non-US researchers would not only reduce the scholarship potential (grants, publications, etc) of schools and colleges, it would further reduce the ability for US and non-US students to train under these high-performing researchers. Many students rely on the faculty at their school to assist them with finding research opportunities, clinical opportunities, and internships, and having fewer faculty members performing these roles will negatively impact the ability of students to gain practical and professional growth before graduation. Considering that international faculty members are prime candidates to serve as mentors to international students, a lack of non-US-born faculty members would mean that there would be fewer mentors for international students that understand their background and may be better equipped to help guide these students in an unfamiliar environment.\textsuperscript{12}

The education of pharmacy students on cultural competency and sensitivity is an integral part of pharmacy school curriculums and is explicitly reviewed as part of the accreditation standards of the Accreditation Council for Pharmacy Education (ACPE).\textsuperscript{13} The American College of Clinical Pharmacy’s (ACCP’s) Task Force on Cultural Competency developed a series of white papers in the early 2000s describing cultural competency for health professionals and how it should be viewed as a continuous process undertaken to ensure that care of diverse populations is delivered in an appropriate manner.\textsuperscript{14} Further, the task force specifies that becoming culturally competent also requires a “conscious effort to reduce any ethnocentric biases” one may have.\textsuperscript{14} In other words, pharmacy students must demonstrate that they do not believe any one culture to be superior to another. Diversity throughout the student body, faculty, and staff encourages an environment that is not “culturally repetitive” and may improve a student’s ability to communicate, empathize, and provide care to patients regardless of their background.\textsuperscript{12} Fewer non-US-born students may directly harm schools’ ability to provide this culturally rich environment for student development, and this may have negative consequences during accreditation.

**Indirect Impact**

While the direct effects of restrictive immigration policies may be easier to quantify and assess, the indirect effects on pharmacy education may be more challenging to observe. Nevertheless, they should be considered in order to determine the full positive and negative implications of such policies. Restricting the educational opportunities within the US for non-US-born students based in other countries also introduces the possibility that, eventually, many countries will be less inclined to permit US-born students from seeking educational opportunities in their respective countries. Many pharmacy schools offer their students the chance to complete practice experiences at international sites as a part of reciprocal agreements between schools. For example, the University of Maryland School of Pharmacy offers international rotations in many different countries, including Egypt, India, Zambia, Peru, and Thailand. An unintended consequence of restrictive US immigration policies could be the reactionary anti-US policies implemented by other countries as international relations deteriorate.

One potential area not commonly discussed during immigration policy debates is the care of US patients. The United States currently relies on a significant proportion...
of non-US-born and noncitizen health professionals to deliver care to its citizens.\textsuperscript{15} Approximately one in five pharmacists practicing in the United States was not born in the United States and another 4\% are not US citizens.\textsuperscript{15} While we discussed the direct impact of reduced immigration on pharmacy school admissions and faculty, a significant reduction in the number of non-US-born practitioners would have downstream effects on care delivery. A recent cross-sectional analysis of international medical graduates in the US physician workforce from 2009-2018 found a directional shift in applications from Muslim-majority countries (increasing applications from 2009-2015, decreasing from 2016-2018) providing evidence that suggests specific anti-immigration policies could play a role in physician workforce dynamics.\textsuperscript{16} For pharmacy schools that consider advancing patient care or improving population health a critical part of their missions, potential impacts on patient care through workforce disruption should also be a concern.

The direct impact related to the cultural competency education for students described previously could exacerbate the effects on patient care. Students typically have more cross-racial and cross-cultural interactions in college and professional school than during their K-12 educational experiences, so a highly diverse pharmacy school student body can greatly increase the opportunity for exposure to different cultures.\textsuperscript{17} A survey of 24,657 medical school graduates found that students who were enrolled in medical schools with highly diverse student bodies rated themselves as having higher levels of cultural competency compared to students enrolled in schools with less diverse student bodies. Students from more diverse schools also felt they were more prepared to care for patients of other cultural backgrounds.\textsuperscript{18} Immigration policies that potentially limit the cultural diversity of pharmacy school enrollment may further diminish the quality of care ultimately provided to a multicultural US population.

As previously mentioned, non-US-born practitioners disproportionately practice in underserved areas, providing more complexity to the health care workforce debate and potential indirect effects on care delivery to socioeconomically disadvantaged patients.\textsuperscript{8-10} During times of severe pharmacist shortages in the United States, US-based retail chains and other major pharmacist employers recruited noncitizen pharmacists with visa sponsorship opportunities to help meet the demand.\textsuperscript{19} While the supply of pharmacists has stabilized, pockets of areas with low resources may still have needs that could be impeded by immigration restrictions. Additionally, damaging our international relationships with divisive rhetoric may hurt our ability to “go back to the well” the next time the United States experiences a major pharmacist shortage.

CONCLUSION
Pharmacy education leaders may not typically prioritize advocacy efforts related to immigration policies as many of the policies implemented throughout US history may have not been directly tied to higher education. However, both the anti-immigrant rhetoric and the proposed executive order specific to non-US-born students taking remote classes during a global pandemic should be major causes for concern for our profession. We believe it is time for the American Association of Colleges of Pharmacy to convene a task force or group of engaged leaders to focus specifically on the issue of US immigration policy and pharmacy education.

In this commentary, we aimed to highlight a few direct and indirect effects of more restrictive immigration policies, but we suspect that this article merely scratches the surface on this issue. Additionally, the reader’s personal opinions related to immigration policy may bias the direction of each effect; thus, we recommend a multi-stakeholder approach to discussing this complex issue. When considering these different impacts, clearly defining the stakeholder perspective (student, faculty, staff, graduate, patient, society, etc) is critical for any such policy evaluation. We also encourage the Association to engage with nonpartisan groups, such as the MPI, who have more direct experience with immigration policy, to understand the historical context of the issues we have raised to provide guidance on how pharmacy leaders can advocate effectively regarding these issues.

REFERENCES