Opportunities for the UK in North American Health Professions Education and Training

In this report, The Hanover Research Council evaluates opportunities for XYZ to deliver existing programs in the School of Community and Health Sciences—nursing, midwifery, optometry, speech and language therapy, and radiography—to students in the United States and Canada. The report opens with a brief background on changes in health care related to globalization and the emergence of cross-border education; profiles the health care industries in the United States and Canada, with emphasis on the nursing field; and proceeds with a supply and demand analysis for each of these fields in the US and Canada. Next, the report walks through the licensure and certification processes in each field for internationally-educated candidates. The report concludes with an overview of recent developments in cross-border health professions training and education.
Globalization and Education for the Health Professions: Promising Opportunities

The complex relationship between globalization and health care in both developing and developed countries is well documented in the academic literature. While scholars have recently given substantial attention to the superficial linkages between globalization and the health care labor market—particularly the “brain drain” of nurses and doctors in less-developed countries—there remains a poverty of synthetic literature exploring the underlying connections between globalization and the education of health professionals, which drives labor markets. Emerging evidence shows that the effects of globalization on health professions education and training programs are widespread and far-reaching, and have involved far more than the implementation of global curriculums, the promotion of study and intern abroad experiences, or even transnational degree completion programs. The withering of national boundaries and liberalization of regulations on international labor heralded by globalization have made it possible not only to work in another country, but to receive education and training for a health profession in one country and quickly become certified and licensed to practice in another.

This is not a wholly new development, argue Clark, Stewart, and Clark in a 2002 article about the influence of globalization on health care labor and education markets. For some time, they insist, less-developed countries have made it an explicit economic development strategy to educate nurses domestically and then “export” them to developed countries that have historically been encumbered by nursing shortages. The Philippines, for example, began training and exporting nurses to the United States during the 1950s and has since sent hundreds of thousands of nurses to dozens of developed countries. Between 1992 and 2003 alone, the Philippines dispatched more than 88,000 nurses to the United States, and many knowledgeable about nurse migration patterns insist that this statistic may understate the magnitude of the movement of nurses out of that country. India, China, and Korea have all become significant players in this market, as well.

4 Clark, Stewart, and Clark 2006
6 Baumann and Blythe, “Globalization of Higher Education in Nursing: Current Standards and Harmonization in Transnational Nursing Education,” 2008
In keeping with the traditional patterns of globalization, “exporting” countries in the field of nurse training have typically been less-developed nations. Economic planners in these countries view the export of nurses principally as a means of bringing additional revenue into the country, as nurses’ incomes are often repatriated to the home country through remittances. The flow of students has been largely from East to West, South to North. Consequently, most of the literature is concerned with the migration of nurses from the developing world to developed countries. The Philippines has been the subject of extensive research, as has the influx of foreign nurses to the United Kingdom.

But the latest round of health professions internationalization is of a fundamentally different nature and is proceeding with unprecedented speed—a function of recent efforts to liberalize immigration laws and other barriers to the mobility of human resources, as well as tremendous technological developments in communication and transit. These and others changes have turned the historical trajectory of migratory health workers on its head: nurses and other professionals from wealthy Western states now travel to other countries for their health occupation education before returning to practice in their home countries. That is to say, while the previous waves of internationalization seen during the 1980s and 1990s involved the domestic education of international nurses, the emerging model invites international, or cross-border, education of domestic nurses. As colleges and universities enter the cross-border health professions education and training market, predictable ex-ante revenues (i.e., tuition) will replace uncertain ex-post remittances. This makes the transnational training and education of health professionals itself a global and highly profitable industry. A new market to educate health professionals in foreign countries is poised to flourish in the coming decades.

This paradigm-shifting internationalization of health professions education has occurred against the background of, and indeed been shaped by, the broader

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7 Clark, Stewart, and Clark 2006
8 Baumann and Blythe, “Globalization of Higher Education in Nursing: Current Standards and Harmonization in Transnational Nursing Education,” 2008
12 Baumann and Blythe, “Globalization of Higher Education in Nursing: Current Standards and Harmonization in Transnational Nursing Education,” 2008
13 Adeniran et al., 2008
internationalization of higher education and a global shortage of health professionals. The internationalization of postsecondary education, which has ushered in the integration of “an international, intercultural, or global dimension into the purpose, functions or delivery of post-secondary education,” first began during the 1950s but recently accelerated after the passage of the 1995 General Agreement on Trade and Services (GATS) during the Uruguay Round of World Trade Organization negotiations. As a result of these efforts and robust global economic growth, the number of international students grew by nearly 70% (.94 million to 1.61 million) between 1988 and 1998.

Despite the global economic recession, we now find ourselves in the “golden age” of borderless higher education. Colleges and universities have rushed to revise mission statements, expand course offerings, redesign curricular and co-curricular platforms, redouble efforts to recruit international students, and augment study abroad programs. But with little question, colleges and universities are currently expressing the most interest in international and transnational education (TNE) initiatives, evidenced by the rapid formation of branch campuses in the Middle East and Southeast Asia, the use of information and communication technologies (ICT) to remotely deliver content abroad, and the renaissance in twinning partnerships, joint-delivery efforts, and dual-degree programs between institutions in developed and developing countries.

The proliferation of international and transnational programs for students studying the health professions comes at a time when, around the world, nurses and other health professionals are aging and retiring at a faster rate than higher education institutions can enroll and graduate new candidates. Today, the supply of nurses remains strained, and most projections indicate that the problem will only grow worse in the coming decades. And despite the fact that the forces of supply and demand incentivize nurses around the world to “chase the highest salary” in the United States, the immigration of foreign nurses is a temporary solution, not a panacea. The training and export of nurses in developing countries has done

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16 Altbach and Knight 2007

virtually nothing to ameliorate the global shortage of nurses as migration merely redistributes, rather than increases, the labor supply. A net increase in the number of health care workers educated and trained around the world, particularly in the developed world, will be required if this problem is to be brought to resolution.

These two concomitant trends—the globalization of health care systems and a worldwide shortage of health professionals—have encouraged enterprising leaders of colleges and universities serving nurses, midwives, radiologic technicians, opticians, and other health professionals around the world to enter international and transnational education markets. One or more of the following models are typically used:

- **Articulation agreements**, frequently employed in the United States between community colleges and four year universities, serve as official documents between institutions certifying that one or more courses and/or degrees will be recognized by both institutions to fulfill degree requirements.

- **Twinning or partnership agreements** establish formal relationships between institutions in different countries and allow students studying at a partner school to enter into a course of study that leads to a foreign degree, a dual degree, or degree completion at another institution. Service can be delivered in a number of formats: face-to-face, usually involving the exchange of professors between partner schools; remote/online delivery; and a hybrid model, which incorporates both classroom (synchronous) and remote delivery (asynchronous) methods. The International University of Nursing (IUN), located in St. Kitts and Nevis, has pursued a number of articulation agreements with institutions in the United States. Students at IUN spend the first three years of their undergraduate nursing education on the St. Kitts campus and then complete their degrees at one of the partnership institutions. Students then receive degrees from both institutions. The University of South Australia operates an offshore program with KPJ International College of Nursing and Health Sciences (formerly Puteri Nursing College) in Malaysia.

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19 In the context of transnational higher education, a joint degree denotes a single degree based on “completion of collaborative program requirements established by partner institutions.” A dual degree results in the receipt of more than one qualification “upon completion of the collaborative program requirements established by two partner institutions.” Combined-degree programs result in the receipt of two consecutive degrees (e.g., bachelor’s degree and master’s degree) “upon completion of the requirements established by the partner institutions.” For more on these distinctions, see Jane Knight, “Double- and Joint-Degree Programs: Double Benefits or Double Counting?” *International Higher Education* Number 55, Spring 2009, http://www.bc.edu/bc_org/avp/soc/cihe/newsletter/Number55/p12_Knight.htm

20 Wilson 2002
Students can complete a Bachelor’s of Nursing, a Graduate Certificate in Nursing, or a Master’s of Nursing.\(^{21}\)

- **Branch campuses**, known in the literature as joint-venture campuses, satellite campuses, or franchised campuses,\(^ {22}\) refer to any brick-and-mortar “off-shore operation of a higher-education institution which is operated by the institution or through joint-venture in which the institution is a partner and in the name of the foreign institution.”\(^ {23}\) The exporting institutions deliver curricula in-person (faculty hail from the flagship campus or the host country, usually both) and/or remotely.\(^ {24}\) A 2002 report by the Observatory on Borderless Higher Education (OBHE), a UK-based organization devoted to the study of transnational higher education, suggests that there are nearly eighty offshore campuses operating around the world.\(^ {25}\) Weill Medical College, Cornell University’s Medical School, recently established a branch campus in Qatar.\(^ {26}\)

Regardless of the international or transnational model utilized, it is clear that the education of nurses and other health professionals offers institutions of higher education untold opportunities to refine program offerings and practices, establish a global brand, form valuable partnerships with colleges and universities overseas, and access a burgeoning market. Today, more than one in four health care professionals in Australia, Canada, the United Kingdom, and the United States were educated in foreign countries.\(^ {27}\) In some US and Canadian hospitals, upwards of 70\% of the nurses and other support staff have been internationally educated.\(^ {28}\) Almost all of the available evidence suggests that these trends will continue as a result of deepening nurse shortages in the United States and Canada.

But how can a college or university determine whether or not it should enter the cross-border market for training and educating health professionals? What types of programs should it consider? How should it navigate the credentialing differences in other countries? How can it align its curriculum with those of institutions in foreign countries? This report responds to these and other questions posed by XYZ and

\(^{25}\) For more on the OBHE, see: http://www.obhe.ac.uk/home
\(^{26}\) Weill Cornell Medical College in Qatar, http://qatar-weill.cornell.edu/; Baumann and Blythe 2008
\(^{27}\) Nichols 2005
\(^{28}\) Ibid.
evaluates current opportunities for the education of nurses and other health care workers both onshore (in the United States and Canada) and offshore (outside of the United States and Canada).²⁹

An Introduction to the American and Canadian Nursing Industries

In order to provide context for the remaining sections of the report, this section profiles the nursing industries in the United States and Canada in comparative perspective, analyzing commonalities and differences between the two while drawing distinctions between the broader US and Canadian health care industries.

Nursing in the United States

The American Nurses Association (ANA) is the United States’ “voluntary, full-service professional organization representing the interests of the nation’s 2.9 million registered nurses (RNs) through its 51 constituent member nurses associations, its 24 specialty nursing and workforce advocacy affiliate organizations that currently connect to ANA as affiliates.”30 The organization, which accredits nursing schools and oversees the credentialing of nursing school candidates, describes the occupation in these terms:

Nursing is the protection, promotion, and optimization of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and populations.31

Health care in the United States is privatized (aside from Medicaid and Medicare, programs for the poor and the elderly, respectively). Accordingly, nurses in the country, which have varying levels of education and qualifications, are primarily in the employ of the private sector. Registered nurses (RNs) comprise the largest health care occupation in the United States—the most recent available estimates suggest that there are 2.5 million registered nurses in the country.32 In 2006 alone, more than 65,000 men and women completed the requirements to become registered nurses.33 RNs must graduate from an accredited college or university with a four-year Bachelor’s of Science in Nursing (BSN) or two-year Associate Degree in Nursing (ADN). A formerly popular alternative for nursing candidates in the United States was the completion of a three-year Diploma in Nursing (DN) after graduating from secondary school, though the frequency with which students select this path is rapidly waning.34

33 American Nurses Association, “About Nursing”
34 Ibid.
Table 1 shows the percentage of the US registered nurse population that held a diploma, an associate degree, a bachelor's degree, or an advanced degree (master’s or doctorate) in 2004. For years, the conventional path for registered nurses was to complete a three-year diploma program after graduating high school. That is no longer the case. In 1977, 18% of registered nurses held a bachelor’s degree. By 2004, more than 34% of RNs had a BSN, and in 2005, more than one in three nursing candidates was enrolled in a bachelor's degree program, eclipsing the percentage of registered nurses who were completing an associate degree program. Almost all available evidence suggests that an increasing share of registered nurses will pursue bachelor’s degrees in the future, and institutions are adapting to this changing demand landscape. As of 2005, 573 colleges offered Bachelor’s of Science in Nursing programs. That same year, nearly three in five basic RN programs continued to offer the ADN—the second most popular educational path to becoming a registered nurse. By 2006, however, only 4% of all nursing programs terminated with three-year diplomas.

<table>
<thead>
<tr>
<th>Degree/Program</th>
<th>Percent of R.N. students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>17.5%</td>
</tr>
<tr>
<td>Associate’s Degree in Nursing</td>
<td>33.7%</td>
</tr>
<tr>
<td>Bachelor’s of Science in Nursing</td>
<td>34.2%</td>
</tr>
<tr>
<td>Master’s Degree of Ph.D.</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

Source: The American Nurses Association

Higher educational expectations for registered nurses are pushing more and more students to apply for and enroll in advanced degree programs. Many of these individuals become advanced practice registered nurses (APRNs), or nurses who have at least a master’s degree and are authorized to give some level of direct care to patients. There are several different types of APRNs:

- Nurse practitioners (NP) “are qualified to provide a wide range of primary and preventative healthcare services, prescribe medication, and diagnose and treat common minor illnesses and injuries.”

- Certified nurse-midwives (CNM) provide gynecological and obstetrical care to women.

- Clinical nurse specialists (CNS) “handle a wide range of physical and mental health problems, and also work in consultation, research, education, and administration.”

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35 Ibid.
36 Ibid.
37 Ibid.
38 Ibid.
Certified registered nurse anesthetists (CRNA) “administer more than 65% of anesthetics given to patients each year.”

Table 2 below shows the number of advanced practice registered nurses in the United States in 2004. There were 141,000 nurse practitioners, 72,000 clinical nurse specialists, 32,000 certified registered nurse anesthetists, and 14,000 certified nurse-midwives. Even though advanced degree programs are quickly growing in popularity, APRNs still represent a very small proportion of the overall RN population.

Table 2: Number of Advanced Practice Registered Nurses in the US (2004)

<table>
<thead>
<tr>
<th>Practice</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Practitioner</td>
<td>141,000</td>
</tr>
<tr>
<td>Certified Nurse-Midwife</td>
<td>14,000</td>
</tr>
<tr>
<td>Clinical Nurse Specialist</td>
<td>72,000</td>
</tr>
<tr>
<td>Certified Registered Nurse Anesthetists</td>
<td>32,000</td>
</tr>
</tbody>
</table>

Source: The American Nurses Association

Registered nurses and advanced practice registered nurses should be contrasted with licensed practical nurses (LPNs), known in some jurisdictions as licensed vocational nurses (LVNs). Individuals with these credentials are not registered nurses in the United States. LPNs and LVNs are only mandated to take a 12-14 month course after graduating from high school (or completing the requirements for a General Equivalency Diploma).

Because XYZ’s interest lies in occupations requiring a collegiate education, this report only addresses registered nurses and other advanced nursing occupations.

Work performed by registered nurses and advanced practice registered nurses increasingly occurs outside the context of hospitals. Though approximately three in five registered nurses still work in hospitals, the decentralization of health care services and surging demand for quality care in nursing homes and community health centers has increased the proportion of nurses working in non-hospital environments: community/public health centers (14.9%), ambulatory services (11.5%), and nursing homes (6.3%). Note the small percentage of nurses who choose to enter academia and become nurse educators (2.6%)—this figures prominently in the nursing shortage in the United States, described in the next section of this report.

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39 Ibid.
40 Ibid.
41 Ibid.
Table 3: Nursing Work Environments in the US

<table>
<thead>
<tr>
<th>Location</th>
<th>% of RNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>56%</td>
</tr>
<tr>
<td>Community/public health</td>
<td>14.9%</td>
</tr>
<tr>
<td>Ambulatory care</td>
<td>11.5%</td>
</tr>
<tr>
<td>Nursing homes</td>
<td>6.3%</td>
</tr>
<tr>
<td>Nursing education</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Source: The American Nurses Association

Nursing in Canada

Canadians have enjoyed a publicly-funded, single-payer health care system since 1968. According to the Canadian Nurses Association, most nurses in Canada work for employers in the public sector, while a select few have jobs with private employers or are self-employed. In 2006, there were almost 271,000 registered nurses in Canada, a 10.7% increase since 2001. Unlike in the United States, most registered nurses in Canada hold a diploma (not a degree), which can be obtained after graduation from a secondary school. Because the community/technical college system does not exist in Canada in the same way that it does in the United States, associate degrees are virtually non-existent. Students can either work towards a diploma or a baccalaureate degree, and in very few cases, an advanced degree (< 3% of all nurses).

Table 4 provides data on the educational attainment levels of registered nurses in Canada in both 2001 and 2006. As evidenced in the table, the percentage of nurses receiving baccalaureate degrees in nursing has increased in recent years—the country registered an uptick of nearly 9% between 2001 and 2006. However, while the percentage of RN candidates pursuing baccalaureate, master's, and doctoral degrees increased during that period, the majority of students (64%) still enter the field after obtaining a diploma, rather than a degree.

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42 Ibid.
44 Ibid.
46 Canadian Nurses Association, “Becoming a Registered Nurse—International Applicants”
Table 4: Educational Attainment of Registered Nurses in Canada, 2001 & 2006

<table>
<thead>
<tr>
<th>Degree/Program</th>
<th>2001</th>
<th></th>
<th>2006</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Diploma</td>
<td>171,247</td>
<td>73.97</td>
<td>162,493</td>
<td>64.24</td>
</tr>
<tr>
<td>Baccalaureate degree</td>
<td>56,193</td>
<td>24.27</td>
<td>83,704</td>
<td>33.09</td>
</tr>
<tr>
<td>Master's degree</td>
<td>3,860</td>
<td>1.67</td>
<td>6,354</td>
<td>2.51</td>
</tr>
<tr>
<td>Doctorate</td>
<td>212</td>
<td>.09</td>
<td>382</td>
<td>.15</td>
</tr>
<tr>
<td>Not specified</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>.01</td>
</tr>
<tr>
<td>Total</td>
<td>231,512</td>
<td>100</td>
<td>252,948</td>
<td>100</td>
</tr>
</tbody>
</table>

Reproduced from the 2006 Workforce Profile of Registered Nurses in Canada, Canadian Nurses Association

Table 5 shows the most common work environments for registered nurses in Canada. As in the United States, most continue to work in hospitals (59.15%), but it is becoming more common to find RNs in nursing/long-term care centers (10.97%), community health centers (8.41%), and home care agencies (2.95%).

Table 5: Nursing Work Environments in Canada

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
<th>% of RNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>149,615</td>
<td>59.15</td>
</tr>
<tr>
<td>Nursing home/long term care</td>
<td>27,754</td>
<td>10.97</td>
</tr>
<tr>
<td>Community health center</td>
<td>21,284</td>
<td>8.41</td>
</tr>
<tr>
<td>Home care agency</td>
<td>7,464</td>
<td>2.95</td>
</tr>
<tr>
<td>Educational institution</td>
<td>7,046</td>
<td>2.79</td>
</tr>
<tr>
<td>Physician’s office/family practice</td>
<td>5,038</td>
<td>1.99</td>
</tr>
<tr>
<td>Public health unit/department</td>
<td>4,692</td>
<td>1.85</td>
</tr>
<tr>
<td>Association or government</td>
<td>4,604</td>
<td>1.82</td>
</tr>
<tr>
<td>Rehabilitation or convalescent center</td>
<td>4,375</td>
<td>1.73</td>
</tr>
<tr>
<td>Mental health center</td>
<td>3,709</td>
<td>1.47</td>
</tr>
<tr>
<td>Other/not stated</td>
<td>17,367</td>
<td>6.87</td>
</tr>
</tbody>
</table>

Reproduced from the 2006 Workforce Profile of Registered Nurses in Canada, Canadian Nurses Association

47 The Canadian Nurses Association, “2006 Workforce Profile of Registered Nurses in Canada”
Health Professions Labor Markets in North America

In order to determine whether or not entry into the North American health education and training market is a strategically sound decision, it is necessary to consider the current (and projected) supply of nurses, midwives, radiologic technologists/technicians, optometrists, and speech-language therapists, as well as the current (and projected) demand for these positions. This section provides supply and demand forecasts from the United States Bureau of Labor Statistics and Canada’s Human Resources and Skills Development division to generate a reasonably accurate projection of the North American labor market for the health professions over the next five to six years. As a general rule, the United States Bureau of Labor Statistics makes available much more sophisticated data (disaggregated to the occupational level) than its Canadian counterpart (data disaggregated to the occupational series level). It should also be noted that these projections are forecasts—not certain facts—based on modeled data. While the data sets reproduced below assume the current depressed macroeconomic climate, continued volatility and changing circumstances erode the utility of these and all models.

Outlook for Nurses in the United States

Current data show that the health care industry in the United States continues to experience a crisis-level shortage of nurses as demand dramatically outstrips supply. The problem exists primarily on the supply side of the market, as domestic nursing schools currently do not have the capacity to educate the number of students interested in a nursing education or the number of students needed to staff health care facilities around the country. In 2006, American schools declined admission to 150,000 students due to a lack of available seats, including 38,415 in baccalaureate programs.48

In 2005, the US Department of Health and Human Services estimated that the national demand for nurses (2,161,300) exceeded the national supply (1,942,500) by approximately 218,800, for a shortfall of 10%. DHHS forecasts show that the situation will likely become much worse over the next decade: a shortfall of 405,800 nurses, or 17%, in 2010; a gap of 683,700 nurses (27%) by 2015; and a confounding shortage of 1,016,900 nurses (36%) by 2020.49 Figure 1 illustrates the expected deficit of nurses over the short-term.

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Though the supply-side of the equation (i.e., capacity problems) is at the root of the domestic shortage of nurses, powerful pressures on both supply and demand are responsible for the shortage. A number of factors continue to put upward pressure on demand:

- **A shortage of support staff** has shifted much of the assistive and supportive work of the health care industry to registered nurses.\(^{50}\)

- **Managed care has decentralized health services**, spreading the burden of patient care over larger geographic areas. An increasing number of nurses are required outside of hospitals and in home settings and community based facilities. This trend is expected to continue as the American Baby Boomer population ages and community-based health care—advocated by President Obama—becomes the preferred delivery mechanism in the United States.\(^ {51}\)

- **Increasing life spans in the Western world** have put enormous pressure on demand for nurses in assisted living facilities.\(^ {52}\)

- **Higher expectations about quality** are a function of the industry-wide focus shift from service delivery to customer service. Because Americans believe that customer service is connected with individualized, personal

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\(^{51}\) Ibid.

\(^{52}\) Ibid.
attention, they are likely to demand more one-on-one time with health professionals in the future. And as concerns about quality of care continue to play a major role in the discussion of health reform in the United States, nurses will become a progressively more valuable asset.53

At the same time that these factors drive demand for registered nurses, a host of variables have and will continue to put downward pressure on nursing supply:

❖ **The “ageing out” phenomenon.**54 Nurses are retiring at record rates, due in no small part to the fact that nearly one in three nurses in the United States is over fifty years old. According to a study by the JAMA, two in five nurses will be older than fifty by 2010.55

❖ **Slow wage growth.** For some time, the real wages of nurses have remained constant—and even declined between 1994 and 1996—discouraging candidates from careers in the field.

❖ **Health care restructuring** in the United States during the 1990s resulted in layoffs, long work hours, and questionable job security, increasing the opportunity cost to work in the nursing field and deterring interested candidates from pursuing a career in the field.

❖ **More career opportunities for women** over the past several decades have led many to leave this female-dominated line of work.

While each of these factors has clearly encouraged current nurses to exit the profession—and also discouraged individuals from pursuing a career in nursing—the single most important and determinative factor depressing the nursing supply has been nursing school capacity. For some years now, the number of students seeking admission to baccalaureate and master’s programs in the United States has vastly exceeded the total number of available seats.56 Furthermore, the organization found that although capacity has increased in the past several years (64 new pre-licensure programs were founded between 2006 and 2007), the rate of growth has slowed with the recession.57

What is the cause of the capacity gap? To simplify a touch, the shortage of nurses in the United States is closely related to the shortage of nurse educators. There is

54 Ibid.
55 Nevidjon and Erickson 2001
57 Ibid.
currently an insufficient supply of nurses in the labor market. Unfortunately, the primary means of increasing the supply of nurses is by nurse training and education, but the number of nurse educators is steadily dwindling due to the old age of the nurse educator force. Worse, increasing demand for nurses puts upward pressure on wages, making it more costly for individuals to pursue careers in nurse education.\textsuperscript{58} Colleges and universities cannot afford to compete with the high salaries and bonuses offered by hospitals, and, as a result, most programs have a shortage of professors, instructors, and lecturers, which ultimately prevents them from enrolling as many students as they otherwise would (See Figure 2).\textsuperscript{59} A National League for Nursing Study found that “eighty-four percent of US nursing schools attempted to hire new faculty in 2007-2008. Of those, 79 percent found recruitment ‘difficult’ and almost 1 in 3 schools found it ‘very difficult.’ The two main difficulties cited were ‘not enough qualified candidates’ (cited by 46 percent of schools), followed by an inability to offer competitive salaries (cited by 38 percent).”\textsuperscript{60}

**Figure 2: Anatomy of the United States Nursing Shortage**

- Insufficient number of nurse educators
- Reduced number of seats in nursing schools
- Higher wages for nurses (opportunity cost for nurse educators increases)
- Fewer nursing graduates

The contemporary shortage of nursing faculty is also rooted in historical dynamics. During the 1980s, enrollments in nursing programs fell precipitously, and, as a result, many faculty positions were eliminated at schools across the country. During the 1990s, enrollment increased again, but rising nurse wages made it difficult to recruit nurses to teach in colleges and universities—instead, institutions hired part-time faculty members. As a result, many nursing programs are staffed today by a number

\textsuperscript{58} Hinshaw 2001


\textsuperscript{60} National League for Nursing, “NLN Annual Nursing Data Review Documents”
According to Nevidjon and Erickson, the lack of full-time professionals devoted to research, care, and education—the “tri-partite mission of the academic career”—undermines the efficacy of nurse education programs. Unfortunately, there is not a sufficient number of nursing faculty to teach the next generation of nurses, and the situation is not set to improve, as there is an insufficient number of nursing faculty expected to begin teaching over the next two decades.

Other factors exacerbating the nursing faculty shortage include:

- **Increasing opportunity costs to entering academia.** One of the most powerful incentives for leaving the nurse education profession is low compensation. In one study, 53% of nurse educators who announced intentions to leave the field cited “more compensation” as a reason for leaving.

- **An aging population.** “The average age of full-time nursing faculty is 49 years.” On average, more than one faculty member left each program in 2002. At least half of all programs surveyed in 2002 by the NLN had at least one opening for a full-time faculty member; some had up to 15 vacancies. As seventy-five percent of current faculty will retire by 2019, it would require roughly 15% of the 10,000 master's level graduates to go into teaching each year in order to maintain the current level of faculty staffing.

- **Recourse to hiring individuals without doctoral degrees.** Nursing education is plagued by an extreme shortage of faculty members with doctoral degrees. Today, roughly one-half of instructors have a doctorate. This situation is largely unchanged from the mid-1990s. In 1996-1997, only 50% of nursing faculty had doctoral degrees, and in 1999-2000, only a negligible increase had occurred, with 50.2% of nursing faculty holding a doctorate.

As a result of these and other factors, fewer people are graduating from nursing school with an interest in academia, which means that “the pipeline for replacing the current generation of nursing faculty seems to have narrowed.” Most studies project a nursing shortage over the next two decades, made virtually inevitable by

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62 Nevidjon and Erickson 2001
63 National League for Nursing, “Nurse Faculty Shortage Fact Sheet,”
65 Nevidjon and Erickson 2001
66 National League for Nursing, “Nurse Faculty Shortage Fact Sheet,”
67 Ibid.
68 Hinshaw 2001
69 Ibid.
70 Nevidjon and Erickson 2001
skyrocketing demand for services and a decline in nursing school enrollments—the latter of which is inescapably affected by the shortage of doctorally prepared nursing instructors.\textsuperscript{71}

Even without a sufficient number of highly qualified nurses, nursing jobs will continue to be rapidly added to the US labor market over the next decade. Data from the Bureau of Labor Statistics (shown in Table 6) indicate that the field of registered nursing will add nearly 587,000 positions by 2016, a growth of nearly 23% since 2006. Candidates for positions in the nursing field—one of the fastest areas of occupational growth between now and 2016 in the entire country—have excellent prospects for finding employment, as “overall job opportunities are expected to be excellent.”\textsuperscript{72}

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<tbody>
<tr>
<td>Registered Nurses</td>
<td>29-1111</td>
<td>2,505,000</td>
<td>3,092,000</td>
<td>587,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>%</td>
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Despite the fact that President Obama’s 2010 budget proposal should allow more students to participate in nursing programs, most of his efforts—including $125 million for Title VIII Nursing Education loan repayment programs and an additional 40% for nurse faculty loan programs—do very little to resolve the short-term supply-side quandary facing the nursing field.\textsuperscript{75} It is clear that because the network of nursing programs in the United States cannot possibly meet the current and future demand for nurses from hospitals, nursing homes, and community-based health centers, internationally-educated nurses will likely play a significant role in the delivery of American health care services in the future.\textsuperscript{76} Internationally-educated nurses (IENs) are those who are primarily trained and educated in one country but then migrate to another country (home country or other country) to practice nursing.\textsuperscript{77}

Aiken reviews the literature on the current nursing shortage in the United States, arguing that “production capacity of nursing schools is lagging current and estimated future needs,” forcing an increased reliance on foreign educated nurses, which now

\textsuperscript{71} Hinshaw 2001
\textsuperscript{72} Bureau of Labor Statistics, US Department of Labor, “Registered Nurses”
\textsuperscript{74} The full entry for registered nurses can be found at ftp://ftp.bls.gov/pub/special.requests/ep/ind-occ_matrix/occ_pdf/occ_29-1111.pdf
\textsuperscript{75} National League for Nursing, “President’s 2009 Budget Cuts Will Increase Nurse and Nurse Educator Shortages,” http://www.nln.org/newsreleases/budget_02042008.htm;
\textsuperscript{76} Adeniran et al., 2008
\textsuperscript{77} Adeniran et al., 2008
account for 8% of the total domestic nursing workforce. Internationally-education nurses are coming to the United States in record numbers. Today, there are approximately three million nurses in the United States, which accounts for almost half of all nurses in the English-speaking world. At present, the largest number of foreign nurses who emigrate to the United States comes from the Philippines. Table 7 shows the top five countries in which internationally-educated nurses currently employed in the US underwent training.

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Philippines, Nigeria, Taiwan, Jamaica, Poland</td>
</tr>
<tr>
<td>2008</td>
<td>Philippines, India, Nigeria, Taiwan, People’s Republic of China</td>
</tr>
<tr>
<td>2007</td>
<td>Philippines, India, Nigeria, Ukraine, Russia</td>
</tr>
</tbody>
</table>

Source: CGFNS International, “CGFNS Qualifying Exam Statistical Data”

A Note about Nurse-Midwives

Midwives have a much less significant presence in the United States than they do in most of the continental European countries. In the United States, students can either train to become a certified nurse-midwife (requires certification as a registered nurse), or a certified midwife—an emerging field of non-nurse midwives who are permitted to work in New York, New Jersey, and Rhode Island. The United States Bureau of


Adeniran et al., 2008

Based on number of CGFNS certificates issued in the specified year


Ibid.

Ibid.

Ibid.

American College of Nurse-Midwives, “About the Midwifery Profession,” [http://www.midwife.org/about_midwife_profession.cfm](http://www.midwife.org/about_midwife_profession.cfm)
Labor Statistics includes certified nurse-midwives in its employment projections for registered nurses (COD 29-1111), but does not track statistics for certified midwives. Nonetheless, it appears from anecdotal evidence that demand for midwives in the United States currently exceeds supply, although the market is too small to discern even estimates.86

**Outlook for Nurses in Canada**

Like the United States, Canada suffers from an extreme nursing shortage. A 2002 Canadian Nurses Association (CNA) study found that by 2011, the country will have a nurse workforce shortfall of nearly 78,000; by 2016, demand is expected to exceed supply by nearly 113,000 positions.87 Based on forecasts by the CNA, there will be “a continued shortage of nurses for the future.”88 Some areas of Canada are worse off than others. Researchers Blythe and Baumann paint a startling picture of the current status of the nursing industry in Ontario, for example, in a February 2008 report. The pair explains that “Ontario does not educate sufficient nurses to avoid a serious shortage in the future.”89 Accordingly, they insist, Ontario and other areas of Canada—and indeed, much of the developed world—will be forced to rely on internationally-educated nurses. Due to its reliance on nurses and nurse midwives for the delivery of essential health services, Ontario appears to be at the epicenter of the IEN trend in Canada. More than half of all internationally-educated nurses in the country live and work in Ontario and account for more than 10% of the nursing workforce. The IEN workforce there and in the rest of Canada is heterogeneous: more than ten different nations are represented in the country’s IEN workforce, though a plurality of these nurses is from the Philippines.

The Canadian Nurses Association characterizes job prospects in this way:

> The nursing employment situation in Canada is improving after several years of health care restructuring and hospital downsizing. Nurses with skills and experience in specialty areas (e.g., emergency, critical care, and operating room) and those willing to work in smaller communities or isolated communities are in the most demand.90

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89 Blythe and Baumann, “Globalization of Higher Education in Nursing: Current Standards and Harmonization in Transnational Nursing Education,” 2008
90 Canadian Nurses Association, “Becoming a Registered Nurse—International Applicants”
Table 8 shows the projected level of jobs created in Canada’s nursing field between 2005 and 2015. The expected rate of growth for nurses and nurse supervisors is 2.5%, well above the 1.1% projected rate of growth per annum for all occupations.

Table 8: Projected Job Creation for Nurses in Canada, 2005-2015

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<tbody>
<tr>
<td>All occupations</td>
<td>000</td>
<td>14,566.00</td>
<td>16,263.70</td>
<td>1697.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Nurse supervisors and registered nurses</td>
<td>315</td>
<td>252.1</td>
<td>323.3</td>
<td>72.1</td>
<td>2.5</td>
</tr>
</tbody>
</table>


Because of the domestic nurse shortage, Canada recruits fairly heavily from abroad—particularly countries in the Global South like the Philippines—though at a rate far lower than the United States. Four regional health authorities in British Columbia now recruit in the UK. A 2006 survey of 6,477 Canadian registered nurses showed that 7.1% received their education in another country, while nearly 13% were born in a country other than Canada. Most had emigrated from the United Kingdom, the Philippines, the United States, and China. Table 9 shows the number of Canadian registered nurses who were educated abroad in 2006. Nearly 20,000 members of the country’s 250,000+ RN population (8%) received a sufficiently equivalent education abroad to become a registered nurse in the country.

Table 9: Education Locations of Canadian Registered Nurses, 2006

<table>
<thead>
<tr>
<th>Location</th>
<th>#</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Canada</td>
<td>231,140</td>
<td>92.1</td>
</tr>
<tr>
<td>International location</td>
<td>19,836</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Reproduced from the 2006 Workforce Profile of Registered Nurses in Canada, the Canadian Nurses Association (March 2008)

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92 Available at: http://www.hrsdc.gc.ca/eng/publications_resources/research/categories/labour_market_e/sp_615_10_06/page08.shtml#three
93 Blythe and Baumann, “Globalization of Higher Education in Nursing: Current Standards and Harmonization in Transnational Nursing Education,” 2008
94 Nichols 2005
95 Available at: http://www.nursingworld.org/MainMenuCategories/CertificationandAccreditation/AboutNursing.aspx
A Note about Midwives

Human Resources and Skills Development Canada does not keep track of job creation or supply/demand statistics for midwives in the country. Midwives, generally speaking, play a less significant role in the delivery of health care services in Canada than the United Kingdom, though they are far more critical than nurse-midwives and certified midwives in the United States. What’s more, a great deal of evidence suggests that midwives are of growing importance in the country. Several Canadian provinces—Calgary, most recently—have begun to cover the cost of their services, as midwives tend to be far less expensive than physicians or obstetricians.\(^96\)

Outlook for Radiologic Technologists and Technicians in the US

According to the 2008-2009 Occupational Outlook Handbook produced by the United States Bureau of Labor Statistics, employment opportunities for radiography technologists and technicians are expected to grow faster than related opportunities in health care, currently one of the fastest-growing fields in the country—and poised to become even larger if the Democrats’ health care reform agenda is passed in the coming months. Table 10 shows that employment opportunities for radiologic technologists and technicians will grow in the United States faster than average for all occupations, at a rate of 15% between 2006 and 2016. The growth will be concentrated in the areas of diagnostic imaging (both digital and analog), particularly as diagnostic imaging centers and in-house imaging at the offices of independent physicians become more cost-effective. This can be attributed primarily to the increasing use of diagnostic imaging technologies as a frontline technique to detect and diagnose illness.\(^97\)

Table 10: Projected Job Creation for Radiologic Technologists/Technicians in the US, 2016\(^98\)

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<tr>
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<tbody>
<tr>
<td>Radiologic Technologists and Technicians</td>
<td>29-2034</td>
<td>196,000</td>
<td>226,000</td>
<td>30,000</td>
</tr>
</tbody>
</table>


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Outlook for Optometrists in the US

Table 11 shows the Bureau of Labor Statistics’ projected employment figures for optometrists in the year 2016. It shows an increase of about 3,700 jobs (11% change from 2006), which is well above the average rate of projected growth across the economy and for the health care industry, which, as noted above, is one of the fastest growing in the United States. Job opportunities for optometrists are expected to grow steadily over the coming years as the baby boomer generation continues to retire and as a growing number of health insurance plans begin to include vision coverage. Additionally, because there are only seventeen schools of optometry in the United States and Puerto Rico, the national supply of optometrists is necessarily constricted, increasing demand.100

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<tbody>
<tr>
<td>Optometrists</td>
<td>29-1041</td>
<td>33,000</td>
<td>36,000</td>
<td>3700</td>
</tr>
</tbody>
</table>


Outlook for Speech and Language Pathologists (Therapists) in the US

Market demand for speech-pathologists is expected to grow in the US faster than most other occupations—by 12,000 jobs, or 11%, between 2006 and 2016—due to the number of ageing baby boomers who will require services, as well as the development of more advanced diagnostic techniques in children (see Table 12).103

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<tbody>
<tr>
<td>Speech-Language Pathologists</td>
<td>29-1127</td>
<td>110,000</td>
<td>121,000</td>
<td>12,000</td>
</tr>
</tbody>
</table>


Outlook for Health Professionals in Canada

The occupational and labor market projections by the Canadian government are not nearly as detailed as those produced by the US Bureau of Labor Statistics. While the BLS disaggregates growth projections by occupation, Human Resources and Skills Development Canada only shows growth at the “job series” level (each job series represents a broad category of occupations). As an example, optometrists, chiropractors, and “other health diagnosing and treating professionals” are part of one series. Nonetheless, the data do indicate subsections of Canada’s health care industry that are likely to see increased activity over the next several years.

Table 13 shows projected growth in each of the health care fields of interest at or above the level of projected growth for all occupations (an average of 1.1% per annum between 2005 and 2015). Optometrists, chiropractors, and “other health diagnosing and treating professionals” will expand at a rate of 2.0% per annum between 2005 and 2015. The rate of growth for registered nurse and nurse supervisor positions will be approximately 2.5% annually during this ten-year period. Other technical occupations and assisting occupations in support of health care will expand by roughly 1.8% and 1.1%, respectively.

Table 13: Projected Job Creation for the Health Professions in Canada, 2005-2015\(^\text{106}\)

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<tbody>
<tr>
<td>All occupations</td>
<td>000</td>
<td>14,566.00</td>
<td>16,263.70</td>
<td>1,697.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Optometrists, chiropractors, and other health diagnosing and treating professionals</td>
<td>312</td>
<td>13.2</td>
<td>16.1</td>
<td>2.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Pharmacists, dietitians, and nutritionists</td>
<td>313</td>
<td>31.7</td>
<td>41.2</td>
<td>9.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Therapy and assessment professionals</td>
<td>314</td>
<td>43.5</td>
<td>60</td>
<td>16.5</td>
<td>3.3</td>
</tr>
<tr>
<td>Nurse supervisors and registered nurses</td>
<td>315</td>
<td>252.1</td>
<td>323.3</td>
<td>72.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Medical technologists and technicians</td>
<td>321</td>
<td>80.3</td>
<td>103.1</td>
<td>22.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Other technical occupations in health care</td>
<td>323</td>
<td>108.7</td>
<td>120.7</td>
<td>12.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Assisting occupations in support of health care</td>
<td>341</td>
<td>254.6</td>
<td>305.0</td>
<td>49.4</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source: Human Resources and Skills Development Canada\(^\text{107}\)


Certification, Licensure, and Credentials Portability for UK-Educated Health Workers in the United States and Canada

The flattening of our world and consequent internationalization of education and training for health professionals has given voice to the conflict perpetually arising in higher education between accessibility and quality, decentralization and the need for global coordination, liberalization and standardization. One of the most significant problems facing cross-border nursing education is “the absence of a body that has international authority to monitor educational standards worldwide, even though some attempts have been made to establish international standards that reconcile standards with cultural diversity.” For almost all of the fields of interest to XYZ, there is no means of comparing education in one country with a parallel education in another—no metric or standard of evaluation exists. The fragmented network of education for nurses finds its roots in the aftermath of World War II, when Russia and the Eastern Bloc countries educated nurses primarily at the secondary level, while the West educated nurses at the tertiary level—and within the Western countries, there was significant variation in the curricula and course offerings.

All of the key players in the education of higher education professionals understand that internationalization poses the same challenge to health care as it does to other fields. Institutions of higher education around the world must acknowledge the “necessity of common standards” that are “crucial in regulated professions, such as nursing, in which lives depend on the possession of specific competencies” while recognizing the need for institutional autonomy and context-specific regulations.

Most countries have independent, non-profit organizations that govern the accreditation of professional schools and certification of graduates. Domestic accreditation is strong in the UK, US, and Canada. While the system is entirely voluntary, it attracts near universal support and acceptance. In the United States, the National League for Nursing (NLN) Accreditation Commission evaluates nursing programs throughout the post-secondary level; the American Association of Colleges of Nursing (AACN) reviews baccalaureate programs exclusively. These organizations, which establish minimalist standards and expectations for educators and students, perform admirably the difficult task of promoting innovation while ensuring standardization within a nation.

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107 Ibid.
109 Ibid.
110 Ibid.
111 Ibid.
112 Ibid.
113 Ibid.
114 Ibid.
While internal standardization has progressed markedly over the past several decades, international integration has not been achieved, despite the powerful forces of globalization. Even after the passage of numerous mutual recognition agreements—formal documents authorizing national professional organizations in different countries to recognize foreign degree holders—aspiring health professionals continue to encounter cumbersome and labyrinthine regulatory environments. Although some countries do not yet recognize nursing as an “autonomous, regulated profession,” most, as a matter of public health and safety, offer certification based on education and other credentials and withhold registration from those who do not meet the criteria. Some unitary states, like England, have a centralized framework for regulating nurses (The Nursing and Midwifery Council) and other health professionals, while in other countries, nursing and the health professions are regulated at the regional, provincial, or even local levels, making mobility within the country challenging.\(^{115}\)

### What is a mutual recognition agreement?

According to the International Council of Nurses, mutual recognition is “a vehicle for regulatory co-operation, and it may be based on harmonization, equivalence, or external criteria such as the host country’s standards or other mutually agreed standards, or international standards. In a mutual recognition agreement, two or more parties agree to recognize and accept all, or selected, aspects of each other’s regulatory results because they are harmonized or judged to be equivalent, or because they satisfy other agreed-upon external criteria. Results may include assessment outcomes, qualifications, standards, rules, titles, and quality assurance system standards.”\(^{116}\)

### Nursing

Because there is no coherent cross-border framework for assessing the equivalency of credentials, domestic regulations still govern nursing, and they vary in intensity and stringency. In Canada, all nurses—even those who receive their education abroad—must take the national licensing exam and meet discrete provincial regulatory requirements.\(^{117}\) Likewise, licensing requirements vary from state to state in the US. As a result of these distinct regulatory environments, internationally-educated nurses often confront a confusing and impossibly complex system of rules and requirements. According to Baumann and Blythe, some nurses who relocate in Canada “never reestablish their nursing careers because they need substantial education upgrading to be eligible to take the licensing examination.”\(^{118}\) Moreover,

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\(^{115}\) Ibid; For more on the Nursing and Midwifery Council of the United Kingdom, see: [http://www.nmc-uk.org/](http://www.nmc-uk.org/)


\(^{117}\) Baumann and Blythe, “Globalization of Higher Education in Nursing: Current Standards and Harmonization in Transnational Nursing Education,” 2008

\(^{118}\) Ibid.
...internationally educated nurses tend to have a relatively high failure rate in the national examination due to their unfamiliarity with the testing procedures and Canadian nursing. Nurses who migrate have to initially depend on their formative education in their home country to provide adequate preparation; and some pre-licensure nursing programs are more effective than others in preparing nurses to practice at the level required by the recipient country.\(^{119}\)

There is even variation in the intensity of efforts to recruit foreign nurses, which sends mixed signals to foreign nurses about a country’s desire to attract labor from abroad. “Policy decisions affect the volume of migration. The US has been assertive in attracting IENs and provides National Council Licensure Examination (NCLEX) RN testing worldwide.” In contrast, “Canadian provinces vary in their overseas recruitment efforts.”\(^{120}\)

That said, progress has been made on the credentials front. Policy adjustments have expedited the credentialing of foreign nurses in many countries. In Canada, for example, a prior learning assessment and recognition (PLAR) policy has been implemented to test and validate skills and abilities of foreign nurses.\(^{121}\) Several organizations in Canada hold screenings and licensing examinations in foreign countries to screen potential nursing candidates before they even arrive in the country.\(^{122}\) And the US-based Commission on Graduates of Foreign Nursing Schools (CGFNS) has taken the lead in helping foreign nurses relocate to the United States and recently launched the International Council of Nurses-Affiliated International Centre on Nurse Migration to coordinate national migration policies and take the first important steps toward an international migration scheme.\(^{123}\)

Furthermore, national professional nursing organizations in the United States (the Commission on Collegiate Nursing Education) and Canada (the Canadian Association of Schools of Nursing) have signed a mutual recognition agreement (2009-2012) to enable cross-border credentials recognition and to facilitate the migration of nurses from one country to the other.\(^{124}\) There are also internal and external mutual recognition agreements in the following territories:

- Between New Zealand and Australian states (with the exception of Western Australia)—The Trans-Tasman Mutual Recognition Agreement (TTMRA)\(^{125}\)

\(^{119}\) Ibid.


\(^{121}\) Ibid.

\(^{122}\) Ibid.

\(^{123}\) Ibid.


\(^{125}\) International Council of Nurses, “Mutual Recognition Agreements”
Between the Eastern, Central, and Southern African Colleges of Nursing (ECSACON)\textsuperscript{126}

Within the European Union—\textit{Nursing Directives} and \textit{The Directive on Mutual Recognition and Professional Qualifications}\textsuperscript{127}

Within CARICOM, the Caribbean Community and Common Market

Within the United States—\textit{The Nurse Licensure Compact}

Within Canada—\textit{The Mutual Recognition Agreement for Registration Bodies for Registered Nurses}

Additionally, there is a mutual recognition agreement in negotiation between NAFTA states.\textsuperscript{128} However, despite attempts by the United Kingdom to function “as a conduit for nurses intending to settle in the US or Canada,” there is a surprisingly low level of coordination between the UK and other countries.\textsuperscript{129} There is currently no mutual recognition agreement between the United Kingdom and Canada or the United States, nor is there an international agreement between the European Union and Canada or the United States.\textsuperscript{130} Consequently, nursing students educated in the United Kingdom are considered internationally-educated nurses and must comply with the respective certification and licensing requirements of the relevant jurisdictions in the United States and Canada.

\textit{Certification and Licensing in the United States}

Nurse licensing and certification in the United States fall under the jurisdiction of state governments. The National Council of State Boards of Nursing, in which all fifty states, territories, and the District of Columbia are represented, issued a document explaining how nurses educated outside of the United States can meet licensing and certification requirements.\textsuperscript{131} Nurses educated within the United States must have graduated from an institution accredited by the National League of Nursing Accreditation Commission (NLNAC), which handles every type of nursing program from master’s degrees and baccalaureate degrees to associate degrees and diplomas, or the Commission on Collegiate Nursing Education (CCNE), which accredits baccalaureate and master’s degree programs.\textsuperscript{132}

Nurses educated outside of the United States must have their credentials evaluated by the board of nursing in the state in which they desire to be licensed. State boards of

\textsuperscript{126} Ibid.

\textsuperscript{127} Ibid.

\textsuperscript{128} Ibid.

\textsuperscript{129} Ibid.

\textsuperscript{130} CASN, “Mutual Recognition Agreement on Accreditation”


nursing either outsource the credentialing process to a third party (for example, the Commission on Graduates of Foreign Nursing Schools (CGFNS) or any of the constituent members of the National Association of Credential Evaluation Services or the Association of International Credential Evaluators) or authenticate and evaluate the credentials of candidates in-house.133 After the credentialing process, state boards of nursing may require international nurses to complete remedial work in an accredited nursing program.134

If credentials are evaluated and accepted as sufficiently equivalent, in order to become a registered nurse in the United States, candidates must pass the NCLEX-RN examination.135 The NCLEX, first administered in April 1994, is a computerized adaptive test (CAT) administered throughout the year at testing centers in the United States and in select countries around the world, including the United Kingdom.136 In 2004, as part of a broader attempt to “remove barriers for US nurse licensure,” the National Council of State Boards of Nursing began to offer the NCLEX examination in three locations overseas: Seoul, Hong Kong, and London.137

In some cases—depending largely on the jurisdiction—a CGFNS certificate is required in order to sit through the NCLEX.138 The CGFNS International Certification Program includes a credentials review, CGFNS International Qualifying Exam, and an English language proficiency exam. To qualify, candidates must have completed classroom instruction and clinical practice in adult health nursing, maternal/infant nursing (excluding gynecology), care of infants (pediatrics), and psychiatric/mental health nursing (excluding neurology).139,140 The CGFNS International Qualifying Exam is a test that is administered around the world on a triannual basis by CGFNS, an “immigration-neutral nonprofit organization, internationally recognized as an authority on credentials evaluation pertaining to the education, registration, and licensure of nurses and other health care professionals worldwide.”141 According to CGFNS, the qualifying exam:

…is a one-day examination that tests your knowledge of nursing as it is taught and practiced in the United States today. The CGFNS Qualifying Exam uses objective, multiple-choice and alternate-item type questions and is designed by testing experts to help you predict your likelihood of passing the

138 Ibid.
139 CGFNS International, “Certification Program”
140 CGFNS International, “Certification Program”
141 CGFNS International, “Who We Are/What We Do,” http://www.cgfns.org/sections/about/
US registered nurse licensure examination, which is called the National Council Licensure Examination for Registered Nurses or NCLEX-RN examination.\textsuperscript{142}

CGFNS statistics show that “international nurses who passed the CGFNS Qualifying Exam on the first attempt had a 92.4 percent chance of passing the US licensure examination.\textsuperscript{143} CGFNS International, inaugurated as the Commission on Graduates of Foreign Nursing Schools in 1960, was established in response to a rapidly increasing number of nurses migrating to the United States. At the time, fewer than 1 in 5 foreign nurses were passing the US registered nurse licensure exam. This organization emerged out of conversations between the American Nurses Association, the American Medical Association, the US Department of Labor, US Immigration and Naturalization Service, NY State Education Department, and the International Council of Nurses, and in the wake of a groundbreaking report from the American Nurses Association and Pace University.\textsuperscript{144} Today, CGFNS performs credential evaluation services for nurses and individuals in a number of fields in the health professions and has provided credentialing services for over 500,000 individuals in 30 years.\textsuperscript{145} The third requirement for the CGFNS Certificate is English language competency, though students educated in the United Kingdom are exempted.\textsuperscript{146} The final stage of certification is the immigration process.\textsuperscript{147}

After becoming certified, one must become licensed in a particular state by passing the NCLEX-RN. State agencies in charge of nursing set licensing requirements, establish continuing education requirements, and are responsible for all disciplinary matters involving registered nurses.\textsuperscript{148} The CGFNS Qualifying Exam is prerequisite for NCLEX-RN in many states, as established by their boards of nursing (see Figure 3).

\textsuperscript{142}CGFNS International, “Certification Program”
\textsuperscript{143}CGFNS International, “90.8% of CGFNS certificate holders pass NCLEX-RN on first attempt,” http://www.cgfns.org/email/sna/may08/2008-05__SNA.pdf
\textsuperscript{145}Ibid.
\textsuperscript{146}National Council of State Boards of Nursing, “Resource Manual for International Nurses”
\textsuperscript{147}National Council of State Boards of Nursing, “Resource Manual for International Nurses”
\textsuperscript{148}American Nurses Association, “About Nursing”
Certification and Licensing in Canada

Canada’s registered nursing market is notoriously difficult to penetrate. In 2003, 4,000 nursing candidates applied for licensure in Canada; only one-third of that cohort was granted licenses.149 Similar to the United States, certification for nurses in Canada occurs at the sub-national level. All internationally-educated candidates for registered nurse licensure in Canada must undergo a credentials review by the authorities in that province. After passing the credentials review, candidates must submit to the Canadian Registered Nurses Examination (CRNE). Permission to take the exam without a credentials equivalency review is granted only after a recommendation is received from a provincial or territorial nurse’s association. Normally, those who do

149 Nichols 2005
not pass the credentials equivalency evaluation enroll in prescribed remedial classes (see Appendix 3). The only exception to this process applies to nurses applying for licensure in the semi-autonomous province of Quebec, which administers its own exam to qualify potential nurses. In Canada, psychiatric nurses must have an advanced degree and can also hold the certification in psychiatric/mental health nursing, which is accorded to candidates by the Canadian Nurses Association (see Appendix 1 for a list of schools offering programs for psychiatric nurses).

Requirements for certification vary from province to province. In Saskatchewan, for example, candidates to become an RN must meet each of the following requirements:

- **Education**—Post-secondary education must have included theoretical and clinical training in medicine, surgery, obstetrics, pediatrics, psychiatry, gerontology, and community health
- **Registration where educated**—Must be registered in good standing where educated as a nurse
- **Registration in good standing**—Must be registered in good standing in jurisdiction where most recently employed
- **English-language proficiency**
- **Good character**—Must respond to character questions on application and obtain reference from former employer
- **Hours of practice**—In last five years, must have worked at least 1,125 hours in nursing practice, graduated from an approved nursing education program, or completed an approved nursing re-entry program
- **Continuing competence**—Must have completed all continuing competence requirements in last jurisdiction
- **Pass the Canadian Registered Nurse Examination (CRNE)**

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150 See the following prep guide: [http://www.cna-ajic.ca/CNA/resources/bookstore/default_e.aspx](http://www.cna-ajic.ca/CNA/resources/bookstore/default_e.aspx); Blythe and Baumann, “Supply of Internationally Educated Nurses in Ontario: Recent Developments and Future,” February 2008; Blythe and Baumann, “Supply of Internationally Educated Nurses in Ontario: Recent Developments and Future,” February 2008,

151 For more information, see the website of the Ordre des infirmières et infirmiers du Québec (only select portions of the website available in English).

152 Saskatchewan Nurses Association: [http://www.srna.org/registration/IEN_requirements.php](http://www.srna.org/registration/IEN_requirements.php)
Radiologic Technology

There are currently no mutual recognition agreements between the United Kingdom and Canada or the United States pertaining to the certification or licensure of radiologic technologists and technicians. Candidates for radiologic technician or technologist positions must meet the independent requirements for certification for the respective national organizations in each country and requirements for licensure set forth by the relevant jurisdictions in each country.

Certification and Licensing in the United States

Radiography technicians and technologists (radiographers) are educated in hospitals, colleges, universities (typically), and vocational-technical colleges (infrequently). Students enroll in a one-year certificate program, two-year associate degree program, or a four-year bachelor’s degree program. The most popular course of study is currently the associate degree. Those who have worked in related fields often opt for
the one-year certificate program. Students who seek entry into administrative or supervisory roles tend to choose the four-year bachelor’s degree program.\textsuperscript{153}

The bureaucratic maze to become certified and licensed in radiologic technology is complex (see Figure 5). Radiologic certification—a “one-time awarding of a certificate after an individual satisfies all eligibility requirements including the certification exam”—is controlled by the American Registry of Radiologic Technologists (ARRT), a national organization. Registration with the AART must occur on an annual basis to ensure that a radiologic technician or technologist has completed continuing education requirements. Finally, if an individual is certified and his/her registration is current, s/he can be licensed, or legally authorized to practice in a particular state jurisdiction.\textsuperscript{154} ARRT certification for internationally-educated students can be difficult to obtain—far more so than it is for students in other health professions. According to the AART’s website, the organization only certifies students enrolled in programs that are under the auspices of:

- The Joint Review Committee on Education in Radiologic Technology
- The Joint Review Committee on Education in Nuclear Medicine Technology
- The Joint Review Committee on Education in Diagnostic Medical Sonography through the Commission on Accreditation of Allied Health Education Programs
- The Conjoint Accreditation Services of the Canadian Medical Association
- The Australian Institute of Radiography\textsuperscript{155}

Students educated at an institution that does not have membership in one of these umbrella organizations are not permitted to take the ARRT certification exam until they have enrolled in remedial/bridging programs.

\textsuperscript{153} Bureau of Labor Statistics, “Radiologic Technologists and Technicians”
\textsuperscript{154} The American Registry of Radiologic Technologists, “Licensing versus certification and registration,” \url{http://www.arrt.org/licensing/certvslic.htm}
\textsuperscript{155} The American Registry of Radiologic Technologists, “Frequently asked questions about ARRT certification,” \url{http://www.arrt.org/}
At present, if XYZ were to launch a cross-border program in radiography, students would be required (upon completion of the program) to enroll in an accredited program (likely with advanced standing) recognized through one of the AART’s verification mechanisms. After completing these requirements—as well as any remedial clinical work—candidates would then be required to take the AART certification exam.\textsuperscript{156} While certification is technically optional, most states require that candidates receive certification and complete the AART certification exam (see Appendix 2 for a list of US States that require radiologic technologists and technicians candidates to take and pass the AART certification exam).

\textit{Certification and Licensing in Canada}

The sequencing of the certification and licensing steps are somewhat different in Canada than in the United States, as noted in the Canadian Association of Medical Radiation Technologists’ certification handbook.\textsuperscript{157}

\textsuperscript{156} For exam content, see: \url{http://arrtpdf1.s3.amazonaws.com/examinations/contentspecs/RAD_CS_2008.pdf}

\textsuperscript{157} To access a complete copy of the book, see: \url{http://www.camrt.ca/english/certification/HB08/Certification_Handbook_2008.pdf}
CAMRT, a non-profit national organization, jointly assesses and regulates candidates for careers in radiologic technology with provincial regulatory bodies. Candidates for careers in radiologic technology must first be registered and certified with a provincial organization before receiving certification from CAMRT (see Figure 6).

**Figure 6: Process Map for Credentialing IE Radiologic Technologist Candidates in Canada**

If candidates are seeking a license in British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, or Saskatchewan, then competency is established by the Canadian Association of Medical Radiation Technologists according to the following criteria:

- Education (diploma or degree), transcript, syllabi
- Work experience of 1,950 hours (1 year) within the past five years
- Language proficiency (English or French)\(^\text{158}\)

If candidates are seeking a license in Ontario, they must register with the College of Medical Radiation Technologists of Ontario (CMRTO) *before* applying for national certification. If candidates are seeking a license in Alberta, they likewise must apply with the Alberta College of Medical Diagnostic and Therapeutic Technologists (ACMDTT) *before* applying for national certification. If they seek a license in Quebec,

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they must pursue a separate certification and licensure process with the L’Ordre des technologies en radiologie du Quebec (OTRQ).\textsuperscript{159}

After registration with the appropriate provincial body, CAMRT must ensure that the candidate has completed the appropriate education requirements.\textsuperscript{160} If the candidate does not meet these requirements in full, s/he is eligible for a bridging program that allows students to meet the necessary requirements and prepare for the national exam. Bridging programs are offered by Michener Institute, NAIT, and BCIT.\textsuperscript{161} After meeting all of these requirements, the candidate must pass the CAMRT.

\textbf{Optometry}

Unfortunately, there are at present no mutual recognition agreements between optometry certification and regulatory organizations in the United Kingdom and Canada or the United States. Consequently, candidates for optometry positions educated at XYZ and other United Kingdom institutions must meet the respective requirements for certification of internationally-educated students in the United States and Canada.

\textit{Certification and Licensing in the United States}

Like Canada’s process for credentialing internationally educated radiologic technology students, certification for optometry positions in the United States begins with state-level regulatory boards. The first step to becoming an optometrist in the United States is to complete a program and receive a Doctor of Optometry degree from an accredited optometry school after at least three years of pre-optometric coursework at an accredited college or university.\textsuperscript{162} Accredited institutions are those recognized by the Accreditation Council on Optometric Education (AOCE). There are currently seventeen recognized institutions in the contiguous United States and Puerto Rico and two institutions in Canada.\textsuperscript{163} If a candidate has graduated from one of these universities—and all of his/her credentials are in order with one of the state boards of optometry—then s/he is eligible to sit for the National Board of Examiners in Optometry.\textsuperscript{164}

\begin{itemize}
  \item \textsuperscript{159} Canadian Association of Medical Radiation Technologists, “Assessment of Credentials by Province,”
  \texttt{http://www.camrt.ca/english/certification/International/INT_assessment_credentials_province.asp}
  \item \textsuperscript{160} An entry-level competency guide can be found here:
  \item \textsuperscript{161} Canadian Association of Medical Radiation Technologists, “Bridging Programs,”
  \texttt{http://www.camrt.ca/english/certification/International/bridging_programs.asp}
  \item \textsuperscript{162} Bureau of Labor Statistics, “Optometrists”
  \item \textsuperscript{163} Association of Regulatory Boards of Optometry, “ABBO FAQs,”
  \texttt{http://www.arbo.org/index.php?action=arbofaqs#regulation}
  \item \textsuperscript{164} Bureau of Labor Statistics, “Optometrists”
\end{itemize}
Internationally-educated students who have not graduated from one of these institutions must undergo an academic equivalency evaluation by the optometry board of the state in which an individual would like to practice. If the education is not equivalent, or the student has an insufficient background in one or more areas of required competency, state boards may ask that students complete remedial education before taking the National Board exam. Candidates can bypass the remediation process and sit for the National Board of Examiners in Optometry without sufficiently meeting the education requirements only if the state board agrees to sponsor the individual (which is extremely rare). After completing the national requirements, some jurisdictions require candidates to take an additional qualifying exam at the state level in order to receive licensure (see Figure 7).165

Figure 7: Process Map for Credentialing IE Optometry Candidates in the US

Certification and Licensing in Canada

Like other fields within Canada’s health care system, optometry is regulated at the provincial level. National certification is coordinated by each of the provincial agencies. After graduating from an accredited program in optometry, students submit to the Canadian Standard Assessment in Optometry (CSAO) as part of licensing requirements at the provincial level. Provincial agencies use the Canadian Standard Assessment in Optometry. Graduates must pass this exam if they wish to practice in

British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, Prince Edward Island, or Newfoundland and Labrador. If candidates did not graduate from an accredited program in Canada, they are eligible to take the CSAO only after completing the International Optometric Bridging Program at the University of Waterloo. A description of the program follows:

Designed to provide optometrists educated outside Canada and the United States with a structured orientation to Canadian standards of optometric practice, the program will provide all qualified applicants with opportunities to gain the critical language, academic and clinical skills necessary for registration in all provinces of Canada. Once academic credentials have been assessed as acceptable, applicants will move forward to a language assessment and a prior learning assessment to ascertain their current knowledge in optometry. From this, the applicants will enter either Bridging One; a six week orientation program, or Bridging Two; a year long structured academic program. This program is designed to prepare the applicants to move forward to the Canadian Standard Assessment in Optometry; the examinations necessary for registration to practice optometry in Canada.

Speech and Language Pathology

At least half of those who work in the speech-language pathology field in the United States are in “educational services” (they work in schools and with children), while the others can be found in health care and social assistance programs. Most states in the US require a master’s degree in speech-language pathology for credentialing and licensing purposes, though particular requirements vary. Forty-seven of the fifty states regulate speech-pathologists. Most require candidates to take the national examination for speech-language pathology, have 300-375 hours of supervised clinical experience, and nine months of professional clinical experience. If practicing in public schools, the standards are less stringent. Many states (except for twelve) grant licenses to those with master’s degrees from approved institutions.

Certification of Clinical Competence in Speech-Language Pathology is governed by the American Speech-Language-Hearing Association (ASHA); licensing is controlled at the state level. Internationally-educated students must submit for a credentials review by an independent credentials evaluation service (master’s degree required), take the PRAXIS exam, and complete a minimum of 1,260 hours of clinical

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Licensing laws vary from state to state, but most simply mirror the ASHA guidelines. Some states have less onerous requirements.

Of all the health professions surveyed in the report, none has more portable credentials than speech-language pathologists. In 2004, representatives from the American Speech-Language Hearing Association (ASHA), the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA), the Royal College of Speech and Language Therapists (RCSLT), and the Speech Pathology Association of Australia Limited entered into a multilateral mutual recognition agreement which streamlined the credentials evaluation process for migratory speech-language therapists/pathologists and dismantled several of the most burdensome requirements facing internationally educated professionals. Larry Higdon, ASHA president, said of the decision: “We believe that this agreement will benefit speech-language pathologists who wish to travel and work in other countries. It will facilitate the exchange of theoretical and clinical research and encourage the flow of information on best clinical practices. It will broaden educational opportunities and perspective for students and faculty.” Since XYZ is a program accredited by the Royal College of Speech and Language Therapists (UK), students attempting to work in the United States would not be required to undergo an evaluation of their credentials or clinical practice experience. The only requirement would be to take the PRAXIS exam (and then apply for licensure in the jurisdiction of their choice).

The requirements for Canada are a bit more stringent. Full members of the Royal College of Speech and Language Therapists must be evaluated by the International Qualifications Assessment Agency and also pass the CASLPA S-LP clinical certification examination.

**Midwifery**

As noted above, midwives occupy a much different (less significant) place in the delivery of health care services in the United States and Canada than the United Kingdom and the rest of Europe. Nonetheless, both the US and Canada—

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171 Royal College of Speech and Language Therapists, “Recognised courses,” http://www.rcslt.org/aboutslts/courses
173 Canadian Association of Speech-Language Pathologists and Audiologists, “Careers: Information for certified speech-language pathologists from ASHA, RCSLT, Speech Pathology Australia, and full members of the Irish Association of Speech and Language Therapists’ Association applying for CASLPA membership under the international mutual recognition agreement,” http://www.caslpa.ca/english/careers/mrainfo_for_international.asp
particularly the latter—are investing more resources into the practices of midwives as traditional obstetrical resources are stretched to the breaking point.

Certification and Licensing in the United States

Certified nurse-midwives are legally recognized at the state level. To practice, candidates must graduate from a nurse-midwifery program that is accredited by the Accreditation Commission for Midwifery Education (ACME).\textsuperscript{174} Certified midwives are only recognized in New York, New Jersey, and Rhode Island.\textsuperscript{175} Those seeking certification as certified nurse-midwives or certified midwives must pass the American Midwife Certification Board (AMCB)

Certification and Licensing in Canada

Registered midwives are regulated exclusively at the provincial and territorial levels in Canada; reciprocity agreements allow nurses to travel between provinces (see Appendix 4). Some provinces recognize midwifery as an official occupation, while others do not. Candidates to become registered midwives enroll in courses at the baccalaureate level.\textsuperscript{176} Those educated outside of the country—a large proportion of Canada’s midwives, since the first domestic program was just inaugurated in 1993—must have their credentials verified and deemed sufficiently equivalent. In some provinces, all internationally-educated candidates, regardless of background, must participate in a bridging program. Ontario, for example, requires those educated outside of Canada to participate in the International Midwifery Pre-Registration Program (IMPP) at Ryerson University, and show proof that they are certified in CPR, Obstetrical Emergency Skills, and Neonatal Resuscitation; become a member of the Association of Ontario Midwives; and procure liability insurance.\textsuperscript{177}

\textsuperscript{174} American College of Nurse-Midwives, “The Credential CNM and CM,” http://www.midwife.org/credential_cnm.cfm
\textsuperscript{175} American College of Nurse-Midwives, “Legal Recognition,” http://www.midwife.org/legal_recognition.cfm
\textsuperscript{176} Canadian Midwifery Regulators Consortium, “What is a Canadian Registered Midwife?” http://cmrc-ccosf.ca/node/18
\textsuperscript{177} College of Midwives of Ontario, “Becoming Registered,” http://www.cmo.on.ca/ITM.php
Developments in Offshore Health Professions Education

This section of the report describes major developments in offshore health professions education, which should be of interest to XYZ as it considers the possibility of entering the cross-border education market. As previously highlighted in this report, the nursing shortage in both the US and Canada can be ascribed to inadequate training capacity at the postsecondary level. Due to a number of factors—but particularly an insufficient number of highly educated faculty members—colleges and universities cannot enroll nearly as many students as have shown interest in and applied to these programs. The supply shortfall is most extreme at the baccalaureate level, which is currently seeing the largest growth in demand. In this environment, many students have opted to enroll in overseas nursing education and training programs before returning to the United States to finish certification and licensing requirements.

International Degree Completion Programs

As one may readily suspect, the most significant barriers to international nursing programs are related to degree portability. Despite the powerful forces of globalization, the process of linking and integrating degree programs around the world has not been completed. Course and degree equivalency has not been established to the satisfaction of students or program administrators, and there remains a disturbing “lack of a comprehensive framework to address the diversity and unevenness in quality assurance processes.” It is never certain that one country’s accreditation and regulatory bodies will recognize foreign or international degrees. As a result, students are hesitant to spend time and money on a nursing program in a foreign country.

An emerging solution to this problem can be found in the interesting experiment taking place at the International University of Nursing (IUN), located on St. Kitts and Nevis, an island-nation in the West Indies. IUN, the brainchild of Robert Ross—the for-profit educational entrepreneur who founded the private Ross University in Dominica and later sold it to a private equity firm for $135 million—offers a three-year Bachelor’s of Science in Nursing and a one and one-half year associate degree program. Two hundred students are currently enrolled at IUN. The University gets around the need for a credentials evaluation through established agreements with US partner institutions. Students finish their degree programs at one of the established partner institutions and receive degrees from both the International University of Nursing and the partner institution. Because they graduate with a degree from an

accredited school of nursing in the United States, they are eligible to sit for the NCLEX-RN exam.\textsuperscript{179}

The IUN model—which essentially functions as a degree completion program—offers numerous advantages to students seeking an international education. Chief among them, though, is the ability to earn a degree from an accredited American institution while studying in another country, which obviates the need for bridging programs or other remedial work. Figure 8 graphically illustrates the differences between the IUN program and a traditional international nursing program.

\textbf{Figure 8: Traditional Program Models Compared to the IUN Model}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure8.png}
\end{figure}

Source: The American Nurses Association\textsuperscript{180}

\textsuperscript{179} The International University of Nursing (St. Kitts), http://www.iuon.org/index.php?option=com_content\&task=section\&id=7\&Itemid=84

\textsuperscript{180} See: http://nursingworld.org/MainMenuCategories/CertificationandAccreditation/AboutNursing.aspx
Degree completion partnerships like the ones established by IUN have the capacity to generate a great deal of money. Ross’ International University or Nursing charges more than $8,000 per semester, quadruple the cost of an LPN degree from a community college.\textsuperscript{181} Other institutions in the United States have already expressed interest in establishing nursing schools in the Caribbean.\textsuperscript{182} Other notable partnerships include those between the University of South Australia and KPJ International College of Nursing and Health Sciences (formerly Puteri Nursing College) in Malaysia, which provides students with the option to complete a Bachelor’s of Nursing, a Graduate Certificate in Nursing, or a Master’s of Nursing.\textsuperscript{183}

While business and technology courses of study remain the most popular academic “export” products, nursing and other programs in the health professions have seen a steady increase in demand. According to Michael Wilson of the La Trobe School of Nursing, Australian universities have been offering transnational nursing programs since the late 1980s.\textsuperscript{184} His unscientific polling of the Australian academic community revealed that there are some 20 transnational nursing programs in existence. Wilson identifies several reasons why individuals from other countries want to study nursing in Australia: improved language skills, status, jobs, facilities and resources, cultural differences, and possible migration to Australia.\textsuperscript{185}

One means of investigating potential partnerships with institutions in the United States would be to make contact with universities that have expressed interest in international nursing programs or that offer credit transfer arrangements. As examples, Georgetown University allows students to transfer some credits from Curtin University of Technology (Australia),\textsuperscript{186} Michigan State University offers a comparative nursing course in London,\textsuperscript{187} and the University of Virginia has dedicated nursing study abroad programs in Denmark, the University of Ballarat in Australia, and South Africa.\textsuperscript{188}

\textsuperscript{184} Wilson 2002
\textsuperscript{185} Ibid.
\textsuperscript{186} Georgetown University School of Nursing, “Study Abroad Opportunities,” http://studyabroad.msu.edu/programs/uknurse.html
\textsuperscript{187} Michigan State University, “Nursing in London,” http://studyabroad.msu.edu/programs/uknurse.html
\textsuperscript{188} The University of Virginia School of Nursing, “Study Abroad,” http://www.nursing.virginia.edu/Global/studyabroad/
Appendix 1: List of Colleges of Registered Psychiatric Nurses, Canada

College of Registered Psychiatric Nurses of Manitoba
1854 Portage Avenue
Winnipeg, Manitoba, R3J 0G9
Tel: (204) 888-4841
Fax: (204) 888-8638
E-mail: crpnm@crpnm.mb.ca
Website: www.crpnm.mb.ca

Registered Psychiatric Nurses Association of Saskatchewan
2055 Lorne Street
Regina, SK S4P2M4
Tel: (306)586-4617
Fax: (306) 586-6000
Web site: www.rpnas.com

Registered Psychiatric Nurses Association of Alberta
#201, 9711 - 45 Avenue
Edmonton, Alberta
T6E 5V8
Tel: (780) 434-7666
Toll Free: 1-877-234-7666
Fax: (780) 436-4165
Web site: www.rpnaa.ab.ca

The College of Registered Psychiatric Nurses of British Columbia
307-2502 St.Johns St.
Port Moody, B.C.
V3H 2B4
Tel: (604) 931-5200
Tool Free: 1-800-565-2505
Fax: (604) 931-5277
Web site: www.crpnbc.ca

189 Reproduced from the Canadian Nurses Association,
http://www.cna-aiic.ca/CNA/nursing/becoming/international/default_e.aspx
Appendix 2: US States that Require the AART Certification Exam

The AART certification exam is required for licensing in the following states:

Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Florida
Hawaii
Illinois
Indiana
Iowa
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Mississippi
Montana
Nebraska
New Jersey
New Mexico
New York
Ohio
Oregon
Pennsylvania
Rhode Island
South Carolina
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wyoming\textsuperscript{190}

\textsuperscript{190} The American Registry of Radiologic Technologists, “Licensing Versus Certification and Registration.”
Appendix 3: Provincial Nursing Regulatory Bodies in Canada

BRITISH COLUMBIA  
College of Registered Nurses of British Columbia  
2855 Arbutus Street  
Vancouver BC V6J 3Y8  
Tel: (604) 736-7331  
Fax: (604) 738-2272  
E-mail: info@crnbc.ca

ALBERTA  
College and Association of Registered Nurses of Alberta  
11620 - 168 Street  
Edmonton AB T5M 4A6  
Tel: (780) 451-0043  
Fax: (780) 452-3276  
E-mail: carna@nurses.ab.ca

SASKATCHEWAN  
Saskatchewan Registered Nurses' Association  
2066 Retallack Street  
Regina SK S4T 7X5  
Tel: 1-800-667-9945 / 306 359-4200  
Fax: 306 525-0849  
E-mail: info@srna.org

MANITOBA  
College of Registered Nurses of Manitoba  
890 Pembina Hwy  
Winnipeg MB R3M 2M8  
Tel: (204) 774-3477  
Fax: (204) 775-6052  
E-mail: info@crnm.mb.ca

ONTARIO  
College of Nurses of Ontario  
101 Davenport Road  
Toronto ON M5R 3P1  
Tel/Tél. : 1-800-387-5526 / 416 928-0900  
Fax/Télécopieur : 416 928-6507  
E-mail/Courriel : cno@cnomail.org

QUÉBEC  
Ordre des infirmières et infirmiers du Québec  
4200, boul. Dorchester Ouest  
Montréal QC H3Z 1V4  
Tel/Tél. : (514) 935-2501 / 1-800-363-6048  
Fax/Télécopieur : (514) 935-1799  
E-mail/Courriel : inf@oiiq.org

NEW BRUNSWICK  
Nurses Association of New Brunswick  
165 Regent Street  
Fredericton NB E3B 7B4  
Tel/Tél. : (506) 458-8731  
Fax/Télécopieur : (506) 459-2838  
E-mail/Courriel : nanb@nanb.nb.ca

NOVA SCOTIA  
College of Registered Nurses of Nova Scotia  
Suite 4005  
7071 Bayers Road  
Halifax NS B3J 2A8  
Tel: (902) 491-9744  
Fax: (902) 491-9510  
E-mail: info@crnns.ca

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191 Reproduced from the Canadian Nurses Association,  
http://www.cna-aiic.ca/CNA/nursing/regulation/regbodies/default_e.aspx
PRINCE EDWARD ISLAND
Association of Registered Nurses of Prince Edward Island
53 Grafton Street
Charlottetown PE C1A 1K8
Tel: (902) 368-3764
Fax: (902) 628-1430
E-mail: arnpei@pei.aibn.com

NEWFOUNDLAND AND LABRADOR
Association Of Registered Nurses Of Newfoundland And Labrador
55 Military Rd
St. John’s NL A1C 2C5
Tel: (709) 753-6040
Fax: (709) 753-4940
E-mail: info@arnnl.nf.ca

NORTHWEST TERRITORIES
Registered Nurses Association of the Northwest Territories and Nunavut
Box 2757
Yellowknife NT X1A 2R1
Tel: (867) 873-2745
Fax: (867) 873-2336
E-mail: nwtrna@theedge.ca

YUKON
Yukon Registered Nurses Association
204 - 4133 - 4th Avenue
Whitehorse YT Y1A 1H8
Tel: (867) 667-4062
Fax: (867) 668-5123
E-mail: yrna@yknet.ca
Appendix 4: Colleges of Midwifery in Canada

Alberta Midwifery Health Discipline Committee
c/o Workforce Planning Branch
Alberta Health and Wellness
22nd Floor - 10025 Jasper Avenue
Edmonton AB T5J 2N3
Tel: (780) 415-0492
Fax: (780) 422-2880
E-mail: deb.chesley@gov.ab.ca

College of Midwives of Manitoba
235-500 Portage Avenue
Winnipeg MB R3C 3X1
Tel: (204) 783-4520
Fax: (204) 779-1490
E-mail: admin@midwife.mb.ca

College of Midwives of British Columbia
BC Women's Hospital
Room F503, 4500 Oak Street
Vancouver BC V6H 3N1
Tel: (604) 875-3580
Fax: (604) 875-3581
E-mail: admin@cmbc.bc.ca

College of Midwives of Ontario
4th Floor, 2195 Yonge Street
Toronto ON M4S 2B2
Tel: (416) 327-0874
Fax: (416) 327-8219
E-mail: admin@cmo.on.ca
Note

This brief was written to fulfill the specific request of an individual member of The Hanover Research Council. As such, it may not satisfy the needs of all members. We encourage any and all members who have additional questions about this topic – or any other – to contact us.

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