

THE INTERNATIONALLY EDUCATED NURSES' (IENs') INTEGRATION EXPERIENCES  
DURING THE COVID-19 PANDEMIC IN ONTARIO

THE INTERNATIONALLY EDUCATED NURSES' INTEGRATION EXPERIENCES  
DURING THE COVID-19 PANDEMIC IN ONTARIO: A MULTI-METHOD STUDY

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A Thesis Submitted to the School of Graduate Studies in Partial Fulfilment of the  
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## **LAY ABSTRACT**

Internationally educated nurses face numerous challenges when transitioning into Canadian healthcare institutions. These challenges are attributed to numerous factors, including delays in recognition of their foreign education, difficulties in securing registration with nursing boards, and challenges in receiving employment offers that align with their areas of training. The experiences of internationally educated nurses are not well studied, particularly after changes to the licensing requirements in 2015 and during the pandemic. This study explored the experiences of internationally educated nurse and the impact of these experiences on their decisions to continue or leave the registration process.

## ABSTRACT

**Background.** Integrating internationally educated nurses (IENs) into Ontario's healthcare workforce is crucial for addressing nurse shortages, meeting high demands, and ensuring quality patient care. However, IENs encounter significant challenges in integrating into the Canadian healthcare system. Limited research exists on their experiences following the 2015 licensing requirement changes and during the pandemic. This study aimed to map IEN integration pathways in Canada, explore sociodemographic factors associated with success, and describe their integration experiences and support needs in Ontario.

**Methods.** A multi-method study explored IEN integration experiences in Ontario. This study contains three phases: a) scoping review, b) quantitative analysis of primary and secondary data, and c) qualitative description studies using semi-structured interviews with twelve IENs and six stakeholders. Data collection and analysis were guided by the Braun and Clarke framework, Transition Theory, and the Fourfold Model of Acculturation Theory.

**Results.** Collectively the findings from all phases intersected highlighting key points affecting IEN integration into the Canadian healthcare system. The scoping review of 27 studies revealed similarities between IEN integration pathways in Canada and Australia, with Australia being more successful. The key recommendation is to better align Canadian policies for improved integration. The quantitative analysis found that successful outcomes were associated with completing registration within the safe practice period and affiliation with an IEN initiative in Ontario. The qualitative analyses from IEN and stakeholder interviews identified interrelated themes. Three main themes from IENs: IEN experiences pre-registration, experiences post-registration, and support and call for improvements and stakeholder themes included insights on the IEN workforce and workplace integration pathways.

**Conclusion.** This thesis highlights the complex challenges IENs face when integrating into the Canadian healthcare system. Stakeholders valued IENs' expertise and demonstrated a commitment to improving the licensing processes to accelerate their integration. Findings from this study thesis emphasize the need for collaboration among stakeholders, including IENs, to overcome challenges of licensure and facilitate smoother integration processes for IENs.

**Keywords:** Experiences, healthcare workforce, internationally educated nurse, Ontario, qualitative description, stakeholder, workplace

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## **LIST OF ABBRIVIATIONS**

ANMAC	Australian Nursing & Midwifery Accreditation Council
BCCNM	British Columbia College of Nurses & Midwives
CASN	Canadian Association of Schools of Nursing
CELBAN	Canadian English Language Benchmark Assessment for Nurse
CELP	Canadian English Language Proficiency Index Program
CIHI	Canadian Institute for Health Information
CIHR	Canadian Institutes of Health Research
CNA	Canadian Nurses Association
CNO	College of Nurses of Ontario
CGFNS	Commission on Graduates of Foreign Nursing Schools®
CI	Confidence Interval
CCDA	Constant Comparative Data Analysis
CARE Centre for IENs	Creating Access to Regulated Employment Centre for Internationally Educated Nurses
ESDC	Employment and Social Development Canada
FMAT	Fourfold Model of Acculturation Theory
HiREB	Hamilton Integrated Research Ethics Board
IRCC	Immigration, Refugees and Citizenship Canada
ICU	Intensive Care Unit
ICNM	International Centre on Nurse Migration
IEHPs	Internationally Educated Healthcare Professionals
IEN	Internationally Educated Nurse

IENCAP	Internationally Educated Nurses Competency Assessment Program
IELTS	International English Language Testing System
LTC	Long-Term Care
MLTSD	Ministry of Labour, Training and Skills Development
MCAR	Missing Completely at Random
MAAP	Modernized Applicant Assessments Project
MICE	Multivariate Imputation by Chained Equations
NCLEX-RN®	National Council Licensure Examination for Registered Nurses
NCSBN	National Council of State Boards of Nursing
NNAS	National Nursing Assessment Service
NGN	Next Generation NCLEX Exam
NP	Nurse Practitioner
NGG	Nursing Graduate Guarantee
OSCE	Objective Structured Clinical Examination
OR	Odds Ratio
OFC	Office of the Fairness Commissioner
OBPAP	Ontario Bridging Participant Assistance Program
OECD	Organization for Economic Co-Operation and Development countries
PIE-IENs	Partners in Education and Integration of Internationally Educated Nurses
PR	Permanent Residency
PSW	Personal Support Worker
PASS	Pre-Arrival Supports and Services
PI	Principle Investigator

RN	Registered Nurse
RNAO	Registered Nurses Association of Ontario
RPN	Registered Practical Nurse
QD	Qualitative Description
SPEP	Supervised Practice Experience Partnership
STARS	Supports, Training, and Access to Regulated employment Services
TT	Transition Theory
UK	United Kingdom
US	United States of America
WENR	World Education News and Reviews
WES	World Education Services
WHO	World Health Organization



## **DECLARATION OF ACADEMIC ACHIEVEMENT**

This sandwich thesis consists of five manuscripts (chapters 2-6) that have been prepared for publication, and submitted, or published in peer-reviewed journals. The student (Nasrin Alostaz) is the first author of all five manuscripts and is responsible for developing the research questions, research design, data collection, data analysis, interpretation of the findings, and writing of the manuscripts and this dissertation. Co-authors of the manuscripts include my supervisor, Dr. Olive Wahoush, and my thesis committee members, Drs. Margaret Walton-Roberts, Ruth Chen, and Maria Pratt, who provided invaluable feedback on the entire research process as well as contributed to revisions in the manuscripts they co-authored. During quantitative data management and analysis, I acknowledge the contribution of a non-committee member co-author Jiaji (Benjamin) Mo. The dissertation and its resulting publications represent the collaborative efforts of the thesis committee and all members have given their final approval.

## **CHAPTER ONE**

### **Introduction**

Canada, like many industrialized countries, is expected to face healthcare workforce shortages in the coming years. By the year 2030, it is estimated there will be a global shortage of about 15 million healthcare workers (Liu et al., 2017). A significant portion of this shortage is proposed to be in the nursing sector (Ma et al., 2020). Nurse shortages are attributed to factors such as human resource shortage and increased demand. Internationally educated nurses (IENs) are a potential solution to this labour issue. However, recent reports indicate that the employment percentage of IENs in Canada is lower compared to other countries within the Organization for Economic Co-operation and Development (OECD) (Trines, 2018). Consequently, Canada will compete with other countries for immigrants with professional qualifications and experiences, particularly in healthcare.

IENs face numerous challenges, including prolonged registration processes within nursing regulatory bodies (Altorjai & Batalova, 2017). Additionally, they encounter difficulties transitioning to professional practice within Canadian healthcare facilities despite the presence of IEN preparation and integration programs nationally. The prediction of nursing workforce shortages, which became particularly acute during the COVID-19 pandemic (Government of Canada, 2020; International Center on Nurse Migration [ICNM], 2020) and is anticipated to continue, highlights the importance of maximizing the brain gain of IENs (Blythe et al., 2009; Canadian Institute for Health Information [CIHI], 2021a).

This study explored and described IEN experiences during their credential assessment, registration with regulatory nursing bodies, transition to clinical practice, and integration into the workplace as registered nurses (RNs) and/or registered practical nurses (RPNs) within Canadian

healthcare institutions. The study also explored the stakeholder perspectives on IEN integration pathways into the workforce and workplace in Ontario.

## **Background**

This thesis will focus on addressing gaps regarding IEN integration experiences after changes in licensing requirements in 2015 and during the COVID-19 pandemic in Ontario. The following section will offer an overview of the current issue and highlight IEN integration pathways in Canada.

### **Nursing Shortage**

Canada, like many developed countries, faces a significant healthcare workforce shortage in the coming years (Government of Canada, 2022). Nursing shortages are due to several factors, including the limited inflow of nursing graduates, an aging nursing workforce, and many RNs not working in healthcare professions (Calenda et al., 2019; ICNM, 2020; Salsberg, 2018). Reports show a 2.7% decrease in the number of new graduate nurses in 2022 (12,439) compared to 2021 (12,837), with only a 1% increase in nursing program enrollments from 2020 to 2022 (Canadian Association of Schools of Nursing [CASN], 2023).

The ICNM (2020) reported that one in six nurses is 55 or older globally and urged developed countries to educate, train, and employ over 4 million new nurses to replace those retiring in the next ten years. In Canada, the number of RNs eligible to work increased by approximately 1.3% in 2020; however, the number of RNs working in the healthcare sector decreased by 1.5% from 2018-2019 (CIHI, 2021a), when the Canadian population increased by 1.4%. The healthcare system increased the number of RPNs by 87% (CIHI, 2021a), but their limited scope of practice, coupled with more RNs retiring than joining the workforce,

exacerbates the challenge of meeting the growing healthcare demands of Canada's aging population requiring complex care (Almost, 2021).

The increasing number of RNs becoming Nurse Practitioners (NPs) has also contributed to nursing workforce shortages (Salsberg, 2018). In Canada, NPs experienced the largest growth rate among the regulated nursing professions, increasing by 10.7% compared to 2.5% for RNs from 2021 to 2022 (CIHI 2022a; b). A significant change in the entry-to-practice requirements introduced in 2015, with the National Council of State Boards of Nursing (NCSBN) becoming the provider of the licensure examination in Canada, increased the potential mobility for graduating nurses who completed the NCSBN examination, likely further reducing the pool of RNs in Canada (Freeman et al., 2015).

### **Impact of COVID-19 Pandemic**

Acute healthcare settings are becoming highly specialized, and nursing practice is increasing in complexity (Calenda et al., 2019; Walton-Roberts, 2023), particularly with the changing demographics of the Canadian population (Almost, 2021) and the COVID-19 pandemic (CIHI, 2021b; 2022a; Cornelissen, 2021; Government of Canada, 2020). Hospital admissions due to COVID-19 complications and the high number of cases among healthcare providers have increased demands on healthcare services, highlighting the need for RNs in many healthcare settings (CIHI, 2021c; ICNM, 2020). The heightened burnout rates and impact on nurses' mental health caused by the pandemic led many to consider working fewer hours, leaving their workplace, or leaving the profession altogether, also discouraging nursing students from completing their programs (Boamah et al., 2023; Buchan et al., 2022).

## **Internationally Educated Nurses**

Internationally educated nurses (IENs) are a potential resource to address the nursing shortage and assist beyond the pandemic. The NCSBN defines IENs as nurses who completed a nursing education program outside the country of employment (NCSBN, 2016). Globally, IENs are one of the most frequent groups to immigrate (Ma et al., 2020; Trines, 2018). In 2022, IENs made up 12 % of new RNs across Canada (CIHI, 2022b), the highest percentage in Ontario at 22% followed by Nova Scotia at 19%.

One-third of the total internationally educated healthcare professionals (IEHPs) living in Canada in 2021 were IENs (Frank et al., 2023). This report suggests that 42% of IENs were employed in healthcare professions, while many others are underemployed or never utilized. In 2020, Statistics Canada reported that 70% of nursing aides and patient services associates were immigrants, with 45% of most recent immigrants in these occupations holding at least a bachelor's degree, 69% of which were in nursing (Turcotte & Savage, 2020). The report also noted that these underemployed immigrants are primarily located in Toronto, Vancouver, and Calgary.

## **Trends of IEN Employment in OECD Countries**

Scheffler and Arnold (2019) predict that the nursing workforce shortage among OECD countries, including Canada, the United Kingdom (UK), and Australia, will be about 2.5 million RNs by 2030. In 2018, the World Education News and Reviews (WENR) reported on labour immigration trends in nursing, showing the employment percentage of IENs in some OECD countries (Trines, 2018). In 2016, IEN employment was higher in some OECD countries compared to the United States [US] (15%) and Canada (7.7%). For instance, 23.3% of RN jobs in Australia were held by IENs, compared to 26.7% in New Zealand (Trines, 2018). Evidence

suggests that migration trends of IENs to Australia have increased, with IENs forming 29% of the Australian nursing workforce (Chun Tie et al., 2019). This evidence suggests that Canada is competing for IENs and missing opportunities to address shortages to increase the proportion of IENs in the RN workforce.

### **Credentialing Process for IENs in Ontario**

Internationally educated nurses must obtain a license to practice nursing in Canada, which requires them to undergo a process of foreign credentials assessment (NCSBN, 2018). This process validates IEN credentials and evaluates their professional competencies and the comparability of their educational programs to those of their Canadian counterparts.

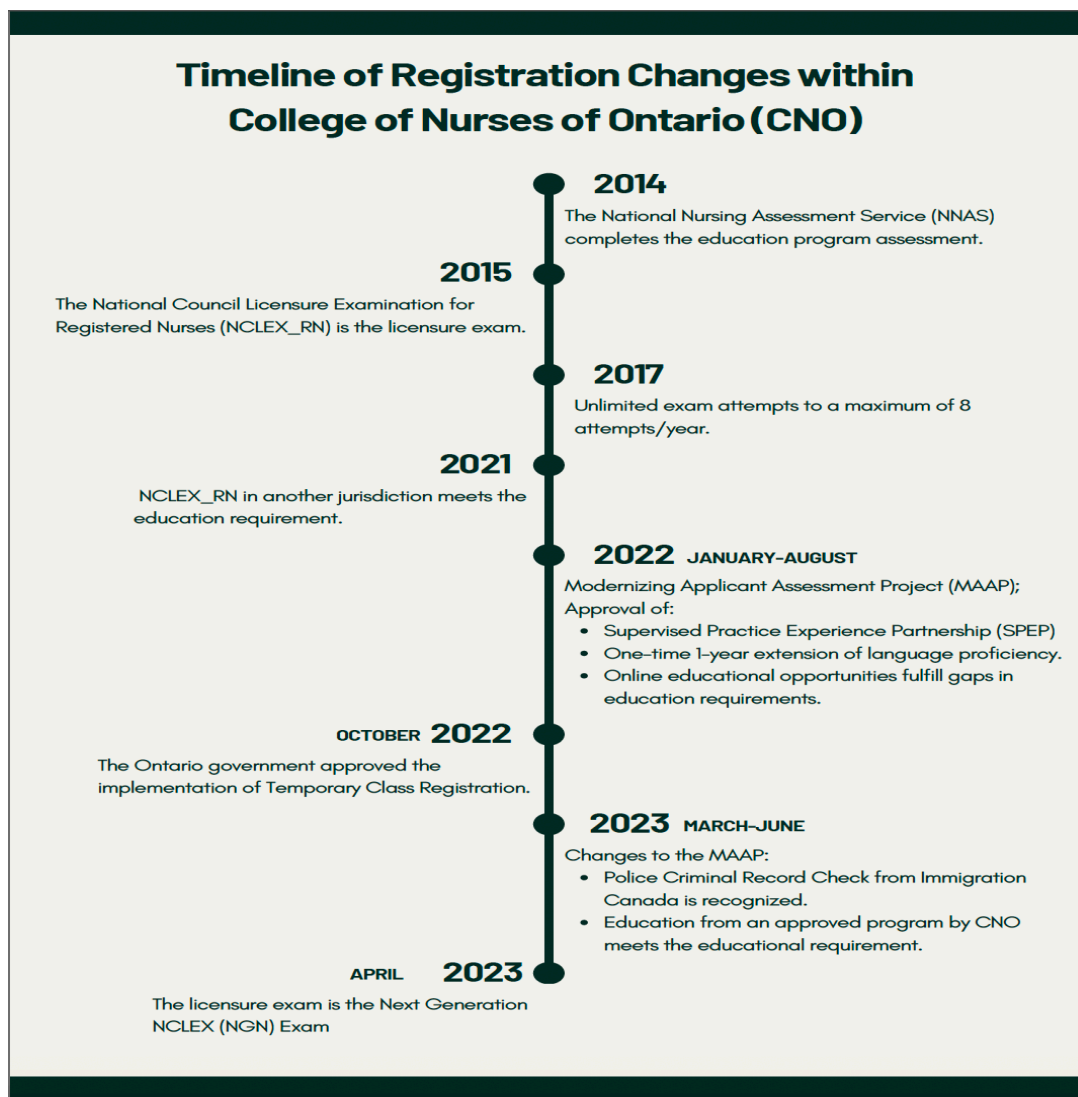
These assessments help ensure that IENs meet entry-to-practice requirements such as those required by the College of Nurses of Ontario (CNO). Requirements include approval of their nursing education program, English language proficiency, and recency of nursing practice, all of which must be achieved within three years before the completion of the registration application process (CNO, 2023a). If the process takes longer than three years, the application may lapse. Appendix A and B map the registration pathways and cost for IENs compared with Canadian graduated nurses in Ontario.

Since August 2014, the National Nursing Assessment Service [NNAS] (CNO, 2017) has completed the credentialing assessment process, which may take 2-3 years to complete. Once the assessment is completed, IENs are required to register with the CNO. They must then complete further requirements for registration, including passing the Next Generation NCLEX exam [NGN] (CNO, 2023b). Internationally educated nurses must pass the licensure exam to complete the registration process successfully.

The successful completion of the exam serves as evidence that IENs meet the required entry-level nursing education in Ontario (CNO, 2023c). Internationally educated nurses must also provide proof of English language proficiency within the two years before registration (CNO, 2023d). Figure 1 summarizes the timeline of registration changes within the CNO since 2014. Appendix C summarizes changes in the Modernized Applicant Assessments Project (CNO, 2023e)

Figure 1

*Regulatory changes within CNO from August 2014 to June 2023*



## **Barriers to IEN Integration**

Internationally educated nurses encounter various barriers throughout their integration, from credentialing and recognition to adapting to the Canadian nursing workplace. Obtaining a nursing license and integrating IENs into the workplace in Canada can be lengthy, expensive, and time-consuming, posing significant challenges for IENs (Altorjai & Batalova, 2017; Cornelissen, 2021; Ghazal et al., 2020).

**Barriers to Workforce Integration.** Internationally educated nurses often face obstacles such as difficulties in proving their nursing education credentials, incompatible nursing education (Cornelissen, 2021), challenges in navigating the Canadian regulatory system (Blythe et al., 2009), and insufficient English language proficiency (Blythe et al., 2009; Walani et al., 2015). Failure to pass the licensure examination for RNs (Belita & Ford, 2021; Blythe et al., 2009) further complicates their integration. These barriers can result in IENs working in non-healthcare professions or being underemployed in long-term-care settings as nursing aides (Turcotte & Savage, 2020). Over a decade ago, policymakers expressed concerns about the underutilization and downward occupational mobility of IENs, highlighting poor integration into the Canadian workforce (Bourgeault et al., 2011). The inability to obtain licensure, registration, and employment negatively impacts the health and well-being of IENs and their families and represents an economic and human capital loss for Canada (Kwansah et al., 2015).

**Barriers to Workplace Integration.** After completing the licensing process, IENs still face significant challenges in workplace integration. Differences in workplace culture, such as organizational structure, can hinder their adjustment (Ho, 2015; Lum et al., 2016). Language proficiency remains a primary barrier, as the approved English tests by the CNO do not assess



sociocultural components or the ability to communicate effectively and therapeutically within the workplace (Blythe et al., 2009; Neiterman & Bourgeault, 2013).

Differences in the scope of nursing practice, levels of autonomy (Covell et al., 2015; Moyce et al., 2016; Neiterman & Bourgeault, 2013; Walani, 2015), and underutilization of skills (Moyce et al., 2016; Walani, 2015) also impede workplace integration. Furthermore, IENs often report feeling stigmatized due to their foreign education and professional training. They may feel constantly required to prove their abilities and experience ongoing scrutiny and bullying from patients and colleagues (Iheduru-Anderson & Wahi, 2018). This lack of integration may prompt some IENs to seek secondary migration to other countries, such as the US, as Canada is a notable source country for nurse migration to the US (OECD, 2019; Trines, 2018).

In summary, over the past 15 years, studies have highlighted the significant impact of nurse shortages on patient safety and quality of care. Studies recommended increasing the inflow of nurses to address the growing demands on the healthcare system. Integrating IENs into the workforce can alleviate the human resource challenge and optimize patient outcomes. However, the literature indicates that IENs encounter multiple challenges when integrating into the new healthcare system.

### **Problem Statement**

Canada is less successful in integrating IENs into the nursing workforce than other OECD countries and is competing with other countries for talented professionals to address workforce shortages. Challenges during the registration process may limit the ability of IENs to become licensed to practice in Canada, lead to underutilization or unemployment, and limit the potential success of IEN programs to meet nursing shortages. The pandemic highlighted the critical importance of human health resources, particularly nurses, in all sectors of the healthcare

system. It is essential to explore IEN experiences of their licensing and integration into the Canadian nursing workforce to inform recommendations that will improve success in IEN integration. This is important for quality health services and to sustain and improve patient outcomes. Information from this study will inform credential and integration practices and may support IENs seeking to become registered in Canada. In brief, findings from this study will inform policy and programming initiatives that support IENs through integration processes.

Therefore, the main objectives of this study are to: a) describe IEN experiences during credentialing and employment processes since changes in licensing requirements in 2015 in Canada and compare these processes with Australian processes; b) explore IEN sociodemographic characteristics impacting their successful workforce and workplace integration and develop recommendations for future licensing processes beyond the pandemic; c) explore IEN experiences during the workforce and workplace integration since the change in licensing requirements in 2015; and d) describe stakeholder perspectives on IEN integration pathways and develop improvement strategies for future licensing and employment.

## **Theoretical Framework**

### **The Transition Theory**

Transition Theory (TT) was initially developed by Meleis (1975) and refined multiple times, with the 2000 version (Appendix D) employed for this study (Meleis et al., 2000). Meleis proposed that transition is a central concept in the nursing discipline (Meleis, 2010). The theoretical framework explains and predicts transition processes and experiences due to changes in health, relationships, and environments, providing direction for nursing therapeutics (Im, 2018).

The framework consists of five major concepts: types and patterns of transitions; properties of transition experiences; patterns of response/ process and outcome indicators; transition conditions (facilitators and inhibitors); and nursing therapeutics (Meleis et al., 2000; Schumacher & Meleis, 1994). Four types of transitions were identified (Im, 2018; Meleis et al., 2000), including health and illness transitions (Meleis & Trangenstein, 1994); situational transitions; developmental transitions; and organizational transitions which refer to changes in environmental conditions affecting the lives of individuals (Schumacher & Meleis, 1994).

Meleis et al. (2000) described the patterns of transition as multiple and complex, explaining that people can experience simultaneous or sequential multiple transitions with some degree of overlap. Due to the complexity and multiplicity of the transition, Meleis and colleagues recommend considering the extent of this overlap and the relationship between the different events affecting the individual transitions. Despite its diversity, transitions share universal properties due to commonalities across all transitions. These properties are interrelated in a complex process and include awareness, engagement, change and difference, time span, and critical points and events.

According to Meleis (1975), the goal of a healthy transition is mastering behaviour and cues associated with the new roles, resulting in a non-problematic process. Unhealthy transitions can cause potential damage, delay coping mechanisms, and lead to role insufficiency. Role insufficiency was defined as “The difficulty in the cognizance and /or performance of a role... as perceived by the self or others” (Meleis, 1975, p. 266). Process indicators of a healthy transition include developing confidence and coping, feeling connected, situated, and interacting (Meleis et al., 2000). On the other hand, outcome indicators for the completion of healthy transitions can be

determined by the extent to which individuals demonstrate mastery of skills and behaviours required to manage their new environment and establish their identity (Meleis et al., 2000).

Transition conditions are the circumstances impacting the individual's response patterns and progress throughout their transition, either hindering or enhancing a healthy transition (Schumacher & Meleis, 1994). These conditions include personal (e.g., socioeconomic status, cultural beliefs, prior knowledge), community (e.g., available community resources), and societal (e.g., immigrant marginalization and stigma) conditions (Meleis et al., 2000). Finally, the conceptual framework Schumacher and Meleis (1994) described identifies three nursing therapeutics: assessment of readiness, preparation for the transition, and role supplementation. The TT framework guided the design and methods of this study, specifically informing data collection and analysis.

## **Research Methodology**

Qualitative description is a qualitative research methodology grounded in the constructivist, or naturalistic, approach to inquiry (Bradshaw et al., 2017; Colorafi & Evans, 2016; Sandelowski, 2000). This approach focuses on the who, what, and where of experiences, motives, and behaviours (Sandelowski, 2000). Qualitative description seeks to conduct an inquiry in the social context and natural settings where phenomena occur without previous selection or manipulation of study variables (Bradshaw et al., 2017; Guba & Lincoln, 1982; Sandelowski, 2000). The constructivist approach claims that people construct their understanding, learning, and knowledge through experiencing phenomena and reflecting on these experiences (Kivunja & Kuyini, 2017). Researchers aim to understand the meanings of lived experiences from the participant's perspectives, reconstructed through interactions between researchers and participants (Bradshaw et al., 2017; Ponterotto, 2005; Weaver & Olson, 2006).

The constructivist approach supports a subjectivist epistemology accepting that multiple subjective realities exist (Guba & Lincoln, 1994; Kivunja & Kuyini, 2017; Levers, 2013). The approach seeks to understand the complexities of human interpretations of experiences through social interactions (Guba & Lincoln, 1994; Ponterotto, 2005; Thorne, 2016; Weaver & Olson, 2006; Winit-Watjana, 2016), influenced by social and cultural environment, leading to shared constructions that are socially and culturally contextualized (Guba & Lincoln, 1989). These constructed realities are ever-changing and shaped by the people who create them (Guba & Lincoln, 1994).

### **The Researcher-Participant Role in QD Studies**

The QD approach allows researchers and participants to connect in a dynamic interactive process, sharing rich data and co-constructing knowledge (Guba & Lincoln, 1994; Ponterotto, 2005). As participant-observer, researchers immerse themselves in participants' cultural contexts (Lincoln & Guba, 1985; Ponterotto, 2005), facilitating social constructions and expressions of lived experiences through intersubjective relationships (Guba & Lincoln, 1994; Ponterotto, 2005). This interactive relationship enables in-depth exploration and understanding of varied social constructions (Guba & Lincoln, 1994; Ponterotto, 2005). The researcher cognitively processes collected data through interactions with the participants in their natural environment (Guba & Lincoln, 1994; Kivunja & Kuyini, 2017; Weaver & Olson, 2006), socially constructing knowledge based on real-life situations within the natural setting (Punch, 2005). Research findings are created through the construction of both the researcher and participants, wherein facts are created by human consciousness (Howell, 2013).

To summarize, QD methodology follows the philosophical underpinnings of naturalistic/constructivist inquiry, suggesting that people interpret social experiences

subjectively, with these experiences varying depending on individual contexts. The naturalistic philosophy accepts multiple and different realities, seeking to understand human interpretations from their perspectives through social interactions. Qualitative description is the most appropriate method for inquiries seeking to answer the who, what, and why of phenomena.

### **Researcher Reflective Statement**

The constructivist inquiry is influenced by values that are embedded within the social contexts of the research in that it is ingrained in the value systems that include those of the researcher, the researched, the social context, and the selected paradigm and methods for the study (Guba & Lincoln, 1982). Therefore, the researcher's values, beliefs, and lived experiences within the scientific inquiry should be thoughtfully considered (Ponterotto, 2005). The QD researcher contributes to the inquiry process; it is not possible to separate the researcher's preconceived values and experiences from the inquiry process, nor can they be ignored or eliminated (Bradshaw et al., 2017).

The researcher should acknowledge that the constructed perceptions of the IENs might be conflicting not only among them but also might be different from those held by the researcher. Researchers should be aware of their personal assumptions, background, cultural and historical experiences, and preconceived values and beliefs by engaging in reflexivity to overcome the analytical challenges of the researcher's preconceptions and values (Bradshaw et al., 2017; Colorafi & Evans, 2016; Ponterotto, 2005; Thorne, 2016). Reflexivity is the process in which researchers explicitly engage in a conscious self-awareness wherein a continuous evaluation and exploration of one's subjective and intersubjective responses is required (Finlay, 2002).

Explicitly positioning oneself allows the researcher to prioritize describing the collected data comprehensively and providing a straightforward summary of IEN experiences as they

construct these experiences in their context (Grant & Giddings, 2002). Journaling and field notes help the researcher contextualize the analysis process (Nkulu Kalengayi et al., 2012). Both the researcher and the generated findings concurrently and mutually impact each other; the researcher is influenced by the data when they construct findings from the collected data, and this process is entirely influenced by the "societal structure" (Levers, 2013, p. 5).

### ***Researcher Reflection***

The primary researcher is an internationally educated nurse and a professional skilled worker immigrant who uses critical reflexivity to minimize the risk of bias from previous personal experiences influencing or introducing bias during the data analysis process (Schluter et al., 2008). To avoid making assumptions about data and ensure the transcription's accuracy, I read the transcripts first, checking them against the digital recording of the entire interview (MacLean et al., 2004). Furthermore, my supervisor and I independently reviewed and analyzed the first two transcripts and compared our initial coding; this activity helped develop the initial coding structure. The researcher coded the remaining transcripts and checked by my supervisor for accuracy and clarity. I discussed emerging codes and themes with the thesis committee members and received feedback, which helped minimize the risk of the researcher's bias.

### **Ethical Considerations**

This study received ethical approval from HiREB # 14965, guided by the Tri-Council Policy Statement (Tri-Council, 2022).

### **Protecting Confidentiality**

Confidentiality was discussed with participants before the data collection to build trust and obtain informed consent. Identifiers were replaced with pseudonyms to promote anonymity (Saunders et al., 2015). Some IENs from visible minority groups were referred to their country of

education and origin using the World Health Organization classifications (WHO, 2021).

Participants were informed about data storage, sharing, analysis, and dissemination. Audio records were saved in a password-protected file and sent via encrypted email to the transcriptionist (Tri-Council, 2022). Only one audio record from an IEN was completed by the researcher, and transcription and recording were saved on One Drive. Transcribed records were anonymized and stored in password-protected files.

A confidentiality agreement was signed between the researcher and the transcriptionist, and HiREB approval was obtained. Eligible participants received written information about the study via email, and their questions were answered to obtain informed consent. Participants agreed to one-on-one interviews, audio recordings, and member-checking. They were assured of voluntary participation and the right to withdraw without any penalties.

### **Data Management**

Confidential information was coded to ensure anonymity. Recorded interviews were transcribed verbatim and stored in password-protected files. Transcripts, demographic questionnaires, and e-signed consents were saved on MacDrive at McMaster University. All data were used only for this study and will be destroyed following McMaster University guidelines. Electronic copies will be retained for five years post-research. Audio records will be destroyed after the data analysis and data generation process. Some IENs became emotionally distressed during the interview, with changes in voice tone, anger, and crying. They were offered breaks, and interviews were stopped and recommenced as they requested.

### **Compensation**

Interviews were completed virtually at convenient times for participants. Each IEN received a thank-you gift card for their participation.



## **Summary of Thesis Chapters**

This sandwich thesis consists of five manuscripts published in or submitted to peer-reviewed journals: three were published (chapters 2, 3, and 5) and two are under revision (chapters 4 and 6).

### **Chapter 2—Integration Trends of Internationally Educated Nurses in Canada and Australia: A Scoping Review**

Published in the *International Health Trends and Perspectives* journal, this chapter is a scoping review synthesizing existing literature on the integration trends of IENs in Canada compared to Australia. Findings highlighted the difficulties IENs encounter in both countries, with better integration of IENs in Australia due to stakeholder collaboration. The review recommends that Canadian ministries collaborate to align their policies for improved IEN integration.

### **Chapter 3— Sociodemographic Characteristics of Internationally Educated Nurses Associated with Successful Outcomes in Canada: Quantitative Analysis**

Submitted to the *Journal of Advanced Nursing* (in press), this chapter involves a cross-sectional and secondary quantitative data analysis, describing the sociodemographic characteristics of IENs (n = 259) since the change in the licensing exam in 2015. It investigates the impact of these characteristics on successful IEN integration into Canada's nursing workforce, revealing an association with enrolment in IEN initiatives and the current nursing practice.

### **Chapter 4— The Internationally Educated Nurses' (IENs') Workforce and Workplace Integration Experiences During the COVID-19 Pandemic in Ontario: A Qualitative Descriptive Study**

Submitted to the *International Health Trends and Perspectives* journal, this chapter is a qualitative descriptive study that examines the integration experiences of twelve IENs in Ontario's healthcare system. Thematic analysis identified three main themes: internationally educated nurse experiences pre-migration, experiences post-migration, and support and call for improvements. These themes highlight the multifaceted challenges faced by IENs and emphasize the need for comprehensive collaborative support to facilitate their integration.

### **Chapter 5— Internationally Educated Nurses' Workplace Acculturation and Strategies for Integration: Application of the Fourfold Model of Acculturation Theory (FMAT)**

Published in the *International Health Trends and Perspectives* journal, this chapter explores IEN acculturation processes utilizing the Fourfold Model of Acculturation Theory to develop effective integration strategies. This chapter reports that poor IEN acculturation leads to physical and mental health issues. The paper highlights that IENs who embrace their native and dominant cultures are better integrated into the workplace environment. It summarizes strategies to foster pluralistic workplace cultures.

### **Chapter 6— Stakeholders Perspectives on Internationally Educated Nurses' (IENs') Workforce and Workplace Integration Pathways in Ontario: A Qualitative Descriptive Study**

Submitted to the *International Health Trends and Perspectives* journal, this chapter is a qualitative descriptive study, describing the perspectives of stakeholders about IEN integration processes and the ongoing improvements. Overall, stakeholders value IEN contributions and are committed to improving strategies that accelerate IEN integration into the Canadian health system.

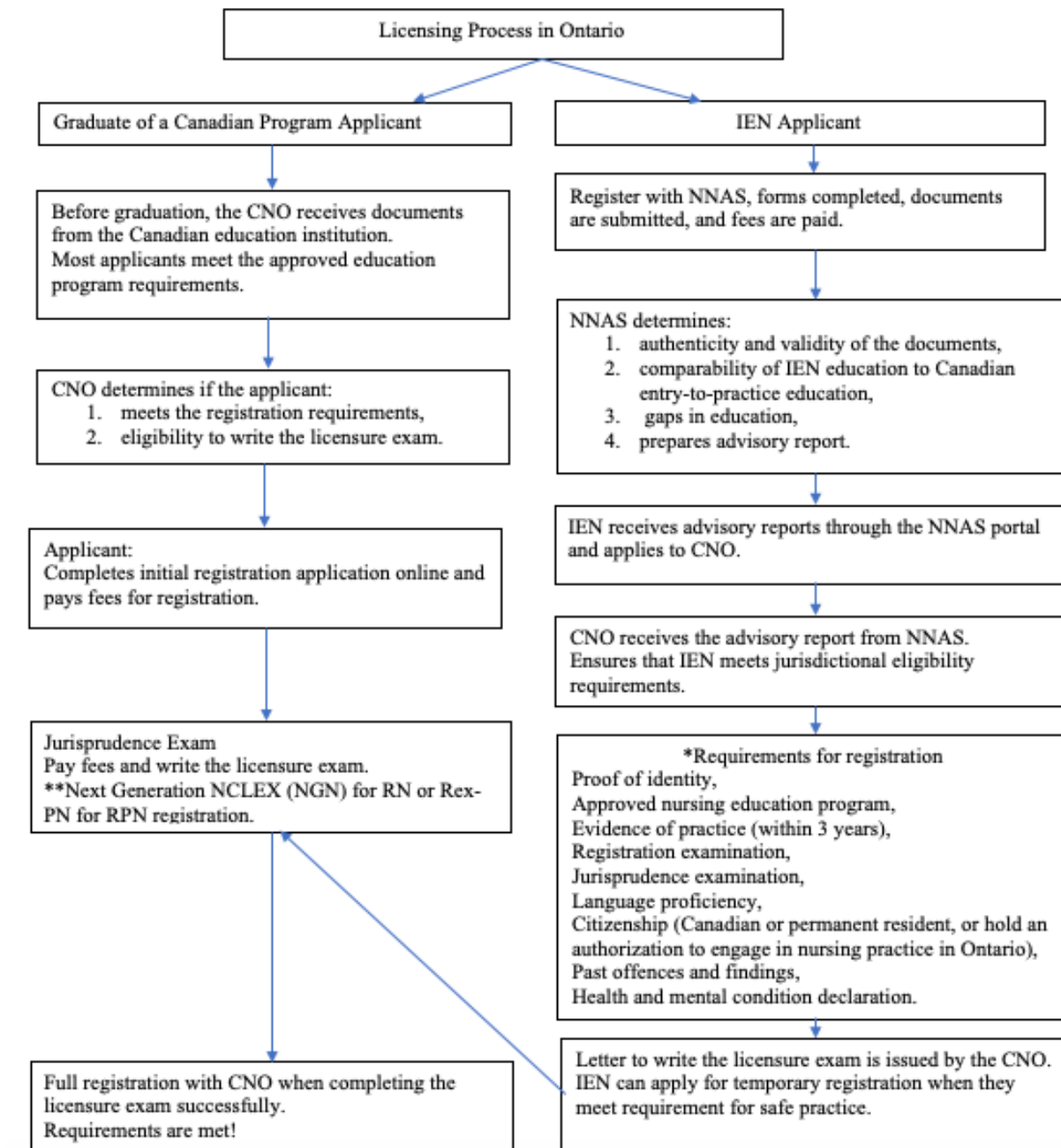
### **Chapter 7— Implications and Conclusion**

This chapter is a concluding chapter discussing the implications of the thesis findings on policy, practice, and research. It outlines knowledge mobilization strategies and the strengths and limitations of the studies incorporated in this thesis.

All manuscripts (Chapters 2—6) are co-authored with the student (NA), as a first author. The first author contributed to the conception and design of the primary study; data collection (quantitative and qualitative description) and analysis (qualitative description); and writing of each manuscript. Data analysis and interpretation of the quantitative study were completed by the first author and co-author Jiajie (Benjamin) Mo. Co-authors contributed to the depth and exploration of the concepts and revisions and approved the final published and non-published material.

## Appendix A: Licensing Process in Ontario

Source: <https://www.cno.org/en/become-a-nurse/>



\*Refer to Modernized Applicant Assessment Project for updates on requirements

\*\*NGN since April 2023 and Rex-PN since April 2022

## Appendix B: Cost of Registration in the General Class RN/RPN in Ontario

Cost\* of RN/RPN General Class\*\* Applications

	Graduate of			
	Canadian Program		Outside Canada (IENs)	
	RN	RPN	RN	RPN
NNAS Main Application Order <sup>1</sup>	Not Applicable		\$880.95	
Document translation by NNAS			\$115.26/page	
Appeal submitted to NNAS			\$623.80 <sup>2</sup>	
Additional evaluation <sup>3</sup>			\$339	
Additional evaluations <sup>4</sup>			\$751	None
Initial application	\$452			
Registration exam <sup>5</sup>	406.80	395.50	406.80	395.5
Jurisprudence exam	\$45.20			
Initial registration & membership	\$455.39			
Annual membership fees	\$382.20			

\* All fees are in Canadian dollars (range of total costs around \$2,240–\$4,000)

\*\* General class is the most common registration class for nurses in Ontario.

<sup>1</sup> Non-refundable, the order expires in 12 months, then a full payment is required to reorder the application.

<sup>2</sup> Refundable if the appeal is successful.

<sup>3</sup> When competency gaps are identified, and further evaluation is requested.

<sup>4</sup> Optional, alternatives to completing the Touchstone Institute evaluation.

<sup>5</sup> NCLEX-RN exam: additional taxes are added to the fees by Pearson VUE as of 2021.

**Sources:** College of Nurses of Ontario. (2024). *Application & Membership Fees*. [Online].

<https://www.cno.org/en/become-a-nurse/application-membership-fees/>

National Nursing Assessment Service [NNAS]. (2024). *Application & other fees*. [Online].

<https://www.nnas.ca/application-fees/>

## Appendix C: Modernized Applicant Assessments Project Changes Timeline

Requirement	Date	Changes
Language proficiency	March 7, 2022	<p>Approval of different options to meet the language proficiency requirement.</p> <ol style="list-style-type: none"> <li>1. Practice experience in a healthcare or health-related setting wherein English is a primary language in or outside Canada, or completing a Supervised Practice Experience Partnership (SPEP) during the past 2 years;</li> <li>2. Nursing education; completing entry level nursing program in any jurisdiction in English within the past 2 years;</li> <li>3. Registration as a practicing nurse that is previously or currently held with CNO or in another Canadian jurisdiction; or</li> <li>4. Successful completion of a CNO approved language proficiency test e.g., Canadian English Language Benchmark Assessment for Nurses (CELBAN).</li> </ol> <p>Extension of language proficiency if language proficiency expires before securing registration, one time, one-year extension.</p>
Nursing education	August 15, 2022	CNO, in collaboration with Ontario schools and colleges, to offer nursing education programs and courses improving access to appropriate educational opportunities and fulfil gaps in IEN educational requirements. CNO approved some online education programs to meet entry-level competencies.
	June 13, 2023	Applicants will meet the education requirement if they complete relevant nursing education recognized or approved in any jurisdiction. Applicants also will be required to complete a course to support their successful integration into Ontario's healthcare system.
Evidence of practice	January 29, 2022	SPEP to facilitate ways that eligible IENs can meet evidence to practice requirements, offer IENs the opportunity to apply the CNO practice standards and/or satisfy language proficiency. A minimum of 140 hours of clinical practice are required to be successful in this partnership.
Police criminal record check	March 9, 2023	Recognizing the police criminal record check provided to Immigration Canada if they have remained in Canada since their immigration status was granted to reduce duplication.

## Appendix D: The Theoretical Framework

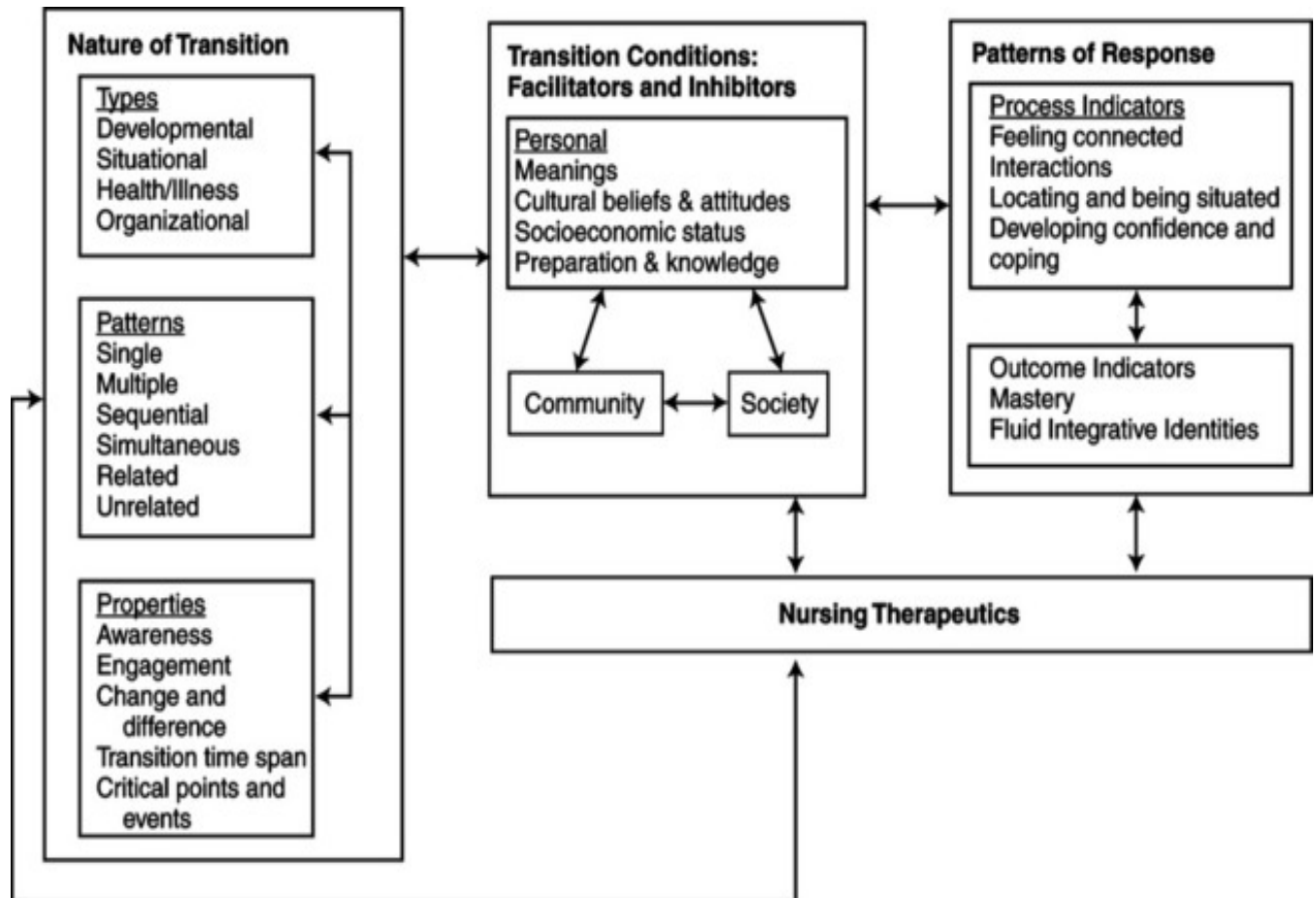


Figure1: Meleis et al. (2000) Transition Theory Framework

Meleis, A. I., Sawyer, L. M., Im, E. O., Messias, D.K. H., & Schumacher, K. (2000). Experiencing transitions: An emerging middle range theory. *Advances in Nursing Science*, 23(1), 12–28.

## CHAPTER TWO

**TITLE: Integration Trends of Internationally Educated Nurses in Canada and Australia: A Scoping Review.**

AUTHORS: Alostaz, N., Walton-Roberts, M., Chen, R., Pratt, M., & Wahoush, O.

JOURNAL: International Health Trends and Perspectives

CITATION: Alostaz, N., Walton-Roberts, M., Chen, R., Pratt, M., & Wahoush, O. (2024a).

Integration trends of internationally educated nurses in Canada and Australia: A scoping review. *International Health Trends and Perspectives*, 4(1), 88–113.

<https://doi.org/10.32920/ihtp.v4i1.1958>

NOTE: This is the final draft submitted to a peer-reviewed journal but is not the final version published by the International Health Trends and Perspectives journal.



## Abstract

**Background:** Canada is less successful in integrating internationally educated nurses (IENs) into the nursing workforce than other developed countries like Australia. Challenges during the registration process to achieve licensure to practice as a registered nurse (RN) may limit the potential success of internationally educated nurse programs to meet the nursing workforce shortage. International educated nurses' experiences during integration processes may differ since the change in the Canadian licensing examination in 2015.

**Objective & Design:** This scoping review compares the integration trends of internationally educated nurses in Canada with those in Australia, highlighting similarities and differences in approaches to integration between the two countries while exploring strategies to improve integration of IENs in Canada.

**Data Sources & Methods:** Nine online databases were searched for English-language studies on the integration pathways of IENs in Canada or Australia. The selected studies were published from January 2015 to June 2022. Two independent reviewers screened the data against inclusion criteria, extracting the author(s) name, year, aim and methodology, sample, data collection, and findings related to IEN integration pathways.

**Results:** 27 publications included in the review were completed in Canada (62.96%, n=17) and Australia (37%, n=10). The reviewed publications reported on internationally educated nurse integration in the workforce (18.5%, n=5) and workplace (66.7%, n=18), and four studies (14.8%) examined both workforce and workplace integration. This review highlighted the difficulties IENs encounter during their integration in Canada and Australia. However, collaboration among stakeholders in Australia resulted in better integration of IENs. This review

recommends that Canadian ministries collaborate and align their policies to support better integration of internationally educated nurses into the Canadian health system.

**Conclusion:** While all studies examined the integration processes of internationally educated nurses, most used data collected before 2015. There is a notable lack of studies on internationally educated nurses' integration experiences after the change in the Canadian licensing examination in 2015. Addressing this gap in the literature requires exploring the internationally educated nurse' experiences after the exam change and developing strategies to enhance their integration within the Canadian healthcare system. Collaboration strategies among stakeholders/gatekeepers showed a higher proportion of IENs integrated into the Australian healthcare system, therefore, strategies applicable in Canada may also be examined.

### **Keywords**

Culturally and Linguistically Diverse Nurses [CaLD]; Foreign-Educated Nurses; Integration; International Educated Nurses; International Trained Nurses; Overseas Nurses; Scoping Review

## **Introduction**

Canada is facing a growing healthcare workforce shortage; a shortage anticipated to reach nearly 15 million globally by 2030 (Liu et al., 2017). The impending shortage is notably pronounced among nurses (Ma et al., 2020), attributed to factors such as a limited inflow of nursing graduates and an aging nursing workforce (International Center on Nurse Migration [ICNM], 2020; Salsberg, 2018). Furthermore, the demographic diversity and the aging population in Canada, coupled with the growing prevalence of chronic illnesses, place heightened demands on healthcare institutions (Almost, 2021).

The predicted nurse shortage was exacerbated by the COVID-19 pandemic (Government of Canada, 2020; ICNM, 2020). Ontario, being the most populated province and the recipient of over 40% of all immigrants in Canada (Duarte, 2023; Statistics Canada, 2022), faced with a pronounced “RN human resource crisis”, featuring over 22,000 RN vacancies pre-pandemic (Registered Nurses’ Association of Ontario [RNAO], 2021, p. 3). This crisis manifested in a record-high surge in RN job vacancies in 2021 compared to 2019, the most significant increase among all professions by 85.8% (Statistics Canada, 2021).

The licensing process is essential for regulated health professions including nursing. This process was changed in 2015 when the National Council of State Boards of Nursing (NCSBN) in the United States (US) became the provider of the RN license-to-practice exam in Canada. This change, increased mobility for graduating nurses as the adoption of the American exam removed a significant barrier for Canadian nurses (Walton-Roberts et al., 2014) seeking full-time work, professional development, and flexible staffing (Freeman et al., 2015). Internationally educated nurses are a potential solution to the nursing shortage in Canada (Kolawole, 2009), but they often

face challenges associated with a lengthy and expensive licensing process and time-consuming integration into the nursing workforce in Canada (Altorjai & Batalova, 2017).

Barriers to integration include difficulties in obtaining proof of nursing education, incompatible nursing education, (Cornelissen, 2021), navigating the regulatory system in Canada (Blythe et al., 2009), meeting English language fluency and proficiency requirements (Walani et al., 2015), and passing the licensing exam (Belita & Ford, 2021). Cornelissen (2021) reported that IENs are less likely to secure employment matching their qualification (37%) compared to Canadian graduate nurses (78%). This report also noted that more than 50% of employed IENs worked in jobs that required low-level skills and were overqualified for those positions.

## **Research Problem**

A comparative analysis found that the authorities in Australia had greater success integrating IENs into the healthcare system than in Canada (Philippon et al., 2018). Reports suggested that among OECD countries, Australia has the highest rate of IEN integration into the healthcare workforce (Chun et al., 2019; Hawthorne, 2006). Similarities between Australia and Canada, encompassing federated and publicly funded healthcare systems, congruent political culture (Philippon et al., 2018), and expansive geographical dimensions coupled with lower population densities (Enticott et al., 2018), render Australia a pertinent comparator for the Canadian context. This review explored trends in IEN integration into the nursing workforce in Canada and Australia, offering insights into strategic measures aimed at optimizing IEN integration into the Canadian healthcare system, a critical imperative given the growing nurse shortages (Canadian Institute for Health Information [CIHI], 2021).

## **Background**

According to the CIHI (2021), IENs accounted for 9% of the Canadian RN workforce in 2020, showing a slight 1.3% increase over the past five years. The highest percentage of IENs within the workforce was in British Columbia at 14%, followed by Ontario at 11% and Alberta at 10%. This lower-than-average percentage of IENs within the Canadian workforce compared to other developed countries suggests an underutilization of immigrant nurses (Hou & Schimmele, 2020). Reports suggest that IENs may be underemployed as 12% of the registered practical nurse (RPN) or licensed practical nurse (LPN) workforce were IENs in 2019 (CIHI, 2020).

According to Statistics Canada, 41% of immigrant healthcare providers (IHCPs) are working in healthcare professions (Hou & Schimmele, 2020), this means that over 47% of internationally educated professionals are under or never utilized, with nursing being the most affected group at 34%. A study from Statistics Canada reported that 70% of nursing aides and patient services associates were immigrants, and 45% of recent immigrants in these occupations held at least a bachelor's degree, with 69% of these bachelor's degree holders holding a degree in nursing (Turcotte & Savage, 2020). The report also stated that these underemployed immigrants are mainly in Toronto, Vancouver, and Calgary.

In 2016, the proportion of IENs employed as RNs was lower in Canada (7.7%) compared to other Organization for Economic Co-operation and Development (OECD) countries; notably, Australia had the highest proportion of IENs at 23% (Trines, 2018). Evidence suggests that migration trends of IENs to Australia have increased, with IENs forming 29% of the Australian nursing workforce (Chun Tie et al., 2019). This evidence suggests that Canada is missing out on opportunities to increase the proportion of IENs in the RN workforce, a strategy that would help address the RN shortage.

The high pass rate of Canadian NCLEX-RN for all IENs (Montegricon, 2021) eliminates hurdles for secondary migration if they continue to encounter challenging integration. Collectively, inadequate integration of IENs into the Canadian workforce, along with unemployment or underemployment issues, significantly impact the success of IENs in Canada. The increasing trend of IEN migration to Australia, where a higher proportion of IENs are successfully integrated into the Australian nursing workforce, suggests competition between Canada and Australia for healthcare professionals.

## **Relevance**

Reports emphasize the significance of employing IENs to address healthcare challenges, such as nursing shortages (RNAO, nd) and the growing complexity of healthcare needs and diversity in the Canadian population (Almost, 2021). Therefore, developing strategies that might enhance IEN integration in Canada is increasingly important. The strategies adopted by the Australian healthcare system demonstrating greater success in integrating IENs compared to Canada, remain unclear. Hence, identifying successful IEN integration strategies from Australia for potential application in Canada is warranted. This review summarizes existing evidence, maps out trends of IEN integration in Canada and Australia, identifies strategies employed in Australia that contribute to improved IEN integration, and highlights gaps in the literature.

## **Methods**

### **Protocol Registration**

The final protocol for this scoping review was registered with Open Science Framework on June 7, 2022 (OSF Preregistration), registration DOI [10.17605/OSF.IO/KB832](https://doi.org/10.17605/OSF.IO/KB832) to ensure no duplication occurs.

### **Eligibility Criteria**

Criteria for inclusion in this scoping review included qualitative and quantitative studies examining IEN integration trends in Canada or Australia, published in English from 2015 when the licensing exam changed in Canada. Studies were excluded if they involved migrants other than IENs; for example, international nursing students and midwives, review articles, conference abstracts, book chapters, protocols, pilot studies, and studies that did not identify the professional groups.

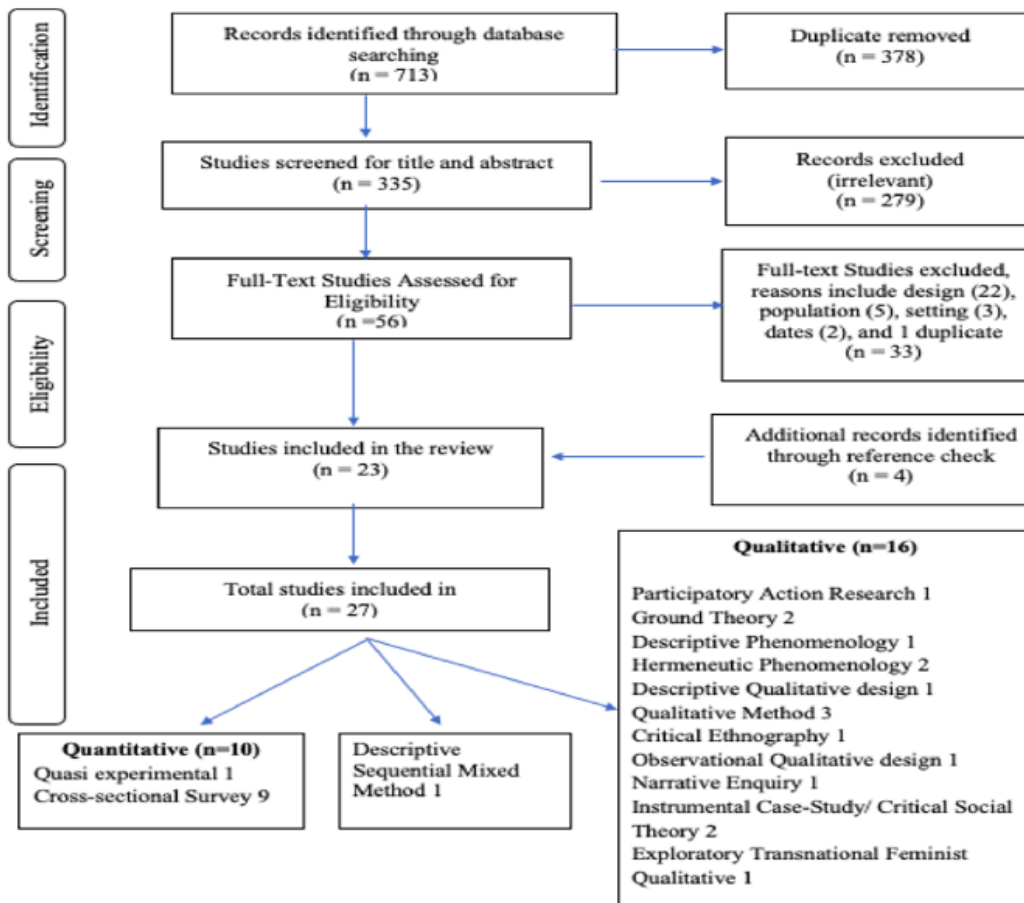
### **Information Sources and Search Strategies**

The search strategy was developed and refined with the assistance of a medical librarian to identify appropriate databases. Nine databases were searched: CINAHL/PROQUEST, Ovid MEDLINE, PsychINFO, Emcare, AMED and Embase, Web of Science, ProQuest, and Global Health. Key journals were hand-searched, and reference lists were checked to identify additional relevant studies. Grey literature was also reviewed to ensure the comprehensiveness and timeliness of the review and to foster a balanced overview of the relevant evidence (Paez, 2017).

The Nursing and Midwifery Board of Australia (NMBA) and the College of Nurses of Ontario (CNO) were consulted for further information. Keywords such as internationally educated nurses, overseas educated nurse, registration, integration, workforce, workplace, and others were used (Supporting information captions S1 Fig 1. Example of search strategy results). Reporting of this review was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews [PRISMA-ScR] (Tricco et al., 2018), (Fig 1. PRISMA-ScR flowchart).

### **Figure 1**

*PRISMA-ScR flowchart*



## The Study Selection Process

A systematic process was developed to select data sources. All peer-reviewed sources were imported into EndNote 20, and duplicates were removed. The remaining items were transferred to Covidence (McMaster University, 2021), and additional duplicates were identified and removed. Initially, two independent reviewers screened the titles and abstracts of each study to determine relevance to the aim of this review. Subsequently, full-text screening was conducted for articles meeting the eligibility, with ineligible articles excluded. The remaining articles (n= 27) from this process were brought forward for data charting.

## Data Charting Process: Data Items



The data extraction template was established before starting the extraction process, ensuring that selected data items aligned with the research aim and captured relevant information concerning the integration trends of IENs in Canada and Australia. These data items include author(s), publication year, country of the study, aims, methodology, sample size and characteristics, and summary of findings relevant to IEN integration processes (Supporting information captions, S3 Table 1. Example of data items and organization). Data extraction from quantitative and qualitative studies is undertaken to comprehend the magnitude of the IEN population and their integration rates within the health systems of each country. A hand search of reference lists uncovered four additional studies. Reviewers achieved consensus on article inclusion through discussion, and any disagreements were resolved by a third reviewer.

## **Results**

### **Selection of Evidence**

The initial 717 studies identified in the database search resulted in 23 studies considered eligible for inclusion in this review. Four eligible publications were identified while searching reference lists (Hall et al., 2015; O'Callaghan et al., 2018; Ramji et al., 2019; Zanjani et al., 2021). Therefore, 27 studies were included in this review.

### **Types and Characteristics of the Evidence**

This scoping review includes journal articles published in or after January 2015, governmental reports (CIHI, Government of Canada, Government of Australia), and professional associations (CNO, Canadian Nurses Association, NMBA, the Australian Health Practitioner Regulation Agency). Geographically, 62.96% (n=17) of the reviewed studies were completed in Canada and 37% (n=10) in Australia. Of these publications, 59% (n=16) used qualitative designs

and only one used a descriptive sequential mixed method. The remaining studies used quantitative methods (37%, n=10), among these studies, nine used a cross-sectional design.

In terms of focus, over 60% (n =18) of the publications explored IEN workplace integration, these include an equal number of studies completed in Canada (33.3%, n = 9) and Australia (33.3%, n = 9). Only five Canadian studies (18.5%) explored workforce integration of IENs. Finally, four studies (14.8%) examined IENs' integration into the workforce and workplace, including three Canadian studies and one Australian study.

Although all studies in this review were published in or after the change in the registration examination in 2015, more than 60% of them (n=17) collected data before 2015, and three of these studies completed data collection in March 2015. Only 14.8% of the studies (n=4) reported data collection in or after 2015, while 22.2% (n=6) did not specify the date of data collection, and two out of the six studies were published in early 2015. Participants were predominantly female, with up to 95-100% in some reviewed articles. Twelve articles reported on nurses primarily from specific countries such as India or the Philippines.

In Canadian studies, the term internationally educated nurse (IEN) refers to nurses who obtained their basic nursing degree outside Canada. Conversely, Australian studies used multiple interchangeable terms to refer to IENs, including overseas qualified nurse (OQN), internationally qualified nurse (IQN), culturally and linguistically diverse (CaLD) nurse, and others. In some cases, the terms in Australia encompassed nurses born in English-speaking countries who completed their nursing education in Australia (O'Callaghan et al., 2018). This review will consistently use the term IEN, referring to RNs who earned their basic nursing degree outside their country of employment (Ma et al., 2020).

## **Results of Individual Sources of Evidence**

A table with a summary of each resource of evidence is available on request.

### ***Synthesis of Results***

Thomas and Harden's (2008) framework guided the thematic synthesis of qualitative sources. Findings were categorized and summarized resulting in two major themes: the workforce integration stage (begins from migration through becoming registered as a regulated professional) and the workplace integration stage (starts with seeking and securing employment with healthcare institutions). The synthesis of results revealed that the most frequently studied topic was IEN experiences during workplace integration (n=18).

In this literature, nurse migration is a complex process requiring nurses to carefully plan and prepare to overcome challenges during their integration into the healthcare of the host country (Hawkins & Rodney, 2015). Table 1 presents the two emergent themes and subthemes. The term workforce integration was defined as IENs obtaining registration with the nursing governing board and securing employment in Canadian healthcare institutions (Covell et al., 2017). However, for this review, the workforce and workplace integration were defined based on the stage of integration.

**Table 1**

#### *Emergent Themes and Subthemes of the Scoping Review*

Major Themes	Subthemes
Workforce Integration	Reasons for migration, sources of information, and support Challenges; registration process and language proficiency Predictors of successful workforce integration Bridging program
Workplace Integration	Predictors of successful workplace integration

Barriers to workplace integration

Discrimination, otherness, and marginalization

Interprofessional communication and interactions

Professional socialization and sociocultural adjustment

Bridging, educational, orientation, and mentoring programs

Internationally educated nurse contributions

Job satisfaction

Recommendations, the stakeholder role

---

The review of grey literature identified the main gatekeepers impacting the IEN integration journey when migrating to Canada or Australia (Table 2).

**Table 2**

*Gatekeepers in the IEN Migration and Integration Journey*

Country	Gatekeepers
Canada	Immigration Policy System
	Educational and Licensure/Regulatory Policy System
	Health Human Resource System
Australia	Nursing and Midwifery Board Australia (NMBA)
	Australian Health Practitioner Regulation Agency (AHPRA)
	Australian Nursing and Midwifery Accreditation Committee (ANMAC)

---

### **Theme One: Workforce Integration Stage**

The workforce integration stage includes activities, and trends from pre-migration until becoming an RN in Canada or Australia. Trends in the workforce stage include downward professional mobility requiring enrollment in bridging programs and initiatives. IENs described workforce integration as complicated and challenging (Covell et al., 2015; Hawkins & Rodney, 2015).

### ***Premigration: Reasons for Migration, Sources of Information and Support***

**Reasons for Migration.** Reasons for IEN migration and motivating factors were identified in four publications. The most frequently reported motivating factors were personal, including a desire to improve their social life, financially support their families in their home country (Hall et al., 2015; Zanjani et al., 2021) and seek financial opportunities and salary benefits in the host country (Hall et al., 2015; Hawkins & Rodney, 2015; Salami et al., 2018; Zanjani et al., 2021).

The second most reported motivations were professional, such as better working conditions (Hall et al., 2015; Hawkins & Rodney, 2015; Salami et al., 2018) and opportunities for education and professional growth (Hall et al., 2015). Some IENs migrated for political stability in the host country (Hall et al., 2015; Zanjani et al., 2021). Research reports identified push factors, including IEN experiences during migration, the time-consuming licensing process that lacks transparency, and difficulty passing the licensing exams (Hall et al., 2015). Similar factors were reported by other researchers as barriers to successful workforce integration (Salami et al., 2018).

**Sources of Information and Support.** Over half of IENs (56%) rely on their family and friends as their primary source of information about migration and the nursing profession in Canada (Hall et al., 2015). These authors also emphasized the importance of increased

recruitment assistance and support in Canada, the host country. Supports, such as access to social networks, are predictors for securing registration as they help IENs prepare for the licensing examination (Covell et al., 2015).

### ***Challenges; Registration Process and Language Proficiency***

Challenges during the registration process include credential assessment, downgrading, and downward mobility.

**Credential Assessment.** Four studies reported IENs' difficulties during the workforce integration stage and their impact on their integration post-migration. In a Canadian study, Filipino nurses described being an IEN in Canada as facing “One Block After Another” and emphasized the multifaceted nature of nurse migration requiring extensive pre- and post-migration preparation and planning (Hawkins & Rodney, 2015, p. 103). These nurses lacked knowledge of how to prepare for the registration process and/or credential assessment. Meeting registration requirements was a significant challenge encountered by IENs (Salami et al., 2018), with delays often occurring as nursing governing bodies scrutinize IENs' previous qualifications (Hall et al., 2015). Furthermore, when IEN education or registration is denied, IENs experience costly “setbacks”, requiring additional education, training, and sometimes recertification (Covell et al., 2015, p. 145). Consequently, Canada is perceived as a non-welcoming country for IENs (Hall et al., 2015) due to delayed workforce integration, leading to frustration among IENs (Covell et al., 2015; Hall et al., 2015; Hawkins & Rodney, 2015).

**Downgrading and Downward Mobility.** Challenges in meeting the registration requirements for IENs in Canada include recognition of their educational credentials, passing the licensing examination, and demonstrating English proficiency. These challenges can devalue IEN's credentials and skills (Hawkins & Rodney, 2015), and downgrade their qualifications and

education (Salami et al., 2018). To expedite their registration, some IENs opt for the RPN route, resulting in downward registration and underemployment of IENs (Salami et al., 2018).

Push factors for seeking RPN registration include personal and professional factors, e.g., IEN' responsibilities to provide financial support to their families, insufficient support and knowledge during the registration process, and limited access to bridging programs (Salami et al., 2018). Some IENs choose RPN roles to improve their familiarity with the Canadian system, language proficiency, and future employability (Covell et al., 2015).

Research reports in this review emphasize strategies for transparency and consistency in IEN licensing, including providing sufficient premigration information (Belita & Ford, 2021; Hall et al., 2015). Such information should cover licensing costs, the time required to become registered, and available support for IENs in the host country so they can better plan their integration stage (Covell et al., 2022).

**Language Proficiency.** IENs face challenges with English proficiency and acquiring new communication skills when migrating to Western countries, negatively impacting their licensing process and exam success (Hall et al., 2015; Lum et al 2016). Stakeholders overseeing registration processes must acknowledge the need for IENs to enhance language and professional skills. Bridging programs, incorporating therapeutic and sociocultural communication skills training, are essential for successful workforce integration (Belita & Ford, 2021; Lum et al., 2016).

Moreover, IENs educated in English-speaking countries may face challenges, including culture shock and language difficulties, especially in academic writing styles, particularly, in university bridging programs. A lack of self-awareness regarding their English language

competencies exacerbates frustration, impacting successful integration into new healthcare systems (Lum et al., 2016).

### ***Predictors of Successful Workforce Integration***

Three Canadian studies identified predictors that facilitate or hinder IEN's successful workforce integration (Covell et al., 2015; Covell et al., 2017; Covell et al., 2018). Facilitating factors include IENs having comparable nursing education, professional experiences, access to educational resources, enrollment in bridging programs (Belita & Ford, 2021; Covell et al., 2015; Covell et al., 2018), English language proficiency, and financial assistance for the cost of registration and bridging programs (Covell et al., 2015). These reports include recent evidence that facilitating factors have not changed.

Workforce integration is improved when IENs receive formal and informal support during exam preparation (Covell et al., 2015; Covell et al., 2017); have clear and adequate information on the registration process (Salami et al., 2018) and previous professional experiences with strong professional vocabularies (Covell et al., 2015; Covell et al., 2017; Covell et al., 2018). Conversely, limited access to educational and bridging programs, inadequate resources (Belita & Ford, 2021; Covell et al., 2022; Salami et al., 2018), and financial constraints may delay successful IEN workforce integration (Belita & Ford, 2021; Covell et al., 2022).

### ***Bridging Program***

The importance of supporting IEN workforce integration through diverse programs and initiatives was emphasized in several papers. Participation in bridging programs significantly enhances IEN workforce integration by addressing knowledge gaps, fostering familiarity with the Canadian healthcare system, and improving professional and cultural competency skills (Covell et al., 2015; Covell et al., 2018). Notably, IENs who completed bridging programs,



particularly those from low-income countries with fewer years of nursing experience, were more prepared for the licensing examination and practice nursing in Canada (Covell et al., 2015). Integrating IENs can improve their future employability (Covell et al., 2015) and bridging programs can be effective in promoting workforce integration.

### **Theme Two: Workplace Integration Stage**

Workplace integration in this review encompasses activities after becoming registered in Canada or Australia as a RN, RPN/Enrolled Nurse; it involves IENs becoming members of workgroups within organizations, utilizing their professional knowledge, and collaborating with multidisciplinary teams to provide healthcare (Covell et al., 2016). In brief, engaging in nursing practice in the receiving country.

This stage received significant attention in the literature and was described as a dual/two-way process requiring collaboration between and contributions from IENs and employers (Ramji & Etowa, 2018). Poor integration of IENs negatively impacts the work environment, healthcare team dynamics, and patient satisfaction and leads to nurse attrition from the workplace and maybe the workforce (Chun Tie et al., 2019; Ramji & Etowa, 2018). A recent study reported that a well-integrated IEN may progress into leadership roles, become an effective role model, be more committed to lifelong learning, have better professional satisfaction and a sense of belonging, and have higher workplace retention (Ramji & Etowa, 2018).

### ***Predictors of Successful Workplace Integration***

Four Canadian studies identified predictors of successful workplace integration (Covell et al., 2015; Covell et al., 2018; Covell & Rolle Sands, 2021; Ramji & Etowa, 2018). Internationally educated nurses with previous professional experiences in advanced specialty care secure employment faster than those trained in general settings (Covell et al., 2015).

Gaining Canadian experience, advancing their professional knowledge, competencies, and skills (Covell et al., 2015; Covell et al., 2017; Covell & Rolle Sands, 2021), as well as having access to colleagues and friends in the host country (Covell et al., 2015; Covell & Rolle Sands, 2021; Timilsina Bhandari et al., 2015) improve IENs' familiarity with the Canadian healthcare system and amplify their employability (Covell et al., 2015; Covell & Rolle Sands, 2021). Recent reports affirm earlier findings that IENs are more likely to secure employment in Canadian healthcare institutions when they receive professional, social (Covell et al., 2017), financial (Covell et al., 2022), and educational support (Covell et al., 2015; Covell et al., 2017). Moreover, IENs adjust rapidly in a supportive, discrimination-free workplace (Timilsina Bhandari et al., 2015).

### ***Barriers to Workplace Integration***

Internationally educated nurses encounter various challenges post-licensure, including securing employment, financial assistance, coping with cultural disparities, and achieving English language proficiency. The demographic characteristics of IENs influence their workplace integration with visible minority IENs facing greater obstacles (Covell & Rolle Sands, 2021). Failure to "fit in" within the workplace culture has adverse physical, psychosocial, and behavioural consequences (Holmes & Grech, 2015, p. 395). Recent reports indicate evolving demographic characteristics of IENs, include having more knowledge and skills in providing care to patients with uncommon diseases (Neiterman & Bourgeault, 2015a), and greater qualification, experience, and language proficiency than previously (Covell et al., 2017). Nevertheless, over 50% of IENs encounter difficulties securing employment as RNs in Canada (Covell et al., 2017). Those who secure employment express dissatisfaction, feeling that their

previous professional experiences are underutilized, and they are unable to demonstrate their skills and expertise (Zanjani et al., 2021).

Two Canadian studies examined the impact of financial assistance and IEN ethnicity on the time required to secure employment (Covell et al., 2022; Covell et al., 2015). The financial support required for healthcare integration differs among IENs (Covell et al., 2015). Recent evidence noted that post-migration, IENs use personal resources such as support from their spouse or family and/or their savings, receive employer support as temporary licensed nurses (Covell et al., 2022; Covell et al., 2015), or access limited government funding (Covell et al., 2022). This recent study also found that IENs from low-income countries require more financial assistance to upgrade their qualifications and recertify (Covell et al., 2022).

Cultural disparities present another challenge, delaying IEN workplace integration (Hawkins & Rodney, 2015; Lum et al., 2016; Philip et al., 2019). Differences in professional culture between the host and home country may hinder IEN adaptation to professional practice (Lum et al., 2016; Neiterman & Bourgeault, 2015a; Zanjani et al., 2021); some were uncertain about their scope of professional practice (Chun Tie et al., 2019; Neiterman & Bourgeault, 2015a).

English language proficiency is essential for becoming a RN in Canada and Australia. However, IENs from non-English speaking countries face numerous challenges in workplace communication due to difficulties in understanding everyday spoken language (Chun Tie et al., 2019; Ramji et al., 2019; Zanjani et al., 2021). Different dialects, slang, and accents were attributed to the highly diverse population in the host country contributing to misunderstandings between IENs and domestic nurses, leading to a more formal working environment (Clayton et

al., 2016), mental exhaustion (Lum et al., 2015), and delayed integration (Philip et al., 2019). Recent reports show that barriers to workplace integration continue to limit IEN integration.

### ***Discrimination, Otherness, and Marginalization***

The profound impacts of workplace discrimination on the psychosocial well-being of IENs and implications on the quality of patient care were reported in eight studies (Holmes & Grech, 2015; Joseph et al., 2022; Neiterman & Bourgeault, 2015a; 2015b; O’Callaghan et al., 2018; Primeau et al., 2021; Timilsina Bhandari et al., 2015; Zanjani et al., 2021). Internationally educated nurses continue to encounter discrimination from various sources, including their employing organization, colleagues, and patients in their care (Joseph et al., 2022; Neiterman & Bourgeault, 2015b; Zanjani et al., 2021) and surrounding communities (Joseph et al., 2022). This discrimination extends to factors like gender, visible minority status (Neiterman & Bourgeault, 2015b), ethnic and cultural background, and accent, particularly for those from non-English speaking countries (Neiterman & Bourgeault, 2015b; O’Callaghan et al., 2018). Notably, 50 % of IENs from non-English speaking countries experience discrimination in opportunities for career advancement (O’Callaghan et al., 2018; Timilsina Bhandari et al., 2015), patient assignment and workload allocation, exclusion from team discussions (O’Callaghan et al., 2018), employment in less desired jobs and working more hours, which leads to feeling devalued (Neiterman & Bourgeault, 2015b).

Furthermore, IENs often experience a sense of otherness attributed to their foreign education and training status (Neiterman & Bourgeault, 2015b). Their knowledge, skills, and expertise were often underappreciated and unrecognized by domestic nurses (Salami et al., 2018). In some cases, the professional practice training of IENs is perceived to be inferior to that of domestic-trained nurses (Neiterman & Bourgeault, 2015a), leading to “professional tension”,

frustration, and discomfort (Neiterman & Bourgeault, 2015b, p. 624). Some IENs often feel their practice is continuously monitored by domestic nurses (Holmes & Grech, 2015; Neiterman & Bourgeault, 2015b) and that they are perceived to be less valuable to the workforce (Neiterman & Bourgeault, 2015b), leading to feelings of fear, powerlessness, and stress (Holmes & Grech, 2015; Neiterman & Boudreault, 2015b). This monitoring negatively affects IEN trust relationships with domestic nurses (Neiterman & Boudreault, 2015b), disturbs their self-esteem and consequently impacts their nursing practice and patient safety (Holmes & Grech, 2015).

In addition, poor relationships with the multidisciplinary team contribute to the marginalization of IEN by their colleagues (Philip et al., 2019). Recent evidence found that discrimination and otherness limit IEN professional growth, the ability to secure leadership positions (Ramji & Etowa, 2018), and career satisfaction (Primeau et al., 2021), and may reduce IEN retention in the workplace.

### ***Interprofessional Communication and Interactions***

Eight studies reported on the professional communication and communication skills of IENs in the workplace (Aggar et al., 2021; Belita & Ford, 2021; Chun Tie et al., 2019; Clayton et al., 2016; Crawford et al., 2016; Lum et al., 2016; O'Callaghan et al., 2018; Philip et al., 2019). Collectively these studies found that IENs experience cultural shock, disillusionment, burnout, and frustration stemming from insufficient sociocultural and therapeutic communication skills in the Western context (Belita & Ford, 2021; Lum et al., 2016) and workplace-required language competence (Lum et al., 2016).

In multicultural societies like Canada, IENs must adapt to diverse accents and communication approaches (Crawford et al., 2016). Sociocultural communication difficulties led IENs to experience stress (Philip et al., 2019), hindering their workplace adjustment and

negatively impacting their work environment and patient interactions (Clayton et al., 2016; Hall et al., 2015), including demonstrating respect and empathy. On the other hand, working in different countries can facilitate IEN adjustment and successful communication strategies (Crawford et al., 2016).

Communication primarily for coordinating clinical interventions and reporting patient medical condition changes requires IENs to engage in professional team discussions (Philip et al., 2019). In challenging situations, hesitancy and a lack of IEN strategies to overcome poor communication affect clinical communication with the multidisciplinary team (Philip et al., 2019). English-speaking nurses also encounter difficulties due to poor elaboration of patient information from their colleagues (Philip et al., 2019). Effective English communication enhances patient care quality (Chun Tie et al., 2019) and improves patient outcomes.

Innovative tools, such as interactive mobile applications, for example, mPreceptor, can help facilitate IEN adaptation to workplace communication and improve their leadership skills during their clinical placement (Aggar et al., 2021). Clayton et al. (2016) proposed forms of social integration of IENs to improve communication skills among nurses, introduce them to the new culture, and help eliminate misconceptions about other cultures. All IENs, regardless of their background, require support from stakeholders and healthcare institutions to understand their professional roles (O'Callaghan et al., 2018). New tools focusing on integrating IENs into the workplace look promising for future practice.

### ***Professional Socialization and Sociocultural Adjustment***

Professional norms and cultures in the host country are often unfamiliar to IENs (Chun Tie et al., 2019; Lum et al., 2016). However, IENs must understand these norms and achieve cultural competence to integrate into the healthcare system (Chun Tie et al., 2019) and avoid

confusion and misunderstandings (Lum et al., 2016). Four studies featured acculturation patterns and social integration into the healthcare system of the receiving country (Clayton et al., 2016; Njie-Mokonya, 2016; O’Callaghan et al., 2018; Zanjani et al., 2021).

Earlier reports, indicating that professional socialization occurs in phases, including learning, observing, and adapting to the cultural norms of the new workplace (Chun Tie et al., 2019; Neiterman & Bourgeault, 2015a) were recently confirmed by a study conducted by Belita and Ford in (2021). Subsequently, nurses progress and re-align their scope of practice, become socialized, and develop communication skills to provide quality care. The last phase is the outcome of the transition process, either successful workplace integration or attrition (Chun Tie et al., 2019).

An earlier study suggests that professional socialization of IENs in the new workplace requires a minimum of four years in addition to adjusting to the culture within their community outside the workplace (Neiterman & Bourgeault, 2015a). Joseph et al. (2022) noted that some IENs lived in dual cultures, struggling to balance their previous culture with the current culture, experiencing mixed feelings of loneliness and isolation due to a lack of commonalities between the two cultures and that most IENs regretted leaving their home country. Another recent study found that successful professional and sociocultural adjustment improved IEN’s health and psychosocial well-being and lowered their stress levels (Zanjani et al., 2021).

### ***Bridging, Orientation, and Mentoring Programs***

Eight studies discussed the impact of preparation programs on integrating IENs into the workplace (Aggar et al., 2021; Belita & Ford, 2021; Chun Tie et al., 2019; Covell et al., 2015; Covell et al., 2017; Covell et al. 2018; Covell & Rolle Sands, 2021; Holmes & Grech, 2015). Studies over the last decade report that enrolling in bridging programs facilitates building

professional, language, and cultural competencies, improving IEN employability (Covell et al., 2015), communication, and leadership skills, enhances IEN workplace integration (Aggar et al., 2021), and helps IENs recognize gaps in their knowledge and skills (Belita & Ford, 2021).

Challenges hindering IEN access to these programs such as financial obligations, can be addressed through strategies like offering distance learning options (Covell et al., 2018).

Recommendations suggest continuous evaluation and modification of bridging programs, with a duration of at least three months, extendable up to 6-12 months (Holmes & Grech, 2015).

Managerial support and enrolling in a mentorship program were important in several studies (Belita & Ford, 2021; Chun Tie et al., 2019; Covell & Rolle Sands, 2021; Ramji & Etowa, 2018). Participation in orientation programs enables IENs to work more independently (Zanjani et al., 2021). Reports also note that orientation programs must be well-structured and tailored to the learning needs of IENs (Chun Tie et al., 2019), with content covering understanding organizational and workplace cultural norms (Chun Tie et al., 2019; O’Callaghan et al., 2018), power relationships (Holmes & Grech, 2015), acceptable behaviours, and familiarity with commonly used jargon (Crawford et al., 2016; O’Callaghan et al., 2018).

Understanding workplace culture is achieved by maintaining positive relationships between IENs and their mentors (Belita & Ford, 2021) and sharing professional experiences with IENs (Chun Tie et al., 2019), which may lead to better professional adaptation and improved job satisfaction for IENs (Primeau et al., 2021). Nurses from English and non-English-speaking countries advocate that mentorship programs facilitate building culturally competent and diverse teams (O’Callaghan et al., 2018).

### ***Internationally Educated Nurse Contributions***



Canadian studies reported on specific IEN contributions to patient care and highlighted the importance of acknowledging the wealth of knowledge and skills that IENs bring to the host country (Kim & Guo, 2021; Neiterman & Bourgeault, 2015a; 2015b; Njie-Mokonya, 2016; Ramji et al., 2019). Lum et al. (2016, p. 350) proposed that these skills should be considered “added benefits” to the host country. Some nurse managers and employers consider IENs to be more skillful and knowledgeable about uncommon diseases than domestic nurses (Neiterman & Bourgeault, 2015a; b). The professional experiences of IENs in another country improved their understanding of the culture in the host country (Njie-Mokonya, 2016).

Internationally educated nurses caring for patients who share their cultural backgrounds, particularly in high-demand healthcare settings, enhanced the quality of nursing care (Clayton et al., 2016), improved time spent with patients and their families, reduced patient anxiety levels, improved relationships between healthcare team members and patients (Njie-Mokonya, 2016), and facilitated patient treatment, leading to a shorter hospital stays and cost-efficient interpreting services (Ramji et al., 2019). Using a language other than English was welcomed by patients, mainly when providing care and interpreting for patients in their language (Kim & Guo, 2021; O’Callaghan et al., 2018). Providing nursing care in the patient's native language improved the comfort level of patients and nurses, ensured patients received appropriate care, and enhanced patient outcomes (Kim & Guo, 2021).

### ***Job Satisfaction***

Job satisfaction of IENs was the focus of four studies (Primeau et al., 2021; Ramji & Etowa, 2018; Timilsina Bhandari et al., 2015; Zanjani et al., 2021). Overall, IENs expressed high job satisfaction (Timilsina Bhandari et al., 2015; Zanjani et al., 2021), particularly, when they achieved their goals (Primeau et al., 2021) and developed a sense of belonging (Ramji & Etowa,

2018). Factors that enhanced IEN job satisfaction included workplace support, a discrimination-free environment (Primeau et al., 2021; Timilsina Bhandari et al., 2015), positive relationships with their colleagues, competitive salary, and benefits (Timilsina Bhandari et al., 2015).

Other factors influenced job satisfaction among IENs, such as sociodemographic characteristics (e.g., age, gender, ethnicity, education level, and years of experience); organizational setting (hospital vs. community); employment (e.g., full-time vs. part-time); and geographic location (IENs in Ontario and Prairie provinces reported higher satisfaction than those in the Atlantic provinces) (Primeau et al., 2021).

One study reported that IENs from non-English-speaking countries expressed lower job satisfaction than those from English-speaking countries due to gaps in their English communication skills (Timilsina Bhandari et al., 2015). Job dissatisfaction among IENs from non-English-speaking countries was attributable to limited career advancement opportunities, recognition of previous qualifications and professional experiences (Timilsina Bhandari et al., 2015), deskilling, and underemployment (Salami et al., 2018; Timilsina Bhandari et al., 2015), all factors which can lead to considering secondary immigration (Timilsina Bhandari et al., 2015).

### ***Recommendations for Stakeholders***

Reports from studies in this review highlighted the critical roles of government, hiring institutions, nurse managers, and educators in the successful workplace integration of IENs. Their recommendations to promote workplace integration are that governments must create financial support programs for IENs during the recertification process (Covell et al., 2022). Organizations and managers develop orientation programs to facilitate sociocultural adjustment and IEN integration (Covell & Rolle Sands, 2021; Zanjani et al., 2021). Two-way workplace

integration is encouraged (Ramji & Etowa, 2018) wherein IENs assume responsibility for adjusting to the new culture, while organizations respect the skills, expertise, and cultural diversity of IENs (Ramji et al., 2019), ensuring successful IEN integration (Ramji & Etowa, 2018).

Robust educational programs developed by the hiring organization for managers, educators, and preceptors interacting with IENs are also recommended to provide the leadership team with strategies to support IEN's success (Chun Tie et al., 2019; Timilsina Bhandari et al., 2015). Stakeholders can achieve cultural competency by training preceptors to recognize the contributions IENs bring to the workplace (Clayton et al., 2016). Preparing domestic and international nurses with knowledge and skills while promoting equity contributes to successful IEN integration into the multicultural workplace (Timilsina Bhandari et al., 2015). Manager training to identify and eliminate discriminatory acts against IENs, to help foster a welcoming and inclusive workplace (Neiterman & Bourgeault, 2015b; O'Callaghan et al., 2018).

Workplace support is fundamental to reducing IEN stress and ensuring high-quality nursing care (Philip et al., 2019). Supports such as providing IENs with accessible educational programs and resources (Belita & Ford, 2021); a supportive work environment and antiracism policies are pivotal to improving relationships among nurses, eliminate IEN marginalization (Neiterman & Bourgeault, 2015b; Timilsina Bhandari et al., 2015), and improve workplace integration (Neiterman & Bourgeault, 2015b; Primeau et al., 2021; Ramji & Etowa, 2018).

### ***International Nurse Registration Process in Canada VS. Australia***

Developed countries, including Canada and Australia, rely on IENs to meet the increasing healthcare demands. Internationally educated nurses must undergo foreign educational credential assessment (NCSBN, 2018) and fulfill specific requirements to obtain a license to practice in

Canada (CNO, 2020) or Australia (NMBA, 2022a). The respective nursing boards engaged in numerous changes in the legislation for domestic and international nurses over the past twelve years (Supporting information captions, S2 Fig 2. Evolution of registration processes in Canada and Australia). In Australia, these changes, including the introduction of a new assessment model, resulted in a more consistent and transparent assessment of IEN applications and improved outcomes (ANMAC, 2021; 2022).

### ***Gatekeepers for IENs Integration into Healthcare***

In Canada, IENs navigate three systems: One federal and two provincial systems. The federal system includes the immigration policy system responsible for developing immigration policies that prioritize immigrants who strengthen societal structure, meet labour market demands, and reunite families (Government of Canada, 2022; Paul et al., 2017). The provincial systems include educational and licensure/regulatory and health human resources policies (Paul et al., 2017). The educational and licensure/regulatory system involves various institutions, including health professions colleges like the CNO, the Ministry of Health and Long-Term Care (MHLTC), and the Ministry of Colleges and Universities (Paul et al., 2017). These ministries oversee policies governing the education and employment of healthcare professionals, including nurses in Ontario. Each province's health human resources system is responsible for managing the supply and demand for healthcare professionals while balancing healthcare costs and financial constraints (Paul et al., 2017).

Similarly, in Australia, IENs navigate three authorities on migration pathways to becoming an RN. The first authority is the Nursing and Midwifery Board Australia (NMBA) responsible for comparing IEN qualifications against the Australian standards, developing practice guidelines, and approving accreditation standards (Australian Government, 2021;

ANMAC, 2016). The second authority is the Australian Health Practitioner Regulation Agency (AHPRA) which oversees 15 national boards for health professionals including nursing (AHPRA, 2022). The agency regulates health practitioners in Australia through the National Registration and Accreditation Scheme, in partnership with the National Board for Nurses NMBA (Australian Government, 2021; ANMAC, 2016).

Finally, the Australian Nursing and Midwifery Accreditation Committee (ANMAC), authorized by the NMBA to supervise the IEN outcome-based assessment (OBA) process and provide recommendations to the NMBA regarding the IEN OBA (NMBA, 2019). The ANMAC is a government-approved —authorized by the Department of Home Affairs and the Department of Education, Skills and Employment— independent assessment authority that facilitates a national approach to nursing regulation (ANMAC, 2022; NMBA, 2019). The ANMAC assesses the skills, qualifications, and work experiences of IENs for Australian migration purposes under the General Skilled Migration Program (ANMAC, 2022). Upon completing the requirements for registration with the NMBA, applicants may pursue a visa through the Australian Department of Home Affairs, a process that includes an ANMAC assessment before visa issuance (Australian Government, 2021).

## **Discussion**

### **Summary of Evidence**

In this review, 27 peer-reviewed studies published in or after 2015 examined IEN integration experiences in Canada and Australia. The findings indicate a paucity of research on IEN workforce integration in Canada post-licensing exam changes, with Australian studies primarily emphasizing workplace integration. In this review, the IEN integration processes in

Canada and Australia are highly comparable concerning credentialing steps, licensing processes, and requirements for registration, including associated costs.

However, reports suggest that Australia is more successful than Canada in integrating IENs into the workforce, with higher employment rates, knowledge and expertise utilization, and access to leadership positions (Chun Tie et al., 2019; Hawthorne, 2006; Trines, 2018). This is evident in the high percentage of IENs in the Australian workforce compared to the Canadian workforce, which may relate to the integrated premigration assessment in the process for Australia.

### **Discussion: Review Findings**

The thematic synthesis in the review revealed two main stages of IEN integration pathways: workforce (premigration to obtain registration with the governing board) and workplace (becoming registered to secure employment and retention) integration. This review suggests similarities in the difficulties IENs encounter during their integration into the healthcare system in Canada and Australia. However, exploration of the grey literature shows collaboration among gatekeepers in Australia led to better IEN integration rates than those in Canada and recommends collaboration at high levels in Canada is warranted.

#### ***Workforce Integration Stage***

Migration is a complex process influenced by personal, social, and professional factors. Limited access to information means IENs may not be adequately prepared before migration to Canada (Covell et al., 2016). Findings from this review emphasized the importance of pre-migration preparation for IENs. They encouraged stakeholders to create government website pages and other multimedia venues to share information about migration and registration requirements (Singh & Sochan, 2010). Such information can assist IENs in planning their

immigration journey (Blythe et al., 2009), encompassing personal, social, financial, and professional aspects, ultimately facilitating workforce and workplace integration (Covell et al., 2016).

Overall, reviewed publications identify the IEN registration process as lengthy, frustrating, and costly, amounting to \$1900 – 4000 CAD throughout the different workforce integration stages (Altorjai & Batalova, 2017; Blythe et al., 2009; Bourgeault et al., 2010; Ramji & Etowa, 2014). Internationally educated nurses face challenges due to complex and complicated credential and licensing processes (Walton-Roberts et al., 2019; Zikic et al., 2011). This review highlighted barriers encountered by IENs during their workforce integration, including the lack of recognition, and dissimilarities of IEN nursing education, difficulties navigating the regulatory system, language barriers —especially for IENs from non-English speaking countries—, and difficulty passing the RN licensing examination. This finding is widely supported across the papers in this review and elsewhere (Blythe et al., 2009; Cornelissen, 2021; Higginbottom, 2011; Kolawole, 2009; Neiterman & Bourgeault, 2013; Walani, 2015).

Unsuccessful workforce integration can result in under or never-employed IENs. Internationally educated nurses are less likely to secure employment that matches their qualifications (37%) compared with those who completed their nursing education in Canada (78%). This recent study also reported that more than 50% of employed IENs worked in jobs that required low-level skills and were overqualified for those jobs (Cornelissen, 2021). The underutilization of IENs and downward occupational mobility continues to be concerning as they reflect limited integration into the workforce for more than a decade (Bourgeault et al., 2011; Higginbottom, 2011).

Becoming registered to practice nursing in Canada has a positive socio-cultural impact on IENs, enabling them to deliver competent, professional, and culturally diverse nursing care (Kolawole, 2009). Researchers noted that the inability of IENs to obtain licensure, registration, and employment negatively impacts the health and well-being of migrants and their families, representing an economic and human capital loss for Canada (Kwansah et al., 2015).

### ***Workplace Integration Stage***

This review revealed the challenges IENs face after becoming registered in the host country, including a time-consuming workplace integration (Adeniran et al., 2008; Altorjai & Batalova, 2017; Cornelissen, 2021; Ghazal et al., 2020). Workplace challenges include cultural disparities, differences in nursing scope of practice and patient care approaches, and language proficiency.

**Cultural, Nursing Practice, and Language Differences.** The literature suggests that differences in the structure of the healthcare organizations in the host country and sociocultural differences inside and outside the workplace can adversely impact IEN workplace integration (Adeniran et al., 2008; Ho, 2015; Liou & Cheng, 2011; Neiterman & Bourgeault, 2013; Ohr et al., 2016). These differences include discrepancies in the nursing practice model compared to the country of origin, impacting IENs from non-Western and Western cultural backgrounds with similar professional training (Neiterman & Bourgeault, 2013). Such discrepancies may create uncertainty about their scope of practice in the host country (Bourgeault et al., 2010).

English language proficiency and fluency are essential requirements for the IEN licensure process. This review indicates that language proficiency remains a significant barrier to successful IEN integration into healthcare organizations in both countries. Internationally educated nurses from non-English speaking countries report difficulties in English



communication, despite completing the proficiency test successfully. The approved language proficiency tests assess basic English competencies (CNO, 2021) and neither assess the sociocultural components (Blythe et al., 2009) nor determine the ability of IENs to communicate effectively and therapeutically within the clinical practice (Neiterman & Bourgeault, 2013).

This review also highlighted the importance of learning the sociocultural aspects of language. Some IENs reported difficulties understanding different dialects, colloquialisms, and everyday language due to the host country's diverse population with a wide range of cultural backgrounds (Adeniran et al., 2008). Learning to communicate effectively in a different language is complex, challenging, and if not refined to the host country's language, may lead to misunderstandings (Brunton & Cook, 2018).

**Clinical Practice Environment.** Internationally educated nurses noted differences in interprofessional communication among the multidisciplinary teams, a finding consistent with other studies (Neiterman & Bourgeault, 2013; Ohr et al., 2016). A single-case study explored the lived experiences of one IEN in the US, revealing that IENs often considered leaving their job due to communication challenges at a “high professional level” (Liou & Cheng, 2011, p. 105). These communication difficulties could negatively impact patient care and outcomes (Neiterman & Bourgeault, 2013).

Internationally educated nurses reported disparities in the scope of nursing practice, uncertainty about their responsibilities, and dissatisfaction with the recognition of their skills. Other researchers also report similar findings and highlighted issues related to autonomy (Moyce et al., 2016; Neiterman & Bourgeault, 2013; Walani, 2015), advocacy for their patients (Brunton & Cook, 2018), and skills underutilization (Moyce et al., 2016; Walani, 2015), potentially impeding IEN workplace integration. These challenges were attributed to IENs working in

clinical areas outside their area of expertise (Kwansah et al., 2015), requiring them to learn new and different clinical practices and adapt to cultural and language differences. This mismatch exacerbates IEN frustrations and potentially leads them to job abandonment (Blythe et al., 2009) and may also mean missing out on expert nursing that might be otherwise available to them.

This review proposed factors that could facilitate IEN workplace integration, including a lifelong commitment to learning, working in a discrimination-free environment, receiving support from managers and colleagues (Kolawole, 2009; Liou & Cheng, 2011), and accessing mentorship programs (Ho, 2015; Iheduru-Anderson & Wahi, 2018; Kolawole, 2009; Liou & Cheng, 2011), maximizing their role satisfaction.

Experiencing stigmatization by their colleagues due to their foreign education and professional training, negatively affected IEN workplace integration, as corroborated by the international literature. A study examining the experiences of Nigerian IENs in the US (Iheduru-Anderson & Wahi, 2018) found that IENs felt that their skills were monitored continuously, and they experienced bullying from patients and their colleagues. Stigmatization took the form of workplace discrimination (Moyce et al., 2016; Primeau et al., 2014; Walani, 2015), harassment, bullying (Moyce et al., 2016; Walani, 2015), feelings of alienation (Liou & Cheng, 2011), and social marginalization (Walani, 2015). In other studies, some IENs reported being assigned non-nursing-related tasks reflecting a non-supportive management and workplace environment (Higginbottom, 2011).

Consistent with the findings of this review, IENs reported that their race, accent, or nationality contributed to discrimination, presented in the form of unequal work assignments, limited educational and promotional opportunities, stigmatization, stereotypes by patients, or bullying by their colleagues (Walani, 2015). Those who encountered racism or discrimination

reported enduring mental and physical abuse and feeling unwelcomed and unappreciated (Walani, 2015).

**Education and Orientation Programs.** Internationally educated nurses face difficulties accessing bridging programs (Aggar et al., 2019), potentially causing delays in their workforce integration (Walton-Roberts & Hennebry, 2019). Findings from this review emphasize the importance of supporting IENs during workplace integration through bridging programs, extended orientation, and preceptor/mentorship initiatives. Other researchers suggest that an IEN integration program, bridging previous experiences with current practice, can streamline their integration (Ghazal et al., 2020; Higginbottom, 2011).

Bridging programs should acquaint IENs with the healthcare system (Cruz et al., 2017; Singh & Sochan, 2010), assess and update their professional and clinical competencies (Cruz et al., 2017), and offer clinical experience opportunities (Singh & Sochan, 2010). Structured orientation programs extended from one month to a year after employment are recommended (Baumann et al., 2017). While nursing leaders hold high expectations when IENs complete orientation programs, it's vital to acknowledge that workplace acculturation of IENs can be a lengthy process, necessitating extended support (Rovito et al., 2022).

The reviewed literature suggests orientation programs should align with Ontario's new graduate orientation programs. Conversely, some researchers advocate for tailored orientation programs sensitive to the unique learning needs of IENs, distinct from those of domestic nurses' needs (Lee & Wojtiuk, 2021; Rovito et al., 2022). The importance of experienced preceptors in supporting IENs in adapting to the nursing role is also highlighted (Brunton & Cook, 2018). Online learning programs are recommended to facilitate IEN participation even before migration (Covell et al., 2022). Higginbottom (2011) posits that nurse leaders should receive cultural

competency training to incorporate it into the practice culture of the receiving program or practice setting.

Recruiting IENs is gaining importance, especially in countries like Canada and Australia, with changing population demographics, an aging nursing workforce (Bauman et al., 2017), and a nursing shortage exacerbated by the ongoing impacts of the COVID-19 pandemic (Cornelissen, 2021; ICNM, 2020). Internationally educated nurses bring valuable skills to their roles (Ohr et al., 2016), including previous expertise and perspectives, and multilingual and multicultural skills (Baumann et al., 2017). This review identifies that IENs experience better workplace integration when their contributions to patient care are acknowledged and valued, and when they feel they are integral members of the nursing care team.

### ***The Gatekeepers Issue***

Researchers suggest a lack of coordination, alignment, and connection between the federal (immigration) and provincial (regulatory body) policies in Canada (Hawkins & Rodney, 2015; Paul et al., 2017), leading to delays in IEN integration, devaluation of their credentials, and downward professional mobility (Hawkins & Rodney, 2015). Paul et al. (2017) explained that the three systems in Canada generate policies independently, with each system regulating different aspects of IEN integration pathways, lacking practical guidelines to support success in navigating these processes.

For instance, Ontario's Ministry of Colleges and Universities, Ministry of Health and Long-Term Care, and nursing regulatory bodies evaluate IEN credentials and control the RN workforce supply. This lack of coordination between human health resources and immigration policy systems results in a mismatch in the number of healthcare professionals approved for migration to Canada and the available job opportunities (Paul et al., 2017).

Conversely, the regulatory body in Australia —NMBA—confirms the equivalency and comparability of the IEN qualifications with the Australian standards (NMBA, 2022b). The ANMAC assesses IEN qualifications for migration purposes (ANMAC, 2022), while AHPRA, on behalf of the NMBA, assesses the IEN application for registration and holds the final decision relating to the registration application (AHPRA 2022; ANMAC, 2016). This implies that IENs may be granted a visa to enter Australia once their registration process is completed in a coordinated pre-arrival process.

### **Lessons for Canada**

Collaboration between three authorities in Australia to improve the workforce and workplace integration for IENs has yielded positive results. This approach improved the transparency in credentialing, standardized credential evaluation, and enhanced coordination between the immigration-credentialing requirements (NMBA, 2020). Reports showed that ANMAC received 9,914 applications from IENs pursuing migration in 2021-2022, with 93% (n=9,323) currently living and registered to practice in Australia (ANMAC, 2022, p. 33). Notably, 70% of these applications originated from India, Nepal, and the Philippines (ANMAC, 2021, p.35).

The system leaders in Canada must collaborate and align their policies to facilitate and support the IEN workforce and workplace integration and avoid delays and other outcomes (Paul et al., 2017; Singh & Sochan, 2010). A sustainable effort by federal and provincial systems to develop premigration processes that enable migrant nurses to secure successful registration and employment without delays is warranted. Improving communication and linkage between the Department of Immigration & Labor and nursing regulatory bodies was recommended to create

consistent policies and resolve policy discrepancies more than a decade ago (Singh & Sochan, 2010) while setting realistic expectations for IENs (Belita & Ford, 2021).

Various credential evaluation standards and policies exist across multiple nursing governing bodies in Canada, leading to less transparent, consistent, and accurate assessment processes (Walton-Roberts et al., 2014). Regulatory bodies must collaborate to establish national guidelines that enhance the transparency of registration, create a more standardized credentialing process, and better align the immigration-credentialing strategy between the immigration agencies and regulatory bodies in Canada (Singh & Sochan, 2010). Like Australia, IENs wishing to become registered in Canada can initiate credentialing processes before migration, such as applying for credential assessment by the nursing governing body and completing the NCLEX-RN® and English proficiency exams online (Singh & Sochan, 2010).

### **Limitations**

This scoping review was conducted systematically to map the existing literature on IEN integration processes since 2015, synthesizing findings and identifying research gaps. This review was limited to publications in the English language and studies published in or after 2015, since the change in the Canadian licensing examination. However, most of the publications included in this review (n=17) used data collected before 2015 and a few studies (n=7, 26%) used data collected in or after 2015 of these, three studies completed data collection in March 2015 or earlier. This lack of recent information restricts the ability to fully examine the impact of the new licensing exam implemented in 2015 on IEN transition experiences. However, findings from more recent studies suggest that problems reported in studies of IENs before the 2015 licensing examination change in Canada continue today.

### **Conclusion**

Recruiting IENs is an essential strategy to address nursing shortages and meet high demands within healthcare organizations. This review found a limited body of evidence describing IEN integration experiences, particularly following changes in the registration examination in Canada. Internationally educated nurses encounter multiple challenges when obtaining a RN license in Canada, impacting their success in joining the workforce. Challenges during resettlement often lead to decisions to abandon the registration process or seek secondary migration, due to the time and requirements necessary to become a RN. Current evidence suggests that policies and programs designed to facilitate the licensure of IENs in Canada exhibit limited success when compared to Australia. This review described and mapped out the integration trends for IENs from 2015 to the present time in Canada and Australia. Strategies that might improve the IEN integration rate in Canada were identified, and gaps in the literature were uncovered. Collaborative efforts among key stakeholders responsible for overseeing IENs are powerful and result in better IEN workplace integration in Australia compared to Canada. The changing demographic characteristics of IENs highlight the need to examine the most current demographic characteristics and other factors associated with successful workforce and workplace integration in Canada.

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### **CHAPTER THREE**

**TITLE: Sociodemographic Characteristics of Internationally Educated Nurses Associated with Successful Outcomes in Canada: Quantitative Analysis.**

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## **ABSTRACT**

### **Aims**

This article describes the sociodemographic characteristics of internationally educated nurses since the change in the registration examination in 2015. It aims to investigate the association between internationally educated nurses' sociodemographic characteristics and their successful integration into the nursing workforce in Canada.

### **Design**

Cross-sectional and secondary data survey questions

### **Methods**

This study adopts a cross-sectional and secondary data analysis, utilizing data from IENs who engaged with internationally educated nurse initiatives such as the Creating Access to Regulated Employment Centre for Internationally Educated Nurses (CARE) or initiated the registration process with the College of Nurses of Ontario (CNO) in 2015 and after.

### **Results**

There were 259 participants, with 155 participants from primary data collection and 104 participants from secondary data sources. Quantitative analysis reveals that most participants are females, under 40 years old, educated in English, and hold at least a bachelor's degree in nursing with 47.3% of internationally educated nurses migrated from India and the Philippines.

Significant associations were identified between internationally educated nurses having CARE membership and the currency of nursing practice and their successful outcomes.

### **Conclusion**



Recognizing and addressing the unique needs of IENs is essential for their successful integration into the Canadian healthcare workforce, thereby ensuring resilience and cultural competence in nursing for the future.

### **Implications for the Profession**

This analysis highlights the impact of sociodemographic characteristics of internationally educated nurses on their successful outcomes and underscores the diversity and richness they bring to the healthcare landscape. Since internationally educated nurses continue to experience challenges while integrating into the Canadian nursing workforce, these findings have substantial implications for nursing policy, practice, professional development, and research.

### **Reporting Method**

This report adhered to relevant EQUATOR guidelines based on the STROBE cross-sectional guidelines.

### **Patient or Public Contribution**

No patient or public contribution.

### **Keywords**

CNO, Sociodemographic Characteristics, Internationally Educated Nurse, Ontario, Quantitative Analysis, Secondary Analysis, Survey

## **1 INTRODUCTION**

The global demand for healthcare professionals, amplified by the COVID-19 pandemic, has led to a surge in internationally educated nurses (IENs) relocating to Canada resulting in an increased reliance on this workforce (Buchan et al., 2022; Covell et al., 2016; Walton-Roberts, 2023). However, the credentials assessment and registration processes can be long, frustrating, and costly (Altorjai & Batalova, 2017; Ramji & Etowa, 2014) leading to underutilization and downward mobility of IENs (Covell et al., 2022; Salami et al., 2018; Walton-Roberts, 2022). Registered IENs, especially those from countries with healthcare systems, cultures, and languages different from Canada, encounter additional hurdles (Covell et al., 2017). This quantitative analysis aims to: (a) describe the sociodemographic characteristics of IENs following the change in the registration examination in 2015, and (b) investigate the association between IEN sociodemographic characteristics and their successful integration into the Canadian healthcare system. The research questions are: (a) What are the sociodemographic attributes of IENs who arrived in Ontario and started the registration process in 2015 or later? and (b) Which sociodemographic attributes of IENs correlate with their registration success and employment attainment in Ontario? This survey was completed in May 2023 in Ontario, the province with the largest population and healthcare demands, having welcomed 42.3% of all newcomers to Canada in 2022 (Frank et al., 2023a; Singer, 2023).

## **2 BACKGROUND**

In recent years, there has been a notable surge in the migration of nurses (Buchan et al., 2022; Pressley et al., 2023). In Canada, various federal and provincial programs, including the Express Entry System and Provincial Nominee Programs, have facilitated the immigration of skilled migrants with healthcare qualifications (Government Canada, 2022; World Education Services,

2023). In 2021, nurses accounted for one-third (33%) of all internationally educated healthcare professionals (IEHPs) residing in Canada (Frank et al., 2023b) reflecting a significant increase in the number of IENs contributing to the Canadian healthcare workforce. Whereas currently, IENs comprise 10% of the Canadian nursing workforce (Canadian Institute for Health Information [CIHI], 2024).

Nurses aspiring to join the Canadian workforce must acquire licensure from the provincial or territorial nursing regulatory board (Canadian Nurses Association [CNA], 2024; College of Nurses of Ontario [CNO], 2023a). Each province and territory regulates the licensing of nurses within their jurisdiction. In Ontario, like most of Canada, the National Council of State Boards of Nursing (NCSBN) examination is utilized for registered nurse (RN) licensure. Internationally educated nurses encounter challenges during the registration process leading to delays in integrating into the workforce. These challenges include difficulties with credential recognition, meeting language proficiency requirements, passing licensure examinations, and financial constraints (Andriescu, 2018). Challenges such as these are not exclusive to IENs from developing countries but also, affect those from developed countries with healthcare systems akin to Canada's. Nurses from comparable cultural backgrounds may struggle to adapt to sociocultural practices in Canada (Bourgeault et al., 2010). The requirements and timeline (Appendix A) and cost (Appendix B) associated with the licensing process at the CNO differ for Canadian-educated nurses compared to IENs.

### **3 THE STUDY**

#### **3.1 Licensing process for IENs in Canada**

Internationally educated nurses are mandated to acquire licensure to practice in Ontario subject to several policies and guidelines governing the registration process. Across Canadian provinces,

excluding Quebec, IENs aiming for healthcare employment must undergo a foreign credentials assessment (Covell et al., 2022; NCSBN, 2018; Walton-Roberts, 2022). This assessment is designed to validate IEN credentials, assess their professional competencies, and determine the comparability of their educational programs with Canadian standards. In Ontario, these evaluations ensure that IENs fulfill entry-to-practice requirements stipulated by the CNO. Such requirements include approval of their nursing education program, English language proficiency, and recent safe nursing practice. All must be accomplished within 3 years preceding the completion of the registration application process (CNO, 2023b). Should the process extend beyond 3 years, the application may expire.

Several changes to the registration process and its requirements have been implemented to integrate IENs into the healthcare workforce while ensuring the safety of the public needing care. As of August 2014, the educational program assessment process was completed by the National Nursing Assessment Service [NNAS] (CNO, 2017), a process that may take 2–3 years to be completed. Once the assessment is completed, IENs are requested to register with the CNO. The IEN can then complete additional registration requirements, such as the National Council Licensure Examination for Registered Nurses (NCLEX-RN®). This exam became the approved licensure examination in 2015 for those seeking licensure in Ontario and other provinces (CNO, 2023b). In early April 2023, the examination was updated and renamed the Next Generation NCLEX (NGN) Exam to incorporate case studies that better reflect real-world nursing practice (CNO, 2023c). It is a requirement that IENs pass the licensure examination to complete the registration process. Initially, all applicants were permitted three attempts to pass the licensure examination and then in 2017, regulations changed, allowing applicants up to eight attempts per year (CNO, 2022a).

In March 2021, the CNO approved a regulation change concerning the process of evaluating IENs seeking registration in Ontario. Under this amendment, IENs who have passed the NCLEX-RN® Exam in another jurisdiction will fulfill the nursing education requirement. The successful completion of this examination confirms that IENs possess the necessary entry-level nursing education in Ontario (CNO, 2023d). Furthermore, since 2013, IENs must provide evidence of English language proficiency within 2 years before registration (CNO, 2023e). Most recently, in 2022, the CNO implemented the Modernized Applicant Assessments Project (MAAP), which introduced several changes to the registration requirements. The primary objective of this project is to ensure that the assessment process is conducted efficiently thereby enhancing the applicant experience by reducing delays in the assessment process and the waiting time for IENs to become registered (CNO, 2023f). Table 1 provides an overview of the timeline of changes in the MAAP, which significantly improved the number of registrations completed by July 31, 2022. Specifically, on June 29, 2022, a total of 3,967 IENs, an increase of 132% within 6 months, were registered with the CNO compared to the total registrations completed in the entirety of 2021 (CNO, 2022b). By July 31, 2022, the total number of registered IENs reached 4,728, surpassing the total number of registrants for the entire year of 2021 (CNO, 2022c). On October 1, 2022, 46% ( $n = 5,848$ ) of all new registrants with the CNO were IENs (CNO, 2022d). Subsequently, the Ontario government approved the implementation of Temporary Class Registration for IENs later that month, aiming to expedite their registration process (CNO, 2022e). From November 2022 to February 1, 2024, the total number of eligible IEN applicants for the Temporary Class was 2,723 compared to 123 Canadian applicants. During this period, 408 IENs were registered in the Temporary Class in contrast to 21 Canadian registrants (CNO,

2024a). Temporary Class Registration expires if IENs are unsuccessful in passing the registration examination on their second attempt (CNO, 2022e; 2024a).

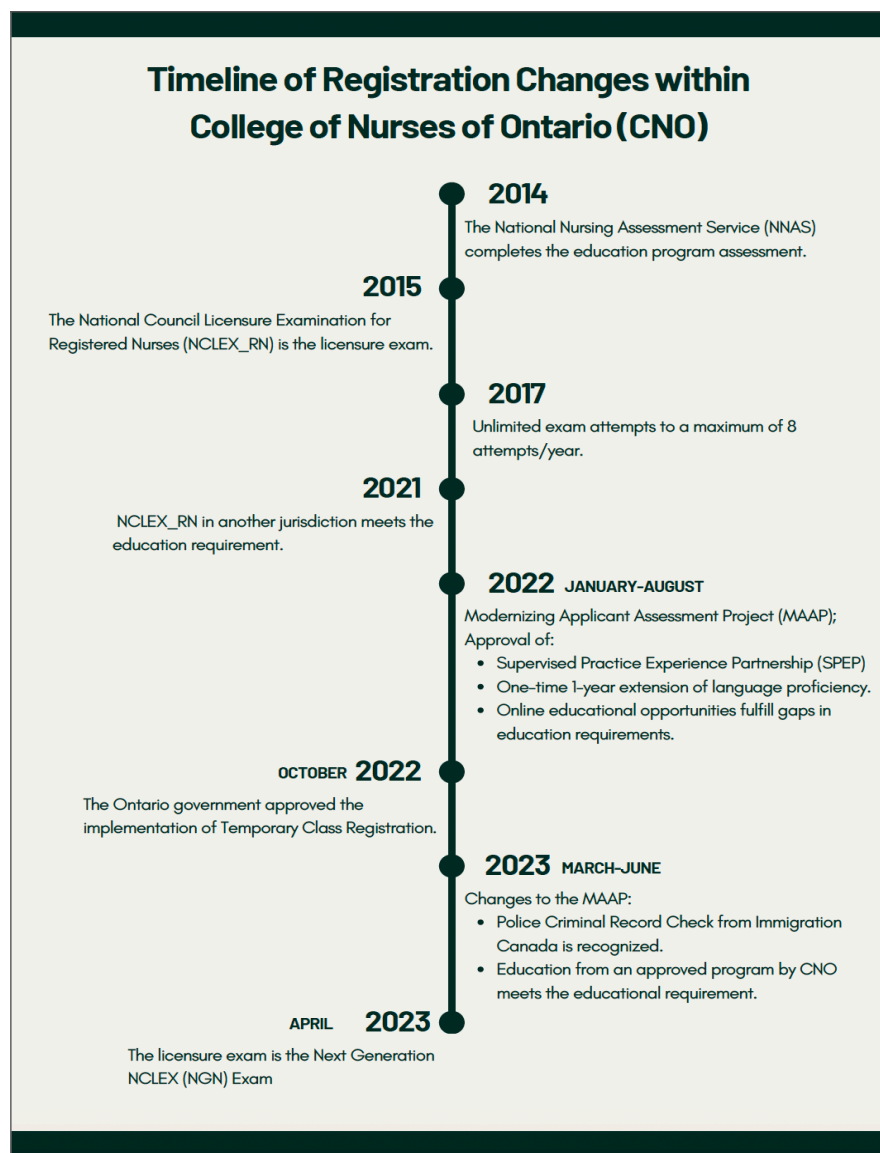
**TABLE 1.** Modernized Applicant Assessments Project changes timeline

Requirement	Date	Changes
Language proficiency	March 7, 2022	Approval of different options to meet the language proficiency requirement. <ol style="list-style-type: none"> <li>1. Practice experience in a healthcare or health-related setting wherein English is a primary language in or outside Canada, or completing a Supervised Practice Experience Partnership (SPEP) during the past 2 years;</li> <li>2. Nursing education; completing entry level nursing program in any jurisdiction in English within the past 2 years;</li> <li>3. Registration as a practicing nurse that is previously or currently held with CNO or in another Canadian jurisdiction; or</li> <li>4. Successful completion of a CNO approved language proficiency test e.g., Canadian English Language Benchmark Assessment for Nurses (CELBAN).</li> </ol>
Nursing education	August 15, 2022	Extension of language proficiency if language proficiency expires before securing registration, one time, one-year extension. CNO, in collaboration with Ontario schools and colleges, to offer nursing education programs and courses improving access to appropriate educational opportunities and fulfil gaps in IEN educational requirements. CNO approved some online education programs to meet entry-level competencies.
	June 13, 2023	Applicants will meet the education requirement if they complete relevant nursing education recognized or approved in any jurisdiction. Applicants also will be required to complete a course to support their successful integration into Ontario's healthcare system.
Evidence of practice	January 29, 2022	SPEP to facilitate ways that eligible IENs can meet evidence to practice requirements, offer IENs the opportunity to apply the CNO practice standards and/or satisfy language proficiency. A minimum of 140 hours of clinical practice are required to be successful in this partnership.

Police criminal record check	March 9, 2023	Recognizing the police criminal record check provided to Immigration Canada if they have remained in Canada since their immigration status was granted to reduce duplication.
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Figure 1 summarizes regulatory changes within the CNO from August 2014 to June 2023.



**FIGURE 1**

Regulatory changes within CNO from August 2014 to June 2023.

### **3.2 Significance**

Recognizing international credentials holds significant importance in facilitating IEN integration into the Canadian nursing workforce. Assessments conducted by NNAS, and other equivalency assessments, are instrumental in determining the compatibility of IEN education within Canadian standards. When IENs gain access to professional appointments aligned with their education and experience, they are more likely to be retained within the host country's healthcare system. This enhances professional development, fulfilment, and satisfaction, fostering better integration (Pressley et al., 2023). Understanding IENs' demographic characteristics, their professional experiences, the challenges they may encounter, and the factors influencing their success in obtaining registration and employment in Canada is important. This understanding enables stakeholders to develop programs to support the settlement, integration, and retention of IENs within the Canadian healthcare system.

### **3.3 Nursing initiatives for IENs in Ontario**

Ontario is the most populated province in Canada receiving over 40% of all immigrants to the country (Duarte, 2023). Additionally, it is home to almost half of all new internationally educated healthcare professionals (IEHPs) who migrated to Canada in 2021 (Frank et al., 2023a). To address the healthcare workforce shortage and support the integration of IEHPs into the Canadian workforce, the Government of Ontario implemented several initiatives. One such initiative is the Creating Access to Regulated Employment Centre for Internationally Educated Nurses (CARE Centre for IENs), hereafter referred to as CARE.

#### **3.3.1 CARE Centre for IENs**



CARE was funded by the Government of Ontario in 2001 to address healthcare human resources issues (CARE, 2019). In 2016, Immigration, Refugees and Citizenship Canada (IRCC) funded the Pre-Arrival Supports and Services (PASS) program. This program supports IENs who are migrating to Canada, assisting in expediting the professional registration process (CARE, 2023). Additionally, the Ministry of Labour, Training and Skills Development (MLTSD) Ontario allocates funding to CARE for the Supports, Training, and Access to Regulated-employment Services (STARS) Program (CARE, 2023). The STARS program supports IENs residing in Ontario by offering various services, including one-on-one case management, language and communication skills enhancement, examination preparation, professional development opportunities, and networking assistance (CARE, 2023). Moreover, the program facilitates connections between IENs and suitable additional education and training programs to help them fulfill the CNO requirements for registration (CNO, 2022f). The Conference Board of Canada Report (Kwansah et al., 2015) highlighted the significance of such an initiative for both IENs and the Canadian government. They reported a threefold greater return on investment for this initiative, demonstrating that registering and integrating IENs can be accomplished more efficiently and cost-effectively compared to delayed and complicated processes.

## **4 METHODS**

### **4.1 Design and questionnaire survey**

The original study plan involved secondary data analysis. However, an initial descriptive analysis revealed a significant number of missing observations in the identified dataset.

Therefore, a cross-sectional survey was developed and conducted among IENs enrolled in the PASS and/or STARS programs at CARE. This survey aimed to collect sociodemographic characteristics of IENs and assess their impact on IEN professional integration within healthcare

institutions in Ontario. Data collection involved utilizing potential participants' responses and an existing dataset that CARE compiled at the time of IEN enrollment. The survey instrument was designed based on research evidence and findings from a scoping review that mapped out IEN integration pathways in Canada since 2015 (Alostaz et al., 2024) and in consultation with CARE leaders. The survey was pilot-tested with experienced IENs and case managers at CARE to improve content quality, accuracy, reliability, and efficiency (In, 2017), and to inform planning, improvement, and modification of the main survey (Thabane et al., 2010). The survey comprised multiple-choice and open-ended questions-with the final version titled Internationally Educated Nurses' Questionnaire Survey (Appendix C).

#### **4.2 Sample and data collection**

The identified dataset comprised over 2,000 IENs/participants who had completed an intake form at the time of enrolment with CARE. However, initial descriptive analysis of this dataset revealed more than 80% of data entries had missing responses. Consequently, a new survey was developed to collect primary data from potential participants. Nurses were deemed eligible if they received their basic nursing education in a country other than Canada and aimed to become registered or work as a regulated nurse in Ontario, after changing the licensing examination in 2015. CARE administrative staff emailed information about the survey and a link to an online self-administered English questionnaire inviting IENs ( $n = 2,200$ ) to participate. Responses were collected anonymously from March 15, 2023, to May 9, 2023, with a reminder email sent every 2 weeks for 4 weeks. Despite these efforts, the response rate remained low at 4% ( $n = 90$ ) after 4 weeks (one round biweekly).

Subsequently, a third-round email was sent to encourage participation, featuring a draw for \$100 x 10 gift cards as incentives for completing the survey. Previously surveyed IENs were also

offered similar incentives. However, by the end of week 6 of data collection, only 159 questionnaires were completed yielding a response rate of 7%. To boost the sample size and improve the response rate, an anonymized dataset collected by CARE at the time of IEN enrolment was accessed and merged with the primary dataset. This collaboration involved the assistance of an information technology specialist and data analyst at CARE resulting in a total sample size of 259 IENs and an improved response rate of 11.8%.

### **4.3 Variables**

The primary dataset comprised sociodemographic characteristics of IENs who commenced the registration process in or after 2015, along with their registration and employment outcomes. The sociodemographic variables encompassed gender, age in years, marital status, and education level, among others (Appendix C). The questionnaire featured multiple-choice and open-ended questions; for instance, gender, a binomial categorical variable with 1 representing male and 2 representing female. Open-ended questions allowed participants to provide additional information where necessary. For example, IENs provided their “Country of Nursing Education” when selecting the option “Others.” Variables in this survey were measured as either nominal/ordinal or scale/interval. For example, the “Date of Arrival in Canada” was measured as a continuous variable, elicited through an open-ended question measured in years.

Several variables were collapsed into meaningful categories to mitigate the potential for unequal variance (Rutkowski et al., 2019). For instance, the IEN “Country of Origin” variable initially encompassed five categories: India, the Philippines, the USA, Australia, and other countries. Due to a limited number of observations in the USA and Australia categories (total of seven IENs), resulting in unbalanced participant distribution across categories and unequal variances, the

variable was collapsed into three categories: India, the Philippines, and other countries (where “Other” comprised Australia, the USA, and 52 other countries).

In addition, the variable “Date of Arrival in Canada” was recategorized to 0 = pre-COVID and 1 = post-COVID based on the announced state of emergency and lockdown in Ontario beginning March 17, 2020 (Long et al., 2023). A new column was created to accommodate this recategorization. Finally, a dependent variable was utilized to measure IEN’s successful workforce and workplace integration. Success was determined based on IEN responses to questions regarding their CNO RN/RPN status and job title. Internationally educated nurses were successful if their response indicated registration or employment as a RN, RPN, or both. Those who initiated the registration process within 3 years or less of completing the survey and had not achieved successful outcomes were classified as a “not yet successful” group. After merging the two datasets, the outcome was recategorized into three groups success: yes, no, or not yet successful.

#### **4.4 Data management and ethical considerations**

The primary and secondary datasets were anonymized, merged, and transferred to an Excel spreadsheet with assistance from a data management expert at CARE. Subsequently, the research team undertook cleaning and coding of the dataset which was then securely stored on a password-protected site described later. To ensure accuracy throughout this process, the research team completed descriptive statistical analyses to verify that the number of subjects in the dataset corresponded to the claimed availability and that data was not interrupted during the process of transfer (Doolan & Froelicher, 2009). Once verified, the coded dataset was imported into the required statistical software to commence the analysis.

Ethical approval for this analysis was obtained from the Hamilton Integrated Research Ethics Board (HiREB) on September 30, 2022, project ID #14965. The project and methodology were discussed with CARE leaders before commencing data collection, merging, and analysis processes. Following McMaster University and CARE guidelines, a confidentiality agreement was prepared, signed by the student researcher and principal investigator (PI), and submitted to CARE leaders to obtain permission to initiate data transfer. To safeguard sensitive information and protect participants' identifiable details, each participant was de-identified and assigned a unique study ID. This information was encrypted on a password-protected computer to prevent unauthorized access (Tripathy, 2013). The main dataset was stored in the Mac Secure cloud storage drive (MacDrive) at McMaster University.

#### **4.5 Data analysis**

The statistical software utilized for analysis included IBM® Statistical Package for the Social Sciences (IBM® SPSS) and R Package (O'Connor, 2020). Due to a high proportion of missing responses (> 70%), descriptive statistics such as frequencies, measures of central tendency, and dispersion were not computed. Consequently, continuous variables were excluded from the analysis, although complete observations were used to generate new meaningful variables. Logistic regression was employed to identify predictors, IEN sociodemographic characteristics, impacting IEN outcomes. To guide the process, the Andersen framework for secondary data analysis was utilized (Andersen et al., 2011). This framework consists of four main stages: identifying a secondary dataset, creating a personalized dataset, creating needed variables, and considering methodological and statistical implications.

##### **4.5.1 Identifying a secondary dataset**

The dataset compiled by CARE was identified as suitable for addressing the research questions. This dataset comprised de-identified information with participants assigned unique ID numbers. A data management expert at CARE helped understand survey codes, facilitated data merging, and ensured the removal of duplicates from the final dataset. This process initially resulted in 260 participants, with an additional duplicate identified and subsequently removed, resulting in a final dataset containing 259 participants. The primary data was collected through an anonymous online survey link emailed to IENs who began the registration process in January 2015 or later.

#### **4.5.2 Creating a personalized dataset**

In this stage, the project was organized by extracting meaningful variables, creating a codebook, and structuring the dataset (Andersen et al., 2011). Given that the final dataset contained more information than required, it was necessary to customize it to the study purpose. This involved focusing attention on variables used during the analysis process. The data-cleaning process was commenced by creating an online electronic file system for the main dataset obtained from CARE, the primary dataset, and merged datasets, which remained unchanged. Subsequent modifications to variables were conducted on working copies of the datasets. The process of combining, creating, and recoding variables to facilitate the desired statistical analysis was iterative. All working files were saved under the same name with a new date and version number assigned ensuring that the most current version could be identified, e.g., Dataset: version 1, August 2, 2023.

As part of the data management and coding processes, a data log summary was created to track decisions and actions taken, ensuring transparency and accountability. Additionally, a detailed master variable codebook was developed to document all variables comprehensively (Appendix D). This codebook included the identification and label for each variable, along with associated

numeric codes assigned for analysis purposes. The codebook helped identify and retain variables necessary for the analysis process while ensuring standardization of coding across the dataset. An expert statistician provided input and feedback throughout the coding and data management process to ensure accuracy and consistency. Descriptive statistical analysis was completed to verify the correctness of variable labels, appropriate definition of missing values codes, accuracy of the sample size, and consistency with the summary statistics. Lastly, the finalized dataset was saved into a file format compatible with statistical software programs enabling seamless importation of the dataset to complete the analysis process.

#### **4.5.3 Creating needed variables**

Composite and alternative variables were created from existing variables leading to additional variable(s) of interest and useful for data analysis. For instance, the variable “Date of Arrival in Canada” was transformed into “Pre- and Post-COVID” to investigate the impact of the pandemic on the outcomes. Consultation with CARE leaders confirmed that IENs enrolled in the PASS and STARS programs were also considered CARE members. Consequently, a new column labelled “CARE Membership” was created to merge those who indicated membership in these programs. This new column facilitated exploration of the impact of enrollment in CARE programs on IEN success. To ensure meaningful results from the analysis, adequate time was allowed for understanding the meaning of variables, how they were generated, and their intended use in the analysis process (Andersen et al., 2011). New information learned about the variables was added to the data log to ensure consistency and accuracy of data management and analysis.

#### **4.5.4 Considering methodological/statistical implications**

Addressing common methodological and statistical considerations is crucial in ensuring the robustness of the analysis process. One significant statistical consideration is managing missing

data and understanding how this issue may alter the outcome of the analysis (Andersen et al., 2011). Two popular and flexible approaches to handling missing data are multiple imputation (Mainzer et al., 2023; Zhang, 2016a) and complete case analysis (Zhang, 2016a; b). Multiple imputations involve substituting a value for a missing data point/observation whereas complete case analysis excludes cases with missing data. Initially, a frequency and descriptive statistical analysis was conducted to identify the percentage of missing observations/data points in each variable and outlier. The analysis revealed missingness ranging from 25–48%. It was assumed that incomplete data were missing completely at random (MCAR), and after confirming the assumptions for MCAR were met, multiple imputation approaches were employed to replace missing values.

#### **4.6 The goodness-of-fit test**

To ensure the reliability and reproducibility of the results, a rigorous model-building strategy was employed involving several cycles of variable selection, deletion, and model fitting and refitting (Zhang, 2016b). The following steps were implemented as part of this strategy:

##### **4.6.1 Step #1, Univariate analysis**

Selecting as few variables as possible is fundamental to the model-building strategy (Mizumoto, 2023; Zhang, 2016 b). A correlation coefficient analysis was completed to determine the association between IEN sociodemographic characteristics (binary and non-binary independent variables) and successful outcomes (binary-dependent variable). Specifically, tetrachoric and polychoric correlation coefficients were applied for binary and non-binary nominal variables, respectively. Variables with an absolute polychoric correlation coefficient below a cut-off value of 0.2 were eliminated to address multicollinearity issues (Zhang, 2016b). Consequently, the following variables with absolute values  $\geq 0.2$  were selected for the multicollinearity test: Age,



CARE Membership, Pre/Post COVID-19, Country of Nursing Education, Applied NNAS, and Practice Currency (Table 2).

**TABLE 2.** Independent variables selection process.

<b>Independent variables</b>	<b>Correlation with the outcome (Success)</b>
Age	-0.1971
CARE membership	-0.2979
Pre/Post COVID	0.5213
Country of nursing education	-0.2729
Education level	0.0881
Applied NNAS	-0.4264
Practice currency	-0.5700
Employment status	-0.0640

#### **4.6.2 Step #2, Interaction among covariates**

A multicollinearity test was completed between the selected IEN sociodemographic characteristics to explore potential interactions between all possible pairs of independent variables and dependency on one another (Zhang, 2016b). This step aimed to identify predictor variables with strong correlations, as indicated by an absolute correlation coefficient  $> 0.7$  (Dormann et al., 2013). During the analysis, multicollinearity was observed between the variables “Practice Currency” and “Pre/Post COVID,” with a correlation coefficient of -0.7198, exceeding the threshold of 0.7. Nevertheless, “Practice Currency” was deemed necessary for the analysis and retained in the final model due to its significant correlation with the outcome variable. Moreover, the variable “Applied NNAS” was logically considered a predictor for

overall success among IENs as achieving the outcome would not be possible without applying to the NNAS. Consequently, “Applied NNAS” was excluded from further analysis. Hence, the final selection of independent variables for subsequent analysis included Age, CARE Membership, Practice Currency, and Country of Nursing Education. These variables were deemed relevant and significant predictors for investigating the success of IENs.

#### 4.6.3 Step #3, Assessing goodness-of-fit of the model

In the final step, logistic regression was conducted between the selected IEN sociodemographic characteristics identified in step 2 and the success of IENs. Multiple imputations were utilized to handle missing data with statistical analysis performed on each imputed dataset. The results were then combined to obtain a consistent estimation of the target parameters (Mainzer et al., 2023). Various measures of fit were employed to evaluate the goodness-of-fit of the regression model. These measures included pseudo-R-squared measures, the relative importance of independent variables, the Hosmer-Lemeshow test, and Wald tests of Significance. By examining these measures, the suitability and effectiveness of the logistic regression model in predicting IEN success were evaluated.

The pseudo-R-squared measures were calculated, indicating that the IEN characteristics explain approximately 11–18% of the variability in successful outcomes (Table 3). This suggests that the model exhibits a moderate level of goodness-of-fit (Hemmert et al., 2018).

**TABLE 3.** Pseudo-R-squared results.

Type of R squared	R squared
McFadden’s R-squared	0.11
Maximum likelihood pseudo R-squared	0.13
Cragg and Uhler’s pseudo R-squared	0.18

The relative importance of the multiple predictor variables indicates that “Practice Currency” holds the highest relative importance value suggesting it is the strongest and most significant predictor in explaining IEN success (Mizumoto, 2023; Tonidandel & LeBreton, 2011). Following “Practice Currency,” “Age” and “CARE Membership” demonstrate significant importance in predicting IEN success albeit to a slightly lesser extent. Conversely, the variable “Country of Nursing Education” exhibits a comparatively lower influence on the model’s prediction than other variables indicating their lesser importance in determining IEN success.

Furthermore, the results of the Hosmer-Lemeshow test suggest that the model fits well. The  $p$  value is  $> 0.05$  indicating an acceptable model (Peng et al., 2002; Surjanovic & Loughin, 2023; Zhang, 2016b). This finding supports the notion that the logistic regression model effectively captures the relationship between the predictor and outcome variables, providing a reliable framework for predicting IEN success.

The statistical Wald Tests of Significance for individual predictor variables in the regression model suggest that the predictor variable “Practice Currency” is the most important predictor in the model and is statistically significant with  $p < 0.05$  ( $F = 4.17, p = 0.02$ ). Conversely, the other predictor variables, “Age,” “CARE Membership,” and “Country of Nursing Education” exhibit relatively low  $F$  values and high  $p$  values suggesting that their coefficients are not significantly different from zero. In other words, high  $p$  values highlight the limited significance of these variables in predicting successful outcomes (Table 4). Nevertheless, the reported  $F$  and  $p$  results are indicators before imputation.

**TABLE 4.** Wald tests of significance for individual independent variables.

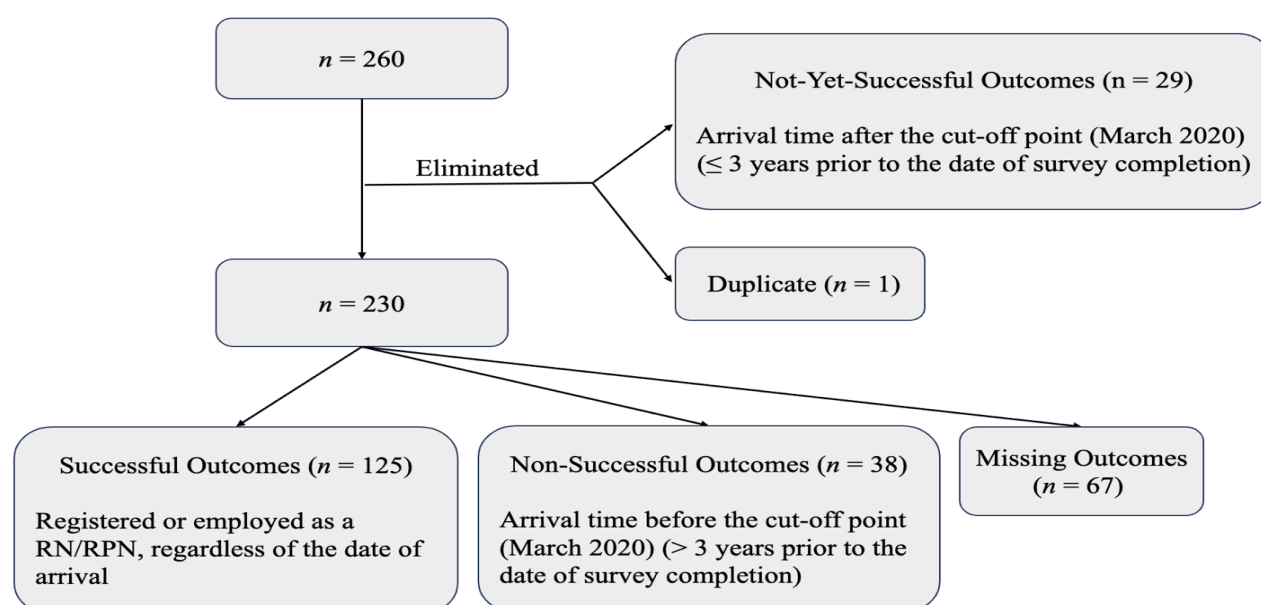
Variables for Wald test	$F$ value	$p$ value
Age	1.48	0.23

CARE membership	1.40	0.24
Practice currency	4.17	0.02
Country of nursing education	0.15	0.86

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## 5 RESULTS

This analysis defined success as when IENs obtain registration with the CNO as a RN, RPN, or both, or secure employment as a regulated nurse in Ontario ( $n = 125$ ). Conversely, an unsuccessful outcome was defined as exceeding the 3-year safe practice period without CNO registration ( $n = 38$ ) or unemployment. Participants with missing outcomes ( $n = 67$ ) were included in the analysis. Additionally, IENs ( $n = 29$ ) within the 3-year practice window but not yet initiated their registration application or were in the early stage since arrival in Canada were labelled as “not yet successful.” The not-yet-successful IENs were excluded from the analysis as they require additional observation, which is beyond the scope of this analysis (Figure 2).



**FIGURE 2**

Flowchart for defining successful outcomes.

The total sample comprised 259 IENs who migrated to Canada within the last decade and initiated their credential assessment process with the NNAS in or after 2015, since the change in the RN licensing examination. This sample comprises IENs who initially migrated to Ontario, with some later relocating to another province, which facilitated the collection of diverse demographic characteristics. The questionnaire data provided comprehensive insight into participants' sociodemographic characteristics, professional backgrounds, and registration and employment pathways.

## **5.1 Descriptive statistics**

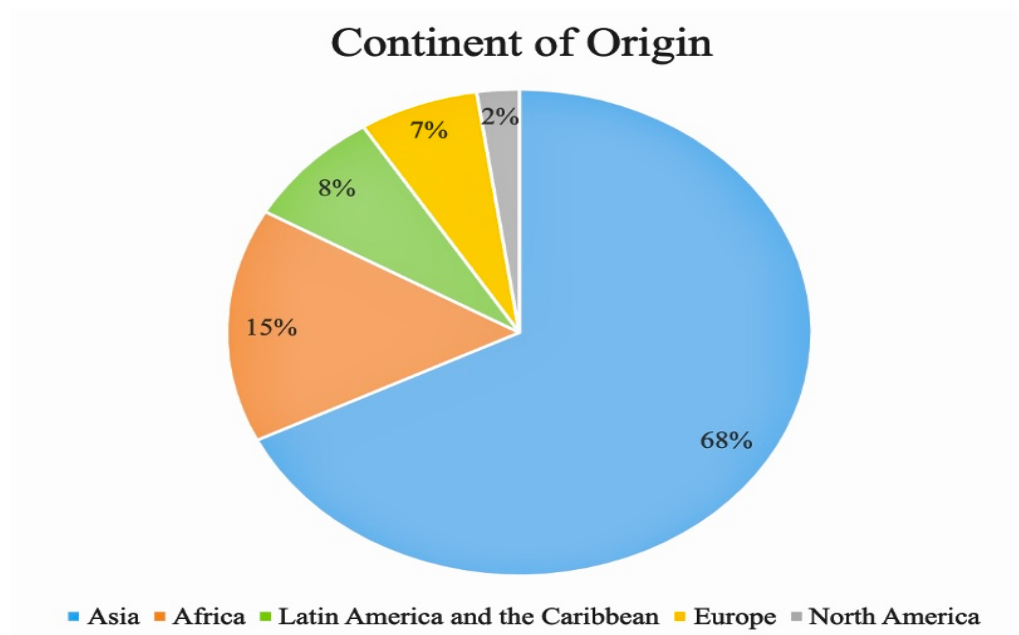
### **5.1.1 Demographic characteristics**

Descriptive statistical analysis was used to summarize the sociodemographic characteristics of IENs ( $n = 259$ ) and answer the following research question: *What are the sociodemographic attributes of IENs who arrived in Ontario and started the registration process in 2015 or later?*

These descriptions include variables such as age, gender, country of nursing education, and others (Appendix C & D). Measures of central tendency for continuous variables, frequencies for discrete variables, and measures of dispersion were not completed due to inaccurate date entries and significant proportions of missing observations ( $> 50\%$ ) (Daniel & Cross, 2013). Where suitable, tables and graphical representations were generated to summarize the dataset's characteristics.

A significant proportion of IENs in Ontario, constituting 54.7% ( $n = 135$ ), were aged between 31 and 40. The majority identified as female ( $n = 217$ , 85.1%) and were either married or in a common-law relationship ( $n = 152$ , 67.9%). Regarding CARE membership, 80.7% ( $n = 209$ ) of IENs were CARE members with 46.8% ( $n = 116$ ) joining CARE for  $> 3$  years since arriving in

Canada and a few joined before migration ( $n = 20$ , 8.1%). Additionally, over half of the respondents, 54.8% ( $n = 142$ ), immigrated to Canada before the onset of the COVID-19 pandemic restrictions on March 17, 2020. The Philippines ( $n = 66$ , 25%) and India ( $n = 56$ , 21.7%) remained the largest and primary source countries for IENs. In contrast, a significant proportion (52.7%) migrated from 52 other countries, including Australia, the USA, the UK, and various Asian and African countries (Figure 3).



**FIGURE 3**

IEN country of origin by continent ( $n = 257$ ).

English was the language of instruction in nurse education for a large majority 84.2% ( $n = 197$ ).

Regarding nursing experience, 66.9% ( $n = 162$ ) reported having < 11 years of nursing experience. Of the 85.8% ( $n = 204$ ) of IENs eligible to apply with the CNO, most (76.6%) migrated as permanent residents, 18.9% were Canadian citizens, and 4.6% were convention

refugees/refugee claimants ( $n = 8$ ). Educational attainment of IENs was notably high with 78.3% possessing at least 4 years of nursing education, and among these, 19.5% hold a graduate degree in nursing with a master's or PhD degree.

Over one-quarter of the sample ( $n = 65$ , 27.2%) sought dual registration applying for both RN and RPN licenses in Ontario. Meanwhile, 53.1% and 17.6 % applied for either RN or RPN, respectively, and only one participant (0.43%) abandoned the registration process. Most IENs (85.4%) had applied to NNAS by the time of survey completion. Additionally, 18.1% had already written their NCLEX RN in another jurisdiction before applying to NNAS in Canada. A notable proportion, 34.6% ( $n = 46$ ), exceeded the recommended safe-practice period ( $> 3$  years); of these, 30.4% surpassed the 5-year mark and became ineligible for the SPEP program initiated by the CNO in 2022. Only 2.5% of the total sample had never worked as a nurse.

For those who applied to become registered in Ontario, 3.4% of RN and 11% of RPN applicants received a report indicating their education was comparable with Canadian standards for RN or RPN registration. Conversely, 56.1% of RN and 8.2% of RPN applicants received an incomparable report necessitating additional training or education, including recertifying from a Canadian nursing program. Approximately half of the IENs, 65.1%, ( $n = 125$ ) secured registration with the CNO or were successful in obtaining employment, 19.8% were unsuccessful, and 15.1% were not yet successful in completing registration (Table 5).

**TABLE 5.** Descriptive statistics of IEN sociodemographic characteristics ( $n = 259$ ).

Variables and categories	<i>n</i> (%)
Age:	
20–30	30 (12.1)
31–40	135 (54.7)

41–50	61 (25.1)
> 50	20 (8.1)
Sex:	
Male	38 (14.9)
Female	217 (85.1)
Membership with CARE Centre:	
No	50 (19.3)
Yes	209 (80.7)
Highest level of education outside of Canada:	
College diploma (2–3 years)	56 (21.8)
University degree (4 years)	151 (58.8)
Graduate degree (Master's, PhD)	50 (19.5)
Arrival date in Canada relation to COVID:	
Pre-COVID	142 (71)
Post-COVID	58 (29)
Country of origin:	
Philippines	66 (25.6)
India	56 (21.7)
Others	136 (52.7)
Country of nursing education:	
Philippines	59 (24.9)
India	49 (20.7)
Others	129 (54.4)



Language of nursing education:

English	197 (84.2)
Other	37 (15.8)

What license did you apply for:

RN	127 (53.1)
RPN	42 (17.6)
Both	65 (27)
None	5 (2.1)

RN/RPN practice currency status:

< 3 years	87 (65.4)
3-5 years	32 (24.1)
> 5 years	14 (10.5)

NNAS assessment result (RN):

Comparable	5 (3.4)
Somewhat comparable	19 (12.8)
Not comparable	83 (56.1)
Not received	9 (6.1)
Not applicable	32 (21.6)

Success outcome:

No	38 (19.8)
Yes	125 (65.1)
Not yet successful	29 (15.1)

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## **5.2 Logistic regression**

Inferential statistical analysis was conducted to determine the associations between sociodemographic characteristics and successful outcomes among IENs in Ontario (Daniel & Cross, 2013; Park, 2013; Zhang, 2016). Logistic regression analysis was employed to address the research question: Which sociodemographic attributes of IENs correlate with their registration success and employment attainment in Ontario? This regression analysis aims to estimate the odds ratio, indicating how much more or less likely it is for an IEN with certain sociodemographic characteristics to experience successful outcomes (Daniel & Cross, 2013; Park, 2013). Significance levels, odds ratios and associated 95% confidence intervals (CI) were reported for all analyses.

### **5.2.1 Logistic regression pre-imputation results**

Participants within 3 years of the safe-period practice and who had recently initiated the registration process ( $n = 29$ ) were categorized as “not yet successful” and excluded from the analysis (Figure 2), resulting in a total sample of 230. A complete case analysis, conducted before dataset imputation ( $n = 163$ ) see Figure 2, revealed that IEN age, CARE membership, and country of nursing education do not significantly impact IEN success ( $p > 0.05$ ). Internationally educated nurses older than 40 had 47% lower odds of success compared to those aged 40 years or younger (OR = 0.53, 95% CI [0.18, 1.47]). Similarly, the odds of success among CARE members are 53% lower than among non-CARE members (OR = 0.0.47, 95% CI [0.12, 1.55]). Additionally, the odds of success for IENs who received their nursing education from countries, including India, are lower by 7% and 28%, respectively compared to IENs who received their nursing education from the Philippines (OR = 0.93 and 0.72, CI [0.0.19, 0.4.58] and [0.19, 2.57], respectively). Conversely, IENs with practice currency between 3–5 or greater than 5 years have

lower odds of success by 75% and 78%, respectively compared to IENs with a practice currency of fewer than 3 years (OR = 0.25, 0.22, and 95% CI [0.08, 0.70], [0.06, 0.83], respectively). This indicates that having a practice currency of  $\geq 3$  years significantly impacts the success of IENs ( $p < 0.05$ ). Table 6 presents the results for logistic regression before imputation.

**TABLE 6.** Logistic regression pre-imputation.

Variables	Estimate ( $\beta$ )	Odds ratio (95%CI <sup>a</sup> )	Pr <sup>b</sup> ( $> z $ )
(Intercept)	3.14	23.11 (3.01, 238.62)	0.00***
age2	-0.62	0.53 (0.18, 1.47)	0.22
care1	-0.75	0.47 (0.12, 1.55)	0.24
prac_curr2	-1.39	0.25 (0.08, 0.70)	0.01**
prac_curr3	-1.50	0.22 (0.06, 0.83)	0.03**
ctry_nedu2	-0.08	0.93 (0.19, 4.58)	0.92
ctry_nedu3	-0.32	0.72 (0.19, 2.57)	0.62

<sup>a</sup> Confidence Interval

<sup>b</sup> Probability ( $p$  values).

\*\* Statistically significant  $p$  value  $< 0.05$ .

### 5.2.2 Logistic regression post-imputation results

A statistical method, Multivariate Imputation by Chained Equations (MICE), was employed to handle missing data in the IEN dataset. The method combines the results of imputation to generate one final imputed dataset ( $n = 230$ ) see Figure 2. The results of the regression analysis from the imputed dataset were comparable to those before imputation as the age at which IENs migrated to Canada did not significantly impact their successful outcomes with odds of success for IENs older than 40 years being 12 % lower than those aged 40 or younger (OR = 0.88, 95% CI [0. 41, 1.90]). Similarly, the country of nursing education has no statistically significant effect

on their successful outcomes. The odds of success for IENs educated in India (22%) and countries other than the Philippines (39%) were lower than those educated in the Philippines (OR = 1.22 and OR = 0.61, 95% CI [0.43, 3.47] and [0.27, 1.36], respectively). Conversely, CARE membership has a statistically significant impact on the outcomes of IENs; the odds of success for CARE members are 72% less than non-CARE members (OR = 0.28, CI [0.11, 0.75]). Similarly, practice currency of 5 years and over has a statistically significant impact on the success of IENs; the odds of an IEN who exceeded 5 years of practice currency is 68% lower than IENs with < 3 years of practice currency (OR = 0.32, 95% CI [0.10, 0.99]). Table 7 shows the result of the logistic regression after imputing the dataset.

**TABLE 7.** Logistic regression results after imputation by R (with MICE package).

Variables	Estimate ( $\beta$ )	Odds ratio (95% CI <sup>a</sup> )	Pr <sup>b</sup> ( $> z $ )
(Intercept)	2.55	12.82 (2.39, 68.59)	0.00***
age2	-0.13	0.88 (0.41, 1.90)	0.74
care1	-1.26	0.28 (0.11, 0.75)	0.01**
prac_curr2	-0.78	0.46 (0.17, 1.24)	0.12
prac_curr3	-1.15	0.32 (0.10, 0.99)	0.05*
ctry_nedu2	-0.20	1.22 (0.43, 3.47)	0.71
ctry_nedu3	-0.50	0.61 (0.27, 1.36)	0.22

<sup>a</sup> Confidence Interval

<sup>b</sup> Probability ( $p$  values).

\*\*\* Statistically significant  $p$  value < 0.05.

To summarize, the logistic regression results before imputation suggest that IEN age, CARE membership, and country of nursing education were predictors that do not statistically significantly impact IEN success. However, practice currency has a statistically significant

impact on IEN's success. Results after imputation differ slightly suggesting that CARE membership and IEN practice currency exceeding 5 years are significant predictors of IEN successful outcomes ( $p < 0.05$ ).

## **6 DISCUSSION**

This analysis described the sociodemographic characteristics of IENs aspiring to become regulated nurses in Ontario after the 2015 licensing examination changes. The objectives were to describe the sociodemographic profile of IENs and identify predictors influencing their successful outcomes.

Like previous studies, this analysis underscores the predominant representation of IENs in Canada from countries such as the Philippines, India, and China (Covell et al., 2017; Lum & Vu, 2020; Organization for Economic Co-Operation and Development [OECD], 2019). Recent data from 2022 reveals a significant influx of new IEN registrants with the CNO originating primarily from India ( $n = 3,037$ , 59.3%) and the Philippines ( $n = 1,560$ , 30.4%), comprising 90% of all IEN registrants, followed by individuals from Nepal (2.1%), the USA (1.9%), and Nigeria (0.8%) (CNO, 2023g). Notably, some IENs secured Canadian citizenship while waiting to become registered, suggesting potential delays in their registration process. Findings from this analysis suggest delays in the registration process as a proportion of IENs (34.6%) were unsuccessful in becoming registered within the CNO's safe-practice period. It is posited that many IENs may be unfamiliar with the registration process (Salami et al., 2017) and face financial challenges (Covell et al., 2016). Consequently, some IENs resort to survival jobs, foregoing completion of the registration process or practicing their profession in Canada (Covell et al., 2015), choices that are likely to exacerbate downward professional mobility (Salami et al.,

2018) and underutilization of their nursing skills and expertise (Government of Canada, 2022; Lum & Vu, 2020).

## **6.1 Sociodemographic characteristics**

### **6.1.1 Gender and age**

This analysis provides insight into the sociodemographic landscape of IENs seeking regulation in Ontario amidst evolving licensing requirements and the COVID-19 pandemic. Notably, the sociodemographic composition of IENs is diverse, characterized by variations in gender, age distribution, and educational background in nursing. The findings indicate a substantial presence of female IENs migrating from diverse cultural backgrounds, particularly those aged 40 years and younger. This observation aligns with existing reports highlighting a predominant representation of females within the IEN cohort, with a significant proportion falling within the 25–44 age range, alongside a growing number aged 45–64 (Covell et al., 2017; Lum & Vu, 2020; Walton-Roberts, 2021).

Cornelissen (2021) further underscores the gender imbalance among migrant IENs, with females comprising a substantial majority (87%) while males constitute a minority (13%), with African-born IENs showing a higher proportion of male representation (approximately 60%). A recent report indicates that about 70% of IEHPs migrating to Canada between 2016 and 2021 were females with approximately two-thirds being younger than 50 years (Frank et al., 2023a).

Additionally, the average age of nurses registered with the CNO in 2022 has increased due to the growing influx of IEN registrants (CNO, 2023g).

The diverse age spectrum observed among migrant nurses reflects the varied career stages, potentially contributing to a dynamic nursing workforce in Ontario. The age distribution of IENs can influence their ability to adapt to the Canadian healthcare system. While older nurses bring

valuable experience and maturity to the nursing workforce, younger IENs potentially display greater adaptability to new environments (Baumann et al., 2021; Tan & Chin., 2023). Tailored support is crucial for integrating nurses of different ages into the Canadian healthcare system.

### **6.1.2 Country of origin**

Analysis indicates source countries like the Philippines, India, and Nigeria are significant contributors of IENs in Canada. Nurses from different source countries add to the cultural diversity of the nursing workforce, bringing professional skills and cultural competencies to the Canadian healthcare landscape, a finding that was reported elsewhere (CNO, 2023g; Frank et al., 2023b; Lum & Vu, 2020; Walton-Roberts, 2021). According to Frank et al. (2023a), 63% of IEHPs arriving in Canada in 2021 received their basic education in Asia, with an additional 11% in Western countries. Differences in healthcare systems and nursing education curricula between countries may present challenges for IENs in adapting to Canadian standards and practices (Belita & Ford, 2021; Chun Tie et al., 2019; Covell & Rolle Sands, 2021), potentially requiring additional education or training. The high representation of IENs from developing countries like India and the Philippines may be attributed to their high dependence on labor migration and remittance to support their domestic economies (Thompson & Walton-Roberts, 2019). These nurses may require additional support to facilitate their integration into the nursing workforce and ensure improved quality of nursing care (Philip et al., 2019).

### **6.1.3 Country of nursing education**

The majority of IENs in this dataset obtained their nursing education in Asia, particularly in India and the Philippines, consistent with findings reported by Frank et al. (2023a) who noted that over 60% of IEHPs in Canada were educated in Asia. In contrast, 11% were educated in Western countries with one-third of all IEHPs in Canada being nurses. Notably, IENs in the dataset also

received education from various African countries, southeast Europe, and elsewhere, replicating a trend observed in earlier studies (Covell et al., 2017). This diversity in source countries reflects ongoing nurse migration from developing to developed countries over decades (Hughes, 2022; Stokes & Iskander, 2021). The pandemic has heightened reliance on IENs to address increased healthcare demands, particularly in developed countries (Pressley et al., 2022; Shaffer et al., 2022). In Canada, despite high employment rates among IENs in the healthcare sector (69%), some provinces employ a significant proportion of them, such as Prince Edward Island (86%), Saskatchewan (80%), and Nova Scotia (79%); there remains a mismatch between their employment and training field (Frank et al., 2023a; b; OECD, 2019). This downward mobility reflects a mismatch between the health human resources policies and migration policies (Alostaz et al., 2024a; OECD, 2019).

#### **6.1.4 Level of nursing education**

Overall, IENs who migrated to Canada, especially after 2020, exhibit diverse educational backgrounds, often possessing advanced nursing education and extensive professional experiences. This trend aligns with previous reports (Government of Canada, 2022; Frank et al., 2023a; Lum & Vu, 2020; Pressley et al., 2023; World Education Services [WES], 2023) and findings from earlier years where 51.4% of IENs held at minimum a bachelor's degree and the majority (60.8%) had > 5 years of nursing experience (Covell et al., 2017). The Canadian immigration assessment process, which awards more points for postsecondary education, likely contributes to the observed higher education levels among IENs (Government of Canada, 2024). Moreover, IENs with bachelor's degrees or higher have the highest employment rates among IEHPs in Canada compared to other educational levels (Frank et al., 2023b).

#### **6.1.5 English language proficiency**



Findings from this analysis show that recently arrived IENs demonstrate proficiency in the English language is consistent with recent reports showing that 98% of IEHPs possess language skills in at least one of Canada's official languages (Covell et al., 2017; Frank et al., 2023a). This proficiency is primarily attributed to changes in the immigration selection process where language skills carry significant weight in the point system used to assess visa eligibility (Government of Canada, 2024). Language assessments, such as the International English Language Testing System (IELTS) or the Canadian English Language Proficiency Index Program (CELPIP), are integral to ensuring effective communication in healthcare settings. However, IENs with insufficient language skills may be challenged to pass language proficiency tests, highlighting the importance of language training programs and support (Belita & Ford, 2021; Chun Tie et al., 2019). Language proficiency established before migration results in better outcomes than post-migration language programs (Lum & Vu, 2020). Furthermore, IEHPs educated in English-speaking Western countries exhibit a high employment rate of 79.8% (Frank et al., 2023).

#### **6.1.6 Class of registration with the CNO**

The survey results suggest that most IENs in the dataset are registered in the RPN jurisdiction, aligning with current reports showing a significant number of IENs from India registered as RPNs in 2022; almost 2,000 out of 3,037 IENs were registered with the CNO as a RPN (CNO, 2023g). The higher growth rate of RPNs compared to RN rates reflects a shift to lower-cost healthcare providers with similar scope of practice (OECD, 2019). While many IENs applied for both RN and RPN registrations concurrently, most did not initially meet the requirements for RN registration and opted for RPN registration instead, consistent with findings elsewhere (CNO, 2023g). However, those with dual registrations benefited from the policy changes implemented

in 2022, which resulted in the highest proportion of nurses (60%) gaining additional registration— specifically RPN to RN—that year (CNO, 2023g). Recommendations advocate for continued implementation of policies and programs to expedite IEN registration and integration processes in Ontario (RNAO, 2023). Notably, while the odds of passing the Canadian NCLEX-RN Exam are generally higher for all IENs compared to the USA IEN applicants, those educated in the Philippines exhibit lower success rates compared to other IENs applying through the USA (Montegricon, 2021), despite some schools in the Philippines aligning their education curriculum with that in Canada and the USA (OECD, 2019). This suggests the need for structured programs tailored to address IENs' learning needs (Chun Tie et al., 2019) while considering their cultural and educational backgrounds (Rovito et al., 2022).

## **6.2 Sociodemographic characteristics impacting success**

While this analysis found that IEN gender and age at the time of migration were not statistically significant predictors of success, reports indicate that female nurses over 45 face a heightened risk of gender and age-related discrimination (Kagan & Melendez-Torres, 2015). Policymakers, including NNAS, are urged to consider these factors when developing support strategies and employment-related policies (Buchan et al., 2020). Employment rates were notably higher among middle-aged IEHPs (65.8%) with the youngest (18–29 years) and oldest groups exhibiting the lowest rates (Frank et al., 2023b). Age has been reported to impact successful workplace integration for IENs with younger individuals having higher language proficiency and a greater likelihood of success compared to older counterparts (Güven & Islam, 2015; Lum & Vu, 2020).

Approximately 95% of the sample received nursing education in English; logistic regression revealed no association between this factor and IENs' success. Contrary to findings in the

literature, IENs with English education or high proficiency were more likely to secure employment post-registration (Frank et al., 2023b; Lum & Vu, 2020). International nurses educated in North America or Western Europe secure employment faster (Ewodou, 2011), however, this analysis did not find such associations. Similarly, the timing of migration, whether pre- or post-COVID-19 pandemic, was not associated with IENs' successful outcomes, contradicting reports of record-high registrants with the CNO. This discrepancy may stem from incomplete registrations when completing the survey (not yet successful group) or inaccurately reported arrival times in Canada. Legislative changes, such as the MAAP (CNO, 2023f), have aimed to expedite integration processes, especially during heightened healthcare demand (CNO, 2022b). Additionally, factors like age, English language proficiency, pre-migration experiences, and post-migration social networks were reported to impact IEN outcomes, including employment success and workplace integration.

This analysis emphasized the impact of factors such as practice currency and CARE membership on IENs' successful outcomes. Understandably, IENs who complete registration requirements within 3 years of the safe-practice period tend to be more successful (Salami et al., 2018). However, CARE membership appears to have a contrasting effect with CARE-affiliated IENs being less successful than non-members. This could stem from unsuccessful IENs seeking additional support through CARE to navigate integration pathways in Ontario. Cornelissen (2021) found that many IENs cannot secure employment matching their qualifications, with over 50% working in positions requiring lower skill levels, highlighting potential mismatches between qualifications and job opportunities. Initiatives like CARE provide valuable assistance during workforce integration (Kwansah et al., 2015), offering IENs opportunities to meet CNO requirements and access professional programs and employment partnerships (CARE, 2022).

Additional information regarding the impact of CARE membership on successful outcomes for IENs will be available in a forthcoming publication.

## **7 RECOMMENDATIONS**

### **7.1 For practice**

It is essential that data collection by IEN initiatives, such as CARE, is conducted robustly and comprehensively to support future program planning, inform decision-making processes, and facilitate funding applications. Additionally, conducting follow-up assessments of IENs in the early stages of the registration process is necessary to evaluate the effectiveness of these initiatives and programs enabling continuous improvement and development. Furthermore, assessing the success of IENs currently applying for registration enables the evaluation of the effectiveness of changes in registration regulations, ensuring that policies align with the needs and challenges IENs face. Support programs, mentorship initiatives, and cultural competency training play crucial roles in facilitating the successful integration and professional advancement of IENs.

### **7.2 For policy**

Stakeholders and educators are encouraged to develop accessible bridging programs tailored to meet the learning needs of IENs and prepare them for seamless integration into the healthcare system (Walton-Roberts, 2022). Given the significant scale of nurse migration in recent years, collaboration among stakeholders, regulators, and healthcare institutions is essential to mitigate challenges faced by IENs and facilitate their timely integration into the Canadian healthcare system (Allostaz et al., 2024a; Buchan et al., 2022). This analysis underscores that IENs possess high levels of education and extensive experience, making them highly employable and poised to make invaluable contributions to the Canadian healthcare system and the diverse communities

they serve. Regular review of regulatory policies to facilitate expedited recognition of foreign credentials may help reduce delays and loss to ‘out of time.’ Employers and managers should ensure that IENs’ qualifications and previous clinical experiences are matched with the utilization of skills and expertise to improve IEN satisfaction (Andriescu, 2018).

### **7.3 For future research**

Despite efforts to expedite the registration process and implement migration programs aimed at supporting IENs in entering the nursing workforce, challenges persist during their integration into the Canadian nursing workforce (Frank et al., 2023b; Ramji & Etwo, 2018). Findings from this study suggest that examining the experiences of IENs as they navigate professional pathways in Ontario is crucial, identifying factors that influence their success to inform developing strategies to overcome integration challenges and difficulties. The findings from this analysis could enhance sources of support and funding for IENs during their workforce integration. Supports such as financial assistance with registration fees and access to bridging programs could significantly improve IEN integration into the Canadian healthcare system. Collectively, regular reviews of current legislation to ensure its effectiveness in expediting the registration process may help alleviate nursing shortages in Canada.

## **8 LIMITATIONS**

Since this study employed a one-time measurement of exposure and outcome, causal relationships cannot be conclusively determined from the cross-sectional analysis; such studies are susceptible to biases (Setia, 2016). Participants enrolled with CARE who remained within the safe-practice period in March 2023 were not followed up. This could have provided valuable insights into their integration pathways and the effectiveness of new legislation by the CNO and IEN initiatives. Additionally, the low response rate, along with substantial missing data and

inaccuracies in key continuous variables, may have introduced non-response (Fincham, 2008; Ramke et al., 2018) and information (Wang & Cheng, 2020) biases, thereby limiting the generalizability of the results. Furthermore, sample selection bias is a concern, as only migrant IENs enrolled in Ontario initiatives were invited to participate, potentially rendering the sample unrepresentative of all IENs who migrated to Canada after 2015. The data on IENs in this study pertains to nurses who emigrated to Canada specifically after the change in the licensing exam in 2015 and those who arrived during and after the COVID-19 pandemic, which strengthened the study and generated significant findings.

## **9 CONCLUSION**

Migration of IENs to Canada has significantly increased since 2015 providing essential support to the Canadian healthcare system facing ongoing shortages of healthcare professionals, particularly nurses. This analysis highlights sociodemographic characteristics such as age, gender, country of origin, and language proficiency among IENs seeking registration after 2015. These factors are associated with successful outcomes for IENs, including obtaining registration and securing employment in Canada. Addressing challenges related to sociodemographic disparities is crucial for facilitating a smooth transition for IENs and meeting the growing demand for healthcare professionals. Tailored orientation programs, language training, and recognition of international qualifications are essential to support IENs effectively. Additionally, promoting diversity and gender balance in the nursing profession can enhance healthcare delivery quality in Canada, benefiting both patients and the workforce. Although this analysis provides insights into IEN characteristics and their association with successful outcomes, further exploration of their experiences during integration into the Ontario healthcare system is necessary to inform targeted support programs and expedite settlement processes.

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### Appendix A: Internationally Educated Nurses Questionnaire Survey

Are you currently being supported by a Case Manager from CARE Centre?	(1) Yes (2) No Why (File Closed)
Membership date	(1) Pre-Arrival Support and Services Program _____ (2) Supports, Training, and Access to Regulated Employment Services Program _____ (3) Other Programs
How long have you been a member of Care Centre	Before arrival to Canada, (2) < 6months, (3) 1year -3 years, (4) More than 3 years
Age	(1) 20-30, (2) 31-40, (3) 41-50, (4) > 50
Gender	(1) Male (2) Female (3) Prefer not to disclose
Marital status	(1) Single, (2) Married, (3) Common Law, (4) Divorced, (5) Widowed, (6) Prefer not to disclose
Number of dependents	(1) None, (2) 1-2, (3) 3-5, (4) > 5
Country of origin	(1) Europe _____ (2) USA (3) Australia (4) India (5) Philippine _____ (6) Other
Immigration class	(1) Permanent Residence, (2) Convention Refugee/ Refugee Claimant, (3) Canadian Citizen, (4) Other _____
Date arrived in Canada	Month/ Year _____
Position/status pre-arrival to Canada	(1) RN: a. Direct Care/Primary Care b. Nursing Administration, c. Education d. Community Health e. Other _____ f. None (did not work as an RN) (2) RPN: a. Direct Care/Primary Care b. Nursing Administration,

	c. Education d. Community Health e. Other _____ f. None (did not work as an RN)
Highest level of education outside Canada	(1) College Diploma (2-3 years), (2) University Degree (4 years), (3) Graduate Degree (Master, Ph.D.), (4) Other
Highest level of education in Canada	(1) College Diploma (2-3 years), (2) University Degree (4 years), (3) Graduate Degree (Master, Ph.D.), (4) Other
Nursing education language	(1) English, (2) French, (3) Others specify _____
Country of nursing education	(1) Europe _____ (2) USA (3) Australia (4) India _____ (5) Philippines _____ (6) Other _____
Years of nursing experience (pre-migration)	(1) < 4 years, (2) 5-10 years, (3) 11-16 years, (4) 17-22 years, (5) 23- 28 years, (6) 29-33 years, (7) > 34 years
Last country of nursing experience/practice	(1) Europe _____ (2) USA (3) Australia (4) Asia _____ (5) Africa _____ (6) Other _____
Area of nursing experience	(1) General Adult, (2) Pediatric, (3) Critical Care (ICU, CCU, Transition Unit, NICU, PICU), (4) Operating Room, (5) Emergency Room, (6) Labour and Delivery, (7) Administration, (8) Education, (9) Community Public Health (10) Mental Health (11) Other
Province/territories of residence (If no longer CARE member)	(1) Alberta, (2) British Columbia, (3) Manitoba, (4) New Brunswick, (5) Newfoundland and Labrador, (6) Nova Scotia, (7) Ontario, (8) Prince Edward Island, (9) Quebec, (10) Saskatchewan, (11) Northwest Territories, (12) Nunavut, (13) Yukon
<b>For RN Applicants</b>	
Applied to NNAS for RN registration	(1) Yes (2) No (3) Others _____
Date of NNAS application	Month/Year _____
Date of NNAS report issued	Month/Year _____

NNAS assessment results RN	Comparable, (2) Somewhat Comparable, (3) Not Comparable, (4) Not received
Date of CNO advisory report issued	Month/Year _____
RN exam date	Month/Year _____
RN exam status	Completed/Pass [where: ( ) Canada, ( ) USA, ( ) Australia], (2) In progress, (3) Completed/Fail, (4) NA
RN exam result date	Month/Year _____
Member of CARE when wrote RN exam	(1) Yes, (2) No
RN practice currency status	< 3years, (2) 3- 5 Years, (3) >5
RN practice currency expiry (Safe practice period)	Month/Year _____
Completed all CNO RN requirements	Month/Year _____
CNO RN registration date	Month/Year _____
CNO RN status/update name	(1) RN, (2) More Document, (3) NCLEX RN Eligible, (4) Waiting Assessment, (5) Others specify
Applied to CNO as RN date	Month/Year _____
<b>For RPN Applicants</b>	
Applied to NNAS for RPN registration	(1) Yes (2) No (3) Others _____
Date of NNAS application	Month/Year _____
Date of NNAS report issued	Month/Year _____
NNAS assessment results RPN	Comparable, (2) Somewhat Comparable, (3) Not Comparable, (4) Not received
Date of CNO advisory report issued	Month/Year _____
RPN exam date	Month/Year _____
RPN exam status	(1) Completed/Pass [where: ( ) Canada, ( ) USA, ( ) Australia], (2) In progress, (3) Completed/Fail, (4) NA
RPN exam result date	(1) Month/Year _____
Member of CARE when wrote RPN exam	(2) Yes, (2) No
RPN practice currency status	< 3years, (2) 3- 5 Years, (3) >5
RPN practice currency expiry (Safe-practice period)	(1) Month/Year _____
Completed all CNO RPN requirements	Month/Year _____
CNO RPN registration date	Month/Year _____
CNO RPN status/update name	(1) RPN, (2) More Document, (3) NCLEX RPN Eligible, (4) Waiting Assessment, (5) Others specify
Applied to CNO as RPN date	Month/Year _____
Applied to NNAS for RPN registration	(1) Yes (2) No (3) Others _____

Date of NNAS application	Month/Year _____
<b>Post Registration and Employment</b>	
Are you satisfied with your current registration class with the CNO	(1) Yes (2) No Explain _____
Employment status	(1) Full Time, (2) Part time, (3) Casual, (4) Unemployed
Job title	(1) RN, (2) RPN, (3) PSW, (4) Unregulated Healthcare Professional, (5) Non-Nursing Profession/Career, (6) Others specify _____
Current area of clinical practice	(1) Same as before migration, (2) Different Specify _____
Preceptorship received	(1) Yes, if yes a) <3 months, b) 3-6 months, c) > 6 months (2) No Why not _____ (3) NA if has not started working yet/ no response
Would you like to participate on a <b>one-on-one interview to share your experiences?</b>	(1) Yes: Please provide your contact information, a research member will contact you Name _____ Email _____ Phone Number _____ (2) No
<b>Survey End Thank You for Your Participation</b>	

## CHAPTER FOUR

**TITLE: The Internationally Educated Nurses' (IENs') Workforce and Workplace Integration Experiences During the COVID-19 Pandemic in Ontario: A Qualitative Descriptive Study**

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## **Abstract**

**Background.** Integrating internationally educated nurses (IENs) into Ontario's healthcare workforce is crucial for addressing nurse shortages, meeting increasing healthcare demands, and ensuring quality patient care. However, internationally educated nurses face numerous challenges during integration. Little is known about their experiences since the registration examination changes in 2015 and the COVID-19 pandemic. This study aimed to understand and describe internationally educated nurses' experiences during their integration processes and the support needed to streamline them.

**Methods.** This study employed a qualitative description approach, using semi-structured one-on-one virtual interviews with twelve internationally educated nurses. Data collection and analysis were completed concurrently and informed by the Braun and Clark framework and the Transition Theory.

**Results.** Three main themes with twelve subthemes emerged from internationally educated nurse interview analyses: internationally educated nurse experiences pre-registration, experiences post-registration, and support and call for improvements.

**Conclusion.** This study highlighted the multifaceted challenges internationally educated nurses face when integrating into the Canadian healthcare system. Collaboration among all stakeholders, including internationally educated nurses, is required to overcome these challenges and facilitate the integration process.

**Keywords:** Experiences, healthcare workforce, integration, internationally educated nurse, workplace.

## **Introduction**

Canada faces healthcare workforce shortages exacerbated by the COVID-19 pandemic (Government of Canada, 2020; International Center on Nurse Migration [ICNM], 2020), with projections indicating it will worsen (Calenda et al., 2019). Pre-pandemic, a global shortage of 15 million healthcare workers (Liu et al., 2017), mainly nurses (Ma et al., 2020), was anticipated, including over 100,000 nurses in Canada by 2030 (Scheffler & Arnold, 2019). Contributing factors include aging staff and increasing retirement and/or attrition rates (Calenda et al., 2019). The pandemic also increased healthcare demands, leading to increased burnout among professionals (Maunder et al., 2021) and a crisis in health human resources (Government Canada, 2022).

Internationally educated nurses (IENs) could help with this shortage. Reports show that the employment percentage of IENs in Canada is low compared to other Organization for Economic Co-operation and Development (OECD) countries (Trines, 2018). Consequently, Canada will compete with other countries for qualified healthcare professionals. IENs face several challenges, including prolonged registration processes with Canadian nursing regulatory boards (Altorjai & Batalova, 2017) and difficulties integrating into healthcare facilities, despite existing preparation programs. Maximizing the potential of IENs is crucial given the predicted shortage (Blythe et al., 2009; Canadian Institute for Health Information [CIHI], 2021a).

This study explored and described IEN experiences and perceptions during their integration into the Canadian nursing workforce and workplace as registered nurses (RNs) and/or registered practical nurses (RPNs). Understanding these experiences is key to enhancing support programs for registration, employment, workplace integration, and retention of IENs in Canada. This study identified barriers and enablers for IEN's integration, providing insights for future

research. For consistency, “internationally educated nurses” (IENs) will refer to nurses who received their basic nursing degrees outside Canada (Ma et al., 2020).

## **Background**

Canada faces a healthcare workforce shortage, particularly in nursing, exacerbated by the COVID-19 pandemic (Government of Canada, 2022; Kwansah et al., 2015; Scheffler & Arnold, 2019). Nursing shortages are attributed to limited nursing graduates and an aging workforce (ICNM, 2020; Salsberg, 2018). Reports show a 2.7% decrease in new nursing graduates in 2022 (12,439) compared to 2021 (12,780) and a 1% increase in nursing program enrollments from 2020 to 2022 (Canadian Association of Schools of Nursing [CASN], 2023), suggesting ongoing nursing shortages.

Globally, one in six nurses is 55 or older, necessitating the training of over 4 million new nurses in the next decade to replace retirees (ICNM, 2020). In Canada, despite a 1.3% increase in RNs eligible to work in 2020, the number of RNs working in healthcare decreased by 1.5% from 2018-2019, while the population increased by 1.4% (CIHI, 2021a). Although the number of RPNs in acute care increased by 87% (CIHI, 2021a), their scope of practice is more limited compared to RNs. The retiring RN workforce exceeds the influx of new nurses, compounded by a growing aging population requiring complex care (Almost, 2021; Walton-Roberts, 2023).

Additionally, the increasing number of RNs becoming Nurse Practitioners (NPs) contributes to the shortage (Salsberg, 2018), with NP numbers growing by 10.7% compared to 2.5% for RNs and 1.1% for RPNs from 2021 to 2022 (CIHI, 2022a; b). The 2015 change in the licensure entry-to-practice exam, now provided by the National Council of State Boards of Nursing (NCSBN), has increased the mobility of Canadian graduates and reduced the RN pool in Canada as many seek employment abroad (Freeman et al., 2015).



## **Healthcare Complexities and Demands Amid COVID-19 Pandemic**

The COVID-19 pandemic has intensified workforce challenges, with hospital admissions and intensive care unit (ICU) stays highlighting the need for more RNs (CIHI, 2021b; 2022a; Cornelissen, 2021; ICNM, 2020; Maunder et al., 2021). In March 2021, 23% of hospital admissions involved ICU stays, with 60% requiring mechanical ventilation and 30% resulting in death (CIHI, 2021c). Ontario and Quebec reported the highest COVID-19 cases and death rates (Government of Canada, 2021).

The pandemic also led to a rise in COVID-19 cases among healthcare professionals, with reported cases tripling from 21,842 in July 2020 to 65,920 in January 2021 (CIHI, 2021d). Healthcare job vacancies increased by 80% in 2021, with a 164% rise in nursing vacancies in Ontario, resulting in more than 90 days of unfilled positions (Statistics Canada, 2022a; 2023). Burnout and increased workload prompted nearly 25% of nurses to consider leaving their jobs within three years (Statistics Canada, 2022b). The pandemic's long-term impact will continue to strain healthcare demands (Maunder et al., 2021), necessitating strategies for building workforce capacity and sustaining safe staffing levels, including funding for education, recruitment efforts, and retention initiatives (CIHI, 2022a).

## **Internationally Educated Nurses**

Internationally educated nurses (IENs), defined by NCSBN as nurses who completed their nursing education outside the country of employment (NCSBN, 2016), are a potential resource to address nursing shortages. Globally, IENs are among the most frequent worker groups that immigrate (Ma et al., 2020; Trines, 2018). In 2022, IENs comprised 12% of new nurses across Canada (CIHI, 2024), an increase (4%) over the last seven years, with higher proportions in Ontario (22%) and Nova Scotia (19%).

Statistics Canada reported that 250,000 internationally educated healthcare professionals (IEHPs) lived in Canada in 2021; about one-third were nurses, but many were not working in the healthcare sector (Frank et al., 2023). The report suggests that only 42% of IENs were employed as regulated nurses, while many held positions that did not match their training. Reports indicate that 70% of nursing aides and patient services associates were immigrants, with 45% of recent immigrants in these occupations holding at least a bachelor's, and 69% of these degree holders having a nursing degree (Turcotte & Savage, 2020). Many underemployed immigrants are located mainly in Toronto, Vancouver, and Calgary.

### **Trends of IEN Employment in OECD Countries**

Many OECD countries, including Canada, the UK, and Australia, face a predicted shortage of about 2.5 million RNs by 2030 (Scheffler & Arnold, 2019). In 2016, IENs made up a higher percentage of nurses employed in countries like Australia (23.3%) and New Zealand (26.7%) compared to Canada (7.7%) and the US (15%) (Trines, 2018). Migration trends indicate that many IENs have moved to countries like Australia (Chun Tie et al., 2019), which has seen a 93% registration rate among IENs who migrated in 2021-2022 (Australian Nursing & Midwifery Accreditation Council [ANMAC], 2022). This evidence suggests Canada is competing for IENs and needs to better integrate IENs to address workforce shortages.

### **Significance of the Study**

With an insufficient number of new nursing graduates to meet healthcare demands, especially during crises like COVID-19, it is crucial to improve integration policies for IENs. Existing studies highlight the importance of employing IENs to address nursing shortages, healthcare complexities, and increasing population diversity (Almost, 2021; Walton-Roberts, 2023). However, there is limited understanding of IENs' experiences with the registration and

integration processes, particularly following changes in registration requirements in 2015 and during the pandemic. This study generated knowledge relevant to these processes to improve the integration of IENs into the Canadian nursing workforce.

### **Problem Statement**

Canada is less successful in integrating IENs into the nursing workforce than other OECD countries, despite the need for talented professionals to address nursing shortages. Challenges in the RN registration process hinder IENs' practice in Canada, underutilizing their potential and limiting the effectiveness of IEN programs. The pandemic has highlighted the critical need for effective integration practices to support IENs and guide policy and program development.

### **Research Goals, Objectives, and Questions**

This study explored IENs' experiences integrating into the nursing workforce and programs needed to streamline their integration. The main objectives are to

- (a) Describe IENs' experiences during credential assessment processes since the licensure examination change in 2015 and during the COVID-19 pandemic.
- (b) Identify strengths and limitations of current licensure processes within the CNO and develop recommendations for future licensing beyond the pandemic.
- (c) Explore enablers for registration continuation, predictors of attrition from registration processes, and IENs' perceptions of their readiness to work independently after completing integration programs.

### **Research Questions**

#### ***Primary Research Question***

- What are the internationally educated nurses' workforce and workplace integration experiences during the COVID-19 pandemic in Ontario?

### ***Secondary Research Questions***

- What are the licensure pathways for IENs who migrated to Canada in or after the licensure examination change in 2015?
- How do IEN initiative programs in Ontario contribute to their successful integration?
- What are the professional integration experiences of IENs in Ontario?

### **Research Methods**

A qualitative description (QD) approach guided this study, collecting rich data to inform future policies and practices, potentially expediting the registration and integration processes (Sandelowski, 2000). This method is the most appropriate research method for gathering detailed information from IENs who experienced challenges during the registration and integration (Bradshaw et al., 2017), given the limited existing knowledge about these experiences.

### **Study Setting**

This research focused on integrating IENs into the Canadian nursing workforce, specifically in Ontario. The province provides diverse healthcare services, employing nurses in acute, long-term, community, and rural care settings (Ministry of Health and Long-Term Care, 2018). Ontario has the largest share of newcomer IENs and higher numbers of underemployed immigrant nurses, making it an ideal focus for this inquiry.

### **Sampling, Sample Size, and Recruitment**

#### **Eligibility Criteria**

Internationally educated nurses were eligible for participation if they: a) received their basic nursing education outside Canada; b) were RNs before migrating to Canada; c) are pursuing licensure to practice as an RN, RPN, or currently working as an RN or RPN within Ontario healthcare institutions; and d) can communicate in English. Internationally educated

nurses who are not eligible to apply for registration with the CNO and do not meet the above criteria were excluded.

### **Sampling Strategies**

A combination of purposeful sampling strategies was used to capture the variations in the integration experiences of IENs, including maximum variation, snowball, and theoretical sampling (Bradshaw et al., 2017; Colorafi & Evans, 2016; Palinkas et al., 2015; Sandelowski, 2000; 2010). *Maximum variation* sampling identified common and unique patterns among IENs with diverse characteristics (Palinkas et al., 2015; Patton, 1990; Sandelowski, 1995; 2010). *Snowball sampling* located key informants (IENs) with critical information about the phenomenon under study (Patton, 1990). *Theoretical sampling* allowed for the modification of interview guide questions and the inclusion of new, information-rich participants, increasing the study's sample size (Patton, 1990; Thorne, 2016; Thorne et al., 2004).

### **Sample Size**

Data saturation was achieved after conducting twelve interviews with IENs (Fusch & Ness, 2015; Lincoln & Guba, 1985). The recruitment process was continuously evaluated and stopped when informational redundancy was observed, indicating no new themes or information emerged from the further data collection and analysis (Thorne, 2016).

### **Recruitment Strategies**

Diverse strategies were employed to recruit participants. After receiving ethics approval from the Hamilton Integrated Research Ethics Board (HiREB), program leaders were contacted via email to arrange one-on-one meetings (Supporting information captions; S1 Appendix A). They received ethics approval, a study overview, and recruitment strategies, and discussed collaboration. Fifty IENs who completed a previous demographic survey (Alostaz et al., 2024b)

expressed interest and were contacted via email (Supporting information captions; S2 Appendix B), offering information, consent forms, and a demographic questionnaire (Supporting information captions; S3 Appendix C & S4 Appendix D).

### **Data Collection**

Data collection was conducted from June 2023 to November 2023, involving in-depth, semi-structured, one-on-one interviews with twelve IENs (Kim et al., 2017; Sandelowski, 2000). The IENs were recruited from various cities across Ontario, and virtual interviewing via video calls (Zoom and Microsoft Teams) facilitated geographic diversity and achieved maximum variation sampling.

### **Data Sources**

Semi-structured interviews facilitated in-depth exploration of IEN-constructed experiences, allowing comprehensive summaries (Roberts et al., 2019), and expanded discussion of emerging themes (Teodoro et al., 2018). Two tools were used: an interview guide and an IEN demographic questionnaire. The guide, featuring open-ended, questions (Supporting information captions; S5 Appendix E), providing flexibility (Kaushik & Walsh, 2019; McGrath et al., 2019), was refined after initial interviews. The demographic questionnaire included thirteen close-ended and three open-ended questions (Supporting information captions; S4 Appendix D). Completed questionnaires (n = 12) and signed consent forms were emailed to the researcher before the interview. Additional data sources, field notes, journals, and memos, enhanced future data collection and analysis (Phillippi & Lauderdale, 2018). Expert stakeholders were consulted to verify the study findings.

### **Interviews**

Participants received an information sheet and consent form when invited to participate. Interviews were scheduled approximately one week after the initial contact. Participants were informed that the interviews would take 40 minutes to one hour (Jacob & Furgerson, 2012). Three participants became emotionally upset, with one requesting a break. Ten interviews lasted 35 to 60 minutes, and two lasted 70 and 80 minutes, respectively.

Each interview commenced with an explanation of the study's purpose, participant rights, and confidentiality strategies. Participant signed their consent form electronically and permitted digital audio recordings of their interviews, with consent to recording noted on the consent form. A summary of themes was emailed to eleven IENs for confirmation (Birt et al., 2016); seven responses confirmed the generated themes without edits, and two IENs added minimal comments, which were included in the data analysis.

### **Data Analysis**

Immediately after each interview, audio recordings (n = 12) were transcribed verbatim by a professional transcriptionist and verified against the recordings by the researcher. One IEN recording, who did not consent to have their recording emailed, was transcribed and verified by the researcher. This verification enhanced understanding and initiated immersion in the data, facilitating the analysis (McGrath et al., 2019). Insights from early interviews informed ongoing data collection (Hunt, 2009). Field notes taken during interviews were added to each interview to support the analysis (Hunt, 2009).

### **Analysis Process**

Thematic analysis was utilized to explore IENs' integration experiences in detail (Vaismoradi et al., 2013). This approach identified patterns, analyzed, and reported themes within the data (Braun & Clarke, 2006). Braun and Clarke's conceptual framework guided and

supported "an insightful analysis" to answer the research question (2006, p.97). Constant comparative data analysis, an iterative approach aligning with thematic analysis (Kim et al., 2017), advances analysis through inductive reasoning (Thompson Burdine et al., 2020), allowing findings to emerge directly from raw data (Thorne et al., 2004). Data analysis continued until saturation was reached, with no new themes identified (Patton, 1990). Demographic questionnaires were summarized descriptively using Excel. Transcripts were manually coded to ensure immersion in the data (Seale, 2000).

### **Strategies to Promote Rigour and Enhancing Credibility**

In 1985, Lincoln and Guba suggested criteria for ensuring an inquiry's methodological rigour, validity, and trustworthiness of an inquiry: credibility, transferability, dependability, confirmability, and reliability.

### **Ethical Considerations**

This study received ethical approval from HiREB # 14965, guided by the Tri-Council Policy Statement (Tri-Council, 2022). IENs received study details via email, and informed consent was obtained after addressing their questions. Written consent was obtained before interviews, with ongoing consent verified throughout the interview. Participants agreed to one-on-one interviews, audio recordings, and member-checking.

### **Findings**

#### **Demographic Characteristics of IENs**

Twelve IENs completed and emailed their demographic questionnaire before their interview. Table 1 summarizes IENs' demographic characteristics. The analysis reveals that most nurses are aged 31 to 50 years (75%). The sample is predominantly female, with the majority being married and having one or two dependants. A significant proportion migrated from non-



English-speaking countries. Half hold at least a master's degree and the remaining have a baccalaureate degree.

Table 2 summarizes the professional characteristics of IEN. All IENs were RNs in their home countries, with experience ranging from novice to seasoned practitioners across various nursing specialties, including acute and critical care, primary care, mental health, education, and research. While all IENs applied to the National Nursing Assessment Service (NNAS), one abandoned their application with the CNO. Employment status varied, with 50% working as RNs, and others as personal support workers (PSWs) or unregulated healthcare professionals.

One-third of IENs received mentorship/preceptorship programs with up to four weeks of orientation, while 58.3% did not receive such support. Most migrated to Canada in or after 2019, with four who migrated earlier included in the study due to pursuing registration after 2015. The average wait time for advisory reports or successful registration was three years and four months, with a minimum of one year and three months and a maximum of 12 years.

### **IEN Professional Journeys in Ontario**

Participants discussed various aspects of their professional journeys, including migration, registration, and securing employment as regulated nurses in Ontario. The analysis identified three main themes: a) pre-registration experiences, b) post-registration experiences, and c) navigating support and a call for improvements. Table 3 summarizes themes and subthemes.

The themes and subthemes highlighted the multifaceted challenges IENs encountered during integration into the Canadian healthcare system. Each participant shared their educational and professional backgrounds (Table 4), showcasing diverse qualifications, experiences, and expertise. Some IENs hold multiple degrees, while others have various qualifications.

All IENs received non-comparable reports for RN registration, necessitating up to two years of additional courses to meet regulatory board requirements. IEN3 was affronted by their report, remarking, “I feel insulted .... to say that my education is not comparable to Canadian education.” Some IENs received non-comparable reports for both RN and RPN registration, requiring them to retake their nursing degree and, in two cases, their high school certificate, causing significant frustration. IEN5 said, “I finally got my reports, which were not comparable for RPN and RN; I was very frustrated... I need to go back to school.”

IEN10 and IEN11 were devastated by their reports; IEN10 stated, “NNAS sent a report saying my education was so below that of a new grad... they acted like I have no education.” IEN 11 added, “I have competency gaps and should retake another bachelor’s program... it was devastating. I ended up in a dead end without an equivalent education, needing to retake the NCLEX... some recommendations felt more like a money grab rather than helping.”

### **Theme I: Experiences Pre-registration Stage**

Experiences pre-registration formed three subthemes (Table 2), including immigration hurdles, regulatory hurdles, and determinations and resilience of IENs. These experiences underscore the need for policy reforms to make the process more accessible and equitable.

#### **Immigration Hurdles**

Participants shared difficulties they encountered during immigration. Many described immigration processes as bureaucratic; leading to delays in obtaining Canadian permanent residency (PR) and subsequently in their registration applications; IEN7 stated, “I put my process [registration] on hold as I also realized that my work visa was only valid for one year.”

Another IEN shared the time-consuming nature of paper-based correspondence rather than online, taking at least four months to receive necessary documents. This added frustration to an

already complicated immigration process. Adapting to life in a new country also proved challenging; IEN6 shared, “Immigrating into a new country.... very challenging... .. cultural, financial strains— made it hard to adjust.”

### **Regulatory Hurdles and Licencing Issues**

Participants reported several regulatory barriers to practicing as nurses in Ontario, categorized into five areas: credential evaluation challenges, communication and transparency issues, sources of information, COVID-19 impact, and financial constraints.

#### ***Credential Evaluation Challenges***

Participants encountered complex credential evaluations, financial constraints, and communication barriers with the regulators exacerbated by the pandemic. These challenges caused significant delays and professional setbacks, causing some IENs to consider alternative careers or registrations in other jurisdictions. Registration processes were described as overwhelming, nerve-racking, and emotionally draining: “It was hard and frustrating ... the application process was just draining. Nothing I did was enough... I couldn’t close the gap.... It was such an ordeal” <sup>1</sup>(IEN10). IEN7 summarized the experience,

It’s quite difficult. challenging... complicated... confusing. There’s no other way to go..... I had quite a challenge with NNAS. So, I will always remember this past as a nightmare. I don’t remember in my life possibly going through such a challenging time.

The time and financial commitments were also highlighted, with IEN2 stating, “It was very expensive ... I cannot afford... it took a long time,” IEN3 and IEN7 echoed this sentiment, sharing, “Too expensive for the NNAS.... NNAS was a nightmare.... 4 years just to complete this.... they take forever to give you an answer...” IEN12 shared the high cost of document notarization, and IEN10 expressed disillusionment with the lengthy process, stating: “I thought it

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<sup>1</sup> IENs 10 and 11 are from the USA.

would take a year. Well, it took 3½ years to get my license... nobody thought that... they [CNO] said everything's complete.... I swear I was crying.” Participant 11 regretted applying, stating, “Had I known... the criteria, I probably wouldn't have applied.” The complexity of the process exacerbated fear, stress, and uncertainty. Many IENs experienced delays despite applying pre-migration; IEN6 felt angry and mistreated:

I started the application.... before I migrated to Canada. And it took way too long... I had a really hard time pursuing this nursing career. .... I'm very angry and I felt... there was injustice at that time... it was unfair .... I wasted four precious years without any job ...

Despite these delays, IEN12 considered themselves fortunate compared to another colleague who faced even longer delays: “A friend... came five years ago.... it took her four years to become RN. Compared to them, I am lucky....” Conversely, three IENs found the regulatory board's application process smoother than the credentialing organizations; IEN2 felt the registration process timeline was shorter for new applicants than when they started in 2018.

Other IENs struggled with transferring credits and submitting documents, leading to application expirations. IEN10 noted the unclear registration forms the educational institutions and supervisors in their home country required assistance completing these forms and obtaining transcripts, causing further delays. Two IENs travelled to their home country to obtain registration forms.

Success in the licensing examination is a registration requirement, and IEN6 found it challenging, particularly before changes to the exam. IEN10 found the Internationally Educated Nurses Competency Assessment Program (IENCAP) exam intimidating and anxiety-inducing. English proficiency was also required, even for those from English-speaking countries; IEN10 expressed frustration:

I went to an English-speaking university, I'm from an English-speaking country, I only spoke English .... CNO said I had to take the test...I was beyond frustrated....

brimming... boiling over... angry, frustrated.... lots of times you just cry... I can't believe I have to go through this.... I'm taking an English test to prove that I am competent in English.

Meeting clinical practice equivalency was another challenge; IEN11, despite submitting work experience and reference letters, found their qualifications deemed inadequate:

“Competency gaps.... still inequivalent. That was devastating.” IEN10 frequently travelled to their countries to meet safe practice requirements: “I went back to US. In 2021, I worked for eight weeks.... Because I needed to do something as a nurse.”

This travel imposed personal and professional burdens, leading to uncertainties about their prospects; IEN11 stated, “I have a family to support. So, it has been a bit of a strain.... how does that look for citizenship?” One IEN encountered difficulties securing employment to obtain temporary license status; IEN12 stated, “CNO says come with a job offer, and we will give you a temporary class license... Most places ... ask for a Temporary class license and will give you a job.... it's like I am in a cycle...”

Many IENs perceived inequities and inconsistencies in Ontario's evaluation and registration processes, especially compared to provinces with expedited assessment. IEN9 questioned the feasibility and fairness of new legislation requiring credentialing organizations to complete evaluations within five days of receiving a complete application, stating: “It might be impossible... Why do I have to wait nine months? ... I don't feel good and don't see it works.... if it works, then it's not good what they have done to me?” Overall, IENs questioned the fairness of the evaluation and registration system; IEN5 stated, “I feel that my report is not accurate as it should be.... I did all these translations, and I feel that nobody looks at that.”

***The Impact of Delays.*** Delays in registration processes negatively impact IEN integration into the workforce, leading to application expirations, safe practice period lapses, abandonment

of registration efforts in Ontario, and downward mobility. Obtaining new paperwork proved to be time-consuming and challenging; IEN7 mentioned, “I had to renew documents ... it was a struggle; gathering paperwork.... took another three months.” Similarly, IEN6 experienced mounting frustration and depression after completing the licensing examinations only having received an application expiration notice.

Lapses in the safe practice period were common due to delays in receiving assessment reports, causing emotional distress. IENs, like IEN5, expressed concern about their eligibility for training programs due to a process extending over two years without communication: “I’m not sure if I will be ... eligible for the <sup>2</sup>SPEP Program... it has been over two years, and I haven’t heard anything.” Several participants travelled to their home countries to meet practice requirements; IEN6 shared, “I approached CNO again to start the process, but they said my practice evidence had expired.... I went back home to practice for 3 months.”

Licensing delays discouraged several IENs from pursuing nursing registration in Ontario and, in some cases, in Canada, prompting them to consider alternative career paths. For example, IEN4 viewed the process as a setback: “I felt the process was a setback for me... I felt frustrated... maybe I need to change my career and do something else... and I moved into research,” and IEN6 shared, “I was so desperate at that time... after almost 4 years, I gave up on my RN...” The complexities of the registration process also caused distress for IEN7: “I was getting fed up and discouraged about my application.... this seems impossible... I realized there’s nothing else I could do; I didn’t want to continue waiting... I would go back to school for a different type of education.”

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<sup>2</sup> Supervised Practice Experience Partnership launched by the CNO, offering applicants the option to complete a supervised practice experience in Ontario and overcome the clinical practice gap.

Most IENs found registration in the USA more facilitated and obtained registration to benefit from new credit transfer legislation in Ontario. Those who obtained RN registration in the USA planned to leave if the Canadian registration process yielded undesirable results: “If my transfer isn’t successful, I plan to work in the US... They welcome IENs... when I got my license... I received invitations from different agencies in the US, they are willing to process my visa.” (IEN1)

Exam failures and delays also led to pursuing RPN registration instead of RN. For example, IEN12 pursued RPN registration to stay connected to the profession, stating, “I will go for RPN in case I don’t clear RN exam... at least I will be in healthcare settings, observing how the system works ....” Reasons for this downward shift included having a backup plan, the ease of obtaining a RPN licence, and financial necessity; IEN1 explained, “As a backup plan... [I will] work as a RPN to support myself financially until I get my RN registration.... I had to do things I hadn’t planned on...,” IEN4 also disclosed, “I began the process because it was easier to get an RPN licence.”

Despite being highly educated, enrolling in the RPN program was challenging and competitive for IEN8, however, they viewed this as a learning opportunity. Many IENs worked as PSWs to earn income, gain Canadian experience, and meet the Canadian experience requirement. For some IENs, working as a PSW was motivating: “Working as a PSW... I have the consolation that one day I’ll work as a nurse in Canada.” (IEN9)

However, IEN1 struggled to secure a PSW job despite being highly qualified, stating, “Imagine that! I have a bachelor’s degree... yet they consider that not good enough for a PSW position...” For some, working as a PSW was demoralizing; IEN4 shared, “Working as a PSW was very difficult.... As an extra staff, I was told to clean wheelchairs the whole night shift....

that demoralized me.” IEN10 felt working as a PSW would diminish their self-worth. IEN11 refusing to become a PSW or RPN, chose to pursue advanced education: “I worked hard to become an RN and won’t settle for a PSW or RPN. I’m considering furthering my education and exploring other career options in Canada.”

### ***Communication and Transparency Issues***

Interviews revealed significant communication and transparency issues during registration. While some IENs faced minimal challenges, most expressed frustrations due to inadequate communication; IEN4 expressed, “The lack of communication, the back and forth, and the time it takes is frustrating.” Confusion due to unclear guidelines and timely information from regulatory boards and credentialing organizations was also reported; IEN2 noted, “There is miscommunication between the evaluator and the IENs. I don’t know why it takes more than 2 years.” Conversely, IEN7 had a more positive experience with the regulatory board: “CNO always answered my questions on the phone, and they were very helpful. I always found the information I needed.”

Many IENs faced delays in receiving responses from credentialing organizations; IEN7 stated, “You have to wait weeks for an answer if you’re lucky to get a hold of somebody,” and IEN10 struggled with the credentialing organization processes and requirements: “I could not figure out what to do. How could my education from an accredited program be so poorly transmitted? It was extremely frustrating.”

Updating application statuses also posed challenges; IEN9 shared, “A form had already been submitted, but NNAS said they were still expecting it. This caused delays.” IEN9 stated, “The same document was noted in two places. One I submitted, the other I didn’t, I called NNAS to reconcile my file.” Changes in legislation and registration requirements were insufficiently



communicated; IEN11 commented, “Communicating with the CNO was difficult. You’d expect them to send emails about changes and application status, but there was nothing.”

Poor communication among regulators and unclear requirements posed significant struggles, uncertainties, and frustrations among IENs from both English and non-English-speaking countries:

This took a lot of my time.... [sighs] I didn’t know where to go ... communication was not easy, and there were no answers. It was very frustrating. I was trying to find out from the CNO what would exactly meet the educational gap. If I took the <sup>3</sup>IENCAP, OSCE would that close the gap so I could get my licence? I had to get CNO to tell me definitively what I needed to do.... If I found it difficult, how would someone whose first language isn’t English manage? It [sighs] was beyond frustrating. (IEN10)

Navigating regulatory board and credentialing organization websites was challenging; IEN12 remarked “Navigation was very poor; some things are still unclear.” Even English speakers faced difficulties; IEN11 shared, “It’s difficult to find basic information. You must log into a website and hope you know specifically what you’re looking for... This is coming from someone who speaks English!” Difficulties in website navigation confused planning for their future: “What’s the next stage? I can’t plan anything. That is a big challenge, being able to plan anything ahead” (IEN3). In contrast, IEN9 found websites clear and organized, stating, “For me, it was very clear to navigate both websites and find the information. The process was nicely written there.”

Perceptions of transparency varied among IENs; IEN10 felt the process lacked transparency, stating, “Registration is not transparent at all.” IEN11 stated, “How can my

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<sup>3</sup> Touchstone Institute created the Internationally Educated Nurses Competency Assessment Program (IENCAP) in collaboration with the CNO, providing IENs who seek licensing in Ontario with an evaluation of their education, training, experiences, and proficiencies. If their education and training don’t meet the CNO standards, IEN will be required to take the IENCAP test (2019). The examination consists of two parts: a written, multiple-choice exam and an Objective Structured Clinical Examination [OSCE] (Touchstone Institute, 2019).

education not be equivalent? It's ludicrous... I found that interesting and disheartening at the same time." IEN9 shared their colleague's frustration, noting, "A US RN... went through NNAS. I feel it's outrageous.... shouldn't have to go through all the stress. She waited for 3 years before she was verified. She worked as a PSW." Conversely, IEN8 viewed the credentialing organization's transparency positively: "I think they are so transparent. No surprise...." Discrepancies in recognizing international qualifications led to feelings of injustice: "I finally got my reports.... CNO said I'm comparable for the RPN but for RN I have many gaps." (IEN5)

### ***Sources of Information***

Participants gained information about becoming registered in Canada from formal and informal sources. Some relied on direct communication with regulatory boards and credentialing organizations, which provided accurate but often difficult-to-navigate information. Others tapped into informal sources (e.g., friends and social media), which were easier to access but not necessarily reliable. For example, IEN10 benefited from advice from a friend involved in IEN initiatives, while IEN8 regretted following a friend's suggestion to pursue RPN registration instead of RN: "A professor advised not to start the NNAS process, saying it was wasting time and money. Start practical nursing, it is easier... this is my regret. I listened to her. It's sad."

### ***Impact of COVID-19***

Participants acknowledged the impact of the pandemic on their registration process, with experiences varying from expedited registration to additional challenges and delays. IEN7 noted that the pandemic positively impacted their registration: "COVID made a difference positively. It helped me with the process. Somehow it made it easier to complete my education." Similarly, IEN2 shared that the pandemic created employment opportunities, permitting IENs to work as PSWs without a Canadian certificate. IEN4 felt the pandemic expedited their application: "I only

got feedback because of COVID-19. The pandemic made them communicate because they were now in crisis,” making registration requirements much easier: “Especially COVID time made it 90 times easier.” (IEN6)

Conversely, the pandemic caused licensing exam deferrals; IEN10 shared, “CNO said you could take the <sup>4</sup>Touchstone IENCAP OSCE test. Now that was 2 years closed due to COVID.” IEN5 commented, “I think COVID didn’t help and that’s why I was receiving few emails from the NNAS. Everything slowed down, and that felt like forever.”

### ***Financial Constraints***

Financial limitations varied in severity and impacted IENs during registration. Many struggled to afford credential evaluation, licensing fees, and exams; IEN3 explained, “Fees are a major problem or a challenge for IENs. A lot of people delay having their application processed because they want to keep earning before they can afford to pay ... that’s a big delay.” Financial constraints, particularly, covering document translation costs, were significant for IEN5: “Translations cost a lot of money because it was many pages of transcripts. And it took a few months.”

Some IENs spent over \$3000 and, in some cases, up to \$8000 on various fees, including preparatory courses. Additionally, IENs incurred costs for document resubmissions if their documents expired before registration, sometimes including travel expenses. IEN12 paid notarization fees again: “NNAS said send me identification documents ... this is the second time

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<sup>4</sup> Touchstone Institute created the Internationally Educated Nurses Competency Assessment Program (IENCAP) in collaboration with the CNO, providing IENs who seek licensing in Ontario with an evaluation of their education, training, experiences, and proficiencies. If their education and training don’t meet the CNO standards, IEN will be required to take the IENCAP test. The examination consists of two parts: a written, multiple-choice exam and an Objective Structured Clinical Examination [OSCE] (Touchstone Institute, 2019).

... so I have to pay expenses twice for the same document to be notarized.” The credentialing application for IEN7 expired twice, necessitating renewal and additional fees.

Financial struggles forced many IENs to work in survival jobs while waiting for registration; IEN1 shared, “I worked as an Uber driver, pizza delivery, PSW. I was paid minimum wage as a PSW because I have no certificate,” and IEN10 shared, “I did something that was babysitting money.”

These jobs, including roles like restaurant kitchen help and recreation assistants, were taken to cover living costs and registration fees. Financial burdens were especially challenging for those with dependants; IEN12 elaborated, “I have two kids ... I’m a single parent... I have mouths to feed.” The need for work in lower-paying jobs exacerbated IEN stress and hindered their ability to focus on professional recertification. The lack of financial support programs exacerbated these burdens, forcing some IENs to rely on spouses, borrow from relatives, or use credit cards to manage their expenses. Church groups helped IEN4 to settle, explaining, “Through the church groups when I would tell them I need a place to stay, some would host me, and I would pay rent. So that helped me settle down.”

In contrast, three IENs had more financial stability, while they could afford registration fees, they found credential assessment fees expensive and lacking compassion; IEN10 stated, “I feel bad .... the people that put in the cost and then don’t get their licence in the end.” However, these IENs considered the fee paid to regulatory boards fair and reasonable: “I thought that the CNO charge the right amount of money for their services ... I found it fair.” (IEN 7)

### **Determinations and Resilience**

Despite numerous challenges and delays, IENs exhibited resilience and determination to pursue their nursing career in Canada. Determination was strongly evident in IEN10’s statement:

I want to work in nursing.... I had my goal focused.... I felt like I was on a rollercoaster with what I was doing... I kept pursuing registration... and not giving up .... This is what I know how to do.... what I'm good at...what I love... what all my education and life experience is. This is what I need to do.

Additional examples of determination include IENs, with extensive education and experience who were willing to retake high school exams to enroll in RPN programs. IEN9 explained:

I applied to [college]... they needed my high school result. I finished high school about 30 years ago.... I was to do English, physics, chemistry, and mathematics or something... But... I was told that if I had to start all over again, I'd be treated as a fresher, like somebody who has just finished school.

Working as PSWs in long-term care motivated some IENs to pursue RN registration, driven by their passion for providing healthcare. Conversely, refusing to work as a PSW or RPN motivated IEN10 to become an RN: "I kept going online... was there something I could do, I would come up empty. I want to pursue RN registration." Maintaining self-support was challenging; IEN7 explained, "I was able to keep myself positive most of the time. But that was a lot of work mentally, besides ... the struggles of being in a new country, not having any friends." Resilience was hard for IEN8: "I was getting depressed talking about registration.... that's how I was for so long. I would sit there and see negatives and then I would try hard to be positive ...." Some IENs aspired to further advance in nursing: "I am planning to start a post-graduate program.... I would like to do research".

## **Theme II: Experiences Post-registration Stage**

Interviews with IEN revealed significant difficulties following registration, with two prominent subthemes emerging: job-seeking and employment challenges, and cultural adaptation and recognition of experiences. These themes highlighted obstacles and adjustments IENs faced during workplace integration.

### **Job-seeking and Employment Challenges**

IENs encountered notable difficulties securing employment due to a lack of Canadian experience despite meeting the qualifications required by job postings; IEN1 explained, “I faced difficulties finding jobs in hospitals.... I was lucky to get this employment ... I’m the only IEN who was accepted... not everyone gets access easily... I don’t have any experience in Canada and that was the main obstacle.”

Despite multiple attempts, IENs 9 and 12 struggled to secure employment because of unmet requirements, such as driver’s licence; IEN9 explained, “It was not easy to get employment ... I submitted several applications ... I got a job... I needed a valid licence [driver]. As a newcomer, there’s no way I could have a licence... I lost this job.” However, some IENs secured employment, with Canadian experience not required; EN7 stated, “I submitted one application, and I got exactly what I wanted, and it was not a difficulty at all... did not ask for Canadian experience.”

Three IENs received limited support in résumé writing that met Canadian standards. IEN1 said, “I know someone in the hospital... a nurse, and she directed me how to write résumé according to their requirements.... no official support by agency, .... Informal connection,” and IEN3 secured employment via a friend “I started working in a clinic... But not through formal application, it was a friend of mine who recommended... who made it quite easy.”

### **Cultural Adaptation and Recognition of Experience**

Workplace culture is important for successful integration; IEN4 stated, “We should be willing to learn Canadian culture, workplace culture, and what your rights are.... can help IENs integrate.” Participants who secured employment did not receive cultural training; IEN1 noted, “I did not receive any cultural training.... I was lucky to [learn] about the Canadian culture through my social work study.” Many IENs acknowledged the importance of cultural competency

training for both IENs and employers; IEN7 explained, “This is the first time that I live in a multicultural country. So, I think some training.... preparation for the employers would be helpful for sure....” While IEN1 had a positive mentorship experience, they felt uncomfortable working with a novice preceptor: “My preceptor is younger than me with three years of experience ... I have more than 15 years ... it makes me uncomfortable... I don’t think they have the training to become a preceptor.”

Recognition of IENs’ prior education and experiences in Canadian institutions was also challenging. Some felt marginalized and treated as newly qualified nurses despite their extensive experience: “I get treated like a newly qualified nurse. And even if I said that I’ve worked for so many years.... it’s but you’re only here for a year in Canada so you’re like a newly qualified nurse” said IEN3. This sentiment was echoed by IEN9, who faced barriers limiting their ability to practice at their full capacity.

Some IENs received lower salaries than their Canadian counterparts with equivalent qualifications and experiences because they exceeded the safe practice window; IEN1 explained, “I am paid less than colleagues with similar qualifications and years of experience because they [employer] said I was hired after completing SPEP and I lost safe practice window. My contract said salary at employer’s discretion.”

Despite working in an inclusive environment, some IENs experienced societal stigmatization, evidenced by comments from some patients; IEN6 shared, “There were few patients.... say, oh, you have an accent.” IEN12 added, “She is an oriental nurse...a brown nurse,” and faced communication difficulties due to dialect differences, stating, “Patients don’t have faith in people from other countries....” Language barriers and cultural biases contributed

to feelings of isolation among IENs, impacting their professional integration and mental well-being; IEN12 said, “We feel alienated over here.”

Minimal managerial support was offered when IENs faced stigmatization; IEN4 explained, “One of the challenges I felt is if you shared with the manager the challenges, there was little that they could do. You manage it on your own ... Very little [support].... you need more emotional support.” Conversely, IEN9 and IEN10 felt well-supported; EN10 stated, “I think I was supported and welcomed well... because I was older... not younger, I was able to adapt and be confident to ask.”

### **Theme III: Navigating Support and Call for Improvements**

Interviews revealed a third theme: navigating sources of support to improve integration. This theme includes two subthemes: navigating support systems and calling for systematic improvements.

#### **Navigating Support Systems**

Participants valued formal support when navigating registration processes, securing employment, and integrating into the workplace. Many received assistance from IEN initiatives and organizations, mentors, settlement and social workers, and employment agencies. Informal networks, including friends and professionals from their home countries, also played a significant role.

Initiatives in Ontario, such as CARE, offered pre-employment services/support and workplace cultural training. Mentorships offered by CARE during registration were particularly helpful for IEN12: “My mentor guides me and gives me resources and preparations...The case manager [at CARE] helps me with the application they motivate me well.” Case managers offered emotional support, encouragement, and guidance. IEN7 noted the positive impact of their



case manager: “My case manager made a difference ... kept me positive. It was more like an emotional support.... It would be way more difficult mentally, psychologically, and emotionally if I didn’t have CARE.”

However, some IENs found formal programs added more complexity to the registration process. Some organizations seemed unaware of available resources and pressured IENs towards alternative career paths; IEN2 stated, “We were told we need to fill a gap in certain jobs but not nursing ... they’re telling me—it is very difficult, you cannot achieve registration easily,” while IEN8 questioned the value of IEN initiatives, stating, “What support are IEN initiatives giving? I don’t know if they’re beneficial! ... it's the same process, you must do the same thing, same journey and requirements.”

Résumé writing support was beneficial, as noted by IEN3: “CARE Centre helped me format my résumé to the Canadian format.” Employment services, funded by Workforce Ontario, helped IEN5 refine their résumé and initiate the registration process. Participants who did not enroll in IEN initiatives also acknowledged their value: “Had I enrolled in CARE, my life would be easier... I’d be an IEN who needs someone to guide them through this painful process.” (IEN2)

Informal networks were also crucial; IEN11 stated, “I have a lot of support from my colleagues, employer, manager, director, co-workers....” Families, friends, and church groups provided additional support; IEN4 stated, “I belonged to a spiritual group, they always encouraged me, family, friends, and colleagues, they were very supportive.” Social media groups were also helpful; IEN1 said, “I registered in different Facebook and WhatsApp groups to get more information about the registration process.”

### **Call for Systematic Improvements**

There was a clear call for systematic improvements to enhance integration and address systematic barriers. Suggestions focused on the pre-registration stage, expedited credentialing and registration, improved communication, comprehensive training programs, and enhanced support services.

***Pre-migration Stage.*** Applying for registration before arriving in Canada was suggested by IEN4 and IEN9 advised colleagues to apply before migrating: “If I had applied back home... registration may have been done by now ...If you want to come to Canada.... I’m suggesting that. So, they won’t... wait for so long.” IEN12 suggested applying for registration and immigration simultaneously and requested the immigration department provide more information on becoming registered in Canada: “People starting the immigration process should start side by side with the registration process.... <sup>5</sup>IRCC should give more information.”

***Streamlined Administrative Procedures and Accelerated Credential Evaluations.*** IENs suggested that stakeholders expedite the process by directly requesting documents from educational institutions in their home countries; IEN9 said, “Regulatory board must reach out to educational institutions directly...” IENs recommended increasing personnel at the regulatory board and credentialing organizations to improve communication with applicants and improve retention; IEN5 stated, “The process should be smoother that we [IENs] don’t have to go there [USA].” Participants also proposed adopting strategies from other provinces to streamline processes: “CNO can look at initiatives in British Columbia, New Brunswick, and Nova Scotia expediting process... I think it would be good,” (IEN7) while IEN9 and IEN12 recommended Canada borrow strategies from the UK, the USA or Australia.

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<sup>5</sup> IRCC Immigration, Refugees and Citizenship Canada

Additionally, IENs called for re-evaluating registration processes, improving international qualification evaluations, and addressing discrepancies. IEN10 suggested, “I am a horrible test taker.... you’re like shaking because you’re so nervous ... As if my English is going to change in two years.” In some cases, proof of the English language expires before securing registration, causing dissatisfaction. Reduced registration fees and extended safe practice periods were also requested.

***Greater Transparency in the Registration Process.*** IENs urged for clearer pathways and simplified requirements to reduce confusion and delays; IEN11 stated, “New guidelines should be clear and transparent.” Enhancing the accessibility of information on regulatory board and credentialing organization websites was also recommended; IEN3 explained, “The CNO website should have an easier-to-understand flowchart... So, it’s simplified... to get a full picture visually.”

***Improved Communication.*** IENs recommended better communication among stakeholders, providing clear guidelines to ensure IENs receive accurate and timely information: “Better communication between NNAS and the CNO,” said IEN1. Sending regular updates on application progress was also recommended. Collaboration between credentialing organizations and IEN initiatives was suggested to expedite IEN registration; IEN9 explained, “CARE and NNAS should work together.... they could post me to a place to work under supervision and provide monthly reports.... to NNAS. This expedites the NNAS report.” Utilizing digital communication to process documents faster was another suggestion.

***Comprehensive Training Programs for IENs.*** IENs recommended accessible training programs to support registration, including specialized English language programs and bridging

programs; IEN12 explained, “Proper English classes and ... resources..... should be provided. CNO should start bridging program.... to know the Canadian culture ...”

Well-structured mentorship, institutional orientation, and training programs were deemed crucial for workplace integration, including cultural competency, workplace-related procedures, role expectations, and specific healthcare practices, IEN1 summarized:

One of the challenges is knowing the health system.... nursing practice is similar everywhere. But the difference is policy/procedures here.... It’s difficult to involve IENs in the Canadian system without special training programs.... including cultural training and programs on policy/procedures, hospital equipment would be helpful.

***Enhanced Support Services.*** IENs highlighted the importance of financial assistance and improved support programs. They proposed loans or subsidies for registration and exam costs; IEN9 explained, “Allow IENs to apply for loans like those going to school and pay back once they start working.” Expanding funding for the existing IEN support programs and initiatives was also recommended. Settlement workers should receive education on how to support IENs best; IEN2 stated, “Support workers are not aware of how the system exactly works, how to help IENs.... it is essential for the federal government, institutions, to ensure everyone is familiar.”

Support programs and initiatives must be publicly and widely advertised to increase awareness about their services; IEN6 stated, “If CNO can have a link to these initiatives on their website for IENs ... or create a webpage for resources to support IENs.” Canadian experience requirement for securing employment should be evaluated; IEN3 shared, “If I want to apply for PSW jobs I can’t, because I don’t have Canadian experience and I need Canadian experience, but I can’t get hired.... It’s a cycle.”

## **Discussion**

Interviews were completed with 12 IENs, aiming to explore their experiences when integrating into Canadian healthcare since changing the registration examination in the year 2015. Thematic analysis of IEN interviews generated three themes and 12 subthemes.

### **IEN Professional Journeys in Ontario**

Three main themes emerged from data analysis: experiences pre-migration, experiences post-migration, and support and call for improvements. This study underscored multiple regulatory and systematic barriers limiting IENs' ability to practice to their fullest potential in Ontario. Addressing challenges within IEN integration and registration processes requires collaborative efforts from various stakeholders to create a more equitable and inclusive pathway.

#### **Theme I: Experiences Pre-Registration**

IENs bring their personal and professional experiences and circumstances that influence the specific obstacles they encounter and the strategies they employ to overcome them. This study highlighted multiple factors impacting IEN integration into the Canadian nursing workforce. These factors include migration issues, insufficient information about the host country, professional licensing, registration requirements and timeline, financial constraints, COVID-19 impact, lack of support systems, differences in clinical environment, role expectations, and language barriers.

#### **Immigration Hurdles**

The immigration process, coupled with the professional and personal challenges facing IENs, led to emotional and psychological stress and frustration. This highlights the importance of developing pre- and post-migration programs and resources (Berry, 1992). Pre-arrival online non-clinical education courses are recommended, providing sufficient information about Canada

and the host province and training IENs on strategies to facilitate their adaptation (Allostaz & Chen, 2024).

Education sources must also provide information about integration pathways, early registration, the Canadian healthcare system, and the roles of Canadian governmental health institutions; this can expedite IEN integration (Maddock et al., 2023; Rajpoot et al., 2024). Delays in obtaining PR impacted IEN registration and career progression, hindering their ability to enroll in additional education and training, paying higher tuition fees compared to PR holders, and limiting access to publicly-funded bridging programs (Flecker, 2022).

### **Regulatory Hurdles and Licensing Issues**

Participants in this study faced numerous regulatory challenges related to credential evaluation, communication and transparency, information sources, COVID-19 impacts, and financial constraints. Despite these obstacles, they were determined to pursue registration in Canada.

***Credential Evaluation Challenges.*** IENs faced many systematic barriers, including the lack of recognition of their foreign credentials and experiences. Consistent with existing literature (Högstedt et al., 2021; World Education Services [WES], 2022), IENs frequently report lengthy, complex, inconsistent, and costly procedures to verify their foreign credentials, resulting in employment delays, underemployment, or unemployment (Turcotte & Savage, 2020).

Focus group sessions with 25 IENs confirmed these issues, noting lengthy processing times and difficulty meeting registration requirements, often perceived as “an endless cycle” (Flecker, 2022). These difficulties significantly influenced IEN decisions regarding their professional future, consistent with current reports (Roth et al., 2022). Delays discouraged IENs from pursuing nursing registration in Ontario, with some seeking registration elsewhere or abandoning

the profession altogether. A significant number abandoned the registration process due to its complexities (Jeans et al., 2005).

Many IENs emphasized the importance of readiness before migrating to Canada (Nourpanah, 2019). Insufficient pre-arrival information on registration requirements, timeline, costs associated with recertification, and employment opportunities caused confusion, frustration, and integration delays. Similar findings were also reported in the literature (Joseph et al., 2022; Kamau et al., 2022; Philip et al., 2019).

During the pandemic, virtual registration formats enhanced IENs' ability to fulfill requirements before migration (Maddock et al., 2023). Tailored pre-arrival programs are crucial to meet IEN-specific needs (Ghazal et al., 2020; Iheduru-Anderson & Wahi, 2018). Programs like CARE's Pre-Arrival Supports and Services (PASS) program have been successful in familiarizing IENs with registration requirements before migration (CARE, 2019). Although extending support of these programs beyond four weeks post-arrival is recommended to enhance effectiveness (Maddock et al., 2023).

IENs often found that their expectations differed from the reality of the registration process, leading some to consider leaving the province, country or, in some cases, profession. Poor familiarity with cultural norms impacts IENs' integration, potentially leading to isolation and marginalization (Berry, 1992; Calenda et al., 2019). Participants expressed disappointment with the post-migration experience, a common theme in related studies (Calenda et al., 2019; Joseph et al., 2022; Kamau et al., 2022; Nourpanah, 2019; Philip et al., 2019).

This study found that IENs ( $n = 12$ ) received non-comparable assessment reports, revealing varied competency gaps regardless of their country of education or origin. Results from a cross-sectional study support this finding (Alostaz et al., 2024b), but contradict earlier research

indicating higher competency scores among IENs from the UK and USA compared to IENs from Asia (Nordstrom et al., 2018). Registration complexities arise from differing educational standards across jurisdictions, creating confusion and delays in recognizing foreign qualifications (Jeans et al., 2018). These challenges highlight the need for policy reforms to streamline IEN integration into the nursing workforce. Language preparation before migration is also recommended to expedite integration. Participants who received four months of pre-arrival language training and extra language courses post-arrival benefited significantly (Calenda et al., 2019).

One IEN faced difficulties obtaining Temporary Class eligibility from the CNO, which requires a job offer for a Temporary Class licence (CNO, 2022). This created a barrier because most employers require this licence before offering a job, creating a frustrating cycle for IENs. To address this, regulatory boards and employers should coordinate more effectively. Issuing provisional licenses, or allowing conditional job offers, could help break this cycle and facilitate smoother integration.

***Communication and Transparency Issues.*** Participants encountered varying levels of transparency from regulatory boards and assessment organizations, including unclear, insufficient, and inconsistent information. These communication issues complicated IENs' understanding of necessary steps, leading to significant frustrations and delays. Many IENs were unfamiliar with registration processes, which contributed to misunderstandings (Salami et al., 2017), particularly if information is not provided in plain language (Maddock et al., 2023). To address this issue, Sunnybrook Health Science Centre launched a new IEN Career Pathway initiative to overcome communication and transparency issues and support IENs in meeting CNO requirements (Sunnybrook Health Sciences Centre, 2024). This pathway also emphasizes



cultural integration, language proficiency, and skills development, supporting IENs to start their career successfully (Maddock et al., 2023).

Lack of transparency regarding credential evaluation criteria led to uncertainty about career progression for many IENs. Providing clear maps of registration requirements and timelines, progress updates, and clear feedback on gaps can enhance transparency. The requirement for evidence of safe practice during registration posed additional challenges (Baumann et al., 2024). To overcome this hurdle, the CNO launched the Supervised Practice Experience Partnership (SPEP) Project in 2022, offering clinical practice opportunities that allow IENs to meet practice requirements while gaining Canadian experience (CNO, 2024).

***Sources of Information.*** Participants utilized a blend of formal and informal networks, including websites, social media platforms, and word-of-mouth, to navigate registration requirements in Canada. Researchers acknowledged these sources vary in accuracy levels and recommended a central authoritative information hub to provide clear guidance on registration steps and inter-provincial differences (Maddock et al., 2023). This hub may help IENs make informed career decisions and improve the accuracy and consistency of information.

***Impact of COVID-19.*** The pandemic offered IENs certain advantages, such as expedited processes and additional employment opportunities, increasing reliance on IENs for meeting healthcare demands, which was also reported in the literature (Pressley et al., 2022; Shaffer et al., 2022). However, the pandemic also introduced significant delays and challenges for some IENs, particularly in accessing required exams and receiving timely communications. The impact of the pandemic on the ever-changing registration legislation was highlighted by most IENs, emphasizing the importance of developing adaptation processes to meet evolving needs during

challenging times. The timing of IEN migration, before or after the pandemic, was not correlated with successful outcomes of IENs; this result is supported elsewhere (Alostaz et al., 2024b).

***Financial Constraints.*** Participants identified financial burdens as a significant barrier, especially due to the added costs of living, relocation, recertification, and additional education, a finding echoed in related studies (Covell et al., 2016; WES, 2022). These financial burdens often force IENs to work in survival jobs or pursue other career options, underutilizing their professional skills (Government of Canada, 2022; Lee & Wojtiuk, 2021). Flecker (2022) reported that the low wages from survival jobs made it difficult for IENs to manage living expenses and cover the costs of additional courses.

Participants expressed frustration working as RPNs in Ontario, feeling overqualified, mirroring findings from other studies (Calenda et al., 2019; Salami et al., 2018). Conversely, although overqualified, some IENs were pleased working as RPNs because it provided a steady income, allowed them to cover registration costs, maintain professional ties, and support their families (Calenda et al., 2019).

Financial assistance programs, such as the <sup>6</sup>OBPAP, were implemented to offset the costs of training for IEHPs. This initiative offers IEHPs up to \$5000 assistance bursary, exemplifying a governmental commitment to relieving financial constraints that might hinder IENs from accessing necessary training programs (Ministry of Colleges and Universities, 2022). Additionally, tuition-free competency upgrade courses, introduced in January 2023, help IENs meet registration requirements (OntarioLearn, 2023). These courses are delivered online and are related to the theory component of nursing education, addressing specific competencies required

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<sup>6</sup> OBPAP Ontario Bridging Participant Assistance Program

by the CNO. Sessions and workshops to share information about these programs are crucial, raising IEN awareness about these existing support programs and enhancing their accessibility.

### **Determinations and Resilience**

This subtheme highlighted IENs' determination and commitment to overcome challenges to achieve their goals. Despite being highly qualified, IENs often retake exams and accept auxiliary positions to remain in healthcare roles. Policymakers should better utilize IEN skills and expertise by reducing barriers, enhancing bridging programs, and supporting IEN's emotional and mental health. Reducing systematic and administrative barriers to foreign credential recognition; developing, implementing, and testing credentialing recognition systems; and providing IENs with Canadian work experience is crucial to successfully integrating IENs into Canadian healthcare (Employment and Social Development Canada [ESDC], 2022).

## **Theme II: Experiences Post-registration**

The experiences of IEN post-registration highlighted significant challenges, specifically when securing employment and integrating into the workplace culture. Systematic barriers and stigmatization impact IEN professional integration and well-being.

### **Job-seeking and Employment Challenges**

The study findings highlighted significant job-seeking and employment challenges attributed to a lack of Canadian work experience, a challenge reported by other researchers (Covell et al., 2017; Neiterman & Bourgeault, 2015). Internationally educated nurses often struggled to find employment that matched their field of expertise, with many employed in jobs below their skill level or even outside the nursing field. Matching IENs with potential employers in Ontario has proven effective in integrating IENs. A strategy developed to match job-ready IENs with healthcare employers has successfully increased employer awareness of the benefits

of diversifying the workplace (Baumann et al., 2021). Addressing barriers such as hiring biases and a lack of understanding of IENs' contributions to the Canadian system is critical.

Lack of formal support in résumé writing to meet Canadian standards was a frequently reported issue by IENs with some relying on informal support. This lack of guidance significantly limits the opportunities for IENs to secure employment matching their skills and experiences. These challenges can be addressed through targeted support services, policy changes, and enhanced networking opportunities to improve employment prospects for IENs. Additionally, better support, structured training programs, and professional recognition could improve workplace integration.

### **Cultural Adaptation and Recognition of Experience**

Participants encountered significant challenges integrating into the workforce due to differences between the new healthcare system and their previous experience. This study identified several multidimensional challenges for IENs working abroad, which align with existing literature. These challenges include cultural differences, variations in technology, patient care practices, role expectations, healthcare policies, and stigmatization (Altorjai & Batalova, 2017; Balante et al., 2021; Cornelissen, 2021; Ghazal et al., 2020).

***Cultural Adaptation.*** Interviews with IENs revealed barriers to cultural adaptation, emphasizing the need to recognize and address potential obstacles and develop effective strategies. Adapting to cultural norms and workplace practices in the host country is crucial but can be stressful (Balante et al., 2021; Chun Tie et al., 2019; Ghazal et al., 2020; Högstedt et al., 2021; Iheduru-Anderson & Wahi, 2018; Pawlak, 2021). This stress often leads to isolation and impacts acculturation and job satisfaction (Balante et al., 2021).

***Inequities and Discrimination.*** Significant salary disparities exist between IENs and their Canadian counterparts. Pay inequities and treating IENs as newly graduated nurses despite their extensive experiences undermine their skills and expertise, discouraging qualified nurses from contributing to the Canadian healthcare system. This highlights the need for supportive workplace environments and standardized salary guidelines for IENs (Rajpoot et al., 2024). Collaborative efforts from employers and regulators are crucial to creating supportive integration pathways, promoting equity, retaining expertise, and strengthening the nursing workforce.

Some IENs experienced discrimination and a lack of support in workplaces, delaying their integration and career advancement, an issue reported elsewhere (Flecker, 2022). Discrimination remains a crucial workplace issue, and its impact is well documented (Covell et al., 2017; Moyce et al., 2016). If not appropriately addressed, it can impact IEN productivity, patient care, and integration (Zanjani et al., 2021), affecting their confidence, social life, and job satisfaction (Brunton et al., 2019). Organizational efforts to eliminate discrimination are necessary to prevent IEN isolation and marginalization, (Berry, 1992; Chin et al., 2019; Zanjani et al., 2021).

Language barriers and cultural biases contributed to feelings of isolation and alienation among IENs, impacting their integration and mental well-being. These feelings potentially lead to lower job satisfaction and increased attrition among IENs. Comprehensive language training programs addressing specific communication and cultural contexts are recommended (Flecker, 2022; Ghazal et al., 2020; Rajpoot et al., 2024).

***Institutional Support and Inclusivity.*** Diverse and inclusive workplace environments enhance IEN professional performance, well-being, and retention by making them feel valued and welcomed. Poor recognition of IEN competencies lead to professional hurdles, feelings of being undervalued (Högstedt et al., 2021; Iheduru-Anderson & Wahi, 2018; Nortvedt et al.,

2020; Salami et al., 2018), isolation, discrimination (Alostaz & Chen, 2024; Berry, 1992; Ghazal et al., 2020; Iheduru-Anderson & Wahi, 2018), and deskilling (Calenda et al., 2019, Kamau et al., 2022), often resulting in IENs working in long-term care (LTC) as PSWs and RPNs.

Inclusive environments can be fostered through cultural competency training and cross-cultural awareness, improving IEN integration and retention (Balante et al., 2021; Kamau et al., 2022; Rajpoot et al., 2024). Employer orientation programs should teach institutional and cultural norms while respecting IEN's previous cultural backgrounds and skills (Alostaz & Chen, 2024; Berry, 1992). Open dialogue on cultural diversity and inclusion is essential for reducing biases and improving team dynamics, consequently, benefiting the healthcare system (Philip et al., 2019; Joseph et al., 2022).

Mutual cultural learning is crucial as IENs often feel pressured to adapt to the dominant culture (Kamau et al., 2022). Achieving cultural pluralism requires a mutual understanding of cultural disparities between IENs and Canadian nurses (Alexander et al., 2020; Balante et al., 2021; Rovito et al., 2022; Sam & Berry, 2010). Organizational support for multiculturalism promotes cultural sensitivity and knowledge (Javanmard et al., 2017).

Organizational integration involves overcoming intra-organizational challenges and socializing within the organization (Ramji & Etowa, 2018). While integration is a long-term process, the initial stages are crucial for IENs' sense of belonging and long-term retention (Aderiye, 2022; Kamau et al., 2022). Cultural belonging, communication, and practical adaptation processes improve relationships among nurses, healthcare organizations, and society, positively affecting IENs' work and social life (Calenda et al., 2019; Covell & Rolle Sands, 2021; Roth et al., 2022). Studies underscore the importance of orientation programs, language

and cultural training, safe work environments, and colleague support (Kamau et al., 2022; Nourpanah, 2019).

***Support Programs.*** Many participants lacked mentorship support. Robust mentorship and orientation programs for IENs, facilitating professional integration and enhancing clinical competency, are widely discussed in the literature (Alostaz & Chen, 2024; Alostaz et al., 2024a; Belita & Ford, 2021; Chun Tie et al., 2019; Flecker, 2022; Ghazal et al., 2020; Iheduru-Anderson & Wahi, 2018; O’Callaghan et al., 2018; Zanjani et al., 2021). Some researchers suggest orientation programs for IENs should mirror those for domestically trained nurses (Newton et al., 2012). However, participants propose that these programs should be sensitive to IEN-specific learning needs, especially for IENs from non-English-speaking countries; a notion supported in the literature (Chun Tie et al., 2019; Lee & Wojtiuk, 2021; Philip et al., 2019; Rovito et al., 2022).

Orientation program durations varied, with some receiving limited support, indicating potential mentorship gaps. Factors such as employment area, acuity, specialty area, and learning needs affect orientation length (Rovito et al., 2022). Recommended program lengths range from a minimum of three months to potentially extending up to a year (Holmes & Grech, 2015). Longer orientation/preceptorship periods are positively associated with IEN competence, confidence, adaptation, and integration (Kamau et al., 2022).

Successful integration also requires well-trained preceptors who have the necessary resources, skills, and support (Cruz et al., 2017). Gradual induction and colleague support enhance seamless integration, whereas short mentorship programs often lead to self-reliance and greater workplace adjustment effort (Kamau et al., 2022). These programs foster a more

inclusive work environment and must be regularly evaluated to meet the evolving learning needs of IENs, acknowledging their diversity.

### **Theme III: Support and Improvements**

The final theme is mainly focused on recommendations for systematic improvements and includes two subthemes: navigating support systems and a call for systematic improvements.

#### **Navigating Support Systems**

Participants often relied on informal networks, such as friends, colleagues from their home country, community organizations, and worship places, for support. However, these informal resources were not always helpful for some IENs, impacting their integration processes to varying degrees. Both formal and informal support systems, when available and accessible, help IENs in their professional and personal integration into the Canadian healthcare system. Reports highlight the positive impact of support on IEN outcomes (Högstedt et al., 2021).

Immigration and settlement officers play crucial roles in guiding IENs to community support resources (Maddock et al., 2023). However, these officers often lack the expertise and resources needed to help newcomer-regulated professionals navigate their pathways due to the complexities involved. Some IENs in this study reported being steered towards other professions or survival jobs, resulting in underutilization of IENs, a finding that was reported elsewhere (Maddock et al., 2023). This finding necessitates better coordination of support services for IENs. Clear communication about available resources, initiatives, programs, and their effective utilization is essential for facilitating IEN integration.

Resources and initiatives for IENs must be widely advertised through formal (e.g., IRCC, governmental organizations, and websites) and informal channels (social media, workshops, and community outreach). Additionally, these programs must be regularly evaluated and modified



based on feedback from IENs. Collaboration between regulatory boards, settlement and support organizations, and employers is crucial for creating transparent and supportive pathways for IENs. Settlement officers must receive educational training on navigating the regulated professional pathways.

### **Call for Systematic Improvements**

This subtheme constitutes seven categories, emphasizing the need for policy reforms and strategies to support IENs, strongly evident in their shared stories. Addressing systematic challenges requires collaborative efforts from all stakeholders to create more inclusive and equitable IEN integration pathways. Participants emphasized the need for transparent, supportive, and equitable evaluation and registration processes. Bridging programs were proposed to facilitate recertification and integration, allowing IENs to learn about the healthcare system and culture of the host country (Covell et al., 2018; Högstedt et al., 2021). These programs can be offered in blended formats to facilitate accessibility.

Participants recommended numerous improvements to the registration processes, calling for policy reforms and increased institutional support. There is skepticism about the fairness of the registration process nationally, highlighting the need for a standardized and supportive approach across provinces to eliminate inequities in access to licensure and professional opportunities. Establishing formal partnerships between credentialing organizations and support initiatives, such as CARE, could streamline the credentialing process. This could include supervised work placements that provide regular progress reports to NNAS, ensuring IENs gain clinical experience and integration support simultaneously while completing their registration.

Managers and educators must develop comprehensive orientation and training programs for IENs, encompassing cultural competency, workplace procedures, role expectations, and

specific healthcare practices unique to the Canadian health system. IENs must be encouraged to enroll in programs like the Nursing Graduate Guarantee (NGG) program (Government Ontario, 2024). This program supports new RNs and RPNs within 12 months of registration, providing temporary full-time employment and improving workplace integration.

### **Strengths and Limitations**

This study provides an overview of IENs who migrated to Canada following the regulatory legislation changes in 2015. A primary strength is the recruitment of participants from different continents, offering diverse descriptions of their experiences. The trustworthiness of the study is enhanced by adhering to the Standard for Reporting Qualitative Research [SRQR] (O'Brien et al., 2014). However, there are some limitations. The convenience sampling method, based on IENs volunteering to share their experiences, introduces the likelihood of selection bias. The researcher used maximum variation and snowball sampling methods, complemented by theoretical sampling to mitigate selection biases and recruit IENs with diverse backgrounds. Additionally, interviews conducted in a language different from some IEN native languages led to occasional understanding difficulties. The researcher mitigated this by continuously checking with IENs to ensure accurate understanding. Finally, IENs in this study are predominantly females, insufficiently exploring the integration experiences of male IENs.

### **Conclusion**

Internationally educated nurses face significant challenges in integrating into the Canadian nursing workforce, including regulatory barriers, professional adaptation issues, and cultural adjustment. To harness their diverse skills and experiences, Ontario must address these challenges through streamlined licensure processes, enhanced mentorship programs, and cultural competency training. A coordinated effort among governments, healthcare institutions, and

professional organizations is essential to create supportive and inclusive environments for IENs. Effective policies should include standardized credentialing, improved stakeholder communication, and comprehensive orientation programs with cultural training. Overcoming these barriers will ensure that IENs contribute their valuable expertise to the Canadian healthcare system, improving patient care and workforce diversity. Collaboration across all levels of government, regulatory boards, educational institutions, and healthcare organizations is crucial for IEN integration and workforce sustainability in Ontario.

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None

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## Tables

**Table 1**

*IEN Demographic Characteristics*

Variable	Categories	N = 12 (%)
Age	20-30 years	0
	31-40	5 (41.7)
	41-50	4 (33.3)
	>50	3 (25)
Gender	Male	3 (25)
	Female	9 (75)
	Other	0
Marital status	Single	1 (8.3)
	Married	9 (75)
	Separated	0
	Divorced	2 (16.7)
	Other	0
Number of dependants	None	3 (25)
	1-2	6 (50)
	3-5	3 (25)
	>5	0
Country of origin	English-speaking countries	3 (25)
	Non-English-speaking countries	9 (75)
Education	College diploma	0
	Baccalaureate degree	6 (50)
	Graduate degree	6 (50)

**Table 2***IEN Professional Characteristics*

Variable	Categories	N = 12 (%)
Profession before immigration to Canada	<sup>7</sup> RN	12 (100)
	<sup>8</sup> RPN	0
	Other	0
Years of nursing experience	1-5 years	1 (8.3)
	6-10 years	3 (25)
	11-15 years	2 (16.7)
	16-20 years	1 (8.3)
	>20 years	5 (41.7)
Applied to CNO	Yes	11 (91.7)
	No	1 (8.3)
	Abandoned	1 (8.3)
Class of license application	RN	7 (58.3)
	RPN	1 (8.3)
	Both	3 (25)
	None	1 (8.3)
Job title	RN	5 (42)
	RPN	1 (8.3)
	<sup>9</sup> PSW	2 (16.7)
	Unregulated healthcare professional	1 (8.3)
	Others (non-nursing profession)	1 (8.3)
	NA (not working)	2 (16.7)
Mentorship/preceptorship	Yes	4 (33)
	No	7 (58.3)
Length of mentorship	3-4 weeks = 8-12 shifts	

<sup>7</sup> RN Registered nurse<sup>8</sup> RPN Registered Practical Nurse<sup>9</sup> PSW Personal Support Worker

**Table 3***Thematic Analysis of IEN Interviews*

<b>Themes</b>	<b>Subthemes</b>
Experiences pre-registration	<ol style="list-style-type: none"> <li>1. Immigration hurdles</li> <li>2. Regulatory hurdles and licensing issues               <ol style="list-style-type: none"> <li>a. Credential evaluation challenges</li> <li>b. Communication and transparency issues</li> <li>c. Sources of information</li> <li>d. Impact of COVID-19</li> <li>e. Financial constraints</li> </ol> </li> <li>3. Determinations and resilience</li> </ol>
Experiences post-registration	<ol style="list-style-type: none"> <li>1. Job-seeking and employment challenges</li> <li>2. Cultural adaptation and recognition of experiences</li> </ol>
Navigating support and call for improvements	<ol style="list-style-type: none"> <li>1. Navigating support systems</li> <li>2. Call for systematic improvements               <ol style="list-style-type: none"> <li>a. Pre-registration stage</li> <li>b. Streamlined administrative procedures and accelerated credential evaluations</li> <li>c. Greater transparency in the registration process</li> <li>d. Improved communication</li> <li>e. Comprehensive training programs</li> <li>f. Enhanced support services</li> </ol> </li> </ol>

**Table 4***Professional Background of the IEN (n =12)*

<b>Parameter</b>	<b>N (%)</b>
Country of nursing education	
English-speaking countries	4 (33.3)
Non-English-speaking countries	8 (66.7)
Language of nursing education	
English	10 (83.3%)
Other languages	2 (16.7%)
Application NNAS submitted	
Pre-arrival in Canada	7 (58.3)
Post arrival in Canada	5 (41.7)
NNAS application date	
Between 2017-2018	3 (25)
In or after 2019	9 (75)
NNAS report	
A non-comparable report for RN applications	11 (91.7.3)
Old applicant through CNO (non-comparable)	1 (8.3)
Report not received yet	0
Applied to the regulatory boards in USA	5 (41.7)
Members of IEN Initiatives in Ontario	
Members (CARE)	9 (75)
Non-member	3 (25)
Registered with the CNO	
Yes	8 (66.7)
Not yet registered	3 (25)
Abandoned	1 (8.3)

**Supporting information captions: S1 Appendix A: Letter to CARE Centre for IENs Lead (for Access)**

**Title:** Research opportunity for internationally educated nurses who seek to work as registered nurses or registered practical nurses in Ontario.

Dear X,

I am a graduate student at McMaster University, currently undertaking a Ph.D. degree in nursing. I am writing to ask your permission to circulate an invitation for internationally educated nurses (IENs) enrolled in the CARE Centre program to participate in the study. The focus of my study is on IEN experiences during their integration processes within the Canadian healthcare workforce. Specifically, I will invite IENs who: were a registered nurse (RN) before their immigration, are currently seeking to become RN or RPN in Canada, have completed the IEN transition program, and are currently employed or seeking employment in Ontario.

Interviews will take place outside the program's training hours to avoid interruption to the training schedule. With your permission, I will display recruitment posters (copy enclosed) on the announcement board at the training centre to invite IENs to participate in the study. I might attend meetings to briefly explain the study and elicit interest in participation. I might also ask the program coordinator to send a follow-up email to potential participants about the study if I do not receive a response to the advertisement.

I have enclosed a copy of the participant information sheet and consent form for your records and additional information. I look forward to hearing from you at your earliest convenience.

Thank you for your time and consideration.

**Yours sincerely,**

Nasrin Alostaz, Ph.D. Student, McMaster University,

Contact # (xxx) xxx-xxx

### **Supporting information captions: S2 Appendix B: IENs' Email/ Phone Script**

Hello; Thank you for your email/ phone call/ phone message. My name is Nasrin Alostaz. I am a graduate student researcher in the School of Nursing at McMaster University, conducting a research study about the experiences of internationally educated nurses during registration with the CNO and integration within the Canadian nursing workforce. This research study is conducted as part of fulfilling the requirement of the Ph.D. program, my supervisor's name is Dr. Olive Wahoush. To participate in this study, you need to be a registered nurse before immigrating to Canada, eligible to apply for registration with the CNO, seeking registration as a registered nurse or registered practical nurse, and or completed the IEN program at CARE Centre and currently seeking employment or are employed within the healthcare workforce in the past year. Your participation in this study is completely voluntary. This means that you do not have to participate in this study unless you want to. If you agree to participate, I can email you the study's information sheet so you can read it. I encourage you to contact me by email (anytime) or phone between 9 am and 5 pm (contact information is provided in the information sheet) should you need further information or clarifications.

You will also receive a short survey to help me determine if you are eligible to participate in this study, and it will assist me in the data analysis for the study. I am asking you to complete the survey before your interview day. Once completed, you can email it back to me, alternatively, you can hand it as a hard copy if we are meeting in person. You will be scheduled to meet with me for an individual one-on-one interview. This interview will be conducted either in person, or virtually via video calling (i.e., Skype/ FaceTime/ Zoom call) and will last about 40-60 minutes, do you have a preference? What day and time will work best for you in the next week?

All the information I receive from you by email, during the interview, or at any other time during the study including your name and any other identifying information, will be strictly confidential and will be stored in a password protected file in a password protected computer. I will not identify you or use any information that would make it possible for anyone to identify you in any presentation or written reports about this study. I might want to use direct quotes from you, but these would only be quoted as coming from “a person” or a person of a certain label or title, like “one registered nurse said....” Once your interview is completed, your information will be anonymized, analyzed, and combined with analyzed data from other interviews for more thorough analysis. Consequently, it will be very difficult to recognize your information and to identify individual participants. In appreciation of your time, you will receive a \$15 gift card, (in the case of a virtual interview kindly advise me of how you wish to receive your gift card e.g., e-transfer or mail to you).

The Hamilton Integrated Research Ethics Board has reviewed this study under project # **14965**.

Do you have any questions?

Thank you for contacting me. I am looking forward to meeting you in person / via video call on date.....  
for your interview.

Nasrin Alostaz, Ph.D. Student, McMaster University,

Contact # (xxx) xxx-xxx

## **Supporting information captions: S3 Appendix C: IEN's Information Sheet & Consent Form**

“The Internationally Educated Nurses’ (IENs’) Workforce and Workplace Integration Experiences

During the COVID-19 Pandemic in Ontario: A Qualitative Descriptive Study”

### **Investigators:**

#### **Local Principal Investigator:**

Olive Wahoush, RN, RSCN, M.Sc., Ph.D.  
School of Nursing, McMaster University,  
Hamilton, ON, Canada  
Phone: (905) 525-9140, ext. xxxxx  
Email: wahousho@mcmaster.ca

#### **Student Investigator:**

Nasrin Alostaz, RN, BScN, M.Sc., MNEd.  
School of Nursing, McMaster University, Hamilton,  
ON, Canada  
Phone: (xxx) xxx-xxxx  
alostazn@mcmaster.ca

**Background:** This research study is being carried out by Nasrin Alostaz as part fulfilment of a Ph.D. in Nursing at McMaster University. The purpose of this research is to describe and explore the experiences of internationally educated nurses of their credential evaluation, international transferring, registration, entry to practice, and integration into nursing workforce particularly after the change in the licensing examination in 2015 and currently during the COVID-19 pandemic.

**The Study Process:** This study involves collection of information through a short survey questionnaire and individual interviews. Firstly, all IENs will be asked to complete a demographic questionnaire. The questionnaire will contain 16 questions of both multiple choice and short answers questions about your demographical data, your education, your nursing experience background, and current licensing and integration process. After completion of the demographic questionnaire, you will be invited to participate in an individual one-on-one interview with the primary researcher either by in-person, face-to-face interview or virtually through FaceTime/Skype/Zoom calls.

The aim of the interview is to collect rich and in-depth data about your experiences of the licensing application process and or your experiences and readiness to join the nursing workforce in Ontario after



successfully completing the integration program for RNs or RPNs. Participants will be selected from the CARE Centre for IENs Program. You will also be asked to refer a friend or a nurse who may have started the registration process but elected to abandon the process or decided to proceed to register with the CNO as an RPN instead of an RN.

Each nurse will participate in one interview that will last approximately 40- 60 minutes. With your permission, the interview will be digitally recorded so that the researcher can analyze and interpret the data at a later stage. If you agree to participate in this study, you will be contacted to arrange a suitable date, time, and location for the interview to take place. A summary of your interview will be shared with you by either phone or email about one week after your interview so that you can verify that the description of your own experience is accurate and to ask for further clarification if needed. You also get the opportunity to add any missing information that you wish to include in the data analysis.

Any personal details and information given to the researcher will be coded so that you cannot be identified in any way. Your anonymized information will be shared with the research supervisor and expert colleagues for data analysis and interpretation. Information from the study will be presented in summary and will not identify the participant, the program they participated in, or their department.

**Potential Risks:** It is unlikely that there will be any harm or discomforts associated with participating in the study. You don't need to answer questions that you don't want to answer or if it makes you feel uncomfortable, we will just skip the question and go on to the next one. Should you become uncomfortable, the interview will be stopped, and you may take a break as needed.

**Potential Benefits:** I hope to learn more about your experiences as an IEN who seeks to become licensed to practice in Canada as a registered nurse or a registered practical nurse and as a job-seeking candidate. I hope that the information obtained from this study will help in generating knowledge which

may inform future practices for IEN licensing and workplace integration. The study also aims to promote a robust nursing system that can capitalize on all resources of future RNs.

**Voluntary Participation:** Your participation in the study is completely voluntary, it will not have any influence on your status with the CNO, employment application, or employment status and you will not be known to the project leaders or your unit manager. You may withdraw from the study at any time even after signing the consent, without any penalties and you will not give up any benefits that you had before entering the study. If you decide to withdraw from the study, the information provided by you to the point of your withdrawal will be stored securely in the same way that another participant's information is stored. Alternatively, you have the option of removing any personal details or data collected from the study. However, I will request you inform me of your intentions to withdraw your data either by phone or email **no later than two weeks after your interview**. This is because once the interview is completed and data is collected, your data will be anonymized, analyzed, and combined with analyzed data from other interviews for a more thorough analysis. Consequently, it will be impossible to recognize your data and remove it.

**Confidentiality:** Confidentiality will be maintained throughout the research process. All data collected will have names removed and participant numbers assigned to maintain your anonymity. Your name will not be published and will not be disclosed to anyone outside the study. All forms of data and documents (demographic questionnaires and consents) will be stored securely at McMaster University, in a locked cabinet, where only my supervisor and I will have access. Audio files will be destroyed once the analysis process is completed and new knowledge is generated, the hard copies will be destroyed when the study is finalized. All electronic documents related to this study will be stored in a password protected computer and will be kept for five years. Direct quotes

would only be quoted as coming from “a person” or a person of a certain label or title, like “one registered nurse said...” or “one participant said....”

**Study Results:** I expect to have this study completed approximately by August 2024. If you would like a summary of the results, please let me know how you would like it sent to you.

**Contact:** If you wish to obtain further information, ask any questions (about the study, your participation and your rights) or discuss any concerns during the research process, you can contact the primary researcher Nasrin Alostaz at phone number (xxx) xxx-xxxx or via email [alostazn@mcmaster.ca](mailto:alostazn@mcmaster.ca) if you wish to speak to my supervisor, Dr. Olive Wahoush, who may be contacted at McMaster University, School of Nursing at phone number (905) 525-9140, ext. xxxxxx. You are encouraged to ask any questions relating to this study process at any time.

This study has been reviewed by the Hamilton Integrated Research Ethics Board (HiREB). The HiREB is responsible for ensuring that participants are informed of the risks associated with the research and that participants are free to decide if participation is right for them. If you have any questions about your rights as a research participant, please call the Office of the Chair, HiREB, at (905) 521.2100 x xxxxxx

## Consent Form

**Declaration:** This study and this consent form have been explained to me. I have read or had read to me the information letter about the study being conducted by Nasrin Alostaz, a student researcher at McMaster University. I have had the opportunity to ask questions about my participation in the study and all my questions have been answered to my satisfaction.

I understand that if I agree to participate in this study, I may withdraw from the study at any time, however, I will need to inform the researcher about my intentions to withdraw no later than two weeks after my interview. I will be given a signed hard copy/ an electronically signed copy of this form. I freely and voluntarily agree to participate in this research study.

**Participant's Name (Printed):** .....

**Contact Details Phone** ..... **email** .....

**Participant's Signature:** ..... **Date:** .....

I agree that the interview can be audio recorded.      ☐ Yes      ☐ No

**Participant's signature:** .....

I agree to receive a follow-up contact using my email .....or my phone number ..... So, the researcher can provide me with a summary of the interpretations of my interview, to confirm that these are a true reflection of my own experiences.

**Participant's signature:** .....

☐ Yes, I would like to receive a summary of the study's results. Please send them to me at this email address \_\_\_\_\_ Or to this mailing address:

☐ No, I do not want to receive a summary of the study's results.

**Statement of Researcher's Responsibility:** I have explained the nature and purpose of this research study, the procedures to be undertaken and any risks that may be involved. I have offered to answer any questions and fully answered such questions to the best of my ability and knowledge. I believe that the participant understands my explanation and has freely given informed consent.

**Researcher's Name (printed):** .....

**Researcher's Signature:** ..... **Date:** .....

## Supporting information captions: S4 Appendix D: IEN Demographic Questionnaire

Date: \_\_\_\_\_

Participant ID #: \_\_\_\_\_

Thank you for agreeing to take part in this study. Please read each question, select the most appropriate answer, and write the most accurate response in the provided spaces. This questionnaire asks you sixteen questions to gain information about yourself and your background experience as an IEN seeking registration with the CNO. All information will be kept strictly confidential.

**1. Age:** ☐ 20-30 years ☐ 31 - 40 years ☐ 41-50 years ☐ More than 50 years

**2. Gender:** ☐ Female ☐ Male ☐ Other: \_\_\_\_\_

**3. Marital Status** ☐ Single ☐ Married ☐ Separated ☐ Divorced ☐ Others

**4. Number of dependents** ☐ none ☐ 1-2 ☐ 3-5 ☐ > 5

**5. Education:** ☐ College diploma ☐ University degree ☐ graduate degree \_\_\_\_\_

**6. Profession before immigration to Canada:** ☐ Registered Nurse ☐ Registered Practical Nurse ☐ Other: \_\_\_\_\_

**7. Years of nursing experience:** ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ 16-20 years  
☐ More than 20 years

**8. Area of nursing experience** \_\_\_\_\_

**9. Application to the College of Nurses of Ontario** ☐ yes ☐ No ☐ Abandoned

**10. Class of license application** ☐ RN ☐ RPN

**11. Did you participate in any IEN initiative** ☐ Yes **Specify:** \_\_\_\_\_ ☐ No

**12. Employment status:** ☐ Full-time ☐ Part-time ☐ Casual ☐ Unemployed

**13. Job title** ☐ RN ☐ RPN ☐ PSW ☐ Unregulated healthcare Professional ☐ Others

**14. Home unit / Department** ☐ Same as in previous employment ☐ Different  
**Specify** \_\_\_\_\_

**15. Since you commenced your employment, were you working with a mentor/ preceptor?** ☐ Yes  
☐ No

**16. How long is the preceptorship period?** \_\_\_\_\_

**Please describe:** \_\_\_\_\_

Other information if required: \_\_\_\_\_

## **Supporting information captions: S5 Appendix E: IEN Interview Guide**

### **Study Background Information:**

The study is being conducted to explore the experiences of internationally educated nurses (IENs) like you. You are being asked to share your experiences of credential evaluation, international transferring, registration, and entry-to-practice during the COVID-19 pandemic. I appreciate you taking the time to share your experiences with me today.

- 1) First, tell me about your professional experience before migrating to Canada. What was your role and how long did you work in this role?
- 2) What stage are you at now in the registration process? Integration/employment process?

### **Experiences During the Licensing Process**

- 3) Please describe your experience during the application to NNAS? When did you start the application process? How long did it take, what do you think of their communication with participants, when did you receive the report, and what was the result of your credits assessment?
- 4) Please describe your experience during the licensing process through CNO?
  - How long did you require to transfer your credit from your home country, receive the credits evaluation report, and book for the RN/RPN registration exam?
  - If RN in your home country applying for RPN licensing: can you tell me why you are applying to this class of registration?
  - What kind of support did you receive during the application process? Who is supporting you financially? Socially?
  - What do you think are some of the factors that might have facilitated the licensing process?

- What are the challenges you encountered during the licensing process? And can you tell me how do you think these challenges could be addressed?
  - How did this experience make you feel? What other plans were you considering?
- 5) Describe the transparency of the process through NNAS and CNO? How did this experience make you feel?

### **Abandoning the Licensing Process**

- 6) Tell me why you did not complete the licensing process with the CNO? And what were the main factors that lead to your decision? What other alternatives did you consider?

### **Experiences During the Job Application Process**

- 7) Please describe your experience during the process of job seeking/ application?
  - Since you become licensed, how long have you been applying for employment? How many interviews or offers did you receive and in what areas?
  - What kind of support did you receive during the job-seeking journey?
  - What factors do you think facilitated the job-seeking/application journey?
  - What are the challenges you encountered during the job-seeking journey? And how do you think these challenges could be addressed?
  - How did this experience make you feel? What other plans were you considering?

### **Working within the Canadian Nursing Workforce**

- 8) How do you think initiatives such as the CARE Centre for IENs/mentorship program prepared you to work independently within the Canadian nursing workforce?
- 9) What are some factors you think/found helped your integration within your workplace?
- 10) What are some challenges you encountered during the integration process?
- 11) What do you think can be done to improve your experience?

**Additional questions:**

- What other plans did you have in mind if registration with the CNO/securing a job was unsuccessful?
- How do you see initiatives in Ontario supporting IENs helped you?
- How do you feel your workplace was prepared to receive you as an IEN? Managers, preceptors, strategies to eliminate discrimination and enhance success?
- What do you think should be done to support IENs through their pathway?
- How does knowing that others get through the process faster than you make you feel?

**Conclusion:** Thank you for taking the time to participate in this interview. Is there anything you would like to add or tell me about that we haven't discussed?

\*This is a preliminary interview guide, it will be revised, and probes will be added once initial data collection and analysis begin.



### Supporting information captions: S6 Appendix F: Confidentiality Agreement

This agreement is between:

Nasrin Alostaz

Primary Researcher, Graduate Student, School of Nursing, McMaster University

And

XXXX

Transcriptionist

Regarding research project **14965**, title: "..."

1. I understand that the work that I will be undertaking for the Project named above must be kept confidential for ethical and legal reasons. I will treat all the information I encounter in the course of providing services to the project as confidential. This includes information held in any format, such as email, discussions, audio files, written transcripts, and other documents.
2. I agree to respect the following rules regarding the treatment of information with which the Project has entrusted me:
  - a) I will not use or disclose information from the Project unless I need to know it to perform my services for the project
  - b) I will not engage in discussions about information from the Project in public or in any area where it is likely to come to the attention of others
  - c) I will not allow another person to listen to, view, or otherwise gain access to information from the Project
  - d) I will not transmit any potentially identifying information related to the Project via email – only via secure password protected means, or as otherwise instructed.
  - e) At the conclusion of the project, I will dispose of all project documents in all forms in a confidential manner, i.e., by shredding paper documents and fully deleting all electronic copies from my computer hard drive and other media, including backups.
3. I will immediately report any violations of the conditions above of which I become aware to Olive Wahoush, Local Principal Investigator.
4. I understand that the conditions as described in this agreement will remain in place once I complete my services for the Project and I promise to abide by these conditions even after my services for the Project are completed.

***Transcriptionist Name and Signature*** \_\_\_\_\_ ***Date*** \_\_\_\_\_

I agree to:

1. Provide detailed direction and instruction on my expectations for maintaining the confidentiality of research information so that *[transcriptionist/research staff]* can comply with the above terms.
2. Provide oversight and support to *[transcriptionist/research staff]* in ensuring confidentiality is maintained in accordance with the Tri-Council Policy Statement *Ethical Conduct for Research Involving Humans* and consistent with the Dalhousie University Policy on the *Ethical Conduct of Research Involving Humans*.

Researcher(s) Name and signature ----- Date -----

## CHAPTER FIVE

**TITLE: Internationally Educated Nurses' Workplace Acculturation and Strategies for Integration: Application of the Fourfold Model of Acculturation Theory (FMAT).**

AUTHORS: Alostaz, N., & Chen, R.

JOURNAL: International Health Trends and Perspectives

CITATION: Alostaz, N., & Chen, R. (2024). Internationally educated nurses' workplace acculturation and strategies for integration: Application of the Fourfold Model of Acculturation Theory (FMAT). *International Health Trends and Perspectives*, 4(2), 297–309. <https://journals.library.torontomu.ca/index.php/ihtp/article/view/2144>

NOTE: This is the final draft that was submitted to a peer-reviewed journal but is not the final version published by the International Health Trends and Perspectives Journal.

## Abstract

**Introduction.** Internationally educated nurses (IENs) bring diverse skills, experiences, and cultural perspectives to healthcare institutions in the host country. However, their integration involves multiple adjustments encompassing physical, sociocultural, linguistic, psychological, and economic changes. **Aims.** This paper aims to explore the acculturation processes experienced by IENs and create strategies to support them as they adjust to their new workplace environment. **Methods.** The Fourfold Model of Acculturation Theory (FMAT) was utilized to develop effective strategies to improve professional, psychosocial, cultural, and organizational outcomes for IENs. **Findings.** Poor IEN integration stemming from cultural disparities leads to acculturation stress. This stress involves physical health issues, mental exhaustion, identity confusion, social isolation, and marginalization by their colleagues. **Implications.** The successful integration of IENs requires the involvement of stakeholders at the host workplace. Two-way workplace integration requires efforts from and partnership between stakeholders and IENs. **Conclusion.** The Fourfold Model of Acculturation Theory underscores that IENs who embrace both their native and dominant cultures are better integrated into their new workplace environments. Such integration positively impacts the individual, institutional, and societal domains. Stakeholders, policymakers, program planners, and healthcare institutions must foster a pluralistic culture and provide support to domestic and international nurses in understanding their professional roles and practices.

## Keywords

Fourfold Model of Acculturation Theory, integration, internationally educated nurses, workplace.

## **Introduction**

Internationally educated nurses (IENs) experience multiple changes, including physical, sociocultural, linguistic, psychological, and economic changes, when migrating to a culturally diverse country (Berry, 1992; Sam & Berry, 2010). This paper aims to navigate the acculturation processes of IENs while adjusting to the dominant workplace. We utilized the Fourfold Model of Acculturation Theory (FMAT) to develop strategies to improve professional, psychosocial, cultural, and organizational outcomes. This paper begins by providing a brief background and description of the IEN acculturation process and analyzes the current scholarly literature on the issue. The analysis is followed by a description and application of the FMAT. The paper then concludes by articulating some strategies for successfully acculturating IENs into nursing practice. Hereafter, the terms international educated nurse(s) and international nurse(s) will be used interchangeably and will refer to those who obtained a bachelor's degree in nursing in a country other than the host country.

## **Background and Practice Issue Description**

International nurses bring a wealth of unique skills, experiences, and expertise (Baumann et al., 2017) besides their cultural beliefs and practices to healthcare institutions in the host country. International nurses must adjust to the new workplace and learn its culture (Pung & Goh, 2017). However, differences between the host country and IEN's cultural background were identified as factors influencing their acculturation processes in the new workplace (Balante et al., 2021). Berry (2005, p. 698) defined acculturation as a “dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members”. Cultural and psychological adjustment is challenging and might take generations (Berry, 2005) as IENs interact in a new workplace culture. Acculturation is a

two-way interaction process; international and domestic nurses in the dominant culture undergo psychological and social changes (Berry, 2005), followed by varied forms of adjustment and adaptation (Sam & Berry, 2010).

**Choosing a Practicum Issue.** Managers and educators are often unaware of IEN needs when transitioning into a new workplace (Baumann et al., 2017). They lack an understanding of cultural differences, leading to increasing cultural challenges for IENs (Zanjani et al., 2018). Adjustment difficulties impact the IEN acculturation processes causing workplace integration issues (Balante et al., 2021) and impacting their retention (Neiterman & Bourgeault, 2013; Roth et al., 2021), nursing care, and patient outcomes (Neiterman & Bourgeault, 2013).

**Significance.** Behaviours and attitudes towards acculturating IENs influence their adopted strategies to acculturate in the new workplace and impact their psychological and sociocultural outcomes (Berry, 1997). These outcomes range from simple behavioural changes to more complicated changes (Sam & Berry, 2010). Facilitating IENs acculturation is essential to improve their physical and psychosocial outcomes (Ghazal et al., 2020; Zanjani et al., 2021), quality of life (Goh & Lopez, 2016), ensure the provision of high-quality care, and enhance patient outcomes (Ghazal et al., 2020). Therefore, it is necessary to understand the transcultural challenges experienced by IENs, inform strategies to overcome them and promote a culturally competent, sensitive, and inclusive workplace.

### **Synthesis of the Literature**

This literature review aimed to summarize existing evidence and clarify what is known about acculturating IENs in the host country (Woo, 2019). The literature search was completed using the Cumulative Index to Nursing & Allied Health Literature (CINAHL), Ovid MEDLINE,

EMBASE (1974–July 2021), Global Health, and PsycINFO. The “cited by” function, hand-searching reference list, and Google Scholar searches were also utilized. The search strategy was limited to studies that (a) were published in the past ten years, (b) explored the integration of IENs into the workplace, and (c) were published in English. We eliminated studies that explored the experiences of professionals other than IENs.

Keywords (Appendix A) were used, the search captured 60 studies, and only 22 met the criteria. Studies included in this synthesis were conducted in Canada and other countries such as the United States, Australia, and Sweden, where the healthcare systems are comparable in their reliance on IEN recruitment to meet increasing healthcare demands. The synthesis revealed two main themes: transcultural challenges and the impact of poor acculturation on IENs.

### **Transcultural Challenges**

Researchers identified language difficulties (Baumann et al., 2017; Eriksson et al., 2018; Lum et al., 2016; Pung & Goh, 2017; Schilgen et al., 2017), workplace professional and cultural differences (Balante et al., 2021; Lum et al., 2016; Zanjani et al., 2021), and uncertainty about their scope of nursing practice (Chun Tie et al., 2019; Neiterman & Bourgeault, 2015a) among the main barriers influencing IEN workplace acculturation, integration, and adaptation experiences.

**Language Difficulties.** International nurses experience cultural shock, disillusionment, burnout, and frustration due to language demands and a lack of sociocultural communication competencies required for the workplace (Lum et al., 2016). Specifically, IENs were challenged with therapeutic communication since it is considered a fundamental element of providing care in the Western context (Belita & Ford, 2021; Lum et al., 2016). International nurses must adapt to the accents and approaches to communication (Crawford et al., 2017); some IENs face

difficulties in understanding different accents due to diverse cultural backgrounds in the dominant workplace (Chun Tie et al., 2019; Ramji et al., 2019; Zanjani et al., 2021).

International nurses also found the structure and nature of interprofessional communication among team members different from what they are familiar with (Covell et al., 2015).

**Workplace Professional and Cultural Differences.** International nurses are challenged by professional and cultural differences leading to their struggles to practice confidently (Neiterman & Bourgeault, 2015a) and causing them to live between their native and the dominant cultures (Joseph et al., 2021). Uncertainty about the scope of nursing practice (Chun Tie et al., 2019; Neiterman & Bourgeault, 2015a; Philip et al., 2019), differences in the level of autonomy (Covell et al., 2015; Moyce et al., 2016; Walani, 2015), skills underutilization (Moyce et al., 2016; Walani, 2015), and differences in professional interactions between nurses and patients and their families (O’Callaghan et al., 2018) hindered IEN acculturation processes. Specifically, IENs were more challenged when employed in an area that did not match their area of expertise (Choi et al., 2019). Domestic nurses perceived IENs as different and unfriendly due to IENs’ cultural beliefs, values, and practices which influenced their interactions at the workplace (Zanjani et al., 2018).

### **The Impact of Poor Acculturation on IENs**

Cultural differences, lack of communication skills (Lum et al., 2016; Zanjani et al., 2021), and poor IEN integration lead to acculturation stress (Berry 1992; 2005) involving poor physical health (Schilgen et al., 2017); mental exhaustion (Lum et al., 2016); identity confusion, conflicting lifestyle (Berry, 1992; 2005); social isolation (Pung & Goh, 2017); and stigmatization, discrimination, and marginalization by their colleagues (Moyce et al., 2016; Walani, 2015).

**Language Difficulties.** Language and sociocultural communication struggles led IENs to experience stress and isolation (Philip et al., 2019), amplified feelings of vulnerability (Crawford et al., 2017) and insecurity at the workplace (Eriksson et al., 2018), and hindered their acculturation processes (Covell et al., 2015). These experiences negatively influenced the work environment, quality of nursing care, and interactions with patients and colleagues (Clayton et al., 2016; Eriksson et al., 2018). Communication difficulties also contribute to a poor sense of belonging (Philip et al., 2019) and low self-esteem (Eriksson et al., 2018; Pung & Goh, 2017) among IENs.

**Cultural Differences.** Cultural differences increased anxiety levels among IENs (Newton et al., 2012) and created uncomfortable working environments, conflicts, and misunderstandings with local nurses (Clayton et al., 2016). These feelings led IENs to adopt negative behavioural strategies, e.g., remaining silent during professional interactions and working night shifts to avoid conflicting situations (Zhong et al., 2017), leading to poor acculturation processes (Pung & Goh, 2017).

**Discrimination and Stigmatization.** International nurses often are challenged by marginalization, and discrimination attitudes from employers, managers, colleagues, and patients in their care (Ghazal et al., 2020; Iheduru-Anderson & Wahi, 2018; Joseph et al., 2022; Moyce et al., 2016; Neiterman & Bourgeault, 2015b; Zanjani et al., 2021). International nurses are more likely to experience discrimination if they perceive themselves as unaccepted and devalued at the dominant workplace (Berry, 2005). Discrimination impacts IENs' psychological and sociocultural adaptation (Berry, 2006) and the way they acculturate; IENs experience less marginalization when they are better integrated (Berry & Sabatier, 2010). Exposure of IENs to discrimination also heightened psychosocial costs and imposed conflicts on IEN native and host



societies (Berry, 1997). Stigmatization leads to a lack of trust in managers and domestic nurses (Neiterman & Bourgeault, 2015b), poor job satisfaction, self-reported illness among IENs, absenteeism from the workplace (Schilgen et al., 2017), and inadequate long-term adaptation (Berry, 2005) and retention rate (Pressley et al., 2022; Roth et al., 2021).

### **The Fourfold Model of Acculturation Theory and Application**

The Fourfold Model of Acculturation Theory (FMAT) is a social science bidimensional theory (Appendix B) that explains the IEN orientation toward their culture and the new dominant culture (Berry, 1992; 1997). The theory identifies four different acculturation strategies IENs adopt during their contact and interactions within the new dominant culture (Berry, 1997; Choi, 2018). These strategies (Appendix C) were categorized based on two dimensions; the retention or rejection of one's original culture and the adoption or rejection of the dominant culture (Berry, 1997). The acculturation strategies include Assimilation, Integration, Marginalization, and Separation [AIMS] (Berry, 1997; Choi, 2018; Sam & Berry, 2010).

*Assimilation* occurs when an IEN abandons their native culture and adopts the dominant culture (Choi, 2018; Sam & Berry, 2010). *Integration* happens when IENs retain their native culture and adopt the dominant culture leading to cultural pluralism (Sam & Berry, 2010). *Marginalization* results from IEN abandoning or rejecting their native and dominant cultures, which leads to discrimination and stigmatization (Sam & Berry, 2010).

*Separation* occurs when IENs embrace their native culture while rejecting the dominant culture (Sam & Berry, 2010). Integration is a highly preferable outcome for acculturation (Magnet de Saissy, 2009; Sam & Berry, 2010); thus, stakeholders must develop strategies to improve and achieve integration (Berry, 1992) and eliminate the marginalization of IENs. Berry (1997, p. 28; 2005, p. 705) suggests that successful acculturation requires “mutual

accommodation”, acceptance, and readiness to implement and support cultural pluralism. Critiquing the FMAT is beyond the scope of this paper.

### **Implications for Successful IEN Acculturation**

The following section will discuss strategies that stakeholders can implement to improve IEN acculturation processes. The two-way workplace integration requires efforts from and partnership between stakeholders and IENs (Ramji & Etowa, 2018); IENs must recognize their responsibilities in adjusting to the new culture, and the organization must respect the IENs cultural diversity and differences and adopt inclusive practices (Ramji et al., 2019). Stakeholders at the host workplace play a crucial role in ensuring the successful integration of IENs.

**Implications for Policy.** Programs such as pre-and post-migration orientation for IENs are helpful in successfully integrating them into the healthcare system of the new country (Berry, 1992). Policymakers should consider developing appropriate programs focused on providing information about the dominant culture and training IENs on strategies to facilitate adaptation to cultural differences (e.g., linguistic acculturation). Healthcare institutions should develop inclusive policies that recognize and value cultural diversity to enhance the integration of IENs. Recognizing and addressing the challenges faced by IEN are essential strategies for fostering an inclusive and diverse work environment.

**Implications for Nursing Education.** Academic educators should adequately prepare domestic nursing students to promote cultural pluralism in the workplace by increasing cultural diversity, sociocultural education (Berry, 1997), and interpersonal skills training in the nursing curriculum. Educators must also set clear expectations and strategies to support integration and deal with cultural differences among patients and healthcare providers (Berry, 2005).

**Implications for Nursing Practice.** Achieving cultural pluralism is a shared responsibility between members of the host workplace and IENs and requires a mutual understanding of issues related to cultural differences (Balante et al., 2021; Rovito et al., 2022). Leaders should engage in cultural competency training to incorporate it into the organizational culture (Higginbottom, 2011). Additionally, managers should receive training in strategies and approaches to recognize, address, and eliminate discriminatory acts against IENs, managing these acts appropriately and effectively to foster a welcoming workplace environment (Neiterman & Bourgeault, 2015b; O’Callaghan et al., 2018).

Managers should develop policies, e.g., antidiscrimination and antiracism, to acknowledge cultural diversity (Pressley et al., 2022; Timilsina Bhandari et al., 2015). These policies are significantly effective when leaders provide workers with support, education, and additional resources for implementation (Timilsina Bhandari et al., 2015). Recruiting organizations achieve cultural competency by promoting a culture of appreciation for IEN contributions, educating domestic nurses about the impact of a multicultural team on providing care for patients from diverse backgrounds (Clayton et al., 2016), the benefits of cultural pluralism, and the negative consequences of marginalization. Managers must also consider matching IEN’s previous experiences and expertise to the current employment opportunity (Pressley et al., 2022). Nursing leaders facilitate IEN acculturation by setting the tone of diverse culture acceptance in the workplace (Ramji & Etowa, 2018; Ramji et al., 2019).

***Institutional Orientation and Mentorship Programs.*** Clinical educators and preceptors contribute to the successful acculturation process of IENs by creating a welcoming and supportive environment conducive to learning and adjustment to the new culture. International nurses can receive guidance and support and develop a sense of belonging through orientation

and mentoring programs. Mentors can help IENs navigate the professional and cultural landscape of the new workplace.

Leaders should offer institutional-oriented and cultural-specific orientation training to introduce IENs to the local healthcare policies (Goh & Lopez, 2016), educate them about the dominant culture and structure of the healthcare institution (Ea, 2007), and train new healthcare professionals to promote a culturally pluralistic workplace (Alexander et al., 2020; Ea, 2007; Javanmard et al., 2017). These programs should also include educating IENs about the differences in the clinical role and accountabilities (Aggar et al., 2020). International nurses require orientation programs that are more sensitive to their learning needs which differ from those of domestic nurses (Goh & Lopez, 2016; Lee & Wojtiuk, 2021; Rovito et al., 2022). Educators must offer a well-structured comprehensive language and training programs specific to IENs (Eriksson et al., 2018) to familiarize IENs with the different local jargon and accents, improve their communication skills and understanding of the cultural nuances of the new workplace.

Preceptors should offer IENs the opportunity to discuss similarities and differences between the current and previous healthcare systems and workplace cultures (Eriksson et al., 2018) and offer strategies to adapt to the dominant workplace practices. A dedicated mentor also ensures a supportive environment (Brady et al., 2019; Rush et al., 2013), attends to the emotional needs of their learners (Brady et al., 2019), and assists in their socialization within the new clinical setting (Happell, 2009). A positive preceptor—preceptee relationship should be encouraged to decrease stress levels among new employees (Brady et al., 2019). Therefore, mentors should be educated about IEN needs and equipped with skills and strategies to support their acculturation into the new work environment.

***Mental Health Support.*** Access to mental health resources is crucial in addressing the social and psychological impact of IEN acculturation processes. Stakeholders and managers must offer IENs access to counselling services, support groups, and stress management programs to help IENs cope with the psychological and emotional challenges of cultural adaptation.

***Innovative Strategies.*** Clinical educators can integrate innovative strategies into the professional workplace. In Australia, combined with the bridging program, educators developed an interactive mobile application, mPreceptor, which improved professional communication and leadership skills for IENs during their clinical placement (Aggar et al., 2020). International nurses can also be enrolled in simulation sessions presenting different case scenarios about the workplace and social communication. These sessions allow IENs to utilize their knowledge and reflect on their practice in a risk-free, supported environment (Ea, 2007; Moyce et al., 2015).

***Informal Strategies.*** Offering information about ethnocultural community interactions/events enables IENs to maintain their native culture and reduce the stress caused by assimilating the new culture (Berry, 1997). International nurses are encouraged to attend social gatherings to improve their communication skills (Clayton et al., 2016; Ea, 2007; Javanmard et al., 2017), introduce them to the new culture, eliminate cultural shock for IENs and misconceptions about other cultures (Clayton et al., 2016), facilitate their acculturation (Clayton et al., 2016; Pressley et al., 2022), and create acceptance atmosphere (Ea, 2007). International nurses can also listen to the local news and radio programs and watch local television shows to improve their familiarity with cultural-specific communication and behaviours (Ea, 2007). Assigning a buddy to serve as an informal consulting friend can also be helpful (Smith & Ho, 2014).

## **Conclusions**

The psychosocial and cultural changes IENs encounter when integrating into the new workplace are inevitable and can affect their acculturation processes. The policies, behaviours, and attitudes of members in the dominant culture influence the adopted acculturation strategy by IENs. The FMAT suggests that IENs who embrace native and dominant cultures are better integrated and adapted to the new workplace. Perceptions of marginalization predict how well-acculturated IENs are within the new workplace. The successful integration of IENs has a tremendous positive impact on the individual, institutional, and societal domains. Domestic and international nurses require support from stakeholders, policymakers, program planners, and healthcare institutions to understand their professional roles and practices to promote a pluralistic culture. Promoting cultural competency in a culturally diverse workplace is fundamental to acculturate IENs into the new workplace. Successful acculturation of IENs leads to improved job satisfaction, mental health, and patient care outcomes.

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## **Appendix A: Search Term**

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### **Key Terms**

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Internationally educated nurses OR internationally qualified nurses OR international nurses  
OR foreign nurses OR overseas trained nurses OR overseas nurses OR overseas-qualified  
nurses OR overseas educated nurses OR internationally recruited nurses OR foreign-  
trained nurses OR foreign-educated nurses, OR migrant nurses OR IEN\* OR OQN\* OR  
Culturally and Linguistically Diverse Nurse OR CLaD

**AND**

Culture OR cultural competency OR cultural background OR cultural differences OR  
Cultur\* Comp\*

**AND**

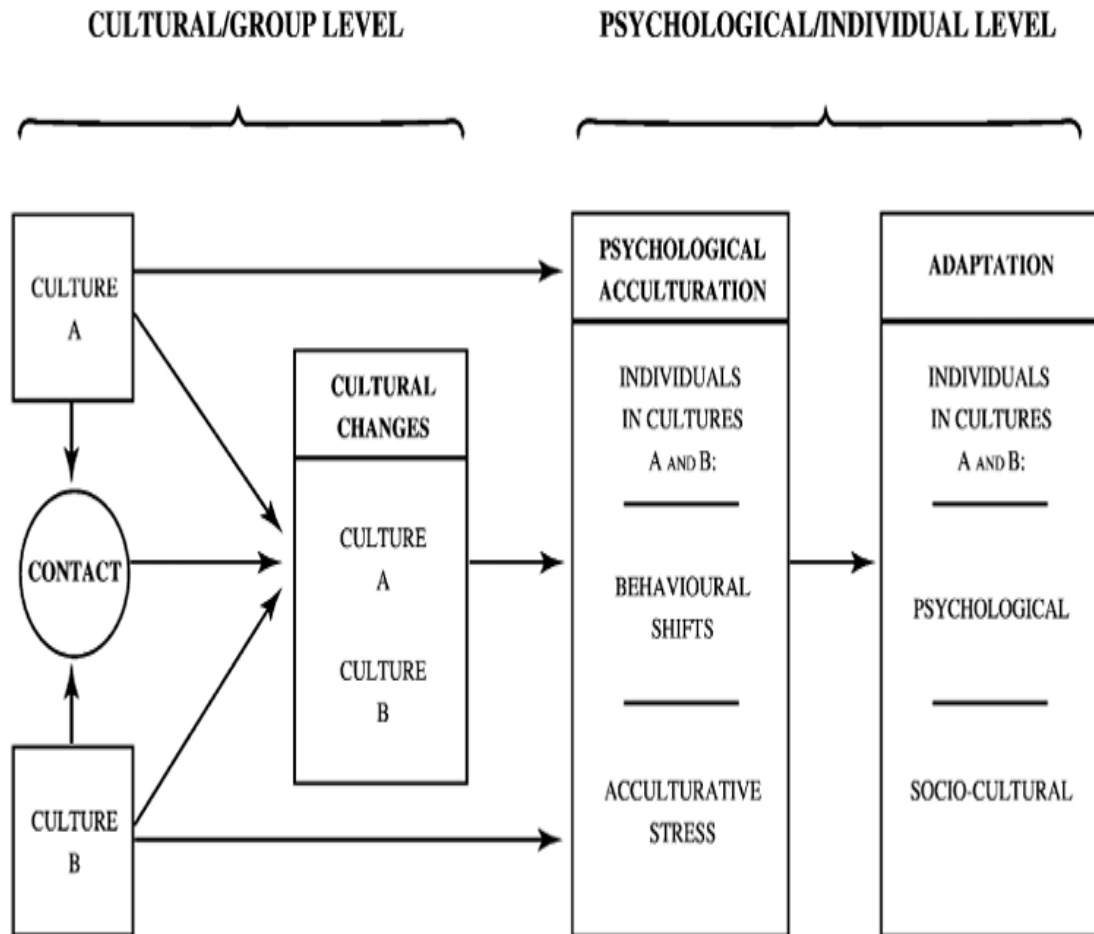
Workplace Integration OR integrat\* OR workplace Acculturation OR Acculturat\*

**AND**

Experienc\* OR Perception\*

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## Appendix B: Acculturation General Framework



Source: Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29(6), 697–712.

<https://doi.org/10.1016/j.ijintrel.2005.07.013>



### Appendix C: The Four Stages of Acculturation

		Value and Maintain Native Culture	
		YES	NO
Value and Maintain Host Culture	YES	Integration	Assimilation
	NO	Separation	Marginalization

Source: Berry, J. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–68.

## CHAPTER SIX

**TITLE: Stakeholders Perspectives on Internationally Educated Nurses' (IENs') Workforce and Workplace Integration Pathways in Ontario: A Qualitative Descriptive Study**

AUTHORS: Alostaz, N., Wahoush, O., Chen, R., & Pratt, M.

JOURNAL: *International Health Trends and Perspectives* (In Review)

NOTE: This manuscript was submitted (on August 18, 2024) to the International Health Trends and Perspectives and is currently under revision. It is formatted to the specific journal requirements.

## **Abstract**

**Background.** Integrating internationally educated nurses into the Canadian healthcare system is a multifaceted process involving numerous stakeholders who can influence their successful integration. Since the registration examination changes in Canada, in 2015 and amidst evolving registration requirements, especially during the COVID-19 pandemic, little is known about stakeholder perspectives. This study aimed to describe stakeholder views on internationally educated nurse integration processes and the strategies to streamline these processes.

**Methods.** A qualitative description approach was employed in this study with semi-structured one-on-one virtual interviews with six stakeholders. Data collection and analysis were completed concurrently, guided by the Braun and Clark framework and the Fourfold Model of Acculturation Theory.

**Results.** Stakeholders valued the internationally educated nurses' expertise in Canadian healthcare and were committed to improving the licensing process to accelerate integration.

**Conclusion.** This study highlights stakeholder perspectives on the integration pathways of IENs into the Canadian healthcare system. Collaboration among stakeholders, including IENs, is essential to streamline integration processes.

**Keywords:** Healthcare workforce, internationally educated nurse, Ontario, qualitative description, stakeholders, workplace.

## **Introduction**

Canada faces a healthcare workforce crisis, amplified by the COVID-19 pandemic and the subsequent growing demands on the healthcare system (Casey, 2023). Internationally educated nurses (IENs) may provide a potential solution to this crisis. However, reports suggest that the employment percentage of IENs in Canada is low compared to other developed countries (Trines, 2018). Reports suggest IENs encounter multiple challenges, including difficulties transferring international credentials, prolonged registration processes, and challenges securing employment (Alostaz et al., 2024c; Altorjai & Batalova, 2017).

Integrating IENs into the Canadian healthcare system is a complex process that involves navigating a multifaceted landscape of licensing and employment procedures. This journey is significantly influenced by the perspectives and actions of various stakeholders, including regulatory boards, credentialing organizations, healthcare employers, educational institutions, and IEN program developers. Understanding these insights and perspectives is crucial for identifying challenges and opportunities within the IEN integration pathways.

This study explores various stakeholder perspectives on the pathways for IENs to become registered and secure employment in Ontario. Specifically, the study focuses on stakeholder insights regarding the IEN workforce and workplace integration. By analyzing these perspectives, we can better understand the collaborative efforts needed to facilitate a smoother transition for IENs into the Canadian healthcare system. Additionally, the study results can inform future strategies to improve the success of IEN support programs for registration and employment. Throughout this paper, the term internationally educated nurses (IENs) will refer to nurses who received their basic nursing degrees outside Canada (Ma et al., 2020).

## **Background**

Canada, like many developed countries, faces a health human resource crisis, particularly in nursing (Government of Canada, 2022; Scheffler & Arnold, 2019). Acute healthcare settings are becoming highly specialized, and nursing practices more complex (Walton-Roberts, 2023), especially with the population changing demographics (Almost, 2021) and the COVID-19 pandemic (Canadian Institute for Health Information [CIHI], 2021; 2022; Casey, 2023; Cornelissen, 2021; Maunder et al., 2021). Healthcare demands will continue to increase long after the pandemic (Maunder et al., 2021). Thus, many jurisdictions in Canada have explored strategies to build healthcare workforce capacities and sustain safe staffing levels (CIHI, 2022).

Internationally educated nurses are a valuable resource for addressing nursing shortages, particularly beyond the pandemic. In 2022, IENs comprised 12% of new nurses across Canada, a 4% increase since 2017 (CIHI, 2024). Ontario, the country's most populous province, receives over 40% of Canada's immigrants and nearly half of all new internationally educated healthcare professionals (IEHPs) who arrived in 2021 (Duarte, 2023; Frank et al., 2023). While about one-third of IEHPs in Canada in 2021 were nurses, only 42% of these IENs secured registration and employment in the healthcare sector, with many working outside their field (Frank et al., 2023).

Successfully integrating IENs into Canadian healthcare is critical for addressing the health human resources crisis and enhancing workforce diversity (Government of Canada, 2022). However, IENs in Ontario face significant challenges, including complex credentialing, regulatory hurdles, financial constraints, and insufficient support during their transition (Alostaz et al., 2024c). More than 50% of IENs reported difficulties in securing employment as an RN in Canada (Covell et al., 2017). The integration process can be challenging and time-consuming (Altorjai & Batalova, 2017; Cornelissen, 2021; Ghazal et al., 2020), often leading IENs to accept jobs for which they are overqualified (Alostaz et al., 2024c; Creating Access to Regulated

Employment Centre for Internationally Educated Nurses Program [CARE], 2021; Cornelissen, 2021). Challenges include cultural differences, language proficiency, differences in nursing practice, and stigmatization (Baumann et al., 2017; Moyce et al., 2016; Zanjani et al.; 2021).

Stakeholders play important roles in addressing these challenges, ensuring IENs transition successfully and contribute effectively to the healthcare system, ultimately creating a sustainable workforce. Enabling IENs to practice nursing in Canadian healthcare has a positive socio-cultural impact on IENs. Reports suggest that the inability of IENs to obtain registration and employment negatively impacts the health and well-being of immigrants and their families, also resulting in economic and human capital loss for Canada (Kwansah et al., 2015).

### **Workforce support**

Findings in the literature emphasized the importance of providing IENs and marginalized professionals with accessible programs and resources to reduce barriers to licensure exam completion and streamline the licensure process, enabling timely entry into professional practice in Canada (Belita & Ford, 2021). Achieving successful workforce integration requires IENs to learn the professional language (Covell et al., 2015), reconcile their past knowledge and experiences with the host country's professional requirements, and identify gaps in their knowledge and practice to learn new skills in the new workplace (Lum et al., 2016). A recent report recommends expediting licensure and practice pathways for IEHPs, including IENs (Casey, 2023).

### **Workplace Support**

Workplace support is fundamental in reducing IENs' stress and ensuring high-quality nursing care (Philip et al., 2019). A positive and supportive work environment allows IENs to utilize their previous knowledge and expertise (Timilsina Bhandari et al., 2015). The presence of

antiracism and antidiscrimination policies improves relationships between IENs and domestic nurses, eliminates IEN marginalization (Timilsina Bhandari et al., 2015), and enhances the integration and retention of nurses in the workplace (Primeau et al., 2021; Ramji & Etowa, 2018).

Reports suggest that nursing leaders have high expectations of IENs, particularly when completing an orientation to practice program (Rovito et al., 2022). This report suggests that acculturating IENs in the workplace can be lengthy, requiring extended support. Acknowledging IEN contributions to the workplace is crucial (Lum et al., 2016). Internationally educated nurses bring a wealth of knowledge, experience, and expertise (Baumann et al., 2017), contributing to the enhancement and stabilization of cultural diversity in the workplace (Rovito et al., 2022). Stakeholders perceive IENs as more skillful and knowledgeable about uncommon diseases in the host country compared to domestic nurses (Neiterman & Bourgeault, 2015a; b).

### **Stakeholders Contributing to IEN Integration Pathways**

In Ontario, various stakeholders involved in IEN integration pathways play crucial roles in successfully integrating IENs into the healthcare system. These stakeholders include government, credentialing organizations, regulatory boards, IEN educational and initiatives programs, and employers. Nurse leaders are often unaware of the learning needs of IENs when transitioning into the professional workplace (Baumann et al., 2017).

#### **Government**

Scholars suggest that there is a lack of coordination, alignment, and connection between federal (i.e., immigration) and provincial (i.e., professional regulatory boards) system policies in Canada (Alostaz et al., 2024a; Hawkins & Rodney, 2015; Paul et al., 2016). This poor alignment

and disconnection delay the integration of IENs into the workforce, devalue their credentials and lead to downward professional mobility (Hawkins & Rodney, 2015).

### **Credentialing Organizations and Regulatory Board**

The National Nursing Assessment Service (NNAS) is a credentialing service for IENs and the entry point to becoming regulated in Canada. The NNAS is responsible for verifying IEN credentials and ensuring consistent approaches in collecting and verifying documents (NNAS, 2024). Upon completion, NNAS develops an advisory report shared with the regulatory board, assessing how the applicant's competencies compare to the Canadian entry-to-practice competencies.

The College of Nurses of Ontario (CNO) is the regulatory board with the authority to grant registration licenses. The CNO plays a vital role in maintaining the quality and safety of nursing practice by establishing entry-to-practice requirements, promoting practice standards, and participating in the legislative process (CNO, 2020). The CNO is involved in developing policies impacting nursing regulation (CNO, 2019).

### **Educational Programs and IEN Initiatives**

As large numbers of IENs have settled in Ontario (Council of Ontario Universities, 2022), the Government of Ontario has acted to capitalize on this potential resource. Specifically, they implemented several education programs and initiatives to address health workforce shortages and support IEHPs throughout their integration into the Canadian workforce (Government of Canada, 2021).

**Educational institutions.** These institutions offer bridging programs and preparatory courses that help IENs fulfill the educational gaps identified by nursing regulatory boards and enhance their competencies to meet Canadian standards. The Ontario IENs Course Consortium,



funded by the Government of Ontario, offers a blended format of intensive fundamental and competency-based courses. These courses include the English language for nurses, the culture of nursing in Canada, and academic and professional writing (Ontario IENs Course Consortium, nd).

**Initiatives for IENs in Ontario.** An example of such an initiative is the CARE Centre for IENs. This initiative was funded by the Government of Ontario more than 20 years ago, it was created to address healthcare human resources issues (CARE, 2021). The CARE obtained funding from Immigration, Refugees and Citizenship Canada (IRCC) for the Pre-Arrival Supports Services (PASS) program and from the Ministry of Labour, Immigration, Training and Skills Development (MLTSD) Ontario for the Supports, Training, and Access to Regulated-employment Services program [STARS] (CARE Centre, 2022). The PASS program supports IENs accepted for immigration to Canada to shorten the time required for professional registration (CARE, 2022). The STARS program supports IENs residing in Ontario by providing services such as one-on-one case management, language and communication skills, exam preparation, professional development, and networking to help IENs transition to employment and succeed in the nursing profession (CARE, 2022).

### **Hiring Institutions**

Employers, such as hospitals and long-term care (LTC) facilities, managers, and educators are essential in providing employment opportunities and supporting IEN integration into the Canadian workforce. Successful integration is achieved by recognizing the value IENs bring to the workplace, acknowledging their diverse backgrounds, and fostering inclusive and culturally competent environments (Alostaz et al., 2024c). Organizational commitment to facilitating the IEN integration process throughout all employment stages can positively impact

the quality of nursing and healthcare practices (Ramji & Etowa, 2018). Supportive employers facilitate the seamless integration of IENs and improve their acculturation into the host country's workplace (Berry, 1992; 1997). Rovito et al. (2022, p.26) posit that supporting IENs is a “multidimensional, intersectional and bidirectional” process, advocating for their enrollment in orientation programs that bridge gaps between their previous professional practice and the host country's professional and cultural norms.

### **Significance of the Study**

Recruiting IENs is an essential strategy to help address nursing shortages and meet the high demands of the Canadian healthcare system. However, IENs encounter multiple challenges in becoming registered nurses (RNs) in Canada, which are more pronounced compared to Canadian nursing graduates. A recent Registered Nurses Association of Ontario (RNAO) report suggests the backlog of IEN applicants to the CNO was escalated by the pandemic and called for increasing RN supply in Ontario by developing multiple pathways and expediting the integration of IENs into Canadian healthcare (Office of the Fairness Commissioner [OFC], 2023; RNAO, 2022). Despite changes in regulatory legislation aiming to expedite IEN integration processes in Ontario, delays remain evident (Alostaz et al., 2024c).

Therefore, it is important to explore stakeholder perspectives to identify challenges and opportunities within the IEN integration pathways. Understanding these perspectives facilitates a better understanding of the collaborative efforts required for a seamless transition of IENs into the Canadian healthcare system. This study is timely as it generates knowledge relevant to the integration processes, improving practices, and developing policies supporting IENs in joining the nursing workforce. This research focus is also important as Canada faces and will continue to face a health human resource crisis.

## **Problem Statement**

Canada is less successful in integrating IENs into the nursing workforce compared to other developed countries while competing for talented professionals to address workforce shortages. Numerous legislative changes were implemented to expedite IEN integration; however, delays remain evident and more needs to be done. Exploring stakeholder perspectives on IEN licensing and integration pathways is essential for making informed recommendations to improve and guide policies and programs that better support IENs during their transition journey. This is essential for maintaining quality health services and improving patient outcomes.

## **Research Goals, Objectives, and Questions**

This study explored stakeholder perspectives on the integration pathways of IENs into the Canadian nursing workforce. The main objectives are to

- (a) Describe stakeholder perspectives on IEN workforce integration pathways since the licensure examination change in 2015 and during the COVID-19 pandemic.
- (b) Identify strengths and limitations of the current changes in the licensure process within the CNO and credentialing organizations and develop recommendations for future licensing processes.

## **Research Questions**

### ***Primary Research Question:***

- What are stakeholder perspectives on internationally educated nurses' integration pathways during the COVID-19 pandemic in Ontario?

### ***Secondary Research Questions:***

- What are stakeholder perspectives on licensure pathways for IENs who migrated to Canada in or after the licensure examination change in 2015?

- What are stakeholder perspectives on IEN integration into the workplace in Ontario?

### **Theoretical Framework**

The Fourfold Model of Acculturation Theory [FMAT] (Supporting information captions; S1 Appendix A & S2 Appendix B) was utilized to develop strategies for stakeholders to better integrate IEN into the workplace (Berry, 1992; 1997) and discussed elsewhere (Alostaz & Chen, 2024).

### **Research Methods**

The stakeholder perspectives on the pathways of IEN integration into the Canadian nursing workforce are not well-described. A qualitative description (QD) approach guided this study, collecting rich data to inform future policies and practices, potentially expediting the registration and integration processes (Sandelowski, 2000). This research method is the most appropriate for gathering detailed information from stakeholders who support IENs through their integration pathways (Bradshaw et al., 2017), given the limited existing knowledge about these perspectives.

### **Research Methodology**

Qualitative description is a methodology grounded in the constructivist, or naturalistic, approach to inquiry (Bradshaw et al., 2017; Colorafi & Evans, 2016; Sandelowski, 2000). The constructivist approach claims that people construct their understanding, learning, and knowledge through experiencing phenomena and reflecting on these experiences (Kivunja & Kuyini, 2017). This approach also supports a subjectivist epistemology, accepting that multiple subjective realities exist (Guba & Lincoln, 1994; Kivunja & Kuyini, 2017). These realities are ever-changing, and shaped by the people who create them (Guba & Lincoln, 1994).

### **Study Setting**

This research focused on exploring stakeholder perspectives on IEN integration pathways into the Ontario workforce. The province offers a wide range of healthcare services employing nurses in various settings, including acute care, LTC, community care, and rural care (Ministry of Health and Long-Term Care, 2018). Ontario has the largest share of newcomer IENs and higher numbers of underemployed immigrant nurses, making it an ideal focus for this inquiry.

### **Sampling, Sample Size, and Recruitment**

#### **Eligibility Criteria**

Stakeholders were eligible for participation if they contributed to IEN integration pathways in Ontario. They were recruited to provide their insights on IEN integration processes, facilitating a comprehensive understanding of these insights.

#### **Sampling Strategies**

Purposeful sampling strategies were used to reflect the emerging variations in stakeholder perspectives (Bradshaw et al., 2017; Colorafi et al., 2016; Palinkas et al., 2015; Sandelowski, 2000; 2010), including maximum variation and theoretical sampling. *Maximum variation* sampling describes common and unique shared patterns among stakeholders with diverse characteristics but share similar views (Palinkas et al., 2015; Patton, 1990; Sandelowski, 1995; 2010).

*The theoretical sampling* method allowed for fleshing out emerging themes in the findings (Thorne et al., 2004) and achieving saturation (Morse, 2015). Emerging themes and patterns from initial data collection and analysis directed data collection in subsequent interviews (Coyne, 1997). Theoretical sampling led to modifying interview guide questions (Thorne, 2016; Thorne et al., 1997; Thorne et al., 2004) and accumulating new information-rich participants, increasing the sample size (Patton, 1990).

## **Sample Size**

Qualitative studies exploring participants' experiences often recruit a minimum sample size of six participants (Morse, 2000). Initially, I planned to invite five stakeholders to share their perspectives on the IEN workforce and workplace integration pathways in Ontario. Ongoing findings suggested the need for theoretical sampling, which increased the sample size to a total of six stakeholders. The recruitment process was evaluated on an ongoing basis and stopped when informational redundancy was observed, meaning no new themes or information emerged from the data collection and analysis (Gentles et al., 2015; Thorne, 2016).

## **Recruitment Strategies**

To maximize the recruitment of a purposeful sample, I used diverse strategies. A map of stakeholders involved in the IEN integration journey in Ontario was created to identify key stakeholders and facilitate their invitation to semi-structured interviews (Appendix A). After receiving ethics approval from the Hamilton Integrated Research Ethics Board (HiREB), stakeholders were contacted via e-mail to invite them to participate (Supporting information captions; S3Appendix C). Ten potential participants were identified and emailed recruitment invitations, and six participated.

Two stakeholders requested an information session to inform their decision about participation. Both meetings were completed individually using Microsoft Teams, during which they received an overview of the study, and their questions were answered. I shared my information and contact details through the recruitment emails to enable interested participants to contact me directly. Initial study information and consent forms were shared with stakeholders to help in their decision-making regarding participation (Supporting information captions; S4 Appendix D).

## **Data Collection**

Data collection was conducted from June 2023 to November 2023, with in-depth, semi-structured, one-on-one interviews with six stakeholders recruited from different cities, across Ontario (n= 5) and abroad (n= 1). Virtual interviewing via Zoom and Microsoft Teams offered flexible scheduling, reduced costs for participants and the researcher, facilitated geographic diversity, and achieved maximum variation sampling (Doyle et al., 2020).

### **Data Sources**

Semi-structured interviews facilitated a flexible way to deeply explore stakeholder perspectives and insights (Roberts et al., 2019). This approach allowed for adjusting the sequencing of questions and expanding discussion to clarify emerging themes (Teodoro et al., 2018).

***Interview Guide.*** The interview guide for stakeholders included predetermined, open-ended, and non-leading questions (Supporting information captions; S5 Appendix E), providing flexibility, and encouraging detailed responses (Kaushik & Walsh, 2019; McGrath et al., 2019). After the first and second interviews, the guide was reviewed, leading to additional probes to explore evolving themes.

### **Additional Data Sources**

Additional data sources included field notes, journals, and memos recorded during data collection and analysis. These sources enhanced future data collection and analysis, promoted accurate data transcription, and contextualized the analysis process (Phillippi & Lauderdale, 2018). Observations, such as non-verbal language, were captured during the interviews and used to gently probe participants for richer and deeper responses, thereby enhancing the understanding of shared views (Paradis et al., 2016). Stakeholders who are experts in the field of registration

and integration of IENs were consulted to verify the researcher's understanding of the context of the study findings.

## **Interviews**

Stakeholders received an information sheet and consent form when invited to participate in the study (Supporting information captions; S4 Appendix D). Interviews were scheduled at a convenient time for participants. Participants were informed that the one-on-one individual interviews would take 40 minutes to one hour. Interviews lasted 35 to 60 minutes and were completed and recorded uneventfully.

Each interview commenced with an explanation of the study purpose, goals, participant rights, and confidentiality strategies. Participant questions were answered before confirming their consent to participate. They signed their consent forms electronically and emailed them back, with one participant sending a scanned signed copy. To maintain consistency, all interviews were conducted by the researcher. Participants permitted digital audio recordings of their interview, and consent for recording was noted on the consent form.

Stakeholders agreed to be contacted by email for further clarification if required following the initial data analysis. A preliminary summary of the interview and generated themes was emailed to three stakeholders to confirm these themes accurately reflected their perspectives (Birt et al., 2016). Participants were asked to review the interview summary, confirm the generated themes, and were reminded to email their responses within two weeks; no responses were received. I maintained journaling throughout data collection and analysis, including reflection on my previous experiences as an IEN.

## **Data Analysis**



Data collection and analysis were conducted iteratively and concurrently (Sandelowski, 2000). I used an inductive analytic approach, which involved searching for patterns and themes within and across the transcripts (Braun & Clarke, 2006) to generate the final themes. The constant comparative data analysis (CCDA) approach was used in this study (Kim et al., 2017); I compared data as each interview was completed.

Immediately after each interview, audio recordings (n= 6) were transcribed verbatim by a professional transcriptionist and verified against the recordings by the researcher. This verification enhanced in-depth understanding and initiated an initial immersion in the data, facilitating the analysis process (McGrath et al., 2019). This approach also helped incorporate insights developed during the early interviews into the ongoing data collection (Hunt, 2009). A sample of early transcripts was reviewed by my supervisor to obtain feedback on data collection and confirm preliminary codes. Field notes made at the time of the interviews were added to each interview to support the analysis (Hunt, 2009).

### **Data Analysis Process**

Thematic analysis was utilized to provide detailed descriptive knowledge of stakeholders' perspectives on IEN integration pathways (Vaismoradi et al., 2013). This methodological approach is common in QD inquiries (Bradshaw et al., 2017; Castleberry & Nolen, 2018; Doyle et al., 2020) and aims to identify patterns of meaning, analyze, and report themes within the dataset (Braun & Clarke, 2006). Braun and Clarke's conceptual framework guided and supported "an insightful analysis" to answer the research question (2006, p.97). Constant comparative data analysis, an iterative approach aligning with thematic analysis (Kim et al., 2017), advances analysis through inductive reasoning (Thompson Burdine et al., 2020), allowing findings to emerge directly from raw data (Thorne et al., 2004). Data analysis continued until no new

information was identified, and themes and patterns were fully described (Patton, 1990).

Transcripts were analyzed and coded manually to enhance immersion in the data (Seale, 2000).

Braun and Clarke's framework (2006) provides a rigorous process for data analysis.

### **Strategies to Promote Rigour and Enhancing Credibility**

Lincoln and Guba (1985) suggested criteria for ensuring methodological rigour, validity, and trustworthiness of an inquiry were utilized to promote rigour, including credibility, transferability, dependability, confirmability, and reliability.

### **Ethical Considerations**

This study received ethical approval from HiREB # 14965, guided by the Tri-Council Policy Statement (Tri-Council, 2022).

**Protecting Confidentiality.** Pseudonyms replaced identifiers to ensure anonymity (Saunders et al., 2015). Participants were informed about data storage, sharing, analysis, and dissemination (Kaiser, 2009). Audio records were saved in password-protected files and sent via encrypted email to the transcriptionist (Tri-Council, 2022). Transcripts were anonymized and stored securely. A confidentiality agreement was signed between the researcher and the transcriptionist, with HiREB approval obtained (Supporting information captions; S6 Appendix F).

**Informed Consent.** Stakeholders received study details via email, and informed consent was obtained after addressing their questions. Written consent was obtained before interviews, with ongoing consent verified throughout the interview (Morse, 2008). Participants agreed to one-on-one interviews, audio recordings, and member-checking.

**Data Management.** Confidential interview data were coded for anonymity (Wang & Huch, 2000). Interviews were transcribed verbatim and stored in password-protected files.

Transcripts and e-signed consents were saved on MacDrive at McMaster University, with data set for destruction following the University's guidelines.

## **Findings**

Stakeholders (n = 6), from credentialing organizations (n = 2), regulatory boards (n = 2), educational institution (n = 1), and LTC (n = 1), shared their perspectives on IEN pathways to becoming registered in Canada. Collectively, these interviews revealed two main themes: stakeholder insights during workforce integration and stakeholder insights during workplace integration. Table 1 summarizes generated themes and subthemes.

### **Theme I: Stakeholder Insights During Workforce Integration**

The workforce integration stage for IENs begins pre-migration until securing registration with the professional board in Canada (Aloustaz et al., 2024a). Stakeholders acknowledged this stage is challenging, requiring collaboration and policy reforms, particularly during credentialing assessments. This theme has two subthemes: credentialing stage challenges and ongoing improvement efforts.

#### ***Credentialing Stage Challenges***

Analysis of stakeholder interviews revealed a common focus on streamlining registration processes and modernizing procedures. Stakeholders identified several challenges facing IENs during the credential assessment, including delays in evaluating education equivalency, recognition of education, and the role of third-party providers (credentialing organizations) and delays in the process. They also noted the impact of the pandemic on accelerating the need for nurses and changes in the registration process for IENs specifically.

#### ***Ongoing Efforts for Improvements***

Stakeholders identified key areas for improvement to overcome workforce challenges, including communication, transparency, efficiency, and support to ensure smoother transitions into the nursing workforce. Collectively, stakeholders and policymakers (n = 6) highlighted the ongoing efforts to overcome registration challenges. For example, the Ontario Bridging Participant Assistance Program (OBPAP) is a program supporting IEHPs with additional training costs. Concurrently, initiatives to modernize the registration pathway for IENs include reducing duplication, recognizing alternative qualifications, and facilitating supervised practice experiences. These programs and initiatives exemplify a commitment to overcoming barriers and adapting to the evolving demands of the healthcare sector, particularly during the pandemic.

Stakeholders emphasized the importance of credential assessment, curriculum evaluation, and ensuring competency levels for IENs seeking registration in Ontario. One stakeholder acknowledged that significant delays, backlogs in credential processes, and lack of communication from credentialing organizations frustrate IENs. Variations in credential requirements across different provincial jurisdictions add complexities, confusion, and frustration among IENs. Most stakeholders highlighted the need for effective initiatives for IENs migrating to Canada, including pre-arrival support with licensing and paperwork, clearer information, and digital credential verification for streamlined registration processes. Other initiatives, such as IEN advisory groups within regulatory boards, were recommended and thought to better address the challenges that IENs face.

Stakeholders also identified available support programs and services beyond academic coursework, including employment support, mentorship during workforce integration, and English language advising, among others. They explained these programs aim to meet the diverse needs of IENs while recognizing their complex lives and time demands. These programs

strive to be accessible across Ontario through online courses and flexible placements, with tuition assistance to ensure cost does not discourage participation.

Overall, stakeholders exhibited a commitment to refining existing programs and processes and finding solutions for a fair and equitable transition for IENs. They highlighted the importance of developing evaluation strategies to identify areas of enhancement, focusing on streamlining registration processing times and incorporating feedback from IENs and other stakeholders. These enhancements may improve efficacy while ensuring the integrity of the registration process. Recent changes, since 2021, within credentialing organizations showcase commitments for improvements. These changes include evaluating assessment methodologies, leveraging document submission technology, modernizing credentialing, and adapting to changing regulatory requirements.

Despite ongoing improvement efforts and support programs, stakeholders acknowledged the complexity of IEN integration. They emphasized the importance of collaboration among all stakeholders for clearer pathways and more coherent guidance to assist IENs. Partnerships with provincial and federal governments emerged as crucial for addressing the complexities encountered by IENs. This collaboration was proposed to streamline immigration processes, track progress during application processes, and develop policies and regulations for healthcare workforce planning.

Some stakeholders noted that some IENs might opt to register in the USA due to barriers or delays in the Canadian registration process. Inconsistencies in the credential assessment reports, issued by the same credentialing organization, raised concerns about the reliability and fairness of the assessment process. The practice of bypassing credentialing organizations for applicants from specific countries, although expediting the process, raised safety concerns

among stakeholders. These concerns were due to potential differences in education and training backgrounds that may be overlooked.

While stakeholders acknowledged the complexity of comparing credentials from different jurisdictions, they emphasized the need for clearer assessment criteria, greater consistency, and transparency in the assessment standards. Efforts to improve communication through enhanced customer service and transparent information exchange were discussed, including utilizing various communication channels, such as social media, websites, and direct communication with participants, to ensure IENs are well-informed throughout the registration process.

In summary, stakeholders exhibited a commitment to improving the registration processes for IENs by enhancing communication, transparency, and support. Key initiatives including OBPAP, modernizing registration pathways, and providing pre-arrival support were highlighted. Collaboration with federal and provincial governments was seen as crucial in addressing the complexities of the process and ensuring fair and efficient IEN integration into the workforce.

### **Stakeholder Insights During Workplace Integration**

Stakeholders also shared their insights about IEN workplace integration. This theme has two subthemes: barriers to workplace integration and ongoing improvement efforts. Workplace integration begins when IEN secures registration until engaging in nursing practice in Canada (Alostaz et al., 2024a).

#### ***Barriers to Workplace Integration***

Stakeholders identified several barriers to workplace integration, including organizational readiness, insufficient support initiatives for IENs, and workplace dynamics such

as “Tribalism & clique behaviour” (Stakeholder 3). Integration efforts are seen as a two-way process involving collaborative efforts between IENs and stakeholders, with organizational leadership needing education to foster a supportive workplace culture that promotes diversity and equity. Recommendations included coaching, mentorship, support programs, education initiatives, and professional development opportunities within healthcare organizations to support IEN’s success.

Leadership and management were highlighted as critical in shaping organizational culture and promoting inclusivity. Two stakeholders advocated for addressing discrimination, racism, and gender inequalities, emphasizing “equal pay for equal work” (Stakeholders 1 & 2), fair compensation, recognition of IEN contributions, and creating a culture of respect. Stakeholders called for awareness programs to empower all nurses, including IENs, to “recognize and address discriminatory behaviours and advocate for themselves.” (Stakeholder 2)

### ***Ongoing Effort for Improvements***

Overall, stakeholders recognized the diverse backgrounds, experiences, and expertise of IENs, emphasizing the importance of inclusivity and cultural competency among both IENs and domestically trained nurses. Two stakeholders suggested seeking support from specialists in creating inclusive workplaces to provide valuable insights and strategies for successful integration. They stated that a supportive workplace culture where IENs feel valued is crucial for integration and retention efforts. They recognized IENs’ contributions, noting they are often overqualified for roles such as PSWs and RPNs, advocating for recognition of their specialty training. Stakeholders also recommended providing IENs with additional training including exposure to the Canadian healthcare system.

In conclusion, stakeholder insights highlight their awareness of challenges and ongoing efforts to integrate IENs into the Canadian healthcare workforce and workplace. Key areas for improvement include streamlining credentialing processes, enhancing communication and support services, fostering inclusive workplace environments, and providing institutional support to all nurses. Effective resolution of these issues requires collaborative efforts among regulatory boards, educational institutions, and healthcare organizations.

## **Discussion**

Six stakeholder interviews were completed to explore their perspectives on IEN integration pathways in Ontario. The analysis of their interviews revealed two main themes: stakeholder insights during workforce and workplace integration. Findings highlighted the need for a comprehensive and collaborative organizational approach to enhance IEN integration experiences in Ontario. Successful integration is a two-way process requiring partnership and collaboration between IENs and stakeholders (Ramji & Etowa, 2018), eliminating the One-way integration mindset (Philip et al., 2019). The FMAT framework was utilized to develop strategies and recommendations for stakeholders to best support IENs, described in detail elsewhere (Allostaz & Chen, 2024).

### **Workforce Integration**

The first theme contains two subthemes: stakeholder insights into credentialing challenges and ongoing efforts to overcome these challenges.

#### ***Credentialing Challenges***

Credentialing remains the primary hurdle to integrating IENs into the Canadian health workforce. Stakeholders acknowledged that the registration process remains complex and requires providing clearer pathways and more coherent guidance. Delays in education



equivalency assessment, recognition processes, and involvement of third-party providers complicate the process. The pandemic has exacerbated these issues by increasing the demand for nurses and necessitating rapid modifications in registration processes (RNAO, 2022). Delays and backlogs in credentialing, coupled with inadequate communication from assessing organizations, result in a prolonged and frustrating experience for IENs (Alostaz et al., 2024c; Squires, 2021).

Variations in educational standards and requirements across jurisdictions further complicated credentialing processes and increased confusion and frustrations among IENs. The lack of standardized criteria for evaluating foreign credentials highlights the need for harmonized assessment procedures across Canadian provinces. Discrepancies in advisory reports among credentialing organizations, in Canada and elsewhere, arise because each assessing board measures different aspects of education, such as credit hours and program contents. Inconsistencies in assessment outcomes for applicants with similar backgrounds are often due to variations in submitted educational materials, several efforts were implemented to address this issue through appeals and adjustments.

The practice of some Canadian nursing boards expediting the process for applicants from specific countries, raising concerns regarding overlooking important differences in education and training. In British Columbia, for instance, the credentials of nurses from the USA, UK, New Zealand, or Australia are considered highly comparable with Canadian education and practice, therefore registration can be achieved faster (British Columbia College of Nurses & Midwives [BCCNM], 2024). Of note, the professional practice of IENs in any of the above countries does not necessarily guarantee a comparable report if they were educated in a country other than those listed (Alostaz et al., 2024c); legislation must be revised to ensure equity. Stakeholders acknowledged the complexity of comparing credentials from different jurisdictions, highlighting

the need for clearer assessment criteria and greater consistency and transparency in assessment standards.

### ***Ongoing Efforts for Improvements***

Stakeholders highlighted numerous ongoing efforts to improve IEN integration. Supporting information captions; S7 Appendix G summarizes the CNO's ongoing changes to improve registration processes in Ontario (CNO, 2024a). Stakeholders discussed key areas for improvement, including enhancing communication, transparency, efficiency, and support systems to ensure smoother transitions and increase diversity and inclusivity within the workforce. Internationally educated nurses identified these key areas requiring additional attention from stakeholders in Ontario to facilitate their successful transition (Alostaz et al., 2024c).

The Canadian government recently launched several programs and initiatives to support IENs during registration. One example of a workforce support program is the OBPAP. This program provides financial support for additional training costs, mitigating some of the financial burdens IENs face (Ministry of Colleges and Universities, 2022; Newton et al., 2012). The federal and provincial governments must create more programs to support IENs financially during recertification, streamline their registration processes and assist with securing employment, ultimately improving their adjustment to the system (Covell et al., 2022).

Effective IEN initiatives during migration are crucial in supporting IENs with licensing and paperwork pre-arrival to Canada, offering clearer information, and implementing digital credential verification to streamline registration and integration. The importance of providing sufficient support during workforce integration was reported elsewhere (Alostaz & Chen, 2024; Alostaz et al., 2024c). Efforts to modernize registration pathways include reducing duplication,

recognizing alternative qualifications, and facilitating supervised practice experience (CNO, 2024b). The CNO launched the Modernized Applicant Assessments Project (MAAP) in 2022 to enhance the registration process for IENs (Supporting information captions; S8 Appendix H). Collectively, these initiatives and programs reflect a commitment to overcoming barriers and responding to the dynamic healthcare landscape, especially during the pandemic, while addressing the increased need for a sustainable nursing workforce in Canada.

Stakeholders are committed to refining existing programs, finding solutions for fair and equitable integration, and developing evaluation strategies to identify areas for enhancement. These enhancements must focus on incorporating feedback from IENs and other stakeholders to improve efficacy while ensuring the integrity of the registration process. Recent changes within credentialing organizations include evaluating assessment methodologies, leveraging technology for document submission, and modernizing credential assessment, to adapt to changing regulatory requirements. The World Health Organization report (WHO, 2016) proposes that strategies addressing persistent workforce challenges must be re-evaluated to leverage current IEN skillsets by adopting a paradigm shift.

Stakeholders acknowledged some IENs might opt to register in the USA due to delays in the Canadian registration process, increasing the competition for nurses and the exodus of IENs (Alostaz et al., 2024a; c). Credentialing organizations informed some IENs that they do not meet the registration requirements in Canada, despite having met the registration requirements in the USA (Alostaz et al., 2024c). Inconsistencies in advisory reports, issued by the same credentialing organization, raise concerns about the reliability and fairness of the assessment process. Improving communication through enhanced customer services and transparent information exchange was also recommended by IENs in related research (Alostaz et al., 2024c). A range of

communication channels, including social media, websites, and direct communication with applicants, might best ensure IENs are well-informed throughout their registration pathways.

Effective collaboration among stakeholders, including provincial and federal governments, is fundamental in addressing the complexities IENs encounter (Allostaz et al., 2024a; WHO, 2016). This collaboration can facilitate tracking IEN progress, developing policies and regulations related to healthcare workforce planning, and addressing immigration processes. Stakeholders suggested forming IEN advisory groups within regulatory boards to better address the challenges IENs face in becoming registered, this was also recommended elsewhere (Covell et al., 2017).

Support programs and services beyond academic coursework, including employment support, mentorship, and English language advising, are essential for integrating IENs successfully (Iheduru-Anderson & Wahi, 2018). These services must be tailored to meet the diverse needs of IENs and strive to be accessible across Ontario through online courses and flexible placements. Adequate funding for tuition assistance ensures IEN participation is not discouraged by program costs, promoting IENs inclusion in the health workforce (Blythe et al., 2009).

In summary, stakeholders highlighted that integrating IENs into Ontario healthcare necessitates comprehensive collaborative approaches. Addressing credential challenges, enhancing communication, and providing support are important strategies to create inclusive and equitable pathways for IENs.

### **Workplace Integration**

Stakeholders recognized the diverse backgrounds, experiences, and expertise IENs bring to the workplace. They emphasized the importance of inclusivity and cultural competency

among IENs and Canadian-trained nurses. Creating a supportive workplace culture where IENs feel valued involves consulting with professionals specializing in inclusive environments. The literature indicates that stakeholders often perceive IENs as less qualified than domestically trained nurses (Baumann et al., 2021), a perception contradicting the perspectives expressed by stakeholders in this study. Stakeholders in this study demonstrated an appreciation of the valuable skills and expertise that IENs contribute to the Canadian workplace.

***Barriers to Workplace Integration.*** Workplace integration presents another set of challenges for IENs. Securing employment can be challenging for IENs, necessitating developing programs to educate managers on skills and strategies for recruiting and hiring IENs (Baumann et al., 2017). Stakeholders in this study identified barriers to successful integration, including organizational readiness, lack of support initiatives, and workplace dynamics such as “Tribalism & clique behaviours.” Creating supportive workplaces is important for successful integration. Integration efforts are seen as a two-way process involving both IENs and stakeholders, a process that is recommended in related literature (Ramji & Etowa, 2018). Internationally educated nurses often face cultural and professional adjustment challenges during workplace integration. The lack of familiarity with the workplace culture and norms negatively impacts IEN integration and practice (Chun Tie et al., 2019). Leadership within organizations must be educated to support a workplace culture conducive to integrating and retaining IENs while promoting diversity and equity. Successful workplace integration of IENs can positively impact the quality of nursing and healthcare practices (Ramji & Etowa, 2018).

### ***Ongoing Efforts for Improvements***

Many IEN initiatives and programs received governmental funding to expedite the integration of IENs into the workplace. One such program is the Nursing Graduate Guarantee

(NGG) program. This program supports new RNs and RPNs, including IENs, within 12 months of registration, providing temporary full-time employment and improving workplace integration (Government Ontario, 2024). Stakeholders must make these programs widely advertised and encourage IENs to join these programs to facilitate securing employment.

Managerial support is crucial, and addressing systematic challenges in the workplace requires collaborative efforts from all stakeholders to create more equitable workplace integration. Leadership and management are vital in shaping organizational culture and promoting inclusivity, by addressing discrimination, racism, and gender inequalities to encourage inclusive work environments. Creating a welcoming workplace involves training managers and educators to develop the required skills to identify, address, and eliminate discriminatory acts against IENs (O’Callaghan et al., 2018). Managers must be able and committed to lead diverse teams (Lee & Wojtiuk, 2021). Programs that raise awareness and empower nurses, including IENs, to identify and address discriminatory behaviours and advocate for themselves are also recommended (Philip et al., 2019).

Workplace support is fundamental in reducing IENs’ stress and ensuring high-quality nursing care (Philip et al., 2019). Establishing inclusive workplaces where IENs feel valued is crucial; a positive and supportive environment is an environment where IENs can utilize their previous knowledge and expertise (Timilsina Bhandari et al., 2015). Recognition of IEN qualifications, specialty training, and contributions is important, ensuring they are not underutilized in roles that do not leverage their expertise (Newton et al., 2012). This recognition creates a culture of respect and ensures a more equitable environment (Njie-Mokonya, 2016). Researchers highlighted the importance of advocating for “equal pay for equal work”,

determining IEN wages based on previous clinical experiences, and fair compensation (Lee & Wojtiuk, 2021).

Healthcare organizations must invest in cultural competency training for all staff, including managers, to enhance understanding and mutual respect of diverse backgrounds, achieving cultural pluralism (Rovito et al., 2022). Other strategies to improve workplace integration for IENs include targeted training, exposure to the Canadian healthcare system, and professional development opportunities. In brief, coaching, mentorship, support programs, and education initiatives within healthcare organizations are recommended to promote IEN success in the workplace. These strategies enable IENs to build confidence in their professional roles (Covell & Neiterman, 2019).

In conclusion, integrating IENs into Canadian healthcare requires collaborative efforts from multiple stakeholders to address workplace challenges. Continuous improvement of existing programs, along with effective collaboration and support, is essential to ensuring fairness and equitable integration for IENs. These efforts can ultimately enhance the overall quality and inclusivity of the nursing workforce in Canada.

### **Strengths and Limitations**

A main strength is that stakeholders from different jurisdictions were recruited offering diverse informed views. The trustworthiness of the study is enhanced by adhering to the standard for reporting qualitative research [SRQR] (O'Brien et. al, 2014). This study also has some limitations, a convenience sample was utilized to recruit stakeholders which is likely affected by selection bias. This approach relies on the researcher's judgment to select participants who are likely to provide relevant rich information, which can lead to excluding other stakeholder perspectives. Ultimately this may not fully capture the diverse views of other stakeholders. To

mitigate these issues, maximum variation and theoretical sampling were utilized to expand sampling methods, resulting in recruiting a broader range of stakeholders and capturing diverse perspectives.

### **Conclusion**

This study offered an overview of stakeholder insights and perspectives on IEN integration pathways in Ontario within the context of the ever-changing regulatory legislation. The paper adds valuable perspectives to the literature by underscoring the practical challenges, systematic barriers, and potential strategies to overcome these barriers from those who are directly involved in the integration processes of IENs. Addressing IEN challenges requires a coordinated effort from governments, healthcare institutions, and professional organizations to create supportive and inclusive environments. Effective policies such as standardized credentialing processes, improved communication among stakeholders, and comprehensive orientation programs, including cultural training, are essential. Governments at all levels, regulatory boards, educational institutions, and healthcare organizations must collaborate to establish smooth pathways for IENs. Overcoming these barriers ensures that the valuable experiences and expertise IENs bring to the Canadian healthcare system are fully utilized, providing high-quality patient care, and fostering a more diverse and resilient workforce. Successful integration of IENs enhances workforce sustainability in Ontario and ultimately improves the quality of patient care.

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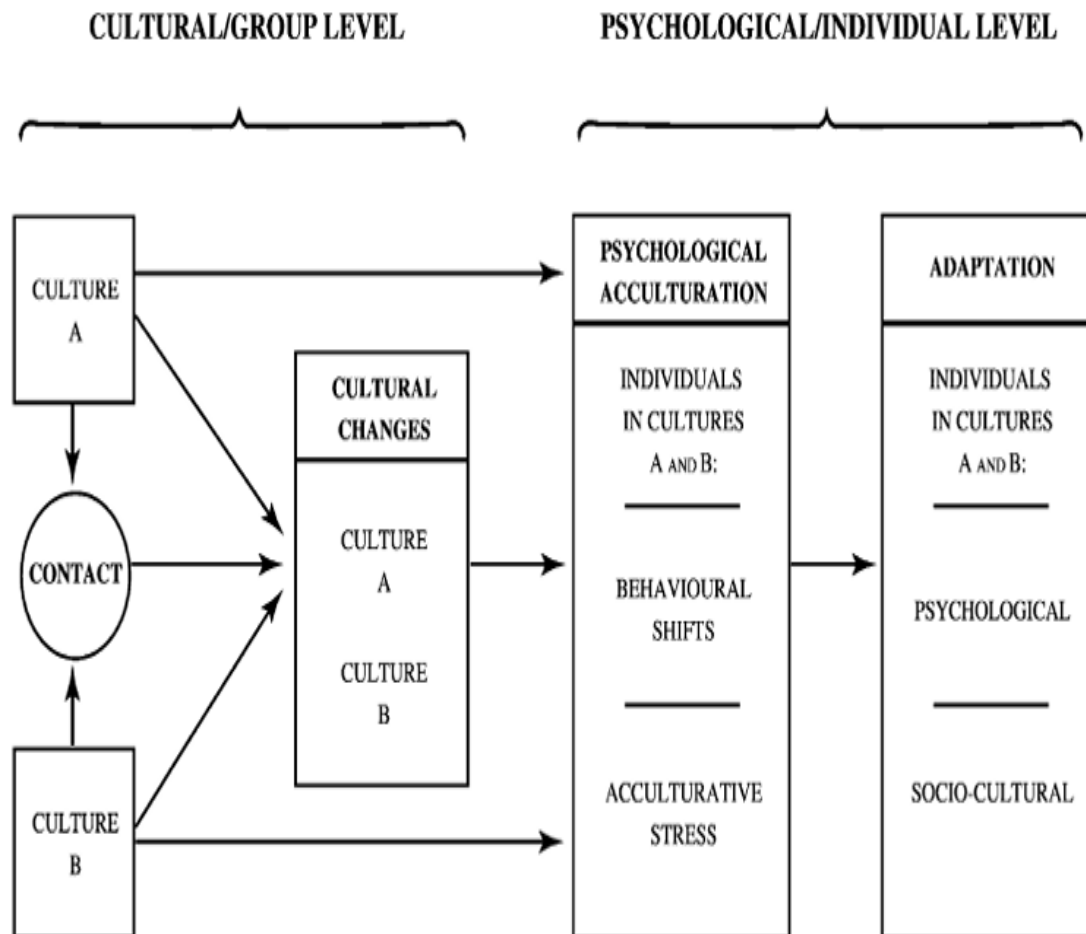
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Table 1

*Stakeholders Thematic Analysis*

Themes	Subthemes
Stakeholder insights during workforce integration	Credentialling stage challenges
	Ongoing improvement efforts
Stakeholder insights during workplace integration	Barriers to workplace integration
	Ongoing improvement efforts

Supporting information captions: S1 Appendix A: Acculturation General Framework



Source: Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29(6), 697–712. <https://doi.org/10.1016/j.ijintrel.2005.07.013>

**Supporting information captions: S2 Appendix B: The Four Stages of Acculturation**

		Value and Maintain Native Culture	
		YES	NO
Value and Maintain Host Culture	YES	Integration	Assimilation
	NO	Separation	Marginalization

Source: Berry, J. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–68.

### **Supporting information captions S3 Appendix C: Stakeholders' Email/ Phone Script**

Hello; Thank you for your email/ phone call/ phone message. My name is Nasrin Alostaz. I am a graduate student researcher in the School of Nursing at McMaster University, conducting a research study about the experiences of internationally educated nurses of registration with the CNO and integration within the Canadian healthcare workforce. This research study is conducted as part of fulfilling the requirement of the Ph.D. program, my supervisor's name is Dr. Olive Wahoush.

To participate in this study, you need to have experience in assisting IENs through their registration or integration process or participating in initiatives such as the HHS IEN Integration Project, CARE Centre for IENs, and or working with the CNO at the entry-to-practice department. Your participation in this study is completely voluntary. This means that you do not have to participate in this study unless you want to. If you agree to participate, I can email you the study's information sheet so you can read it. I encourage you to contact me by email (anytime) or phone between 9 am and 5 pm (Contact information is provided in the information sheet) should you need further information or clarifications. The information you will provide me will assist in further understanding the accounts of the IENs and will further enhance the data analysis and knowledge generation process.

You will be scheduled to meet with the primary researcher (myself) on an individual one-on-one interview. This interview will be conducted either by in person, face-to-face meeting or virtually via video calling (i.e., Skype/ FaceTime/Zoom call) and will last about 40 minutes to one hour. Please let me know a time and day suitable for you to meet with me in the next week or two, if in person please let me know where you would like to meet.

During the interview, there is a small chance that some of the questions may make you feel uncomfortable. You don't have to answer those questions if you don't want to. You don't have to

answer any question that you choose not to answer, and that is fine. We will just skip that question and go on to the next one.

All the information I receive from you by email, during the interview, or at any other time during the study including your name and any other identifying information, will be strictly confidential and will be stored in a password-protected file on a password-protected computer. I will not identify you or use any information that would make it possible for anyone to identify you in any presentation or written reports about this study. If it is okay with you, I might want to use direct quotes from you, but these would only be quoted as coming from “a person” or a person of a certain label or title, like “one stakeholder said....” Once your interview is completed, your information will be anonymized, analyzed, and combined with analyzed data from other interviews for a more thorough analysis. Consequently, it will be very difficult for others to recognize your information or individual participants.

The Hamilton Integrated Research Ethics Board has reviewed this study under project # **14965**.

Do you have any questions? Thank you for contacting me and I am looking forward to meeting you in person / via video call on the date... for your interview.

Nasrin Alostaz, Ph.D. Student, McMaster University,

Contact # (xxx) xxx-xxx



## **Supporting information captions: S4 Appendix D: Stakeholder’s Information Sheet & Consent Form**

“Stakeholders Perspectives on Internationally Educated Nurses’ (IENs’) Workforce and Workplace  
Integration Pathways in Ontario: A Qualitative Descriptive Study”

### **Investigators:**

#### **Local Principal Investigator:**

Olive Wahoush, RN, RSCN, M.Sc., Ph.D.  
School of Nursing, McMaster University,  
Hamilton, ON, Canada  
Phone: (905) 525-9140, ext. xxxxx  
Email: wahousho@mcmaster.ca

#### **Student Investigator:**

Nasrin Alostaz, RN, BScN, M.Sc., MNEd.  
School of Nursing, McMaster University,  
Hamilton, ON, Canada  
Phone: (xxx) xxx-xxxx  
alostazn@mcmaster.ca

**Background:** This research study is being carried out by Nasrin Alostaz as part fulfilment of a Ph.D. in Nursing at McMaster University. The purpose of this research is to describe and explore the experiences of internationally educated nurses (IENs) of their credential evaluation, international transferring, registration, entry to practice, and integration into the nursing workforce particularly after the change in the licensing examination in 2015 and currently during the COVID-19 Pandemic. I am also seeking to recruit five stakeholders (e.g., managers, employers, educators, etc....) to explore their insights regarding the pathways of the IENs credential assessment process, registration with the governing board, employment, challenges and factors that impact these processes, strengths and limitations of the processes, and suggestions for improvements particularly after the change in the licensing examination in 2015 and currently during the COVID-19 Pandemic.

**The Study Process:** This study involves the collection of information from IENs and stakeholders. You as a stakeholder, will be invited to participate in an individual one-on-one interview with the primary researcher either by in person, face-to-face interview or virtually through FaceTime/Skype/Zoom calls. The interview aims to collect rich and in-depth data about your role in supporting IENs. Each

stakeholder will participate in one interview that will last approximately 40- 60 minutes. With your permission, the interview will be digitally recorded so that the researcher can analyze and interpret the data at a later stage. If you agree to participate in this study, you will be contacted to arrange a suitable date, time, and location for the interview to take place. With your approval, a summary of your interview will be shared with you by either phone or email about one to two weeks after your interview so that you can verify that the description of your experience is accurate and ask for further clarification if needed. You also get the opportunity to add any missing information that you wish to include in the data analysis.

Any personal details and information given to the researcher will be coded so that you cannot be identified in any way. Your anonymized information will be shared with the research supervisor and expert colleagues for data analysis and interpretation. Information from the study will be presented in summary and will not identify the participant, the institution they participated from, their affiliation, or their department.

**Potential Risks:** It is unlikely that there will be any harm or discomfort associated with participating in the study. You don't need to answer questions that you don't want to answer or if it makes you feel uncomfortable, we will just skip the question and go on to the next one. Should you become uncomfortable, the interview will be stopped, and you may take a break as needed.

**Voluntary Participation:** Your participation in the study is completely voluntary and you may withdraw from the study at any time even after signing the consent, without any penalties and you will not give up any benefits that you had before entering the study. If you decide to withdraw from the study, the information provided by you to the point of your withdrawal will be stored securely in the same way that another participant's information is stored. Alternatively, you have the option of removing any personal details or data collected from the study. However, I will request you inform me

of your intentions to withdraw your data either by phone or email **no later than two weeks after your interview**. This is because once the interview is completed and data is collected, your data will be anonymized, analyzed, and combined with analyzed data from other interviews for a more thorough analysis. Consequently, it will be impossible to recognize your data and remove it.

**Confidentiality:** Confidentiality will be maintained throughout the research process. All data collected will have names removed and participant numbers assigned to maintain your anonymity. Your name will not be published and will not be disclosed to anyone outside the study. All forms of data and documents (demographic questionnaires and consents) will be stored securely at McMaster University, in a locked cabinet, where only my supervisor and I will have access. Audio files will be destroyed once the analysis process is completed and new knowledge is generated, the hard copies will be destroyed when the study is finalized. All electronic documents related to this study will be stored in a password-protected computer and will be kept for five years. Direct quotes would only be quoted as coming from “a person” or a person of a certain label or title, like “one Stakeholder/educator said....”

**Study Results:** I expect to have this study completed approximately by August 2024. If you would like a summary of the results, please let me know how you would like it sent to you.

**Contact:** If you wish to obtain further information, ask any questions (about the study, your participation, and your rights) or discuss any concerns during the research process, you can contact the primary researcher Nasrin Alostaz at the phone number (xxx) xxx-xxxx or via email [alostazn@mcmaster.ca](mailto:alostazn@mcmaster.ca) if you wish to speak to my supervisor, Dr. Olive Wahoush, who may be contacted at McMaster University, School of Nursing at the phone number (905) 525-9140, ext. xxxxx. You are encouraged to ask any questions relating to this study process at any time.

This study has been reviewed by the Hamilton Integrated Research Ethics Board (HiREB). The HiREB is responsible for ensuring that participants are informed of the risks associated with the research and

that participants are free to decide if participation is right for them. If you have any questions about your rights as a research participant, please call the Office of the Chair, HiREB, at (905) 521.2100 xxxxx.

## Consent Form

**Declaration:** This study and this consent form have been explained to me. I have read or had read the information letter about the study conducted by Nasrin Alostaz, a student researcher at McMaster University. I have had the opportunity to ask questions about my participation in the study and all my questions have been answered to my satisfaction.

I understand that if I agree to participate in this study, I may withdraw from the study at any time, however, I will need to inform the researcher about my intentions to withdraw no later than two weeks after my interview. I will be given a signed hard copy/an electronically signed copy of this form. I freely and voluntarily agree to participate in this research study.

**Participant's Name (Printed):** .....

**Contact Details Phone** ..... **email** .....

**Participant's Signature:** ..... **Date:** .....

I agree that the interview can be audio recorded.      ☐ Yes ☐ No

**Participant's signature:** .....

I agree to receive a follow-up contact using my email ..... or my phone number ..... So, the researcher can provide me with a summary of the interpretations of my interview, to confirm that these are a true reflection of my own experiences.

**Participant's signature:** .....

☐ Yes, I would like to receive a summary of the study's results. Please send them to me at this email address \_\_\_\_\_ Or to this mailing address:

---

☐ No, I do not want to receive a summary of the study's results.

**Statement of Researcher's Responsibility:** I have explained the nature and purpose of this research study, the procedures to be undertaken and any risks that may be involved. I have offered to answer any questions and fully answered such questions to the best of my ability and knowledge. I believe that the participant understands my explanation and has freely given informed consent.

**Researcher's Name (printed):** .....

**Researcher's Signature:** ..... **Date:** .....

## **Supporting information captions: S5 Appendix E: Stakeholder Interview Guide**

### **Study Background Information:**

The study is being conducted to explore the experiences of internationally educated nurses (IENs) regarding their credential evaluation, international transferring, registration, and entry to practice during the COVID-19 pandemic. I appreciate you taking the time to be interviewed as a person knowledgeable about IEN programs in Ontario/Canada and/or working with IENs.

- 1) First, please tell me about your professional experience, what was your role and how long you worked within the registration/entry to practice department/ the integration program.
- 2) What is the pathway of the registration of nurses particularly IENs/the integration/employment process of IENs?

### **Prompt #1:**

- a. What are the differences between WES and NNAS credential assessment?
  - b. Please share your thoughts about the reported discrepancies in the NNAS, SGFNS, and CNO advisement report.
  - c. What strategies were implemented to expedite the assessment process? How do you suggest compensating for applicants who are delayed?
  - d. What do you suggest we keep, remove, and implement in our system to improve the credentialing assessment and registration process?
  - e. Some provinces waived NNAS for IENs from certain countries, leading to IENs moving to other provinces with more facilitated entry-to-practice requirements, what is the plan here in Ontario?
- 3) How do you suggest Ontario's IEN programs and initiatives support IENs through their transition processes? What can be changed and what can we keep as permanent practice?

**Prompt #2:**

- What is the Stakeholders' role in integrating IENs?
- How can we support IENs to improve their retention within Canadian Healthcare institutions and prevent secondary migration?

**Conclusion:** Thank you for taking the time to participate in this interview. Is there anything you would like to add or tell me about that we haven't discussed?

\*This preliminary interview guide will be revised, and probes will be added once initial data collection and analysis begin. This guide will be developed based on preliminary data analysis from previous IEN and stakeholder interviews.

## Supporting information captions: S6 Appendix F: Confidentiality Agreement

This agreement is between:

Nasrin Alostaz

Primary Researcher, Graduate Student, School of Nursing, McMaster University

And

XXXX

Transcriptionist

Regarding research project **14965**, title: "..."

1. I understand that the work that I will be undertaking for the Project named above must be kept confidential for ethical and legal reasons. I will treat all the information I encounter in the course of providing services to the project as confidential. This includes information held in any format, such as email, discussions, audio files, written transcripts, and other documents.

2. I agree to respect the following rules regarding the treatment of information with which the Project has entrusted me:

a) I will not use or disclose information from the Project unless I need to know it to perform my services for the project

b) I will not engage in discussions about information from the Project in public or in any area where it is likely to come to the attention of others

c) I will not allow another person to listen to, view, or otherwise gain access to information from the Project

d) I will not transmit any potentially identifying information related to the Project via email – only via secure password protected means, or as otherwise instructed.

e) At the conclusion of the project, I will dispose of all project documents in all forms in a confidential manner, i.e., by shredding paper documents and fully deleting all electronic copies from my computer hard drive and other media, including backups.

3. I will immediately report any violations of the conditions above of which I become aware to Olive Wahoush, Local Principal Investigator.

4. I understand that the conditions as described in this agreement will remain in place once I complete my services for the Project and I promise to abide by these conditions even after my services for the Project are completed.

**Transcriptionist Name and Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

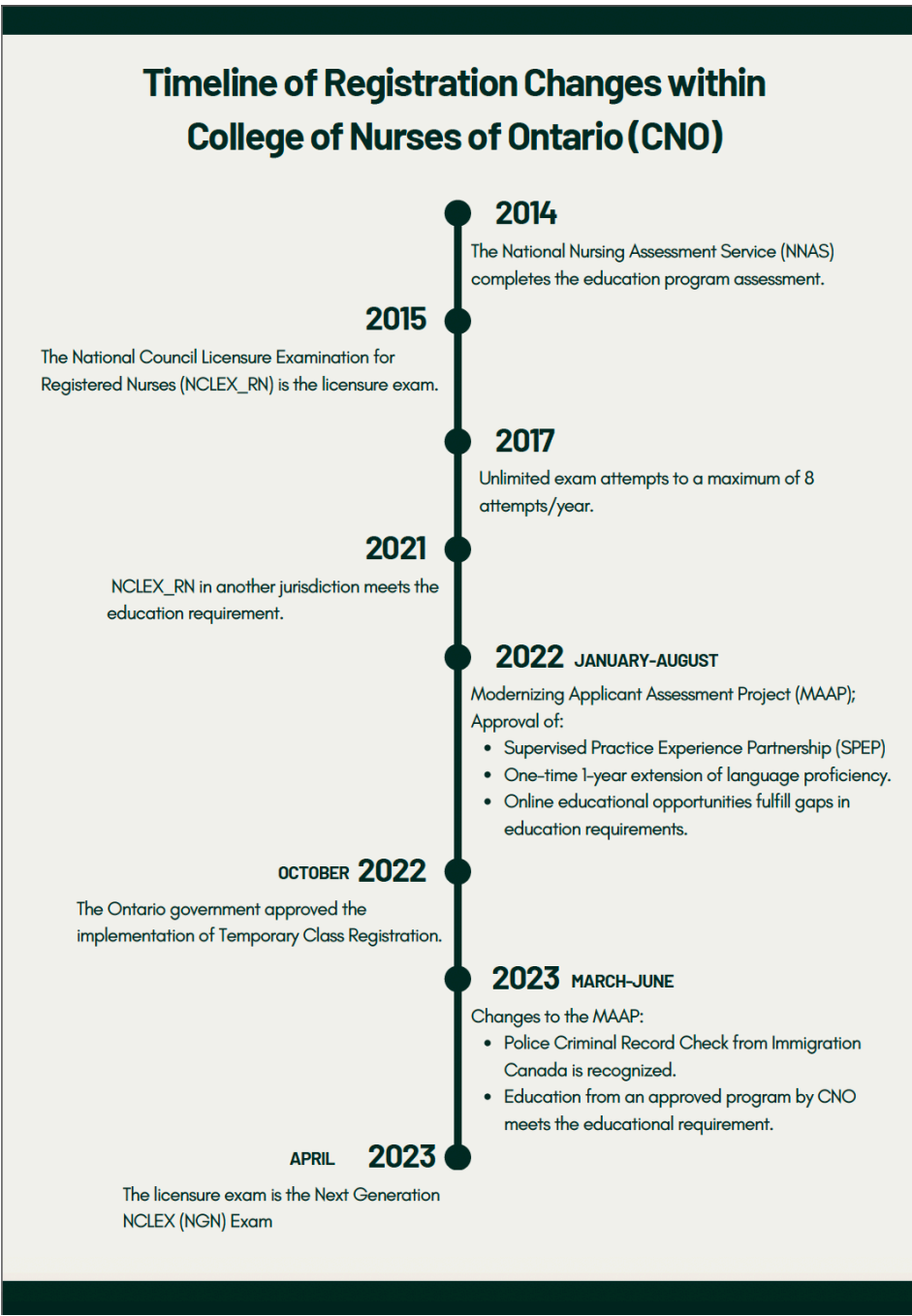
I agree to:

1. Provide detailed direction and instruction on my expectations for maintaining the confidentiality of research information so that *[transcriptionist/research staff]* can comply with the above terms.

2. Provide oversight and support to *[transcriptionist/research staff]* in ensuring confidentiality is maintained in accordance with the Tri-Council Policy Statement *Ethical Conduct for Research Involving Humans* and consistent with the Dalhousie University Policy on the *Ethical Conduct of Research Involving Humans*.

**Researcher(s) Name and signature** \_\_\_\_\_ **Date** \_\_\_\_\_





## Supporting information caption: S8 Appendix H: Modernized Applicant Assessments Project

Requirement	Date	Changes
Language proficiency	March 7, 2022	<p>Approval of different options to meet the language proficiency requirement.</p> <ol style="list-style-type: none"> <li>1. Practice experience in a healthcare or health-related setting wherein English is a primary language in or outside Canada or completing a Supervised Practice Experience Partnership (SPEP) during the past 2 years.</li> <li>2. Nursing education; completing entry level nursing program in any jurisdiction in English within the past 2 years.</li> <li>3. Registration as a practicing nurse that is previously or currently held with CNO or in another Canadian jurisdiction; or</li> <li>4. Successful completion of a CNO approved language proficiency test e.g., Canadian English Language Benchmark Assessment for Nurses (CELBAN).</li> </ol> <p>Extension of language proficiency if language proficiency expires before securing registration, one time, one-year extension.</p>
Nursing education	August 15, 2022	CNO, in collaboration with Ontario schools and colleges, to offer nursing education programs and courses improving access to appropriate educational opportunities and fulfil gaps in IEN educational requirements. CNO approved some online education programs to meet entry-level competencies.
	June 13, 2023	Applicants will meet the education requirement if they complete relevant nursing education recognized or approved in any jurisdiction. Applicants also will be required to complete a course to support their successful integration into Ontario's healthcare system.
Evidence of practice	January 29, 2022	SPEP to facilitate ways that eligible IENs can meet evidence to practice requirements, offer IENs the opportunity to apply the CNO practice standards and/or satisfy language proficiency. A minimum of 140 hours of clinical practice are required to be successful in this partnership.
Police criminal record check	March 9, 2023	Recognizing the police criminal record check provided to Immigration Canada if they have remained in Canada since their immigration status was granted to reduce duplication.

## Appendix A: A List of Key Stakeholders

Stakeholder	Role in the IEN Pathways
IENs themselves	They are directly impacted by the transition process and have a vested interest in its effectiveness and fairness. These were interviewed separately.
Regulatory boards	The College of Nurses of Ontario (CNO), plays a crucial role in assessing the qualifications of IENs and granting them licensure to practice.
Government agencies	Provincial levels, such as the Ministry of Health and Immigration, Refugees and Citizenship Canada (IRCC) are involved in developing policies and regulations related to healthcare workforce planning and immigration.
Educational institutions	Colleges and universities offering bridging programs or other educational opportunities for IENs, facilitating their transition to the Canadian workforce
Employers	Healthcare institutions, including hospitals, clinics, community, and long-term care facilities, employ and retain IENs within the workforce.
Professional associations	The Canadian Association of Schools of Nursing (CASN) and Registered Nurses Association Ontario (RNAO) may advocate for policies and initiatives that support the integration of IENs into the nursing profession.
Assessment and credentialing agencies	NNAS and CGFNS are responsible for evaluating the credentials and competencies of IENs seeking licensure in Canada.
IENs Initiatives, community organizations, settlement centres, and advocacy groups	These may provide support services, advocacy, and resources for IENs navigating the transition process and settling into their new communities. CARE Centre for IENs and Hamilton Health Sciences IEN project are examples of IEN initiatives in Ontario.

Experts in workplace culture and diversity consultants	Professionals who specialize in creating inclusive work environments and addressing issues of discrimination and bias can contribute valuable insights and strategies for supporting IENs in the workplace.
Research and evaluation bodies	Academic institutions and research organizations may conduct studies to assess the effectiveness of programs and initiatives to support IENs and improve their integration into the healthcare system

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## **CHAPTER SEVEN**

### **Introduction**

This concluding chapter summarizes key findings from the multi-method study included in the thesis. I will briefly present the application of the theoretical framework. Implications for policy, practice, and research informed by these findings are presented. This is followed by knowledge mobilization strategies and an overview of the strengths and limitations of studies included in this thesis.

### **Summary of Findings**

This multi-method study explored the integration experiences of IENs following the licensing examination change in 2015 and during the COVID-19 pandemic in Ontario. This thesis is structured into three phases: a) a scoping review, b) a quantitative study, and c) qualitative description studies.

The scoping review provided insights into strategies to optimize IEN integration into the Canadian healthcare system by comparing IEN integration processes in Canada and Australia. A total of 27 studies were reviewed, revealing a lack of research on IEN integration experiences post-2015, with workplace integration being the most frequently explored area. Over 60% of the included studies focused on IEN integration into the workplace, while only 14.8% examined integration into the workforce. Notably, most studies relied on data collected before 2015, with only 14.8 % reporting data collected after 2015.

The review suggests that IEN integration pathways in Canada and Australia are highly comparable, with Australia showing greater success in integrating IENs. This success is attributed to collaboration strategies among the key stakeholders in Australia, indicating that similar collaboration and policy alignment among Canadian stakeholders could facilitate better

IEN integration into the healthcare system. The results from this review informed the development of a survey questionnaire for the next study phase.

The quantitative study described the sociodemographic characteristics of IENs and examined how they influenced their successful integration pathways. This phase included a cross-sectional and secondary data analysis, with a total sample size of 259 IENs. The findings from this analysis were noteworthy. First, some IENs secured Canadian citizenship while waiting for their licensing in Ontario, suggesting delays in the registration process that extend beyond the period of safe practice. Second, the analysis found no association between successful integration outcomes and factors such as the country and language of nursing education or the timing of migration to Canada, whether pre- or post-COVID-19 pandemic, contradicting current reports by the CNO (CNO, 2022).

Finally, the study revealed that IENs who completed their registration within a three-year safe practice period were more successful in securing employment than those who registered beyond this period. Surprisingly, IENs affiliated with CARE were less successful in securing registration or employment than non-CARE members. This may be because IENs who struggle to succeed in registration or employment seek assistance from CARE after exceeding the safe practice period. The findings from this study informed interview guides for the third phase of this thesis.

The qualitative description phase of this thesis was twofold: 1) it examined IEN experiences ( $n = 12$ ) during their integration into the Ontario healthcare system, and 2) it explored stakeholder perspectives ( $n = 6$ ) on IEN integration pathways, particularly since 2015 and during the COVID-19 pandemic. Internationally educated nurses shared various aspects of their educational and professional backgrounds, showcasing a diversity of qualifications and

expertise. The findings highlighted that IENs face multifaceted regulatory challenges throughout their integration journey.

The registration process was described as complex, expensive, and lengthy, causing disappointment, stress, and frustration among IENs. Notably, all IENs in this study received non-comparable reports for RN registration, with some requiring additional education and, in some instances, needing to retake nursing degrees regardless of their country of origin, education, or practice. These credentialing challenges highlighted the need for systematic reforms and comprehensive support programs. Internationally educated nurses faced transparency and communications issues from regulatory boards and credentialing organizations, leading to uncertainties regarding their plans and careers.

Financial burdens posed a significant barrier to IENs' success, particularly considering additional living costs and relocation fees, leading to downward mobility, underemployment, or unemployment. Even after becoming registered, IENs often struggled to secure employment matching their area of expertise. Additionally, they encountered difficulties adapting to the new healthcare system due to a lack of structured institutional orientation. This study also highlighted the multidimensional challenges IENs face, including cultural differences, technology variations, healthcare policies, inequities, and stigmatization. Finally, IENs called for multiple systematic improvements to facilitate their timely integration.

Stakeholders shared their insights on IEN integration pathways in Ontario. They acknowledged that the credentialing process remains the primary hurdle in integrating IENs, despite significant changes in the licensing requirements. Stakeholders also expressed a commitment to refining existing processes and developing programs for the fair transition of IENs. The findings emphasized the need for a comprehensive collaboration among stakeholders

to create transparent, equitable, and supportive pathways for IENs, thereby strengthening the overall healthcare system in Ontario.

### **Theoretical Framework Application**

This study is grounded in a strong theoretical foundation. Transition Theory (TT) was critical in framing the experiences of IENs as they navigated the psychosocial, environmental, and organizational challenges of integrating into a new healthcare system. It informed the design of the data collection tools and guided data analysis, focusing on the transition stage while capturing its complexities and identifying facilitators and inhibitors. The data aligns with the concepts of the TT. For example, many IENs experienced significant stress and frustration during the initial registration with CNO. However, with support from case managers at CARE, IENs exhibited greater resilience and were better prepared to meet registration requirements. This finding supports the notion that external support is essential to secure positive outcomes.

While TT was helpful in supporting IENs through their transition, it did not necessarily generate sustainable outcomes. Therefore, the FMAT was utilized to explore cultural integration challenges and better understand the adaption strategies of IENs. This understanding facilitated identifying potential workplace strategies that focused on effectively integrating IENs and creating a sustainable workforce.

### **Implications**

This study aimed to describe the experiences of IENs during their integration processes and the insight of stakeholders regarding these processes. Despite efforts for systematic improvements, IENs continued facing challenges in integration, while stakeholders agreed that IEN integration remains complex and requires further systematic improvements to overcome these complexities. Integrating IENs is a complex and ongoing process (Rajpoot et al., 2024),



requiring planning, proactive collaboration, continuous support, and evaluation of the effectiveness of existing policies.

### **Priority Recommendations**

The main priority recommendation is focused on establishing a more coordinated, multi-stakeholder support system involving the government, nursing regulatory boards, credentialing organizations, and hiring institutions. This study suggests that IENs face fragmented support, with different stakeholders responsible for different stages of their transition. A coordinated approach would ensure IENs receive comprehensive support, leading to a seamless transition into the workforce. Additionally, the study underscored the need for better data tracking and evaluation of IEN progress throughout their transition and integration. Robust, high-quality data would help identify gaps and facilitate ongoing improvements to current policies and support systems.

To further enhance IEN integration, several strategies are recommended: improved collaboration among stakeholders and policymakers; streamlined credentialing processes; enhanced communication and transparency; increased support programs and services with improved accessibility; reduced financial constraints; and reformed policies to ensure timely access to the nursing profession and address workplace dynamics. The next section summarizes the impact of findings on policy, practice, and future research.

### ***Implications for Policy***

**Government.** The analysis of IEN interviews revealed that delays in obtaining legal status or PR caused additional delays in their professional integration. Creating more efficient pathways for obtaining legal status in Canada so that IENs can access publicly funded support programs is recommended. Implementing pre- and post-migration programs is crucial for

facilitating successful IEN integration (Alostaz & Chen, 2024; Berry, 1992). Developing consistent and sustainable pre-migration policies is important for integrating IENs into the health system without delays. These policies must include initiating licensing processes and completing registration requirements such as language proficiency and registration examinations before arrival in Canada (Alostaz et al., 2024a; Singh & Sochan, 2010). Setting realistic expectations, such as a clear timeline of the process, cost, and requirements, is also important so IENs can better plan their settlement professionally and financially.

Post-arrival programs must be tailored to address the diverse learning needs of IENs (Alostaz et al., 2024b; Walton-Roberts, 2022), accessible across Ontario through online/hybrid sessions, flexible training and placements, and must offer adequate funding for tuition assistance to ensure participation is not limited by cost. Additionally, these programs must be evaluated periodically to ensure objectives are met. Federal and provincial governments should create more programs to support IENs financially during the recertification process. Financial support can shorten the time for securing registration and employment and improve IEN adjustment to the system (Covell et al., 2022).

Effective collaboration among stakeholders, including federal and provincial governments, regulatory boards, educational institutions, hiring institutions, and governmental agencies, is essential (Alostaz et al., 2024b; Buchan et al., 2022). This collaboration can facilitate tracking IEN progress and provide more streamlined and supportive integration pathways. Aligning language proficiency tests required by IRCC, nursing boards and bridging programs to reduce duplication in credentialing requirements and costs for IENs, and extending the time for language validity, especially for IENs living in Canada are recommended (Maddock et al., 2023).

**Regulatory Board.** Despite implemented changes within the regulatory board, IENs continued to face credentialing hurdles, highlighting the need to provide more explicit guidance to support IENs through licensing applications. Regulatory bodies in Canada must collaborate to create harmonized credentialing processes (Alostaz et al., 2024a), ensuring consistency, improving equality, and reducing competition for IENs across provinces. Another credentialing issue includes delays and discrepancies in advisory reports issued to an IEN from different assessing organizations or to IENs with similar credentials. This credentialing issue necessitates improving assessment efficiency, communication strategies, and transparency through online portals, allocating adequate resources, and collaborating with external credentialing organizations.

Modernizing credentialing methodologies is a crucial step in expediting integration. Continuous improvement efforts and commitments to refining current programs and processes are fundamental in supporting IENs through the licensing journey. Regular evaluation of existing policies to examine their effectiveness is important to identify areas for improvement. This can be done more efficiently by incorporating feedback from IENs and insights from stakeholders on the impact of policy reforms on IEN integration. Feedback from IENs can be obtained through advisory committees with IEN representatives.

Emphasis should be placed on utilizing proactive communication and enhancing customer services. Communication channels include websites, social media, and direct communication with applicants, ensuring IENs are well-informed throughout the integration process. Offering timely updates regarding the status of their application is important to ensure IENs are submitting registration requirements without missing deadlines. Collectively, these strategies improve transparency, eliminate confusion among IENs (Blythe et al., 2009), address

their concerns regarding the assessment process, and improve the overall effectiveness of credentialing procedures.

### ***Implications for Practice***

Successfully integrating IENs into the workplace requires a multifaceted organizational approach (Leone et al., 2020; Sasso et al., 2019). This approach includes offering comprehensive support, equal professional growth opportunities, and fair payment (Sasso et al., 2019) to improve IEN retention (Rajpoot et al., 2024) and maintain a sustainable nursing workforce (Roth et al., 2022).

**Hiring Organization.** Institutional support programs are required to assist IENs in navigating challenges during integration into a new workplace. Hiring institutions must develop programs to educate managers on skills and strategies for recruiting and hiring IENs (Baumann et al., 2017). Additional robust educational programs must also be developed for managers, educators, and preceptors who interact with IENs to provide them with information about the transition processes and strategies for supporting IENs, ensuring their successful integration and retention (Chun Tie et al., 2019; Timilsina Bhandari et al., 2015). Hiring institutions must adopt practices that are inclusive and respectful of diversity, recognize IEN contributions to the workplace, and value equity (Ramji et al., 2019).

Institutional readiness is ensured by developing strategies to address workplace dynamics, discrimination, and inequities. Leaders must develop anti-discrimination and antiracism policies, enhance strategies and approaches to manage discrimination in the workplace, supporting managers and educators to manage these acts effectively (O’Callaghan et al., 2018; Timilsina Bhandari et al., 2015). These efforts extend beyond the recruiting

organization to include collaboration among various stakeholders to develop and implement meaningful change.

Hiring institutions must continue recognizing the diverse experiences of IENs, matching their previous expertise with their current employment, maximizing the utilization of IEN skills, and improving their satisfaction (Andriescu, 2018; Pressley et al., 2022). Developing opportunities for IEN professional growth and advancement enhances equality and equity (Ramji et al., 2019). Employers must identify and address barriers to IEN integration and provide the resources and professional and emotional support required to overcome these barriers (Blythe et al., 2009).

This study highlights the importance of creating inclusive workplaces and implementing strategies to foster inclusivity and promote a culture of diversity and equity. These strategies include institutional orientation and education initiatives. Institutional training workshops must include cultural competency and mentorship programs (Aggar et al., 2020). This can facilitate positive relationships among nurses, improve IEN retention, and enhance the sustainability of the nursing workforce (Rajpoot et al., 2024). Education initiatives for organizational leadership foster a supportive workplace culture and promote diversity and equity, improving IEN's sense of belonging (Alostaz & Chen, 2024).

**Managers and Educators.** Effective leadership is essential for reinforcing positive behaviours and addressing challenges. Managers and educators must acknowledge the diversity IENs bring to the workplace. They must prioritize diversity, equity, and inclusion initiatives and actively support IEN integration. Managers and educators must receive training on recognizing and effectively managing discriminatory acts (O'Callaghan et al., 2018), enhancing IENs' retention within Canadian healthcare.

Managers and educators must develop orientation programs that are sensitive to IEN learning needs, differing from programs offered for new Canadian nurses (Lee & Wojtiuk, 2021; Rovito et al., 2022). Internationally educated nurses in this study highlighted the need for language and cultural competency training. Therefore, language courses, including communication and vocabularies specific to the new workplace are beneficial. Managers and educators must prepare mentors with skills and strategies to support IENs during their transition to the new workplace effectively (Zanjani et al., 2021).

Mutual understanding of cultural norms and differences is a shared responsibility among all nurses (Balante et al., 2021; Rovito et al., 2022). To enhance inclusivity, Canadian and internationally educated nurses must be offered cultural competency training. Training programs that raise awareness regarding discriminatory acts and empower all nurses to recognize these acts for themselves and others are crucial. Educators must also encourage IENs to identify areas for improvement is also crucial.

**Preceptors.** Cultural pluralism can be achieved by training preceptors to understand the important contributions IENs bring to the workplace. Preceptors must utilize strategies for mutual respect of different cultures and support IENs through navigating adaptation strategies to the new workplace practices (Alostaz & Chen, 2024), enhancing IENs' seamless transition and satisfaction.

### ***Implications for Research***

Future research should continue to explore the impact of implementing systematic changes on IEN integration to identify areas for improvement. Researchers should evaluate the effectiveness of existing policies, support programs, and educational initiatives to ensure they meet IEN needs. Exploring challenges within the credentialing assessment process to identify

strategies to improve assessment efficiency, proactive communication strategies, and enhance customer services is crucial.

At the workplace, investigating the impact of mentorship and support programs on IEN integration and retention is essential for developing evidence-based strategies to enhance their experiences is important. Researchers should also focus on evaluating the impact of cultural training on workplace dynamics, racism, discrimination, and inequities to promote inclusive workplace culture. Collecting data on the progress of IENs is crucial for tracking their progress and identifying areas for improvement. This data can inform future research and policy development to ensure successful IEN integration into Canadian healthcare institutions. Finally, future research must also examine Canadian nurse perspectives and experiences when mentoring IENs at the workplace to develop educational programs to meet their learning needs.

### **Knowledge Mobilization**

The contents of this thesis were disseminated through various strategies, including conferences, stakeholder meetings, and publications. Additional knowledge mobilization activities will continue in the future.

**Conferences.** The research protocol and findings from chapters two and three were presented at several conferences, including the Partners in Education and Integration of IENs (PIE-IENs), the Canadian Association of Health Services and Policy Research (CHSPR), and Metropolis Canada, among others. Abstracts for chapters four and six were submitted for presentation at the Canadian Health Workforce Conference (CHWC), the Pathways to Prosperity (P2P) conference, and the International Council of Nurses (ICN) Congress.

**Oral Presentations.** The findings were presented at a meeting with the Chief Nurse Officer of Canada and leaders of the CARE Centre for IENs. These findings will also be shared

with the Chief of Nursing & Professional Practice; Ministry of Health, Ontario, and leaders at the CNO, specifically the entry-to-practice department.

**Publications.** Chapters two, three (in press), and five were published in a peer-reviewed journal. Chapters four and six are under revision for publication in a peer-reviewed journal. An issue/policy brief will be prepared and submitted to related stakeholders at both federal and provincial levels.

### **Strength and Limitations**

Studies within this thesis have several strengths and limitations. Chapter three employed a cross-sectional study conducted at low costs, making it efficient (Levin, 2006). This study was strengthened by using an evidence-informed survey questionnaire developed after completing a scoping review (Alostaz et al., 2024a) and in consultation with experts in the field. However, cross-sectional studies have limitations. Data is captured at a single point in time, making it difficult to conclusively determine causality between variables (Sedgwick, 2014; Setia, 2016). The data from this study reflects only a specific time and might not represent changes over time. For example, participants who completed the survey and were within the safe-practice period were not followed up and were eliminated from the study. Information from these participants could provide insights into the effectiveness of current changes within the regulatory body and credentialing organizations.

This study might be affected by non-response and information biases due to a low response rate and missing key information (Ramke et al., 2018; Wang & Cheng, 2020), limiting the generalizability of the results. Another limitation is sample selection bias; only IENs who initiated their licensure process in 2015 and after were recruited. As such this may not represent all IENs who migrated to Canada before 2015. Incentives and follow-up with IENs were used to



increase the response rate and overcome limitations. Additionally, we applied multiple imputations as a statistical method to account for missing data. This cross-sectional study was complemented with a qualitative descriptive study to overcome some of these limitations by gaining a deeper understanding of the context and reasons for observed patterns, such as IEN pursuing licensing despite multiple challenges or abandoning registration (Bradshaw et al., 2017).

Qualitative descriptive studies were used in chapters four and six. This methodology is suitable for exploring complex phenomena (Bradshaw et al., 2017), providing a deep and detailed understanding of IEN and stakeholder experiences and perspectives (Sandelowski, 2000). Qualitative descriptive studies within this thesis are participant-centered, emphasizing IEN and stakeholder voices and ensuring their experiences and perspectives are accurately captured (Colorafi & Evans, 2016), allowing them to share their stories in their own words (Bradshaw et al., 2017). The main strength is that IENs were recruited from different continents, providing diverse and rich descriptions of their experiences.

This methodology also allowed a holistic view, providing insights into the broader context. Qualitative descriptive studies also have limitations. A risk of researcher bias is encountered, as findings can be influenced by researcher biases and interpretations (Bradshaw et al., 2017). Additionally, the sample size is small, particularly for stakeholders ( $n = 6$ ), which may not represent the larger population. During IEN interviews, some participants were emotionally impacted when sharing their experiences and challenges. To alleviate their emotional distress, IENs were offered breaks, and interviews were stopped and recommenced as they requested.

Maximizing strengths and mitigating limitations is crucial; therefore, a few strategies were implemented. These strategies include triangulation of data sources (Bradshaw et al., 2017),

methods and findings were validated by using cross-checking or members checking (Colorafi & Evans, 2016). The researcher engaged in reflexivity to address potential biases and used thick, rich, and detailed descriptions to enhance the transferability of the findings (Sandelowski, 2000). Finally, ethical rigour was ensured by obtaining informed consent before data collection, protecting confidentiality, and addressing potential emotional impacts.

### **Conclusion**

A multi-method study, incorporating both quantitative and qualitative approaches, was completed to examine the socio-demographic characteristics of IENs and their impact on successful outcomes in Canada following changes to the licensure examination in 2015. The quantitative analysis revealed that IENs' success is associated with their nursing practice currency and membership with IEN initiatives in Ontario. The qualitative study explored IEN integration experiences in Ontario after the licensure examination changes, during the COVID-19 pandemic and beyond. It also examined stakeholder perspectives on IEN integration pathways and ongoing improvements to facilitate their integration.

Despite these improvements, semi-structured interviews with IENs revealed that they continue to face significant challenges hindering their integration into the Canadian nursing workforce. These challenges include migration hurdles, regulatory obstacles related to licensing and credentialing recognition, financial constraints, professional barriers in adapting to new healthcare systems, and cultural adjustment. Stakeholders acknowledged numerous changes implemented to expedite IEN integration but noted that licensure pathways for IENs remain complex. Addressing these challenges requires coordinated efforts from governments, healthcare institutions, and professional organizations to create supportive and inclusive environments that facilitate the successful integration of IENs.

Effective policies, such as standardized credentialing processes, improved stakeholder communication and comprehensive orientation programs, including cultural competency training, are essential. Overcoming these barriers ensures that the valuable experiences and expertise IENs bring to the Canadian healthcare system are utilized, providing high-quality patient care and creating a more diverse and resilient workforce. Collaboration between all levels of government, regulatory boards, educational institutions, and healthcare organizations plays a crucial role in creating smooth pathways for IENs. Successfully integrating IENs promotes equity and inclusion and enhances workforce sustainability. Finally, continuous monitoring of IEN integration is crucial for developing evidence-based policies and programs, refining current policies, and identifying areas for improvement.

## **Glossary of Terms**

**Advisory Report:** The NNAS application process is intended to produce an Advisory Report that verifies your identification, nursing education, and nursing registration/licensing.

**Demand:** the number of health workers that a health system can support in terms of funded positions or economic demand for services. It is correlated with the expenditure on health by the government, private insurance, and out-of-pocket payments.

**College of Nurses of Ontario (CNO):** the regulatory board for Registered Nurses (RNs), Registered Practical Nurses (RPNs) and Nurse Practitioners (NPs) in Ontario, Canada.

**Consortium:** a consortium refers to the Primary Health Care Nurse Practitioner (PHC NP) Program established by the Council of Ontario University Programs in Nursing (COUPN) in 1995. Nine Ontario universities offer the program through this consortium: Lakehead, York, McMaster, Ottawa, Laurentian, Western, Windsor, Queens, and Ryerson.

**Credentialing:** is the process of obtaining, verifying, and assessing the qualifications of a practitioner to provide care or services in or for a healthcare organization.

**Credentials:** are documented evidence of licensure, education, training, experience, or other qualifications.

**Expedited Service/Process:** The new Expedited Service is a simple, fast, and safe process for IENs who wish to obtain a license to practice nursing in Canada as a Registered Nurse (RN) or Licensed Practical Nurse (LPN). It is being offered in partnership with participating Nursing Regulatory Bodies and is based on a streamlined application process. Once all documents are received, a single Advisory Report for both LPN and RN professions will be released within five business days.

**Internationally Educated Nurse (IEN):** nurses who have completed post-secondary (university or college) nursing education outside of Canada, including Canadians who have completed their nursing education outside of Canada.

**Licensing:** refers to the process of certifying that an individual can perform the roles and tasks within a defined scope of practice to the required standard and conferring a license to legally authorize them to exercise a specific profession within a given jurisdiction.

**Regulatory Board/Governing Board:** is an organization with a mandate to govern its profession and ensure that the highest possible standards are maintained to protect the public. Nursing regulatory bodies ultimately decide who will be granted a nursing license. In Ontario, the College of Nurses of Ontario (CNO).

**Supply:** the supply of health workers refers to the pool of qualified health workers willing to work in the healthcare sector. It is a function of the training capacity and the net migration, deaths, and retirements of health workers (The Commission Accreditation Ambulatory Care, 2017).

**The Credentialling Organization:** The National Nursing Assessment Service (NNAS) has been the starting point for IENs interested in becoming registered in Canada since 2014. The Commission on Graduates of Foreign Nursing Schools® (CGFNS) in the USA.

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**THIS AGREEMENT** (the “Agreement”) is made as of the last date of signature below (the “Effective Date”) between IHTP - IHTP-Toronto Metropolitan University, of 350 Victoria St., Toronto, Ontario (hereinafter “IHTP-TMU”) and [Nasrin Alostaz] of (each an “Author” and together the “Authors”) with regards to the Authors’ original work entitled [*Integration trends of internationally educated nurses in Canada and Australia: A scoping review*] (the “Content”). For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

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**CORRESPONDING AUTHOR (WITH AUTHORITY TO SIGN ON BEHALF OF AUTHORSHIP TEAM):**

\_\_\_\_\_  
Nasrin Alostaz

\_\_\_\_\_  
February 1, 2024

PRINT: FIRST AND LAST NAME

DATE

  
\_\_\_\_\_

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THIS AGREEMENT (the “Agreement”) is made as of the last date of signature below (the “Effective Date”) between IHTP - IHTP-Toronto Metropolitan University, of 350 Victoria St., Toronto, Ontario (hereinafter “IHTP-TMU”) and [Nasrin Alostaz] of (each an “Author” and together the “Authors”) with regards to the Authors’ original work entitled [Internationally educated nurses’ workplace acculturation and strategies for integration: Application of the Fourfold Model of Acculturation Theory (FMAT)] (the “Content”).

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CORRESPONDING AUTHOR (WITH AUTHORITY TO SIGN ON BEHALF OF  
AUTHORSHIP TEAM):

Nasrin Alostaz  
PRINT: FIRST AND LAST NAME

May 28, 2024\_\_\_\_  
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