

Acting in the Public Interest: Learnings and Commentary on the Occupational Licensure Literature

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The *Journal of Nursing Regulation* provides a worldwide forum for sharing research, evidence-based practice, and innovative strategies and solutions related to nursing regulation, with the ultimate goal of safeguarding the public. The journal maintains and promotes National Council of State Boards of Nursing's (NCSBN's) values of integrity, accountability, quality, vision, and collaboration in meeting readers' knowledge needs.

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Letters to the Editor

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Acting in the Public Interest: Learnings and Commentary on the Occupational Licensure Literature

There is increased interest in reforming the way occupations are licensed. However, most of the current dialogue focuses on the rapid growth in the number of people who need a license to pursue their chosen occupation. Consequently, significant questions are being raised as to the appropriateness of such requirements for groups that do not appear to present any tangible threat to public safety. Recent research has demonstrated that health professions have failed to articulate the need and value for licensure and how health regulators are addressing the many concerns being raised by the current debate.

This study identifies dimensions or aspects of nurse licensure congruent with acting in the public interest and starts to curate (ie, to select, organize, and present) evidence related to each dimension, thereby identifying the current impact and highlighting opportunities for further research. This study utilizes a mixed-methods approach that combines documentary analysis, focus group discussion, and related literature associated with the various dimensions of acting in the public interest to highlight how nurse licensure addresses the current drivers for regulatory reform.

A total of 99 documentary sources (ie, papers, articles, reports, and opinion editorials) were uploaded to NVivo 11 Plus for analysis. The analysis generated four overarching themes: (a) licensure reform, (b) impact of occupational associations, (c) occupational licensure issues, and (d) contemporary issues. Associated with these themes, 22 subthemes were also identified.

The findings demonstrate there is clear evidence to support the fact that nurse regulators are acting in the public interest. However, further research is needed to provide definitive evidence to inform best practices in regulation and to offer direction for improved nurse regulatory reform. Furthermore, it is suggested that nurse regulators create and effectively maintain a global community capable of learning from one another and driving continuous improvement to better serve the public.

Keywords: Legislation; Occupational Licensure; Professional Regulation; Public Interest; Regulatory Boards

Today's scrutiny of occupational licensure is not new. Chapin (1904) highlighted the proliferation of occupational licensing more than a century ago at the first annual meeting of the American Political Science Association. When discussing the control of professions and trades, he noted:

...{T}his practice {the creation of state licensing boards} has already led to grave abuses. There seems to be excellent reason for licenses in some kinds of work as that of engineers, physicians and pharmacists. On the other hand, there does not seem to be sufficient reason for the state licensing of plumbers, barbers, or undertakers.

Chapin (1904), pp149.

Chapin (1904) advanced the position that not all licensed groups are the same and, through examples, that no rationale for differentiating the groups was provided. Currently, it appears there is an overwhelming assault on occupational licensure in the United States. However, other countries such as the United Kingdom, Australia, Canada, and others have identified licensure proliferation as potentially problematic (UK Commission for Employment and Skills, 2013; Koumenta, Humphris, Kleiner, & Pagliero, 2014; Fu & Hickey, 2015). The globalization of this issue has been long recognized by nurses who have contributed to the debate on this topic for more than a century. Palmer (1907), a graduate of Massachusetts Hospital and President of the Board of Nurse Examiners of New York State, stated:

...{S}tate registration (licensure) is not, in any sense, only a state measure. It has been shown clearly that it is an international movement of an educational character, and we cannot fail to learn from the efforts of nurses in other countries, from the successes and failures both at home and abroad, that what affects the standards in one state or one country will affect, sooner or later, the standards in every state or country.... We must never lose sight for a moment of the fact that we are not working for ourselves alone, in one particular state, but for the whole nursing body the world over.

Palmer (1907), pp428

Recognizing increased mobility of the nursing profession, the development of health tourism, and the exponential technological advances to deliver services virtually across borders demonstrates how the regulatory landscape is changing. Hence the need to draw upon the experiences of jurisdictions from across the globe and identify and examine the concept of acting in the public interest and to curate (ie, to select, organize, and present) evidence as a basis to inform change.

Despite repeated commentary challenging the need for occupational licensing, health and nursing professionals have not curated the evidence necessary to effectively and efficiently question and counter the various points made by the anti-occupational licensure lobby (Benton et al., 2018). Benton et al. (2018) also observed, from a global perspective, that evidence tends to originate from high-income countries and material from middle- and low-income jurisdictions is relatively scarce. Despite this, the criticality of licensure and its potentially far-reaching geographical impacts noted by Riddle (1907) have been articulated from the very inception of nurse scholarship on licensure. Therefore, particularly in today's mobile environment, a clear understanding of how licensure contributes to public protection, standardization of education, the prevention of fraudulent practitioners entering practice, and the removal of those who fail to meet the necessary standards of care and conduct is needed. Up until this point, many of the arguments presented in this regard have been in the form of assertions devoid of evidence. In today's policy environment, this approach is inadequate, particularly considering the Beijing and Bamako calls for action that advocate for increased use of research in informing policy decisions (World Health Organization [WHO], 2008; Executive Committee of the Second Global Symposium on Health Systems Research, 2012; Oxman, Lavis, & Frtheim, 2012).

Previous Research on Acting in the Public Interest

U.S. Executive Order 12866 (1993), requires regulators to demonstrate their actions address a "compelling public need", which may be difficult. For example, Begun (1980) conducted one of the few studies that sought to quantify how public interest can be measured and found who defines the public interest can impact on the dimensions considered and the subsequent results. This is certainly not a new problem, nor is it restricted to professional regulation. Shorenstein and Veraldi (2003) demonstrated the challenges they faced in delineating a clear definition in their analysis of the communications industry. Shorenstien and Veraldi (2003) also noted that the impact of temporal changes to priorities and social values can exacerbate the complexity of addressing acting in the public interest, as well as the multi-dimensional nature of the concept. Therefore, it is important to operationally define what is meant by acting in the public interest before assessing how nurse licensure contributes to the pursuit of public interest.

Trends in Acting in the Public Interest

Veloso et al. (2015), Adams (2016, 2017), and Benton (2017) have shown the dimensions of professional regulation have evolved. While Benton (2017) identified 25 trends from global data obtained through a bibliometric analysis of indexed papers originating from the very inception of professional regulation, Adams (2016, 2017) focused specifically on how the concept of the public interest evolved over 150 years in Canada. Veloso et al. (2015), in their sociological analysis of regulation and public interest relative to Portuguese health professions, noted that changes in healthcare delivery, technology use, and globalization may impact our evolving understanding of acting in the public interest. Beyond nursing and the health professions, other disciplines such as the Institute of Chartered Accountants in England and Wales (ICAEW) (2012) conducted comprehensive research and contend that many of their findings may be applicable to other regulated professions. From a general legal perspective, Mousmouti (2018) contended there is a need to focus on the content of primary legislation and how effective it is in delivering its primary intent.

Table 1 (modified from the analysis presented by Benton and George [2018]) summarizes how the dominant concepts related to acting in the public interest evolved and provides a high-level summary of some of the changes identified by the work of ICAEW (2012), Veloso et al. (2015), Adams (2016, 2017), and Benton (2017).

TABLE 1

Summary of the Evolving Concept of Acting in the Public Interest

	19th to Mid-20th Century Perspective	1960s to 1990s Perspective	21st Century Perspective
Dimensions of Considering and Acting in the Public Interest	<ul style="list-style-type: none"> Standards of practice Standards of qualification Elevating the profession Addressing public information deficit Entry barriers Competence of practitioner Access to services 	<ul style="list-style-type: none"> Service quality Practitioner competence Efficiency of the system Cost effectiveness Best for the patient and the public Better coordination of services More flexible to patient need Increased patient choice Lay representation on boards Oversight by government Equity of access 	<ul style="list-style-type: none"> Costs of regulation Increased efficiency Increased cost effectiveness Reduction in entry barriers to the profession Reduction of barriers to mobility Promoting competition Regulation proportionate to risk Promoting alternatives to the licensure model Responsive to a highly complex health system
Synopsis	Benefits both profession and the public. Quality to the forefront but some concerns over access, choice, and entry barriers.	Professions cannot be trusted to act in the public interest and therefore need oversight. The need for a balance between quality, cost, and access emerges.	Dominant narrative is where public interest is tied to efficient provision of services through minimum regulatory intervention.

While Table 1 provides useful information on the potential dimensions of the definition of acting in the public interest, it does not offer a succinct operational description. Therefore, prior to offering such a definition for the purposes of this study, a further line of inquiry is provided.

Operationally Defining Acting in the Public Interest

In terms of healthcare delivery and other services, much of the literature examining regulation considers the juxtaposition of public interest theory with that of capture theory (Christensen, 2010; Stigler, 1971; Peltzman, 1976). Certainly, much of the current debate on occupational licensure is framed as a negative critique of the various regulatory processes, portraying them as unnecessary barriers that need removal (Carpenter, Knepper, Erickson, & Ross, 2017; The White House, 2015). Some authors, such as the Australian Health Ministers' Advisory Council (2018), refer to the need for licensure based on serious public harm; however, using health professions as the exemplar for change undermines this point. Kleiner (2006), referring to the entire labor market, noted there is an almost exponential growth in the numbers of individuals who need a license to practice. If the value of this regulatory tool is to be maintained, it can only be used for those disciplines where the benefits outweigh the individual and societal costs. Any examination is strengthened if the intended actions and any critical commentary are simultaneously addressed.

Study

A broad-based, operational definition is proposed that guides this study and facilitates bi-directional scrutiny of the topic. Accordingly, for this study, *acting in the public interest* is defined as:

A multi-dimensional concept that evolves over time; is context sensitive; and embraces the use of a range of interventions to address the effective, efficient, and safe provision of services to the recipient. In addition, the concept embraces the simultaneous balancing of equity of access to services by the user with minimizing provider barriers that are proportionate to the level of risk.

As noted earlier by Chapin (1904) and reiterated recently by Bowblis and Smith (2018), the breadth of occupational licenses and the associated heterogeneity in the stringency of the regulatory approaches used is an important consideration. Furthermore, variations in the impact of regulation of different disciplines have been raised by Nunn (2018). If definitive conclusions are to be reached, then it is important to focus on a single discipline, since findings for one occupational group may not be true or applicable to other disciplines.

Aim

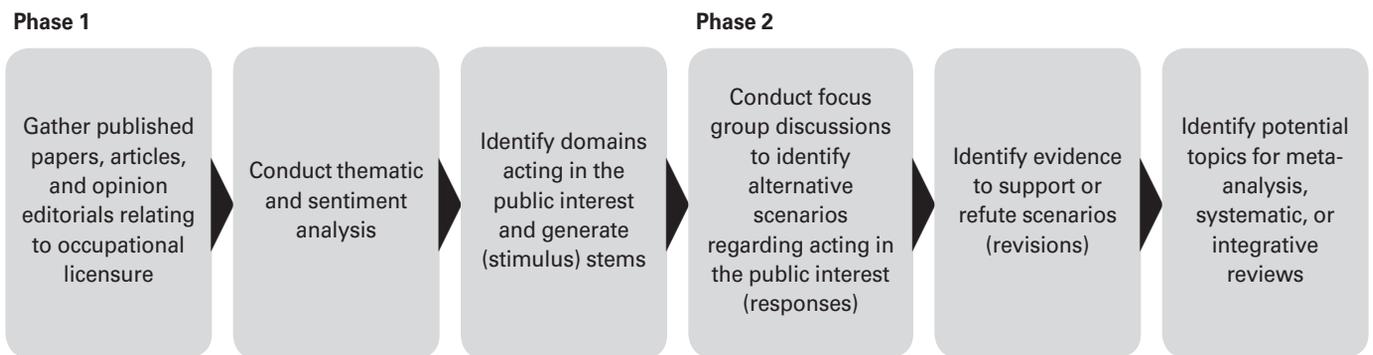
The aim of this study was to identify dimensions or aspects of nurse licensure congruent with acting in the public interest and to curate the associated evidence relating to each dimension to identify their impact and potential opportunities for further research.

Method

This study utilizes a mixed-methods approach that combines documentary analysis for the identification of themes, focus group discussion, and the subsequent identification of related literature associated with the various dimensions of acting in the public interest identified from the analysis. Follow-up work requiring meta-analysis, systematic, or integrative reviews of the literature is not part of this study other than through the identification of potential future research topics. Figure 1 provides a schematic description of the two-phase study design.

FIGURE 1

Study Design



Data Sources and Collection

Three different sources of data were used. Published material from scholarly, grey literature, and popular media relating to occupational licensure was identified using a standard search of Scopus, PubMed, Web of Science, Google Scholar, and Bing and Yahoo search engines. The intent was to gather sufficient material to provide sources capable of generating comprehensive and saturated themes critiquing occupational licensure within the literature. Both positive and negative commentary on the impact of occupational licensing was sought.

Data Analysis to Identify Themes and Sentiment

Computer-assisted analysis of documentary content has improved dramatically in recent years and can be used as a means of deductively identifying content themes and sentiment (Edhlund & McDougall, 2017). Version 11 Plus of the NVivo software package (QSR International, Melbourne, Australia) provides a word frequency count function and an autocoding function. These approaches detect commonly occurring words and themes as well as assess the sentiment of sentences or paragraphs by grading them from very

negative to very positive. This initial approach offers a baseline from which saturated themes can be identified and defined through recursive coding by the researchers (Miles & Huberman, 1994).

Data Sources and Data Cleaning

The retrieved documents were initially sorted into three categories: (a) scholarly articles (peer-reviewed journal articles and book chapters), (b) foundation reports and papers, and (c) opinion editorial pieces. Equal numbers of each document type were imported in groups of nine into NVivo 11 Plus. An initial word frequency analysis was conducted to provide a high-level picture of the content of the various documents. Instead of looking at unique words, a search that grouped synonyms together was utilized. These words (strings of letters and numbers) were examined to ensure the identified “word”, based on pattern matching, had analytical meaning and identified either negative or positive commentary on the topic. NVivo 11 Plus removes and does not count filler words such as “it”, “is”, “the”, “that”, etc. by placing these words in a stop list. Any additional filler words, words, or strings such as a “http”, or dates such as “2018” were added to the stop list, in effect, removing them from the analysis prior to a word frequency diagram being generated.

Autocoding

Sources were autocoded to generate (via a deductive process) a range of themes and, in addition the various documents, were further examined to consider the sentiment (positive or negative) of the content. Once the autocoding resulted in a saturated and stable framework of themes and no additional themes were identified from the new groups of documents, the researchers scrutinized the computer-generated deduced themes to ensure analytical coherence. This was reached by examining whether the material coded to a theme was either negative or positive and related specifically to an aspect of occupational licensure. In some cases, two or more autocoded and closely related themes were collapsed into a single consolidated theme. This was done through referring to the source material and its context within the paper. Consequently, language that was being used in different ways to express the same concept was streamlined.

Triangulation of Identified Themes

The identified themes were then compared with the codes identified by Benton, Fernandez-Fernandez, Gonzalez-Jurado, and Beneit-Montesinos (2015) in their international comparative analysis of the nursing legislation content. The rationale for this step was based on the fact that the actions and powers of the regulator are prescribed and delineated in the establishing legislation and associated government endorsed rules. Thus, any critique of the application of occupational licensure needs ultimately to be linked back to the establishing legislative authority. To increase trustworthiness of the findings, the authors of this study independently reviewed the resulting deductively generated themes with those described by Benton et al. (2015). The deductively coded text was triangulated and, as a result similarities and differences were identified, operational definitions were generated, and consensus of triangulated themes agreed. Any initial disagreement in interpretation between the researchers resulted in discussion until agreement was reached.

Rigor and Trustworthiness

The triangulated approach assisted in maintaining analytical integrity through an audit trail. This audit trail resulted from the modification of the word counting approach described by Miles and Huberman (1994). In the current study, it was generated through the deductive NVivo 11 Plus analysis and the comparative review of the inductive codes generated by Benton et al. (2015). This approach, according to Lincoln and Guba (1985) and Onwuegbuzie and Leech (2007), facilitated the evaluation of the analysis's legitimacy.

Identifying Stimulus Stems and Focus Group Participation

Positive and negative statements were extracted from the coded literature (based on the sentiment analysis) and used as the stimulus stems for discussion during the focus group sessions. Experienced nurse regulators comprised the focus groups and worked in groups of three. One person read the statement, a second person responded to the statement, and the third person took notes. Two or more groups considered each statement. Having completed the initial stimulus-response-record cycle, all three individuals discussed the work and refined it to make a more comprehensive response and to identify any evidential materials that could be used to substantiate or refute the response being made.

Finally, researchers reviewed each of the completed contributions and duplicates were merged into a single consolidated statement. Furthermore, evidence to support or refute the statement was sought by the researchers through standard searches of the scholarly literature. This was designed to strengthen the validity of the stimulus-response statements and identify areas where subsequent meta-analysis or systematic/integrative reviews could be undertaken.

TABLE 2

Saturated Themes and Subthemes Identified from 99 Sources

High-Level Theme	Subtheme	Subtheme Content
<i>Licensure Reform</i>	Drivers	<ul style="list-style-type: none"> • The apparent uncontrolled use of licensure to regulate groups that present only minimal risk of harm • A desire for more efficient and streamlined licensure body operation • Frustration regarding the anti-competitive actions of boards who restrict scope of practice of other groups • Apparent arbitrary nature of rules • The complexity of the quasi-judicial processes • Impact on labor market entry and mobility • The ability to use tele-service provision • Adverse impact on the adoption of new practices and innovative solutions • Ad hoc reviews of existing regulation can result in the removal of excessive restrictions that do not contribute to public protection • Routine review of the performance of the regulatory system through the implementation of “sunset reviews” • Call to use the least restrictive form of regulation to deliver the desired public protective effect (best practices)
	Support for Action	<ul style="list-style-type: none"> • There is broad based and often bipartisan interest in reforming regulation • There is increasing media and think tank coverage of apparent inconsistencies in requirements • Societal values are changing and the public wishes to see more opportunities for those who have paid their debt to society through a jail term having the opportunity to gain legal meaningful employment as a route out of poverty and criminality
	Potential Solutions	<ul style="list-style-type: none"> • Regulatory impact assessment to identify the least restrictive regulatory solution (explicit consideration of a range of regulatory approaches) • The merging of regulatory boards into umbrella agencies and the introduction of oversight arrangements • Routine review of the need to continue to license the group (sunset provisions) • Clear evidence of acting in the public interest • Increased use of research-based evidence • The standardization of impact measurement tools and the centralization of data • Federal preemption • Increased provision of information on quality of services
<i>Impact of Occupational Associations</i>	Promoting Licensure	<ul style="list-style-type: none"> • Associations can call upon its members to generate funds that can be used to support legislators that are amenable to their arguments • They can also mobilize their members to lobby their representative to advance their case • They can get their members to give testimony in legislative hearings
	Defending and Extending Licensure	<ul style="list-style-type: none"> • Once established, the association can mobilize its resources to prevent any adverse changes to legislation that would impact their members • Can, through having active market participants on the regulator’s board, generate rules that are favorable to the profession rather than targeted at protecting the public
<i>Occupational Licensure Effects</i>	Proliferation	<ul style="list-style-type: none"> • Marked increase in the number of disciplines that need a license to practice from 1 in 20 in the 1950s to approximately 1 in 4 or 1 in 3 in the United States currently • Increased costs of running so many licensing boards • Share of licensed boards in the United States varies by state ranging from 12% to 33% of the labor force • Expansion of coverage from traditional high-risk professions (ie, medicine, nursing) to low-risk occupations such as hair braiding

(continued)

Saturated Themes and Subthemes Identified from 99 Sources *(continued)*

High-Level Theme	Subtheme	Subtheme Content
<i>Occupational Licensure Effects (continued)</i>	Mobility	<ul style="list-style-type: none"> • Lack of reciprocity between states restricts permanent and temporary physical relocation and inhibits the use of virtual means of service provisions such as telehealth and distance learning • Hinders economic opportunity through additional costs and process delays in getting a license • Can impact availability of services and capacity to respond to sudden demands (ie, emergency events and disasters) • Particularly problematic for military dependents who move frequently with their partners • Need to keep track of individuals with adverse discipline history • Keeping accurate workforce data to assess capacity (dangers of double counting) • Variability in non-professional requirements such as residency requirements
	Board Governance	<ul style="list-style-type: none"> • Boards fail to meet their core responsibilities in a timely, efficient, and effective manner • Dominance of active market participants can adversely impact focus on public protection • Lack of staff resources and competitive salaries to attract employees to fulfill mandate • Need for awareness of potential actions to be anti-competitive
	Types of Regulation	<ul style="list-style-type: none"> • Consider different types of regulation proportionate to the level of risk • Use least restrictive approach necessary to deliver regulatory objective • Range of approaches include licensure, certification, registration, liability insurance, job-specific financial bond, reputational attestations
	Purpose	<ul style="list-style-type: none"> • Protecting the public or advancing the interests of those licensed • Consistent with the concept of acting in the public interest • A means of dealing with risk of harm • To increase quality of service provision
	Patient Safety	<ul style="list-style-type: none"> • Lack of evidence of the impact of licensure on patient safety and quality • Lack of linkage of duration of education and stringency of requirements to the improvement of quality and safety • Asymmetry of information or the inability to assess quality potentially supports the need for licensure • Some disciplines seem overly lenient in dealing with poorly performing practitioners • Lack of diligence in monitoring those who have conditions on their license • Lack of ability to track and respond to individuals who have multiple licenses from different professions within the same jurisdiction or multiple licenses for the same discipline across different jurisdictions
	Scope of Practice	<ul style="list-style-type: none"> • Practice by one discipline is restricted through the actions on another discipline • The imposition of supervisory requirements when interventions that were originally provided by one discipline is now being offered by another discipline
	Disadvantaged Groups	<ul style="list-style-type: none"> • The cost, in terms of education and licensure application, can deter people from low- and middle-income groups from entering or re-entering licensed professions • Those with criminal records can also have problems entering licensed professions • In some cases, black and minority groups and women can also be disadvantaged by licensure requirements

Saturated Themes and Subthemes Identified from 99 Sources *(continued)*

High-Level Theme	Subtheme	Subtheme Content
<i>Occupational Licensure Effects (continued)</i>	Criminal Backgrounds	<ul style="list-style-type: none"> • The need for more specificity in how criminal records are relevant to the practice of a particular profession and the avoidance of overly broad and open to interpretation terms such as “moral turpitude” or “good character” • The move away from a blanket ban to an individually considered case of the person’s history, time since event, remediation taken, relevance to the profession, and insight into the issue • Increased availability of easy to understand information on potentially disqualifying events and the criteria that will be used to reach a determination relevance
	Recidivism	<ul style="list-style-type: none"> • It is suggested that overly restrictive licensure requirements can prevent people with a criminal record from obtaining gainful employment and; therefore, contribute to recidivism • Suggests there is a shift in societal values to provide those who have served their time an opportunity to redeem themselves • Call for states to issue a certificate that documents their “right to work” based on completion of time served and behavior during incarceration
	Practicing without a License	<ul style="list-style-type: none"> • Suggested that regulatory boards are sometimes more stringent in prosecuting those who practice without a license than they are on their own licensees
	Barriers to Entry	<ul style="list-style-type: none"> • Education is often measured in hours of study rather than competence attainment, forcing people to complete courses that have little or no impact on their knowledge skills and abilities • There are a range of potential barriers to entry to practice that include, prescribed age entry requirements, grade point average requirements, completion of a set number of years schooling, successfully passing certain subjects at school, language proficiency, residency requirements, completion of lengthy, expensive approved programs of education, prescribed number of hours of clinical experience requirements, passage of high stakes examinations, payment of fees, and being healthy in body and mind and of good moral character • Distortion of the exam passing standard to control the supply of practitioners to deliver services • Educational content that has little or no relevance for the safe practice of the profession • Continuing competence requirements that involve additional education, minimum hours of practice over the preceding time period, license renewal payment, attestation of good character, criminal background check
	Market Control	<ul style="list-style-type: none"> • Argues that licensure regimes are a means of protecting the status quo • Suggests that it is the professions themselves that lobby for the creation of regulatory bodies that then raise market entry requirements for the benefit of the profession • Argues that licensure requirements distort markets and prevent people from entering the job market • Regulatory bodies can use their powers to restrict supply of services and raise wages for those in the profession as a premium is payed to access their services • Highlights the tension between free-market models and public interest regulatory approaches • Identifies that there are new technology-based ways of providing information on the quality of services such as Yelp, Google, and third party created consumer ratings • Suggests that the full range of regulatory controls should be considered rather than the dominance of licensure as the preferred tool • Advocates for the normalization of standards toward a uniform approach across jurisdictional borders to facilitate license portability • Existing regulatory bodies can curtail innovation and prevent new market entrants performing activities that are normally undertaken by the already regulated professional

(continued)

Saturated Themes and Subthemes Identified from 99 Sources *(continued)*

High-Level Theme	Subtheme	Subtheme Content
<i>Occupational Licensure Effects (continued)</i>	Market Control <i>(continued)</i>	<ul style="list-style-type: none"> • The economic impact of licensure is complex • Economists argue that occupational licensure raises the costs of services, limits the choices for consumers, and reduces opportunities for service providers • Economists also argue that lack of reciprocity between states limits mobility and, thus prevents the operation of a market model • There are conflicting views on the impact of licensure on wages • Licensure may increase wage inequality by keeping out persons from entering higher wage occupations
	Variability	<ul style="list-style-type: none"> • Highlights that there is inconsistency between jurisdiction in the professions that are licensed or not (in some cases a profession is licensed in all states but in other cases a profession may only need a license in one or few jurisdictions) • Notes even when a discipline is licensed in all states, there can be differences in the requirements to hold a license • A root cause of difficulties in mobility from one jurisdiction to another • In some cases, the requirements seem disproportionate to the level of risk posed • Suggests that such variability undermines any public protection argument particularly when a profession does not need a license in one or more jurisdictions • Also, argues that such variability provides the opportunity to gather evidence on effectiveness and efficiency because of “natural experiments” • Refresher requirements to activate a dormant license that may include additional formal training, a period of supervised practice, and a fee
<i>Contemporary Issues</i>	Anti-Trust Immunity	<ul style="list-style-type: none"> • Highlights the challenges that active market participants can have on rent-seeking anti-competitive decision making • Advocates for an increase in the lay membership of licensing boards • Suggests that independent, active scrutiny of the decision making takes place with the option of a state veto to overturn a board’s decision • Places a spotlight on the issue of state immunity and idea that by removing the threat of triple damages reform is more likely
	Level of Regulatory Control	<ul style="list-style-type: none"> • Identified several levels that can introduce regulatory controls (federal, state, municipal, county, and city) • Majority of content focuses on the state-based powers linked to the authority provided by the 10th Amendment of the U.S. Constitution
	Regulatory Reform Actors	<ul style="list-style-type: none"> • Highlights that all three branches of government are involved in the reform of regulation—executive branch, judicial branch, and legislative branch • The executive branch interest is multi-dimensional with organizational interest originating from the Department of Labor, Department of Defense, Federal Trade Commission, and Federal Drug Administration • Academics are active contributors to the debate particularly those with interests in economics and labor market dynamics • Professional associations are active in this dialogue • Several think tanks that can promote ideologies are active in this space

Phase 2 – Focus Group Discussion and Generation of Narratives

Data was gathered from 47 Executive Officers (EOs), the highest-level staff of U.S. boards of nursing who are members of the National Council of State Boards of Nursing (NCSBN) membership, and associate member boards. The majority of EOs were from U.S. or Canadian jurisdictions. Two distinct exercises were completed. One to identify current and desired sentiment of the occupational licensure narrative and a second to generate alternative narratives to a set of statements identified from the collection of literature considered in Phase 1 of this study.

Current and Desired Sentiment

The EOs worked in eight groups using a deck of cards that had both positive and negative adjectives. The EOs reviewed the cards and chose three adjectives they believed best described how occupational licensure should be described. The group discussed their

TABLE 3

An Alternative Narrative to a Statement from the Occupational Licensure Literature^a

Statement	There is little to no published research on the relationship between performance on the licensure exam and an individual's ability to perform on the job.
Diagnose	<ul style="list-style-type: none"> • Lack of evidence • Lack of understanding the purpose of the exam
Respond	The purpose of the exam is to assess whether an individual is minimally safe to practice. It is not designed to assess work performance. This is a common misunderstanding and it is important we understand the difference between fitness for practice, which is the job of the licensing exam, fitness for academic award, which is the role of the educational institutions delivered through formative and summative assessment and fitness for purpose, which is the responsibility of the employer who addresses through induction, orientation, and ongoing learning specific to the role to which the nurse is appointed.
Evidence	<ul style="list-style-type: none"> • Benton, DC. (2011). Nurses fit for purpose, award and practice? <i>International Nursing Review</i>. 58(3), 276. http://dx.doi.org/10.1111/j.1466-7657.2011.00935.x • Czekanski, K., Hoerst, B.J., & Kurz, J. (2018). Instituting Evidence-Based Changes to Improve First-Time NCLEX-RN® Pass Rates. <i>Journal of Nursing Regulation</i>. 9(1), 11-18. • Sears, N.A., Othman, M., & Mahony K. (2015). Examining the relationships between NCLEX-RN performance and nursing student factors, including undergraduate nursing performance: A systematic Review. <i>Journal of Nursing Education and Practice</i>. 5:11, 10-15. http://www.sciedu.ca/journal/index.php/jnep/article/viewFile/7386/4560
Gaps	Despite regular education sessions on the NCLEX, there is still inadequate understanding of its purpose. Need to explain to educators, nurses, employers, and policy makers the primary purpose of licensure exams. Also need to correlate exam performance with discipline history through big data analytics.
Statement	Although the professions have met with some success in raising the general tone of professional conduct, the fact that experts often sit in judgement of themselves—conferring, suspending, and revoking licenses—raises the question of whether they sufficiently consider the public interest in their deliberations.
Diagnose	<ul style="list-style-type: none"> • Potential conflict of interest • Lack of transparency
Respond	This is certainly not the case for nursing where lay members are commonly part of the process. Increasingly, regulatory boards clearly set out the facts, lay out their determination, and offer a rationale for reaching the various judgements thereby assuring transparency.
Evidence	<ul style="list-style-type: none"> • Graddy, E., & Nichol, M.B. (1990). Structural Reforms and licensing Board Performance. <i>American Politics Quarterly</i>. 18(3), 376-400.
Gaps	A number of papers have been written on the role of lay members as part of regulatory boards' governance structures; however, no synthesis of this material has been published and this could provide a useful synopsis in the future design of discipline determination arrangements.
Statement	The way regulatory boards operate is not uniform.
Diagnose	<ul style="list-style-type: none"> • A factual observation of functioning • May imply that variation is a problem
Respond	To a certain extent this is true as each jurisdiction has its own statutes and rules, which often reflect the jurisdictional culture. However, increasingly there is a convergence toward best practices. This is driven by collaborative work across jurisdictions, the use of evidence-based processes, initiatives such as the development and application of model acts and rules, as well as systems such as CORE (Commitment to Ongoing Regulatory Excellence).
Evidence	<ul style="list-style-type: none"> • Hudspeth, R. (2009). Regulatory Issues Column: Boards of Nursing Commitment to Ongoing Regulatory Excellence. <i>Nursing Administration Quarterly</i>. 33(2), 188-189. • Benton, D., Brekken, S. Ridenour, J. & Thomas, K. (2016). Comparing performance of umbrella and independent nursing boards: An initial review. <i>Journal of Nursing Regulation</i>. 7(3), 52-57.
Gaps	Making performance metrics available to the public can shift focus from process to outcome. It is not necessary for everything to be the same. However, deviations from the norm do need to be justifiable based on superior performance or unique political, legal, or cultural requirements. Identification of best practices should drive structural and process reform.

^a Additional information and the full EO synopsis can be found in Appendix C.

Discussion

The two phases of this study are pulled together using the four high-level themes detailed in Table 1 – Licensure Reform; Impact of Occupational Associations; Occupational Licensing Effects; and Contemporary Issues. This helped identify, section by section, a number of key findings and associated recommendations that point toward gaps in the evidence where further research may clarify the impact of nursing licensure associated with acting in the public interest.

Licensure Reform

Calls to address the increases in the number of individuals requiring a license to practice have been heard by various governments (Carpenter et al., 2017; UK Commission for Employment and Skills, 2013; The White House, 2015). However, commentary often focuses on the increase of different professions and occupations being licensed for the first time. The need for the licensing of new disciplines does require investigation and has been recognized by such entities as the Australian Health Ministers' Advisory Council (2018). Nonetheless, there are other significant factors at play that increase the percentage of the workforce requiring license. The World Health Organization (2006) in its *World Health Report 2006: Working Together for Health* identified the significant shortage of nurses and the need for millions of nurses if the changing health demographics (increased numbers of elderly with complex care needs; burden of non-communicable or lifestyle-related diseases; and the re-emergence of infectious diseases) are to be addressed. In many developed countries, birth rates are on the decline and retiree health needs are on the rise (Prskawetz & Samby, 2014). As a result, the percentage of employees who need a license to deliver care to this vulnerable patient population is contributing to the observed increase in the numbers of people requiring a license to work. In short, the problem is multi-dimensional and requires more nuanced consideration. As an indicator of the potential impact on labor markets, consider that the United Nations High-Level Commission on Health Employment and Economic Growth (2016) found the global health employment sector consumes \$5.8 trillion dollars (U.S.) a year. Furthermore, James (2016) noted that even during the period of economic instability from 2000 to 2014, health sector employment in the Organization for Economic Collaboration and Development (OECD) countries grew by 48%. Any analysis of licensure growth needs to consider such major changes and their potentially stabilizing effect on labor market dynamics.

Another factor driving interest in licensure reform is the desire to achieve more efficient and streamlined regulatory systems. This is congruent with the many initiatives occurring around the world to minimize regulatory burdens. In the health sector, the Professional Standards Authority (PSA) of the United Kingdom has been promoting the right-touch regulation (Professional Standards Authority [PSA], 2015). This risk-based approach argues that the level of regulation should address identified risks and avoid excessive controls, and is modeled on the work of Sparrow (2008) who extensively identified the character of harm. This is not a new concept for nursing since the work of the International Council of Nurses (1998) and the comprehensive review of the principles of regulatory practice completed by Benton, Gonzalez-Jurado, and Beneit-Montesinos (2013) addressed the need for regulation to be proportionate to the level of risk posed to the public. However, this tended to manifest itself through increasing the range of alternatives to deal with discipline cases.

As stated earlier, licensure reform is being discussed in multiple countries and perhaps, consequently, has been the focus of a significant number of publications by the OECD. The OECD has covered dimensions such as the performance of regulators, the independence of their actions, and the need to learn from best practices (Organization for Economic Collaboration and Development [OECD], 2016; OECD, 2017a; OECD, 2017b). In the United States, at a time of highly polarized policy debate, occupational licensure is one of the few topics that is of mutual interest to Democrats, Republicans, and the White House. Fortunately, nursing has been proactive in addressing the need for reform by such initiatives as the Nurse Licensure Compact and the move to expand advanced practice registered nurse's scope of practice and autonomy (US Department of Health and Human Services [DHHS], 2018).

Some suggestions have been made to address the need for reform. While some, such as the call by OECD (2014) for increased use of regulatory impact assessment, are well documented and procedural guidance are readily available, others, such as a push to create umbrella agencies, have little evidence to support such change. In nursing, work comparing the performance of umbrella boards versus more autonomous arrangements demonstrates that the autonomous arrangements are more effective in pursuing regulation in the public interest (Washington State Nursing Care Quality Assurance Commission, 2012; North Carolina General Assembly, 2014; Benton et al., 2016; Benton & Rajwany, 2017). Nonetheless, there is evidence to suggest a need to balance autonomous professional licensure boards with operational efficiencies, which may be found within umbrella organizations that oversee a multitude of, lesser-in-number, professional groups (Ball, Rose, Redding, & White, 2012).

Recommendations for Further Work on Licensure Reform

Despite the availability of sound methodologies for regulatory impact assessments, they are not widely used by regulatory licensure boards, possibly due to the absence of material targeted specifically toward their needs, and the resources or funding required to support a review. Accordingly, resources could be developed in the form of e-learning material, templates to guide standardized

approaches, and peer-support networks by entities such as the NCSBN or the International Nurse Regulatory Collaborative to support the wider adoption of these assessments.

Despite various opinion pieces promoting the value of right-touch regulation, there is a need to operationalize and generate further research into the most effective and efficient forms of right-touch regulation. Perhaps by exploiting jurisdictions where differing approaches are already being used, it will be possible to generate evidence capable of definitively identifying the optimum regulatory response proportionate to various levels of risk.

The trend toward recommending umbrella agencies by entities such as the North Dakota Legislative Council (2005) requires further investigation. From data produced by Benton and Rajwany (2017), there is variation in performance of both umbrella agencies and autonomous boards. A deeper understanding of the factors that cause such variation is important if informed choices are to be made in the design and implementation of systems that result in more efficient and effective regulatory body performance.

Impact of Occupational Associations

The impact of associations appears to be two-pronged. First, they are often the initial advocates for their occupation to gain licensure by encouraging members to generate funds and produce material that can be used to educate legislators that are amenable to their arguments. Additionally, associations can mobilize members to lobby their representative(s) to advance their case. If a bill is introduced, then the association may also get members to give testimony in legislative hearings. Second, when an occupation is already licensed, occupational associations may seek to defend or extend the scope of their practice; thus, consolidating power and preventing others from performing the work. It is important to differentiate the role of the association, trade union, and regulatory body. The action of these three entities are often conflated and confused. As a result, authors such as Healy (2012) and Benton, Thomas, Damgaard, Masek, and Brekken (2017) have sought to delineate the policy interests, desired purpose, and other drivers that influence the position taken on regulation by the various stakeholders. Failure to be sensitive to these issues can result in policy decisions by the regulatory body that can fall foul of anti-trust legislation (Cooper, Dorsey, & Wright, 2017). Therefore, it is essential those appointed, selected, or elected to regulatory bodies have adequate orientation and induction to their role, responsibilities, and duties if board members are to be equipped to pursue the mandate(s) of the organization rather than individual interests of the member. Where a jurisdictional board has dual mandates, tensions can arise, which requires careful attention to best governance practices where members are particularly conscious of potential conflicts of interest (Miller, 2010).

Recommendations for Further Work on Impact of Occupational Associations

Healy (2012) and Benton (2017) found similarities and differences in terms of the purpose and desired outcomes of the various stakeholder groups. It has been noted that the interests may align but if there is to be confidence in the regulatory system it must maintain its focus on acting in the public interest. To this end the similarities and differences related to the various stakeholder groups need to be clarified and communicated effectively to all those involved in the regulatory reform debate. Further, stakeholder groups should be encouraged and empowered to take responsibility and be held accountable to stay true to their purpose by their licensees, governments, and the public.

Occupational Licensing Effects

Occupational licensing effects is a complex multi-dimensional theme with 14 subthemes. Some subthemes have additional specific aspects that warrant detailed consideration when looking at the critique of the impact on occupational licensure. Additionally, several subthemes are closely related or could be considered as overlapping.

Mobility

One of the most frequent concerns raised by those who advocate for market-based controls, rather than occupational licensure is the adverse impact licensure has on the mobility of workers (Carpenter et al., 2017). This has been a concern of the nursing profession for some time and has led to the development and implementation of solutions that facilitate mobility; enable the use of new types of clinical intervention such as telehealth; and assist in standardizing licensure requirements across jurisdictional borders (Anderson, 1950; Evans, 2015; Alexander, 2018).

Two major developments by the nursing profession in the United States have resulted in facilitating improved mobility. The first is expedited licensure, in which a nurse who is in good standing in one state can request a license to be granted by a regulatory body from another state through use of an electronic platform (the Nursys® system). This model is in effect in nearly all U.S. jurisdictions and, as a result, registered nurses (RNs) and licensed practical nurses (LPNs) with unencumbered licenses have a streamlined process to gain licensure in second and subsequent states. An alternative model can be found in Europe where the Professional Passport is used to facilitate movement (Wismar, Maier, Glinos, Dussault, & Figueras, 2011; Paun, 2013). The second major development is the Nurse Licensure Compact (NLC) currently in place in 31 U.S. states and territories. The NLC uses a set

of universal licensure requirements to enable nurses who meet the requirements to have a single license in their state of residence and the right to practice through a privilege in all other party states (NCSBN, 2015).

These mobility developments are not unique to the United States and Europe. Nor are they limited to the nursing profession as they are predicated upon use of the theoretical model of mobility enshrined in the work developed by the World Trade Organization (International Council of Nurses [ICN], 2008; Lennon, 2007; Benton & Ferguson, 2019). The application of these models can apply to countries with state/federal structures such as the United States and Canada or can apply between nation states where there are regional agreements in place such as the Nurse Mobility Agreement implemented by the countries of the Caribbean Community or the European Union's Professional Services Directive. Since these models or similar legal arrangements can reduce bureaucracy and increase efficiency while simultaneously maintaining the safety of the public, their utility is gaining momentum across an increasing range of health professions (Department of Health and Human Services, 2018).

Source of Workforce Data

The literature acknowledges that licensing bodies can often be a useful source of workforce data (Maier, Barnes, Aiken, & Busse, 2016; Efendi, Nursalam, Kurniati, & Gunawan, 2018). As regulatory bodies around the world have moved to licensure processes that require annual renewal information, the accuracy of data has improved. This data not only provide the numbers of practitioners available but also their geographic distribution, which provides policy makers with important intelligence to address future health-care planning, design, and reform (WHO, 2006). The U.S. Nursys[®] is updated daily and provides accurate data on the numbers of LPNs and RNs in each jurisdiction. Nursys[®] also offers information on whether any individual who reports to be a nurse does indeed have an active and unencumbered license. The system collates information across the states and displays all available licensee data in one place. Hence, if an individual has multiple licenses and an outstanding discipline in one state but an unencumbered license in other states, the information is available to all. eNotify, an extension to Nursys[®], enables employers to register employees and provides updates on any license status change, thereby further protecting the public. Such developments are not unique to high-income countries and initiatives such as the work completed by the Kenyan Nursing Council has provided an opportunity to modernize systems and offer invaluable data to government (Riley et al., 2007; Waters et al., 2013). Appiagyei et al. (2014) demonstrated how data can be used to look critically at how improvements to pre-service training capacity and production can be realized.

Impact on Disadvantaged Groups

Many authors contributing to the occupational licensure literature are concerned about the impact licensure can have on disadvantaged groups (Natividad-Rodriguez & Avery, 2016; Umez & Pirijs, 2018). However, the perspective in the occupational licensure literature is very different from what appears in the general health literature where the disadvantage relates to patients with difficulties in accessing services or culturally sensitive services (Betancourt, Green, Carrillo, & Park, 2005). Occupational licensure literature focuses on the individual worker who, due to costs of education, licensure processes or in some cases, preclusions about their criminal histories are dissuaded or prevented from pursuing a career in a licensed occupation (Natividad-Rodriguez & Avery, 2016). In some jurisdictions, the licensee is excused from payment, such as in Tennessee and Missouri, which can mitigate the cost of initial nurse licensure or as is in New Zealand where the employer picks up the cost. Another concern is that licensure examinations may discriminate against ethnic minorities (Kleiner, 2015). This is certainly not the case with the NCLEX, where all items are subjected to differential item functioning analysis. This ensures factors such as gender and ethnicity do not have an impact on the degree of difficulty of the various items (Woo & Dragan, 2012).

Barriers to Occupations

While Carpenter et al. (2017) identified that licensure can be a barrier in some occupations to obtaining work, it also offers a means of lifting individuals out of poverty with a progressive and articulated career pathway as in nursing (Driffield, 2016). Multiple countries offer the possibility of progression from support workers to LPNs to registered and advanced practice roles (Mule, 1986; Boot, Hurst, McGeorge, & Smith, 1987; Hembrough & Sheehan, 1988; Paech, 2002; Arieli, 2007; Craft, Hudson, Plenderleth, & Gordon, 2017; Buxton, Claywell, Goerke, & Pennington, 2019); however, the approach used to progress can vary significantly. Some researchers, such as Buxton et al. (2019), highlight the simultaneous enrollment in associate and bachelor's degree programs, which allows students to complete the associate degree coursework and then progress and complete the bachelor's degree requirements. In the United Kingdom, the Peach report (1999) introduced the concept of stepping on and stepping off. This is where an individual can start and complete a support nurse program (one year of study) and then take a non-licensed role in practice. Subsequently, immediately after completing the support worker education or after a period of work, they can join a RN education program by starting in the second year of study. (University of the Highlands and Islands, 2019). As noted by the United Nations High-Level Commission on Health Employment and Economic Growth (2016), finding ways of lifting women out of poverty can

have a profound impact on the health and economic growth of countries. Since nursing is a female-dominated profession in most countries, there may be considerable value in investigating how progression can be optimized from regulatory, socio-economic, career progression, and labor market perspectives.

Contemporary Approach for Reviewing Criminal Records

Recently there has been increased attention to the problems individuals with criminal records face when pursuing licensed careers (Umez & Piriuis, 2018). In the past, blanket bans for those with a criminal history was common but, as the views of society have changed, a more nuanced approach is increasingly being used. Consideration is given to factors such as time passed since the conviction, the insight, remorse, and contrition the person demonstrates toward their actions, the relevance the crime has to the profession, and the removal of ambiguous licensing criteria such as “good moral character”. In many parts of the world, regulatory boards of nursing have made progress to ensure cases are examined on an individual basis, there is consistency in approach and standardization on determinations being made, and information is readily available to individuals with a criminal record to guide their career choices (Zhong, Kenward, Sheets, Dohert & Gross, 2009; Smith, Covers, Wilson, Douglas, & Benemy, 2013; Zhong, McCarthy, & Alexander, 2016). This more individualized approach ensures a balance between protecting the public and the risks of recidivism an individual licensee faces when their criminal history prevents them from entering or returning to their chosen profession.

Failure of Regulatory Boards

Over the years, failures in the governance of regulatory boards have often triggered governmental, media, professional, and lay concerns. For example, the time it takes to process and resolve complaints have drawn the attention of oversight bodies is one concern. In the United Kingdom, the Nursing and Midwifery Council was subject to intense scrutiny and a series of reforms were required due to their failure to deal with public concerns in a timely manner. (Council of Healthcare Regulatory Excellence, 2012a; Council of Healthcare Regulatory Excellence, 2012b). Such investigations are not unique to nursing and due to a series of regulatory systems failures, bodies such as the Organization for Economic Cooperation and Development have published guidance on how to improve the governance performance of regulators (OECD, 2014). Benton and George (2018) identified a range of approaches used to provide oversight of regulatory boards. Various researchers have demonstrated how existing performance can be measured and how innovative approaches address governance improvement (College of Nurses of Ontario, 2016; Benton et al., 2016; and Benton and Rajwany, 2017). The College of Nurses of Ontario examined how to optimize board membership, increase lay participation, introduce competence-based selection of members, and pursue structured induction and ongoing governance training (College of Nurses of Ontario, 2016). The work by Benton et al. (2016) and Benton and Rajwany (2017) looked at the impact a regulatory body’s administrative structure, either umbrella agency or autonomous board, can have on its performance. Studies and innovations, such as the development of eLearning resources, can be used by regulatory board members and staff to improve governance and regulatory skills, and can support the pursuit of excellence in the governance of regulatory systems and their focus on public interest.

Linked to the issue of governance is market controls. The literature contends that licensure regimes are often used as a means of protecting the status quo (Furth, 2016). To a certain extent, this is correct since licensing bodies must operate within the legislation enacted into law and to change such legislation can take time. Another criticism relating to market control is the impact of interest groups that pursue the interests of the profession versus that of public protection (Kleiner, 2006). While closed-door lobbying does take place, the recording, broadcasting, and storage of testimony on web-based platforms readily accessible to the public makes discussion far more transparent than in the past (Attaran, Benton, Chauvin, McKee, & Percival, 2014). Evidence on the effects of licensure on wages and labor markets is complex. Some studies where the licensee operates on a fee-for-service model have indicated licensure brings wage premium, but more recent work by Redbird (2017) suggests that this may not be the case. Certainly, in the case of nursing, the majority of those licensed do not operate on a fee-for-service model but instead are part of an overhead costing model, which we contend has not been adequately investigated up until this point.

Nursing Licensure Impact on Safety and Quality

A significant criticism made of occupational licensure is the apparent lack of evidence relating to the impact licensure has on maintaining patient safety and assuring quality (Kleiner, 2006). In a recent analysis of the occupational licensure research, Benton et al. (2018) highlighted the need to curate such existing evidence but is not currently framed in terms of its contribution to the occupational licensure debate. Furthermore, multiple authors have demonstrated the benefits of nursing licensure to patient safety and service quality (Needleman, Buerhaus, Stewart, Zelevinsky, & Soeren, 2006; Dunton, Gajewski, Klaus, & Pierson, 2007; Aiken et al., 2012; Bouwman, Bomhoff, De Jong, Robben, & Friele, 2015). All demonstrate that the greater the percentage of RNs in the workforce, the more likely adverse events are managed successfully. Such successes help reduce length of stay, avoid complications, and return patients home to live productive lives. These findings tend not to be reported in economic and labor market occupational

licensure research. Some of these studies, such as the work of Aiken et al. (2012), have been replicated across multiple health provider systems in the United States and around the world. These studies reach consistent findings and invariably conclude that RNs provide measurable benefits while working in hospitals on patient safety, quality of services, and the avoidance of adverse incidents.

Critical Health Needs

In Africa, regulators work across jurisdictions to change legislation to enable licensees to better address critical health needs such as maternal child survival, access to nurse-initiated and nurse-managed antiretroviral therapy, prevention of mother-to-child transmission of HIV, and treatment of drug resistant tuberculosis (McCarthy, Zuber, Kelley, Verani, & Riley, 2014; Kelley et al., 2017). The work of the African Health Profession Regulatory Collaborative (ARC) has been successful in learning from best practices and accelerating their implementation across jurisdictions so licensees can address priority health burdens (Gross, Kelley, & McCarthy, 2015; Dynes et al., 2016).

Expansion of Practice Scope

There is a wealth of evidence demonstrating advanced practice registered nurses provide equal or better quality service than physicians with equal or reduced costs across a range of client groups (Browne, Birch, & Thabane, 2012; Martin-Misener & Bryant-Lukosius, 2014). Additionally, when members of the public experience services provided by nurse practitioners, they are often more satisfied with nurse-based service than the traditional physician-based model (Bryant-Lukosius, Dicenso, Browne & Pinelli, 2004).

Certainly, professional associations have debated scope of practice issues. In the United States and in many other countries, physicians have resisted attempts by nurses to expand their scope of practice, often arguing it will be unsafe for the public. However, there is now overwhelming evidence that refutes this and entities such as the U.S. Federal Trade Commission, the Department of Health and Human Services, and the Department of Labor and Treasury have issued guidance and policy notes on the safety expansion of practice scope and the benefits regarding increased access, consumer choice, and reduced costs (Federal Trade Commission, 2012; DHHS, 2018).

Acting Solely in the Public Interest

Closely related to patient safety is the critique of the specified purpose of licensure, which was shown to be changing by the trend analysis of the regulatory literature by Benton and George (2018). Historically, the purpose of protecting the public or acting in the public interest was often not explicitly specified in nursing legislation. Similarly, when such a statement was made it was often accompanied by a statement to promote the profession. Over the last two decades, specificity of acting solely in the public interest was included in many revised nursing acts such as the *Health Professions Act of British Columbia*. This act states that a College (regulatory body), must “at all time... serve and protect the public, and.... exercise its powers and discharge its responsibilities under all enactments in the public interest”. Accordingly, understanding and differentiating those boards with a single mandate to protect the public/act in the public interest versus those with double or triple mandates is important if a comprehensive assessment of regulator role is to be undertaken (Benton et al., 2017).

Alternatives to Licensure

Recently, some authors, stimulated by the proliferation of licensure, have advocated for the use of regulatory tools that are proportionate to the level of risk (OECD, 2009). A range of authors have described differing types of regulatory controls (Cox & Foster, 1990; Ross, 2017; Berliner et al., 2017). In nursing, the International Council of Nurses (1998) has advocated for proportionate regulation for more than two decades. Sparrow (2008) and the PSA (2015) have sought to link the level of harm to the degree of control needed and have advocated for the use of a wide range of regulatory approaches. The need to consider alternatives to licensure is frequently addressed in the occupational licensure literature and has been schematically captured as the production of an inverted regulatory pyramid (Mascini, 2013; Carpenter et al., 2017; Ross, 2017). This pyramid shows that licensure should be the last resort and should be reserved for occupations that present significant risk and that cannot be regulated by less restrictive means. Despite the increasing volume of work, definitive criteria to differentiate the allocation of the various levels of regulatory control have not been explicitly specified. Linked to this issue is the variability in licensing and licensing criteria between jurisdictions. To a certain extent, this is a consequence of the sovereignty of nations and, in the United States, the Tenth Amendment to the Constitution, which gives the responsibility to protect citizens to the individual states. As evidence of best practices becomes increasingly available through research and the documentation of performance variances, the pursuit of standardization of approach is more likely.

Cost and Standards of Licensure Exams

One barrier to obtaining a license repeatedly identified in the literature is the cost of taking licensure exams (Carpenter et al., 2017). However, in the United States, there is a single examination fee that applies across all U.S. jurisdictions and most territories. This fee has remained static at \$200 for almost two decades, while exam candidates have risen. If depreciation is considered, the cost of taking the exam has gone down by 32%. In other words, if the cost of taking the exam had been matched to inflation candidates would have to pay \$293. Therefore, in nursing, the cost barrier has been eroding over time.

The occupational literature highlights other concerns including: (a) manipulation of the passing standard as a means of controlling labor market supply; (b) differences in the passing standard between states thus restricting mobility; and (c) exam content that has nothing to do with public safety (Kleiner, 2006; Summers, 2007; Schow, 2018). However, this is not the case with the RN exams in the United States and Canada where there is a single passing standard for all U.S. states, Canadian provinces (with exception of Quebec), and territories based on a detailed analysis of the skills and activities undertaken by newly qualified nurses (in their first year of practice). Every three years a comprehensive analysis of entry to practice work is conducted that seeks the views of educators, employers, and newly qualified nurses as well as a group of experts, on the frequency and risks associated with a newly qualified nurse. Only content that encompasses a risk to public safety is contained in the exam and the standard is set purely on the need to protect the public (O'Neill, et al., 2005a; Wendt & Kenny, 2007; NCSBN, 2016).

The Impact of Age and Language

Some occupations set a minimum age for entry into education programs leading to a license, and despite the evidence that age appears to have an impact on completion rates, many of the minimum age limits have been removed from nursing legislation over the years. The finding that older students had better academic performance than their younger peers has been reported in studies in the United States, Australia, New Zealand, and the United Kingdom (Pitt, Powis, Levett-Jones, & Hunter, 2012). However, the integrative review noted that many studies had significant research design weaknesses (Pitt et al., 2012), a finding echoed by Gaynor, Gallasch, Yorkston, Stewart, & Turner (2006) who were seeking to identify empirical evidence of the factors influencing attrition from nursing programs.

Any potential barrier to entry needs to be carefully considered to identify if there is evidence that the requirements make a tangible difference to the safe delivery of the service. For example, language fluency requirements would be viewed very differently from state or provincial residency requirements. In the delivery of healthcare, the ability to understand the patient and communicate with other members of the team would suggest a higher level of risk from a patient safety perspective, as opposed to living across a jurisdictional border. There is extensive literature on language fluency and its impact on patient safety and team functioning (O'Neill et al., 2005b; Neff & Harman, 2013; Hull, 2016). Additionally, there is a wealth of evidence on the relative strengths and weaknesses of various language fluency assessment tools that guide rule making and standard setting (Wendt & Woo, 2009; Woo, Dickinson, & de Jong, 2010).

Recommendations for Further Work on Occupational Licensing Effects

There is evidence in nursing that runs contrary to the current deregulatory narrative found in much of the occupational licensure literature. However, although addressing the concerns raised by those who seek to remove many of the burdens of licensure, this evidence is typically published in the nursing-specific professional journals rather than in the economics, social policy, and labor market literature. In short, the evidence has low visibility and is dispersed over a wide range of journals. This needs to be addressed and nurse regulatory scholars must engage with economists, social policy experts, and labor and workforce scholars if a more balanced and comprehensive critique is to be achieved.

Much of the nursing evidence is based on small-scale single-jurisdiction studies and; therefore, the ability to reach definitive conclusions or infer that the findings can be extrapolated to other jurisdictions is limited. If evidence-based regulatory reform and contemporary policy is to be formulated, it is essential nurse regulators start to curate the available evidence using integrative reviews. Equally important is the need for regulators to work collaboratively across jurisdictions to identify key research questions and then use multi-center data collection techniques to ensure studies have sufficient power to reach definitive conclusions. Additionally, by working globally, the differences between regulatory approaches can be used as natural experiments to deduce optimum practices. While medicine, through the International Association of Medical Regulators Authorities and physical therapy, via the International Network of Physiotherapy Regulatory Authorities already have a mechanism to facilitate dialogue, pursue research, and coordinate efforts, nursing does not have an international regulatory forum. With global interest in regulatory reform and the unique issues nursing faces, the development of a global nurse regulators forum focused solely on regulatory issues and activities is a critical priority.

Contemporary Issues

Three subthemes: (a) regulatory reform actors, (b) levels of regulatory control, and (c) anti-trust immunity, are associated with the overarching theme of contemporary issues. In the United States and globally, the range and number of stakeholders pursuing various aspects of occupational licensing reform has increased over the last decade. The literature demonstrates that legislators, academics, interest groups, and various parts of government have become increasingly vociferous regarding the reform of occupational licensure regimes (Berliner et al., 2017). Much of this interest has focused on the topics identified in the preceding sections of this study and overall, at least recently, has tended to address the variations seen between the licensure requirements for occupations such as barbers, cosmetologists, and other non-health related disciplines. These narratives have been found in the academic literature, in libertarian foundation reports and papers, and opinion editorial pieces, as well as in blog posts and social media content. However, as noted by Benton et al. (2018), health professions have not been particularly active in this debate and this study is an attempt to address some of this criticism. Mapping out how nursing measures up to some of this criticism, and where there is scope to curate evidence that can shape standardization on these issues is key to influencing change. The results from phase 2 of this study provide ways of stating how nursing can address and respond to the various challenges being raised (Tables 3 - 5 and Appendix B).

While much of the debate is targeted toward country or state-based licensure provision, the literature demonstrates other levels of regulation need to be considered if a comprehensive approach toward the removal of unnecessary regulatory barriers is to be pursued. Regulation at regional, city, county, or even institutional levels needs to be considered.

Finally, the U.S. Supreme Court decision on *North Carolina Board of Dental Examiners vs the Federal Trade Commission*, as well as high profile cases in other parts of the world have raised questions about the composition of regulatory boards, and the immunity from prosecution these individuals enjoy. These discussions have led to calls to review the composition of boards including increasing the number of lay members, adding new forms of oversight, and empowering various entities to overrule the decisions of regulatory boards. Currently, no perfect set of solutions has been found. Further research is needed on the impact of lay members, how they are identified, appointed and orientated, and how best to ensure a board discharges its public interest mandate.

NCSBN produces an annual environmental scan that identifies emergent issues in the nurse regulatory space (NCSBN, 2019). Issues, such as the need to curate the evidence associated with identified trends, the impact of increasing lay membership on regulatory bodies, best practices in the recruitment, induction and development of board members, and the most appropriate means of providing oversight to such bodies should be pursued.

Limitations

Published work tends to be dominated by material from United States and other high-income countries despite the fact that the focus on occupational licensure reform is global. This may impact the breadth and depth of some of the findings. The lack of published material from low- and middle-income countries, although increasing, may mask additional points yet to be identified or may distort the significance of some that have been identified by this study. Consequently, these findings should be interpreted cautiously when considering them in relation to non-U.S. contexts.

Conclusions

This study and analysis of a wide range of sources relating to the current drive to reform occupational licensure identified a comprehensive list of issues. Schmitt (2018) attempted to provide legislators with a set of questions to assist them in considering whether to regulate an occupational group. However, this study has provided greater detail pointing toward the potential for a more granular consideration of the topic. By offering commentary on how these issues can be addressed by the nursing profession, a benchmark has been set that can be used by other disciplines. This study starts to address the lack of curated evidence in relation to the benefits of occupational licensure and provides examples of promising practices designed to pursue acting in the public interest.

A number of significant recommendations are made in the discussion section. Not least amongst these is the need, where there is enough research available, to conduct integrative or systematic reviews of the evidence to identify whether there is sufficient material to drive evidence-based policy making. Additionally, the need to take a structured, robust, reliable and valid risk-based approach to determining the level of regulation needed by an occupation should be urgently pursued. Such an approach would address concerns of the proliferation, variability, and over-use of licensure as the default option for the regulation of occupations. While medicine and physical therapy are working globally on some of these issues, nursing needs to find a means of bringing regulators together. By bringing nursing regulators together, it will be possible to facilitate dialogue, pursue research, and coordinate efforts to generate evidence to inform regulatory reform.

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Operational Definitions of Themes and Subthemes

Theme	Subtheme	Synopsis
Licensure Reform	<i>Provided contextual information on the narrative that can be found in the literature relating to occupational licensure reform.</i>	
	Drivers	Offers insights into what is driving the current interest in licensure reform.
	Support for Action	Identifies there is multi-dimensional support to address regulatory reform.
	Potential Solutions	Provides several solutions that could be used to address the actual and perceived problems with the current licensure regimes.
Impact of Occupational Associations	Details the roles and impact of occupational associations regarding the pursuit of licensure and regulatory processes.	
	Promoting Licensure	Identifies occupational associations that often advocate for the licensure of the discipline.
	Defending and Extending Licensure	Once a discipline is licensed, occupational associations often advocate for defending existing responsibilities granted or extending these further to consolidate or extend the scope of the discipline.
Occupational Licensure Effects	<i>This is a complex multi-dimensional theme that includes different sub themes. Some of these subthemes have a number of specific aspects such as in the case of "Barrier to Entry"</i>	
	Proliferation	Highlights there have been a marked increase in the use of licensure as a requirement for practicing a wide range of occupations.
	Mobility	Identifies that variation in requirements have an adverse impact on the mobility of practitioners, resulting in delays and additional costs. This is a narrow consideration of the modes of supply and focuses on physical mobility.
	Board Governance	This focuses on board performance and resource availability as well as the adverse impacts of active market participants.
	Types of Regulation	Articulates a range of regulatory approaches that should be considered when seeking to act in the public interest
	Purpose	Provides details on the specific purpose the regulatory body is established to pursue.
	Patient Safety	Highlights the lack of concrete evidence relating to the public safety impacts of regulatory approaches.
	Scope of Practice	Focuses on turf battles that can occur between disciplines thereby restricting access to services.
	Disadvantaged Groups	Provides details of a number of vulnerable groups that can be deterred from entry into a profession due to costs, education, or other requirements.
	Criminal Background	A theme that can impact the ability of an individual to pursue or maintain licensure in a regulated discipline
	Recidivism	It is argued that due to barriers to the entry or re-entry to a discipline people with a criminal record cannot find a legal job and as a result reoffending is more likely.
	Practicing without a License	This is often a criminal offence that can result in various fines or other penalties.
	Barriers to Entry	A multi-dimensional concept that can define a set of criteria that need to be met before an individual can enter a nursing program and or gain a license practice.
	Market Control	Focuses on labor market dynamics suggesting that regulation has a negative impact by preventing people offering services.
	Variability	Relates to the observations that standards and approaches to regulation of a discipline varies between jurisdictions and consequently suggests this undermines the need to regulate the discipline.
Contemporary Issues	<i>Provides a number of issues currently being discussed and who is promoting their exploration.</i>	
	Anti-Trust Immunity	As a result of the North Carolina Dental Board Case there is considerable discussion on anti-trust issues, state immunity, and active supervision.
	Level of Regulatory Control	Delineates the levels at which regulatory control can operate such as at federal, state, municipal.
	Regulatory Reform Actors	Provides insight into stakeholders who are active in policy space.

Executive Officer Focus Group Exercise Results

Executive Officer Summit Table Top Exercise 1

Using a deck of cards with positive and negative adjectives, EO groups chose three adjectives they believed best described how occupational licensure should be described. The groups discussed their choices and selected four to six cards that best captured the shared sentiment of the group.

Exercise #1 – “What is the current message?”

Group Response 1:	<ul style="list-style-type: none"> ● Focused Exclusive Bold Opinionated Formal
Group Response 2:	<ul style="list-style-type: none"> ● Emotional Opinionated Aggressive Idealistic Technical Futuristic
Group Response 3:	<ul style="list-style-type: none"> ● Emotional ● Technical ● Complex ● Opinionated ● Pessimistic ● Vintage
Group Response 4:	<ul style="list-style-type: none"> ● Basic Opinionated Aggressive Emotional Pessimistic
Group Response 5:	<ul style="list-style-type: none"> ● Exclusive Traditional Complex Standardized ● Rugged (rough around the edges)
Group Response 6:	<ul style="list-style-type: none"> ● Professional Industrial ● Serious Opinionated ● Mysterious
Group Response 7:	<ul style="list-style-type: none"> ● Exclusive Opinionated Transitional Complex ● Brash Standardized
Group Response 8	<ul style="list-style-type: none"> ● Crafted Aggressive Pessimistic Complex Experimental

Executive Officer Summit Table Top Exercise 2

The EO groups then picked three more cards that described the way they would like occupational licensure to be described. Again, the EOs shared their views with each other and selected five adjectives that best described how occupational licensure should be experienced in the future.

Exercise #2: “What should the message be?”

Group Response 1:	<ul style="list-style-type: none"> ● Best in Class ● Recognize ● Trusted Profession ● Scholarly Futuristic
Group Response 2:	<ul style="list-style-type: none"> ● Bold Respectful Scientific Futurist ● Multi-faceted Trusted
Group Response 3:	<ul style="list-style-type: none"> ● Scholarly ● Best in class Progressive Trusted Approachable Futuristic
Group Response 4:	<ul style="list-style-type: none"> ● Scholarly Trusted Approachable Professional ● Progressive (futuristic)
Group Response 5:	<ul style="list-style-type: none"> ● Trusted ● Realistic ● Focused ● Dynamic (chosen over progressive) ● Secure
Group Response 6:	<ul style="list-style-type: none"> ● Dependable Dynamic Trusted Professional Scientific
Group Response 7:	<ul style="list-style-type: none"> ● Practical ● Trusted ● Rational ● Realistic ● Dynamic Futuristic
Group Response 8	<ul style="list-style-type: none"> ● Scholarly Progressive Respectful Trusted Standardized

Executive Officer Focus Group Exercise Generating Alternative Narratives

Thirty-six statements from the literature analyzed in Phase 1 were randomly allocated in groups of three statements. Each group of statements were given to three self-selected EOs who reviewed the statements to identify the issues, articulate an alternative narrative, document supporting evidence, and identify any gaps that surfaced in the available evidence. Below are the results of this exercise.

Statement	There is little to no published research on the relationship between performance on the licensure exam and an individual's ability to perform on the job.
Diagnose	<ul style="list-style-type: none"> • Lack of evidence • Lack of understanding of the exam purpose
Respond	The purpose of the exam is to assess whether an individual is minimally safe to practice. It is not designed to assess work performance. This is a common misunderstanding and it is important that we understand the difference between fitness for practice which is the job of the licensing exam, fitness for academic award, which is the role of the educational institutions delivered through formative and summative assessment and fitness for purpose the responsibility of the employer who addressed this through induction, orientation and ongoing learning specific to the role to which the nurse is appointed.
Evidence	<ul style="list-style-type: none"> • Benton, DC. (2011). Nurses fit for purpose, award and practice? <i>International Nursing Review</i>. 58(3), 276. http://dx.doi.org/10.1111/j.1466-7657.2011.00935.x • Czekanski, K., Hoerst, B.J., & Kurz, J. (2018). Instituting Evidence-Based Changes to Improve First-Time NCLEX-RN® Pass Rates. <i>Journal of Nursing Regulation</i>. 9(1), 11-18. • Sears, N.A., Othman, M., & Mahony K. (2015). examining the relationships between NCLEX-RN performance and nursing student factors, including undergraduate nursing performance: A systematic Review. <i>Journal of Nursing Education and Practice</i>. 5:11, 10-15. http://www.sciedu.ca/journal/index.php/jnep/article/viewFile/7386/4560
Gaps	Despite regular education sessions on the NCLEX exam there is still inadequate understanding of its purpose. Need to explain to educators, nurses, employers, and policy makers the primary purpose of licensure exams. Also need to correlate exam performance with discipline history through big data analytics.
Statement	Although the professions have met with some success in raising the general tone of professional conduct, the fact that experts often sit in judgement of themselves – conferring, suspending, and revoking licenses – raises the question of whether they sufficiently consider the public interest in their deliberations.
Diagnose	<ul style="list-style-type: none"> • Potential conflict of interest • Lack of transparency
Respond	This is certainly not the case for nursing where lay members are commonly part of the process. Increasingly, regulatory boards clearly set out the facts, lay out their determination and offer a rationale for reaching the various judgements thereby assuring transparency.
Evidence	<ul style="list-style-type: none"> • Graddy, E., & Nichol, M.B. (1990). Structural Reforms and Licensing Board Performance. <i>American Politics Quarterly</i>. 18(3), 376-400.
Gaps	A number of papers have been written on the role of lay members as part of the regulatory boards' governance structures; however, no synthesis of this material has been published, which would provide a useful synopsis in the future design of discipline determination arrangements.
Statement	The way regulatory boards operate is not uniform.
Diagnose	<ul style="list-style-type: none"> • A factual observation of functioning • May imply that variation is a problem
Respond	To a certain extent this is true as each jurisdiction has its own statutes and rules which often reflect the jurisdictional culture. However, increasingly there is a convergence toward best practices. This is driven by collaborative work across jurisdictions, the use of evidence-based processes, initiative such as the development and application of model acts and rules as well as systems such as CORE (Commitment to Ongoing Regulatory Excellence).
Evidence	<ul style="list-style-type: none"> • Hudspeth, R. (2009). Regulatory Issues Column: Boards of Nursing Commitment to Ongoing Regulatory Excellence. <i>Nursing Administration Quarterly</i>. 33(2), 188-189. • Benton, D., Brekken, S. Ridenour, J. & Thomas, K. (2016). Comparing performance of umbrella and independent nursing boards: An initial review. <i>Journal of Nursing Regulation</i>. 7(3), 52-57.

Gaps	Making performance metrics available to the public will shift the focus from process to outcome. It is not necessary for everything to be the same; however, deviations from the norm do need to be justifiable based on superior performance or unique political, legal or cultural requirements. Identification of best practices should drive structural and process reform.
Statement	Occupations that are well organized and have well-funded campaigns with no organized opposition are more likely to find themselves at the top of the agenda.
Diagnose	<ul style="list-style-type: none"> • Coherence of action and messaging • Resource availability to advance their message • No countervailing positions that make the issue contentious
Respond	While this is true, it is important to build coalitions with others outside the profession if proposed changes are to be supported when a window of opportunity opens. Links with the public and other groups that are well regarded by the legislators can increase the likelihood of successful legislative change.
Evidence	<ul style="list-style-type: none"> • Kingdom, J. (1995). <i>Agendas, Alternatives, and Public Politics</i>, 2nd ed. New York: Harper Collins. • Gordon-Fisher, S.B. (2015). <i>Strategic Influence in Legislative Lobbying: Context, Targets, and Tactics</i>. New York, NY: Palgrave Macmillan.
Gaps	Being able to have a consistent message is important but also identifying the opposition and finding win-win position or at least get to a point where there is no vocal opposition will enhance the possibility of success. Need to develop coalition-building skills as part of regulatory staff and board development.
Statement	It is important that licensing boards have public members nominated who have been given wide publicity as to their potential appointment so they are open to blogger scrutiny.
Diagnose	<ul style="list-style-type: none"> • Appointing lay membership to boards • Transparency of selection and appointment process
Respond	Citizen groups have advocated for lay membership of licensing boards for some time and it is on the increase. It is important these individuals are not only identified and appointed through a transparent process but that they are equipped to make a meaningful contribution. The limited research available on nursing would suggest that lay members can make a positive contribution to the governance board.
Evidence	<ul style="list-style-type: none"> • Citizen Advocacy Center. (1995). Public representation on healthcare regulatory, governing, and oversight bodies: strategies for success. Washington, D.C. The Citizen Advocacy Center. http://www.cacenter.org/files/PublicRepresentation.pdf • Graddy, E., & Nichol, M.B. (1990). Structural reforms and licensing board performance. <i>American Politics Quarterly</i> 18:3, 376-400. • Professional Standards Authority. (2015). Ethics for Regulators. London, Professional Standards Authority. https://www.professionalstandards.org.uk/docs/default-source/publications/consultation-response/others-consultations/2015/committee-on-standards-in-public-life.pdf?sfvrsn=ab527e20_14
Gaps	Globally there are a range of appointment procedures in place for the selection, appointment, and renewals of public members. While no one discipline has examined the impact of these differing approaches, some value may be derived from an integrative review of the available published literature.
Statement	George Bernard Shaw's famous dictum that 'All professions are a conspiracy against the laity'.
Diagnose	<ul style="list-style-type: none"> • Conflict of interest • Professional self-interest
Respond	This quote is from an era before significant changes to the governance of boards were instigated. Today, an increasing number of jurisdictions make it explicitly clear that they have a single mandate to protect the public rather than a split responsibility of also promoting the profession. Despite these changes, more is needed to explain the purpose of regulators to both the profession and the public.
Evidence	<ul style="list-style-type: none"> • Benton, D., Thomas, K., Damgaard, G., Masek, S., & Brekken, S. (2017). Exploring the differences between regulatory bodies, professional associations and trade unions: An integrative review. <i>Journal of Nursing Regulation</i>. 8:3, 4-11. • Pickett, L. (2017) Professional Regulation in Health and Social Care. Number CBP8094. London, House of Commons Library. http://researchbriefings.files.parliament.uk/documents/CBP-8094/CBP-8094.pdf
Gaps	There is a need to be more proactive in communicating the role of the regulator to all interested parties. This involves better education of practitioners, increased media coverage, and the use of social media as a means of reaching the various audiences.

Statement	Under the pretext of ensuring quality control, occupational licensing in the United States restricts competition and choice for the ordinary consumer. Higher process and less innovation prevail while economic freedoms diminish.
Diagnose	<ul style="list-style-type: none"> Looks at occupational licensure from a labor impact and restriction on market perspective
Respond	There is overwhelming evidence that the licensing process for nurses makes a significant difference in terms of mortality and morbidity, and, as such, the restrictions placed on entry to the profession have a tangible benefit for those receiving services. This may not be the case where the services do not present a significant risk to the recipient.
Evidence	<ul style="list-style-type: none"> Aiken, L.H., Sermeus, W., Van Den Heede, K., Sloane, D.M., Busse, R., McKee, M., Bruyneel, L., Rafferty, A.M., Griffiths, P., Moreno-Casbas, M.T., Tishelman, C., Scott, A., Brzostek, T., Kinnunen, J., Schwendimann, R., Zikos, D., Sjetne, I.S., Smith, H.I., & Kutney-Lee, A. (2012). Patient safety, satisfaction, and quality of hospital care: Cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. <i>BMJ (Online)</i> 344(7851), e1717. https://www.bmj.com/content/bmj/344/bmj.e1717.full.pdf Bouwman, R., Bomhoff, M. De Jong, J.D., Robben, P., & Friele, R. (2015). The public's voice about healthcare quality regulation policies. A population-based survey. <i>BMC Health Services Research</i>. 15:325. DOI 10.1186/s12913-015-0992-z
Gaps	There is a robust evidence base in relation to the delivery of hospital-based care but further research is needed in relation to community-based services.
Statement	Although continuing education requirements may appear to be an important step in shoring up the quality of professional service, the promise has proved greater than reality.
Diagnose	<ul style="list-style-type: none"> The value of continuing education is being questioned The link between continuing education and continuing competence
Respond	While entry to practice standards has long been established and demonstrated as valid, reliable, and legally defensible, the need to focus on continuing competence is a relatively new phenomenon. As the value of continuing education has been questioned, the focus has shifted toward continuing competence and the concept of revalidation of competences as a means of protecting the public.
Evidence	<ul style="list-style-type: none"> Cowan, D.T., Norman, I., & Coopamah, V.P. (2005). Competence in nursing practice: A controversial concept – A focused review of the literature. <i>Nurse Education Today</i>. 25(5), 355-362. Benton, D. (2017). Using bibliometrics to support revalidation requirements. <i>Nursing Standard</i>. 32(1), 44-51. doi. org/10.7748/ns.2017.e10589
Gaps	The best way to assure continuing competence is unknown and further research is needed perhaps by looking at the implementation of revalidation by the NMC in the UK and continuing competence by colleagues in Canada.
Statement	In nursing, where graduates of two-year, three-year, and four-year schools all qualify for taking state licensing examinations the data does not indicate unacceptable performance among any of those groups.
Diagnose	<ul style="list-style-type: none"> Calls into question the variability of education programs to take the same exam
Respond	The purpose of the NCLEX is to assess the individual's fitness for practice. Employers place newly qualified nurses into the same role, and, as such, the licensing exam tests safety in relation to those competencies that represent risk to the patient. The exam is not designed to differentiate educational content or length.
Evidence	<ul style="list-style-type: none"> O'Neill, T.R., Marks, C.M., & Reynolds, M. (2005). Re-evaluating the NCLEX-RN® passing standard. <i>Journal of Nursing Measurement</i>. 13(2), 147-165. Wendt, A., & Kenny, L. (2007). Setting the passing standard for the National Council licensure Examination for Registered Nurses. <i>Nurse Educator</i>. 33(3), 104-108. Benton, DC. (2011). Nurses fit for purpose, award and practice? <i>International Nursing Review</i>. 58(3), 276. http://dx.doi.org/10.1111/j.1466-7657.2011.00935.x
Gaps	With changing demographics and shifts toward more prevention and community-based practices, the need to ensure and continually monitor entry to practice safety dimensions remains important.

Statement	On the other hand, occupations such as teachers and nurses have not been able to significantly enhance earnings in their profession through licensing, perhaps as a consequence of the marked structure or employment relations.
Diagnose	<ul style="list-style-type: none"> • Differentiates between occupational groups • May refer to the gender dimensions of both professions – female dominated • Highlights that the reward and market structure may impact earnings
Respond	This is an important aspect of any economic analysis. A lot of the criticism of occupational licensure has been predicated on the basis of disciplines where a market for their service exists and a fee-for-service model is in place. This is not the case for nurses and teachers; licensure has not resulted in a step increase in salaries.
Evidence	<ul style="list-style-type: none"> • Redbird, R. (2017). The new closed Shop? The economic and structural effects of occupational licensure. <i>American Sociological Review</i>. 82(3), 600-624. • Benton, D., Catizone, C. A., Chaudhry, H. J., Hatherill, W., DeMers, S., Monahan, M.J., & Grace, P. (2018). Bibliometrics: A Means of Visualizing Occupational Licensure Scholarship. <i>Journal of Nursing Regulation</i>. 9:1, 31-37.
Gaps	Much of the economic evidence fails to differentiate between the models (fee for service vs. salaries) and erroneously suggests that the findings apply to the majority of disciplines. Additionally, much of the research is significantly outdated.
Statement	The growth of information technology through the internet minimizes the argument that licensing reduces asymmetry of information between consumers and suppliers of services.
Diagnose	<ul style="list-style-type: none"> • Increased availability of information • Assumes information is accurate, valid, and reliable • Assumes users are able to access and make sense of the information
Respond	There is an overwhelming amount of information available, but this may not be sufficient for an individual to determine the quality of a provider. Also, in the case of emergency conditions, the person may not have the time nor even be conscious to undertake the research needed to make an informed choice.
Evidence	<ul style="list-style-type: none"> • Shapiro, C. (1982). Consumer Information, Product Quality, and Seller reputation. <i>The Bell Journal of Economics</i>. 13(1), 20-35. • Philipsen, N.J. (2009). Regulation of liberal professions and competition policy: Developments in the EU and China. <i>Journal of Competition Law and Economics</i>. 6(2), 203-231.
Gaps	Finding reliable and valid information can be difficult due to the exponential growth of data. Synthesizing the information and determining whether it is likely to apply to a particular individual is complex.
Statement	The most revered professions have committed the most blatant and indefensible abuses of licensure.
Diagnose	<ul style="list-style-type: none"> • Failure of licensure • Betrayal of trust
Respond	This is true. Cases such as Charles Cullen or Harold Shipman are examples of the most heinous betrayals of trust. But these are extreme examples that would test any system—the balance between oppressive controls and risk is a challenge regulators seek to address. Systems like Nursys® provide an open and transparent way of checking a person's license for problems or fraudulent qualifications.
Evidence	<ul style="list-style-type: none"> • Professional Standards Authority. (2015). Right Touch Regulation (Revised). London, Professional Standards Authority. https://www.professionalstandards.org.uk/docs/default-source/publications/thought-paper/right-touch-regulation-2015.pdf • McClenton, L.G. (2012). Falsification of nurse licensure applications: Cases and consequences. <i>Journal of Nurse Regulation</i>. 2(4), 26-28.
Gaps	With the advent of big-data analytics and machine learning it may be possible to detect, at an earlier stage, problem practitioners. This is an area that requires future research, which may require a closer working relationship between regulators and employers who can provide real-time data.

Statement	Unlike a driver's license where individuals do not have a choice with whom they will interact on the road, consumers generally choose with whom they obtain a regulated service.
Diagnose	<ul style="list-style-type: none"> • Implies that consumers of a service generally have a choice • Questions the need for compact arrangements
Respond	In many ways, healthcare compacts are similar to the driver's license since people are not always able to choose who provides their care. It is essential systems are in place to ensure individuals practicing on a privilege do not have outstanding discipline or felony convictions.
Evidence	<ul style="list-style-type: none"> • Anderson, B.E. (1950). <i>The facilitation of interstate movement of registered nurses</i>. Philadelphia, PA. J.B. Lippincott Company. • Fotsch, R. (2018). The Enhanced Nurse Licensure Compact Goes Live. <i>Journal of Nursing Regulation</i>. 8(4), 61-62.
Gaps	Moving toward a compact nation is a challenge and can only be achieved by building coalitions that address concerns of the opposition, such as trade unions. Quantifying benefits and any costs associated with the introduction of the compact for the various stakeholders is a key component of making progress.
Statement	Occupational associations perceive state regulation as an important arena for their members and they attempt to directly impact legislations.
Diagnose	<ul style="list-style-type: none"> • Professional associations are active in influencing legislation that controls the practice of the profession
Respond	Historically, professional associations have often lobbied for the creation of regulatory bodies and the licensure of the profession. However, it is important to note that the role of professional associations and their interest in promoting the profession is different from the mandate of the regulatory body that is focused on public protection.
Evidence	<ul style="list-style-type: none"> • Benton, D., Thomas, K., Damgaard, G., Masek, S., & Brekken, S. (2017). Exploring the differences between regulatory bodies, professional associations and trade unions: An integrative review. <i>Journal of Nursing Regulation</i>. 8:3, 4-11.
Gaps	With significant demographic, disease, and technological changes, collaborating with a range of stakeholders who respect their responsibilities and share an agreed vision of ensuring the health needs of the population are met will be important.
Statement	Most of the research on the regulation of occupations has emphasized barriers to entry, but relatively little empirical work has examined the quality of output of the demand-side response by consumers to these quality efforts.
Diagnose	<ul style="list-style-type: none"> • Most research has been conducted from an econometric or labor market perspective • There is a scarcity of regulatory research focused on the quality and safety benefits of licensure
Respond	This is correct but increasingly this gap is being addressed. NCSBN is investing in research. Publications in the <i>Journal of Nursing Regulation</i> and materials in other nursing journals is starting to build a collection of evidence.
Evidence	<ul style="list-style-type: none"> • Benton, D., Catizone, C. A., Chaudhry, H. J., Hatherill, W., DeMers, S., Monahan, M.J., & Grace, P. (2018). Bibliometrics: A Means of Visualizing Occupational Licensure Scholarship. <i>Journal of Nursing Regulation</i>. 9:1, 31-37. • Aiken, L.H., Sermeus, W., Van Den Heede, K., Sloane, D.M., Busse, R., McKee, M., Bruyneel, L., Rafferty, A.M., Griffiths, P., Moreno-Casbas, M.T., Tishelman, C., Scott, A., Brzostek, T., Kinnunen, J., Schwendimann, R., Zikos, D., Sjetne, I.S., Smith, H.L., & Kutney-Lee, A. (2012). Patient safety, satisfaction, and quality of hospital care: Cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. <i>BMJ (Online)</i> 344(7851), e1717. https://www.bmj.com/content/bmj/344/bmj.e1717.full.pdf
Gaps	There is a major gap in the curated evidence on the benefits of regulation and this needs to be addressed.
Statement	State and local government can also change pass rates to mirror relative supply and demand conditions for service.
Diagnose	<ul style="list-style-type: none"> • Implies the exam is a means of addressing labor supply issues • Misses the point that licensure is about public protection
Respond	This depends on the profession and, from a legal perspective, is true but in the case of nursing there is a single passing standard that is reviewed very three years. The passing standard is determined through the triangulation of data from newly qualified nurses, educators, employers, and a group of experts.
Evidence	<ul style="list-style-type: none"> • O'Neill, T.R., Marks, C.M., & Reynolds, M. (2005). Re-evaluating the NCLEX-RN® passing standard. <i>Journal of Nursing Measurement</i>. 13(2), 147-165. • Wendt, A., & Kenny, L. (2007). Setting the passing standard for the National Council licensure Examination for Registered Nurses. <i>Nurse Educator</i>. 33(3), 104-108.
Gaps	With increasing use of technology, it may be possible to analyze data directly from the electronic health record. This is an area worthy of exploration if real-time data is to become a reality rather than the current cyclical (every three year) model.

Statement	Crucial licensing decision that can affect vast numbers of people are often made with little or no input from the public.
Diagnose	<ul style="list-style-type: none"> • Lack of user input to the licensing process
Respond	Increasingly, licensure boards are engaging users in their licensure and rule-making processes and including public members as part of their boards. Also, with the advent of the internet, boards of nursing use their website to seek input on proposed rules and other key decisions.
Evidence	<ul style="list-style-type: none"> • Carlitz, R., & Gunn, R. (2005). e-Rulemaking: a New Avenue for Public Engagement. <i>Journal of Public Deliberation</i>. 1(1), Article 7. https://www.publicdeliberation.net/jpd/vol1/iss1/art7 • Carvalho, N., & Lourenco, R.P. (2018). E-rulemaking: Lessons from the literature. <i>International Journal of Technology and Human Interaction</i>. 14(2), 35-53.
Gaps	This is a poorly researched area and warrants investigation. With the changing characteristics of generations, it is important that a range of approaches are available and targeted toward the generational groups that will be most impacted by proposed changes.
Statement	For nurses and teachers, the primary mode of determining wages, hours, and other terms and conditions of employment is through labor relations and collective bargaining with an employer.
Diagnose	<ul style="list-style-type: none"> • Differentiates between occupational groups • May refer to the gender dimensions of both professions—female dominated • Highlights that the reward and market structure may impact earnings
Respond	This is an important aspect of any economic analysis. A lot of the criticism of occupational licensure has been predicated on the basis of disciplines where a market for their service exists and a fee-for-service model is in place. This is not the case for nurses and teachers; licensure has not resulted in a step increase in salaries.
Evidence	<ul style="list-style-type: none"> • Redbird, R. (2017). The new closed Shop? The economic and structural effects of occupational licensure. <i>American Sociological Review</i>. 82(3), 600-624. • Benton, D., Catizone, C. A., Chaudhry, H. J., Hatherill, W., DeMers, S., Monahan, M.J., & Grace, P. (2018). Bibliometrics: A Means of Visualizing Occupational Licensure Scholarship. <i>Journal of Nursing Regulation</i>. 9:1, 31-37.
Gaps	Much of the economic evidence fails to differentiate between the models (fee for service vs. salaries) and erroneously suggests that the findings apply to the majority of disciplines. Additionally, much of the research is significantly outdated.
Statement	Licensing laws have exerted negative influences in many professions by inhibiting innovations in practice, training, education, and organization of services.
Diagnose	<ul style="list-style-type: none"> • Adverse impact of licensure on innovation, education, and service organization
Respond	Repeatedly, nursing has demonstrated its flexibility through changing scopes of practice, introducing delegation, and leading the way in many licensure reforms such as in the case of the development of computer adaptive testing, the creation of the Nursys® registration database, the nurse licensure compact, and the global atlas of regulation. Some legislation such as that in Texas does permit pilot studies to facilitate and test change.
Evidence	<ul style="list-style-type: none"> • O'Neill, T.R., Marks, C.M., & Reynolds, M. (2005). Re-evaluating the NCLEX-RN® passing standard. <i>Journal of Nursing Measurement</i>. 13(2), 147-165. • Fotch, R. (2018). The Enhanced Nurse Licensure Compact Goes Live. <i>Journal of Nursing Regulation</i>. 8(4), 61-62. • McClenton, L.G. (2012). Falsification of nurse licensure applications: Cases and consequences. <i>Journal of Nurse Regulation</i>. 2(4), 26-28.
Gaps	Need to differentiate between the different professions and get each profession to demonstrate how they maximize public protection while minimizing the degree of intervention.

Statement	Seldom are requirements based on careful analysis of what minimum levels of knowledge, skills, ability, and other traits are truly necessary to ensure adequate services.
Diagnose	<ul style="list-style-type: none"> • Entry barriers and licensure requirements • Necessity for the barriers relative to service needs
Respond	This depends on the profession. In the case of nursing, there have been multiple studies that demonstrate the impact on morbidity and mortality of the registered nurse. Furthermore, there is a single passing standard that is reviewed very three years. The passing standard is determined through the triangulation of data from newly qualified nurses, educators, employers, and a group of experts.
Evidence	<ul style="list-style-type: none"> • O'Neill, T.R., Marks, C.M., & Reynolds, M. (2005). Re-evaluating the NCLEX-RN® passing standard. <i>Journal of Nursing Measurement</i>. 13(2), 147-165. • Aiken, L.H., Sermeus, W., Van Den Heede, K., Sloane, D.M., Busse, R., McKee, M., Bruyneel, L., Rafferty, A.M., Griffiths, P., Moreno-Casbas, M.T., Tishelman, C., Scott, A., Brzostek, T., Kinnunen, J., Schwendimann, R., Zikos, D., Sjetne, I.S., Smith, H.I., & Kutney-Lee, A. (2012.) Patient safety, satisfaction, and quality of hospital care: Cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. <i>BMJ (Online)</i> 344(7851), e1717. https://www.bmj.com/content/bmj/344/bmj.e1717.full.pdf
Gaps	There is sufficient robust research to address this comment.
Statement	For some occupations that have been regulated for a long time the trend has been toward fewer restrictions.
Diagnose	<ul style="list-style-type: none"> • Changing nature of regulation
Respond	Comprehensive work has shown that there are 25 trends impacting regulation. Initiatives such as the introduction of the compact have led to harmonization of standards, as has the establishment of the NCSBN's research, guidance, and model act.
Evidence	<ul style="list-style-type: none"> • Fotch, R. (2018). The Enhanced Nurse Licensure Compact Goes Live. <i>Journal of Nursing Regulation</i>. 8(4), 61-62. • Benton, D. (2017). Bibliometric Review: Identifying Evolving and Emergent Regulatory Trends. In Regulation 2030 First Steps on a Journey. <i>Journal of Nursing Regulation</i>. 8:2 Supplement, S5-S14. • National Council of State Boards of Nursing. (2012). NCSBN Model Act. Chicago, IL. National Council of State Boards of Nursing. https://www.ncsbn.org/14_Model_Act_0914.pdf
Gaps	Need to examine whether the trends identified by NCSBN are applicable to other health disciplines.
Statement	The classic work by the future Nobel Laureates Milton Friedman and Simon Kuznets analyzed the differences in the regulatory restrictions of doctors and dentists from 1900 to the early 1940s.
Diagnose	<ul style="list-style-type: none"> • Using the status of Nobel Laureates to amplify credibility of positions • Amplify points by stating the research basis • Based on outdated research
Respond	Healthcare delivery, education, and regulation has changed markedly in the past century and little can be concluded from citing such outdated work. More recent work by Ruth Redbird paints a very different picture and, this added to the mapping of changing trends in regulation, means there is an urgent need to challenge many of the long promoted but outdated narratives.
Evidence	<ul style="list-style-type: none"> • Redbird, R. (2017). The new closed Shop? The economic and structural effects of occupational licensure. <i>American Sociological Review</i>. 82(3), 600-624. • Benton, D. (2017). Bibliometric Review: Identifying Evolving and Emergent Regulatory Trends. In Regulation 2030 First Steps on a Journey. <i>Journal of Nursing Regulation</i>. 8:2 Supplement, S5-S14. • Shafer, M. (2018). <i>New Occupational Licensing Analysis Opposes Traditional Theory</i>. Washington, D.C. Council of State Governments.
Gaps	Need for regulators to work with economists to ensure research is better informed from the perspectives of contemporary care delivery, education provision, and regulatory systems application.
Statement	Recently there have been few studies detailing the effects of occupation licensing.
Diagnose	<ul style="list-style-type: none"> • Recency of research • Effects of occupational licensure
Respond	This is true. A lot of the evidence cited by economists and labor market analysts is outdated, does not differentiate between disciplines that pose a substantial risk from those that do not, and fails to examine the impact of occupational barriers on the quality of services provided.
Evidence	<ul style="list-style-type: none"> • Benton, D., Catizone, C. A., Chaudhry, H. J., Hatherill, W., DeMers, S., Monahan, M.J., & Grace, P. (2018). Bibliometrics: A Means of Visualizing Occupational Licensure Scholarship. <i>Journal of Nursing Regulation</i>. 9:1, 31-37.
Gaps	There is a need for the curation of available evidence on the positive benefits of licensure as well as updating the economic analysis as cited work fails to acknowledge some professions are provided a salary and unable to set a fee for service.

Statement	In many occupations, complaints of malpractice usually are brought by licensed practitioners, not consumers, and these complaints become more common when economic conditions worsen.
Diagnose	<ul style="list-style-type: none"> • Origins of Complaints • Implied link between complains and worsening economic conditions
Respond	This is a complicated matter and needs to be separated into two different issues – complaints and who raises them and the suggestion of link between complains and economic conditions. Unfortunately, there is limited research on this topic and is certainly an area for future study. In the United States the most common reason for a nurse's license to be disciplined is for substance abuse and/or drug diversion so it is possible that licensed practitioners are in a better position to detect this.
Evidence	<ul style="list-style-type: none"> • Hudson, M.L., & Droppers V, O.J., (2011). Licensed Nurses Disciplined in Oregon Between September 1996 and June 2008. <i>Western Journal of Nursing Research</i>. 33(8), 1030-1046. • Chappell, H.W., Stanhope, M., Dean, P.R., Johanson, S., Sutherland, B., & Weisenbeck, S.M. (1999). Nursing Law Violations: A threat to competent and safe nursing practice. <i>JOAN'S Healthcare Law, Ethics, and Regulation</i>. 1(3), 25-32.
Gaps	There is a need for far more studies into the complaints and discipline data that is now been aggregated. This is important if efficient and effective public safety is to be delivered.
Statement	Pass rates can vary by more than 25% by state, and exams often are given only twice a year.
Diagnose	<ul style="list-style-type: none"> • Variable pass rates • Frequency of test
Respond	This is not the case for nursing in the United States and Canada. Using the computer adaptive testing high-stakes method employed to deliver NCLEXs are available daily. Importantly, there is a single passing standard that is reviewed on a three-yearly basis.
Evidence	<ul style="list-style-type: none"> • O'Neill, T.R., Marks, C.M., & Reynolds, M. (2005). Re-evaluating the NCLEX-RN® passing standard. <i>Journal of Nursing Measurement</i>. 13(2), 147-165. • Wendt, A., & Kenny, L. (2007). Setting the passing standard for the National Council licensure Examination for Registered Nurses. <i>Nurse Educator</i>. 33(3), 104-108.
Gaps	With increasing use of technology, it may be possible to analyze data directly from the electronic health record and this is an area that is worthy of exploration if near real time data is to become a reality rather than the current cyclical (every three year) model.
Statement	Turf disputes are particularly common in the market for healthcare services.
Diagnose	<ul style="list-style-type: none"> • Arguments between different disciplines • Scope of practice • Impact on income
Respond	Medicine was the first discipline to obtain licensure and at that time there was no delineation of their scope of practice. Consequently, organized medicine has resisted setting or permitting expansion of scopes of practice for other disciplines when they feel that it impinges on their work or may limit their income. Advanced practice and nurse prescribing are often opposed by organized medicine and has been viewed by the Federal Trade Commission as a restraint on trade.
Evidence	<ul style="list-style-type: none"> • Federal Trade Commission. (2014). Policy Perspectives: Competition and the regulation of advanced practice nurses. Washington, D.C. https://www.ftc.gov/system/files/documents/reports/policy-perspectives-competition-regulation-advanced-practice-nurses/140307aprnpolicypaper.pdf • McCleery, E., Christensen, V., Peterson, K., Humphrey, L., & Helfand, M. (2014). Evidence Brief: The quality of care provided by advanced practice nurses. Washington, D.C. Department of Veterans Affairs. https://www.ncbi.nlm.nih.gov/books/NBK384613/pdf/Bookshelf_NBK384613.pdf
Gaps	There is strong evidence that advanced practice is safe, effective and cost efficient. Advanced nurse practitioners are often the only health practitioners that will work with disadvantaged or remote and rural communities and therefore enhance access to services.

Statement	Even the harshest critics of licensing would not argue that occupation regulation is purposefully discriminatory by race, but any regulation that imposes barriers to entry is likely to have adverse effects on outsiders who want to become insiders.
Diagnose	<ul style="list-style-type: none"> • Inequity of using entry barriers in terms of race
Respond	Recent research has shown that entry barriers may be helpful to those from minority groups as they clearly delineate the requirements for the job. Also, in nursing the items in the NCLEX are all subjected to a differential analysis where any item that does discriminate on the bases of gender or ethnicity is removed.
Evidence	<ul style="list-style-type: none"> • Redbird, R. (2017). The new closed Shop? The economic and structural effects of occupational licensure. <i>American Sociological Review</i>. 82(3), 600-624. • Woo, A., & Dragan, M. (2012.) Ensuring validity of NCLEX® with differential item functioning analysis. <i>Journal of Nursing Regulation</i>. 2(4), 29-31.
Gaps	There is enough measurement science data available to address this issue.
Statement	Licensing exams often contain two parts—written and practical. The potential for bias may be greater on written tests because candidates with poor reading ability or those whose first language is not English are often at a disadvantage.
Diagnose	<ul style="list-style-type: none"> • Two-part tests implying one focuses on knowledge and the other on practice • Implies that written discriminates against those with poor reading skills
Respond	The ability to read and write is part of communications skills and is an essential component of delivering complex team-based healthcare. Assessing practical skills is not without problems particularly in terms of making sure that two or more assessors come to the same conclusion. Irrespective of the approach taken it is essential that the measurement is grounded in the pursuit of public safety and is a valid, reliable and legally defensible measure.
Evidence	<ul style="list-style-type: none"> • Norman, I.J., Watson, R., Murrells, T., Calman, L., & Redfern, S., (2002). The validity and reliability of methods to assess the competence to practice of pre-registration nursing and midwifery students. <i>International Journal of Nursing Studies</i>. 39(2), 133-145. • Fotheringham, D. (2010). Triangulation for the assessment of clinical nursing skills: A review of theory, use and methodology. <i>International Journal of Nursing Studies</i>. 47(3), 386-391. • Prion, S., Berman, A., Karshmer, J., Van, P., Wallace, J., & West, N. (2015). Preceptor and self -evaluation competencies among new RN graduates. <i>Journal of Continuing Education in Nursing</i>. 46(7), 303-308.
Gaps	The current research work on the next generation of NCLEX may be able to provide a new approach to competence assessment that in addition to reliability, validity, and legally defensiveness of the exam adds a fidelity dimension.
Statement	The new guilds as some have called licensed occupations.
Diagnose	<ul style="list-style-type: none"> • Guilds a medieval model of professional control
Respond	This is a rather critical and poorly informed comment. The role of regulators has evolved significantly over the past century and as a result many aspects of how occupations are regulated have changed. It has been noted that regulation is on the increase in the United States but many of the findings of the econometric research is now being contradicted by more recent larger studies.
Evidence	<ul style="list-style-type: none"> • Redbird, R. (2017). The new closed Shop? The economic and structural effects of occupational licensure. <i>American Sociological Review</i>. 82(3), 600-624. • Benton, D. (2017). Bibliometric Review: Identifying Evolving and Emergent Regulatory Trends. In Regulation 2030 First Steps on a Journey. <i>Journal of Nursing Regulation</i>. 8:2 Supplement, S5-S14.
Gaps	There is a need to differentiate those occupations that genuinely pose a risk to the public and those that do not. By differentiating these groups more accurate findings and potential solutions can be formulated.

Statement	Licensing laws can create maldistributions in the supply of practitioners, especially when laws make it difficult for licensed professionals in one state want to obtain a license in another.
Diagnose	<ul style="list-style-type: none"> • Licensing laws create maldistribution of supply • Restriction on mobility
Respond	There is a range of ways of facilitating mobility between jurisdiction such as endorsement, reciprocity, and licensure compacts. However, in terms of maldistribution within a jurisdiction a wider range of issues need to be considered since rural communities often find it difficult to recruit and retain practitioners. Additionally, restrictive supervisory requirements advanced by one discipline over another need to be removed when there is no benefit in terms of quality or safety.
Evidence	<ul style="list-style-type: none"> • Federal Trade Commission. (2014). Policy Perspectives: Competition and the regulation of advanced practice nurses. Washington, D.C. https://www.ftc.gov/system/files/documents/reports/policy-perspectives-competition-regulation-advanced-practice-nurses/140307aprnpolicy.pdf • Fotch, R. (2018) .The Enhanced Nurse Licensure Compact Goes Live. <i>Journal of Nursing Regulation</i>. 8(4), 61-62.
Gaps	There is a range of solutions and sufficient evidence to address this issue and perhaps linking this to the risk-based approach to regulation would help accelerate solution implementation.
Statement	Each state can establish its own pass rate for entering the occupation even when they use a national standardized test.
Diagnose	<ul style="list-style-type: none"> • Passing standard • Autonomy of state
Respond	This is true from a legal perspective but in the case of nursing in the United States and in Canada there is a single passing standard that is reviewed very three years. The passing standard is determined through the triangulation of data from newly qualified nurses, educators, employers and a group of experts.
Evidence	<ul style="list-style-type: none"> • O'Neill, T.R., Marks, C.M., & Reynolds, M. (2005). Re-evaluating the NCLEX-RN® passing standard. <i>Journal of Nursing Measurement</i>. 13(2), 147-165. • Wendt, A., & Kenny, L. (2007) Setting the passing standard for the National Council licensure Examination for Registered Nurses. <i>Nurse Educator</i>. 33(3), 104-108.
Gaps	With increasing use of technology, it may be possible to analyze data directly from the electronic health record and this is an area that is worthy of exploration if near real time data is to become a reality rather than the current cyclical (every three year) model.
Statement	The expectation is that individuals who change their jobs occupations do so in an attempt to make an economic gain.
Diagnose	<ul style="list-style-type: none"> • Reasons for job mobility • Pull factor (economic gain)
Respond	There has been a lot of research done on nurse mobility and migration. Although economic gain can be a reason there are many others such as the work environment, the opportunity to gain new skills or in some cases push factors such as a poor and unsafe work environment or poor career prospects.
Evidence	<ul style="list-style-type: none"> • Kingma, M. (2007). Nurses on the Move: A global overview. <i>Health Services Research</i>. 42(3 II), 1281-1298. • Bach, S. (2007) Going Global?The regulation of nurse migration in the UK. <i>British Journal of Industrial Relations</i>. 45(2), 383-403. • Benton, D.C., Gonzalez-Jurado, M.A., & Beneit-Montisinos, J.V. (2014). Professional regulation, public protection and nurse migration. <i>Collegian</i>. 21(1), 53-59.
Gaps	Most research has looked at international migration or trans-jurisdictional migration focusing on the time taken to conduct qualifications equivalence testing.
Statement	Regulations that require a practitioner to be trained at a minimum level may produce positive social payoffs.
Diagnose	<ul style="list-style-type: none"> • Link between education and social good
Respond	There is a great deal of evidence to suggest that this is true. The Organization for Economic Cooperation and Development has highlighted the link, particularly in women, of the benefit of education to the economic health of nations and the well-being of families. Also, recent research by Ruth Redbird has demonstrated the positive impact that licensing can have for minorities in terms of leveling the field for recruitment criteria.
Evidence	<ul style="list-style-type: none"> • Organization for Economic Cooperation and Development. (2012). Gender equality in education, employment and entrepreneurship: Final Report to the MCN 2012. Paris, Organization for Economic Cooperation and Development. http://www.oecd.org/employment/50423364.pdf • Redbird, R. (2017). The new closed Shop?The economic and structural effects of occupational licensure. <i>American Sociological Review</i>. 82(3), 600-624.
Gaps	This point is frequently missed, and evaluations tend to focus on a very narrow range of measures. Need to promote more comprehensive and balanced evaluations.

Statement	A major theoretical justification for licensing is that there are market failures due to asymmetric information on quality between producers and consumers that regulation can correct.
Diagnose	<ul style="list-style-type: none"> • Information asymmetry
Respond	If you are not able to assess the quality of a service due to its complexity or the amount of knowledge you need is not generally available to you or is not easily understandable additional measures are needed to protect you from serious harm. For example, if you are unconscious you are not able to choose so licensure can provide a means of assuring the person treating you meets minimum safe and ethical standards of practice.
Evidence	<ul style="list-style-type: none"> • Shapiro, C. (1982). Consumer Information, Product Quality, and Seller reputation. <i>The Bell Journal of Economics</i>. 13(1), 20-35. • Philipsen, N.J. (2009). Regulation of liberal professions and competition policy: Developments in the EU and China. <i>Journal of Competition Law and Economics</i>. 6(2), 203-231.
Gaps	With the growth of internet-based information there are arguments being made that this solves the problem but in reality it does not as the internet only provides increased access to information but does not guarantee the accuracy of the information or present it in a manner that can facilitate interpretation.

Statement	The fact that educational requirements vary widely from state to state for the same occupation suggests the arbitrary nature of these provisions.
Diagnose	<ul style="list-style-type: none"> • Variation in entry requirements • Suggests that such requirements are linked exclusively to licensure
Respond	Variation in entry requirements can result from differences in licensure and educational institutional factors. It has been noted that there is significant competition for nurse education places and this can have an impact on entry requirements. However, irrespective of the entry requirements nurses in the United States take the same licensure exam which sets the minimum benchmark for safe practice.
Evidence	<ul style="list-style-type: none"> • American Association of Colleges of Nursing. (2017). Faculty Shortage Fact-Sheet. Washington, D.C. American association of Colleges of Nursing. https://www.aacnnursing.org/Portals/42/News/Factsheets/Faculty-Shortage-Fact-sheet-2017.pdf • O'Neill, T.R., Marks, C.M., & Reynolds, M. (2005). Re-evaluating the NCLEX-RN® passing standard. <i>Journal of Nursing Measurement</i>. 13(2), 147-165. • Wendt, A., & Kenny, L. (2007). Setting the passing standard for the National Council licensure Examination for Registered Nurses. <i>Nurse Educator</i>. 33(3), 104-108.
Gaps	Need to differentiate those occupations that are licensed in every state and through approaches such as entities like NCSBN, the model act, and compacts where there is a normative impact on requirements.

Statement	Moreover, economist have often argued the certification, such as granting degrees in the area of expertise, could easily assure minimum quality with less impact on supply.
Diagnose	<ul style="list-style-type: none"> • Argues that certification (a voluntary process) would be enough to assure quality • Certification would have a lower impact on supply
Respond	Certification does not afford the same level of public protection and assumes that users of the service are able to make an informed choice at the point when they need the service. In the cases of emergencies this may not be possible so where the risk of harm is high licensure is a better choice if morbidity and mortality is to be reduced.
Evidence	<ul style="list-style-type: none"> • Aiken, L.H., Sermeus, W., Van Den Heede, K., Sloane, D.M., Busse, R., McKee, M., Bruyneel, L., Rafferty, A.M., Griffiths, P., Moreno-Casbas, M.T., Tishelman, C., Scott, A., Brzostek, T., Kinnunen, J., Schwendimann, R., Zikos, D., Sjetne, I.S., Smith, H.I., & Kutney-Lee, A. (2012). Patient safety, satisfaction, and quality of hospital care: Cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. <i>BMJ (Online)</i> 344(7851), e1717. https://www.bmj.com/content/bmj/344/bmj.e1717.full.pdf
Gaps	There is a need to curate the evidence demonstrating the quality and safety advantages of licensure for high risk/harm disciplines.

