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Evaluating the NICHE program in an Academic Medical Center: Uncovering the missing link between training and effective practice change in the care of older adults

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ABSTRACT

Purpose: This paper recounts the history and experiences of one academic medical center that sought to improve the care of elderly patients by adopting and adapting the Geriatric Resource Nurse (GRN) model recommended by the Nurses Improving the Care of Healthsystem Elderly (NICHE) program. A formal evaluation examined the perceptions, opinions and attitudes of non-GRN nursing peers, Nurse Managers (NMs) and members of the Inter-Professional Advisory Board (IAB) regarding GRN practices and the institution's NICHE program.
Design: A qualitative research design with purposive sampling was utilized.
Methods: Semi-structured interviews and focus groups conducted in the fall/winter 2017 were analyzed using standard content analysis methods of isolating and grouping contextual themes without a predefined framework.
Findings: The institution's GRN training program, a hybrid of the national NICHE program and organization-developed components, has strong support among NMs, members of the IAB and other RNs. However, there exist many misconceptions, erroneous information and misunderstandings about the program and the roles and expectations of GRNs that have hindered the likelihood of producing desired outcomes.
Conclusions: Training GRNs was insufficient in disseminating and implementing evidenced-based geriatric practices in this hospital. Future work in this area would benefit from integrating concepts and methods from dissemination and implementation science when developing, launching, and sustaining NICHE programs.
Clinical relevance: Integrating principles and models of dissemination and implementation science can increase consistent use of evidence based practices and the likelihood of improved geriatric patient outcomes in NICHE hospitals.

1. Overview & introduction

1.1. Origins of the NICHE program

Decades ago, visionary healthcare professionals understood the enormous future impact that emerging demographic trends would have on American society. The aging of the population would radically change the way healthcare would be delivered and the manner in which healthcare providers would be trained to effectively care for growing number of older adults. The Nurses Improving Care for Healthsystem Elders (NICHE)[1] Program was among the first to recognize the urgent need to develop a workforce of nurses that understood the unique healthcare needs of older adults. NICHE, officially launched in 1992, was designed to "provide principles and tools to stimulate a change in the culture of healthcare facilities to achieve patient-centered care for older adults" (NICHE, 2016). In its early form, this objective was predominately accomplished through access to web-based resources and tools that would assist hospitals to stimulate dissemination of evidence-based assessment tools and practices to attain high-quality geriatric care. From its inception, NICHE's focus on training nurses about geriatric practices and tools, however, was not matched with adequate attention to potentially effective strategies to apply and integrate geriatric knowledge and skills into nursing practices. In short, the NICHE model's presumption that training alone would lead to practice change neglects the very real challenges of disseminating and integrating evidence-based practices into nursing standards of care. Recent developments in the field of dissemination and implementation science (D&I) underscore the often neglected process and structural factors that may facilitate or obstruct adoption of innovation and change. The evaluation of our NICHE program brought the incongruity between NICHE training

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[1] Originally called Nurses Improving Care of Hospitalized Elderly.

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and practice into clear view.

Over time, the national NICHE model evolved and in 2010 the clinical and leadership training components were migrated from an on-site workshop and individual consultation from faculty at NYU's Division of Nursing to an on-line, web-based system. The availability of on-line training standardized the educational curriculum for Geriatric Resource Nurse (GRN) preparation, which ensured that all GRNs, regardless of where they worked, obtained standardized training by completing 14 individual modules that covered key components of geriatric practice such as urinary incontinence, delirium and dementia, and pressure injuries, to name a few.

The GRN model is one of the most common options of the national NICHE program. GRNs are typically staff nurses that obtain didactic and clinical training to prepare them to serve as clinical resources on geriatric issues to other nurses on their units. Decisions about the use of the GRN moniker and the desired number of trained GRNs to be trained are made by each institution that chooses to implement the NICHE program (Mezey et al., 2004). The GRN model, as originally conceived, is founded on 3 key principles: (i) RNs at the bedside have the best knowledge of how their older patients may respond to treatment and care; (ii) the bedside RN is the provider most likely to engage with family members; and (iii) RNs can apply the principles of geriatric nursing with support and mentorship of advanced practice nurses with specialization in geriatrics (Fulmer, Mezey, & Solomon, 2019). These impressive goals notwithstanding, there is no national database nor guidelines on the recommended size or composition of the GRN workforce at individual institutions.

A significant body of literature exists on the history of the NICHE program, as well as descriptions of institutions that have adopted the model (Fulmer et al., 2002; Hendrix, Matters, West, Stewart, & McConnell, 2011; Inouye et al., 1993; Mezey, Boltz, Esterson, & Mitty, 2005; Pfaff, 2002). Notably, NICHE membership grew to 105 hospitals by 2000 and mushroomed to 650 by 2016 (Brown, 2016). To date, the literature has primarily focused on the potential benefits of the NICHE program from the institution's perspective. Little is known about the perceptions, opinions or attitudes of the individuals who were trained as GRNs or others who work with GRNs at the same institution. Additionally, there are no published formal program evaluation studies that examine the barriers, obstacles, facilitators and enabling factors in developing and sustaining NICHE programs.

In 2016, this large urban academic medical center sought to answer these and other questions through a two-phased evaluation study to examine the experiences of practicing GRNs and the perceptions of RNs and other providers that work alongside GRNs. In Phase I (2016–2017) we surveyed the GRN workforce at this institution to elicit their attitudes and perception of their GRN training and the frequency of their use of the evidence-based geriatric assessment tools. In addition, the GRNs identified the barriers they have encountered in promoting geriatric practices on their units. (Rosenfeld, Kwok, & Glassman, 2018). This article focuses on Phase II of our evaluation which, using qualitative methods, examines the perception and attitudes of RNs, Nurse Managers and members of the Inter-professional advisory group who work with the GRNs.

2. How Niche took root at NYU Langone Health-Tisch

In the late 1990s, NYU Langone Health-Tisch (NYULH), a large, academic medical center located in NYC, with over 3000 RNs, primarily at the BSN and Master's level, and over 40,000 hospital discharges per year adopted and launched the NICHE program. Using an informal mentorship style, Terry Fulmer, RN, PhD, FAAN, one of the pioneers of NICHE, led and trained a cadre of GRNs on one medical unit. The program's reach, however, went beyond the one medical unit as GRNs actively collaborated with unit-based physicians, nutritionists, pharmacists, and rehabilitation therapists. In addition, our GRNs had a high level of participation at the national NICHE sponsored events and were consistently among the podium and poster presenters at the annual NICHE conferences. Fulmer, a faculty member of the then-called NYU Division of Nursing, personally engaged the senior nursing leadership at NYULH. This early engagement between nursing leaders at the academic and this clinical site provided strong foundation for developing our NICHE program. We were among the first adopters obtaining NICHE designation[2] in 1999 and subsequently recognized as an "exemplar" program.

In 2014, under the leadership of a new NICHE Coordinator at the organization, we significantly overhauled our NICHE program in several ways. First, GRN training was extended beyond the one original Medicine unit to other inpatient services and selected ambulatory settings, based on data that indicated where older adults were receiving care. Moreover, rather than allowing individual RNs to self-pace their use of the on-line training modules, RNs from across the institution were trained as cohorts (Fall and Spring) with specific timelines for completion of different course requirements. The cohort approach also served to increase synergy across clinical areas.

In addition to completion of all 14 NICHE on-line modules, prospective GRNs are introduced to web-based resources available through the NICHE national program (evidence-based tools and other resources). Over time, the on-line national resources were supplemented with additional resources and materials that aligned with the institutional priorities. These included (i) seminars and lectures from colleagues in disciplines such as nutrition, medicine, and pharmacy; (ii) clinical rounds with inter-professional experts; (iii) discussion groups (e.g. huddles); and (iv) quality and improvement projects. GRNs are expected to obtain ANCC geriatric certification within two years of completing their geriatric training. Finally, the Inter-professional Advisory Board was expanded to include a health services researcher and key nursing leaders who meet routinely to provide input and guidance to the program coordinator. Our GRN model is singular and truly one-of-a kind.

Our hybrid model accelerated our ability to produce the number of GRNs to be deployed throughout the institution. With a large and growing GRN workforce at the institution – there are currently 86 GRNs across the institution – nursing leadership requested a formal program evaluation to (i) collect data on the training experiences of GRNs and their ability to utilize the geriatric EBP tools and practices they learned and (ii) assess perceptions and attitudes concerning the NICHE program and GRNs from individuals who have had sustained relationships with GRNs and the NICHE program. A two-phased evaluation plan was designed. The first phase consisted of an on-line survey of the GRNs themselves and gathered data on a range of topics related to their motivations and expectations for becoming GRNs, their current practices, their satisfaction with the training program and perceived barriers to implementing newly acquired geriatric knowledge and skills into practice. Our GRNs reported very high satisfaction with the GRN training program, as well as almost daily use of the geriatric EBP assessment tools and resources learned during their training. Several barriers were reported, most notably resistance from colleagues with regard to utilization of geriatric specific practices. A fuller description of the findings of Phase I are reported elsewhere (Rosenfeld et al., 2018).

3. Phase II research design and methods

Phase II, using qualitative methodology, was conducted in the fall/winter 2017 to gather data on the perceptions of non-GRN nursing peers (RNs), Nurse Managers (NM), and members of the Inter-Professional Advisory Board (IAB). In short, the objectives of this study

[2] Earlier, formal adoption of the NICHE programs was characterized as a "designation"; more recently, institutional participation is described as "membership".

were to collect qualitative information from individuals who work alongside the GRNs and other stakeholders such as members of the IAB, to collect data on their perceptions of GRNs and the NICHE program as operationalized at NYULH. To the extent possible, identical questions were asked of NMs, GRN peers and IAB members. Among the open-ended questions asked were: In your own words, what is the NICHE program? From your point of view, what are the goals and objectives of NICHE? Have you observed that GRNs have different patient-related behaviors, practices or actions? How do you think the GRNs may influence other nurses, staff, and the unit? What are the benefits or disadvantages of having GRNs in your unit? Can you relate some unique story about a GRN you can share?

A purposive sampling method was used to ensure maximum variation of opinions and experiences both within and across groups. The NICHE Program Coordinator provided the PI with a list of eligible subjects for recruitment. Two focus groups were conducted with 10 GRN-peers who had at least one-year tenure on their current unit. Face-to-face interviews were conducted with four NMs of units with largest number of GRNs and three members of the IAB.

GRN-peers were recruited to focus groups in an ad-hoc manner by research staff in collaboration with unit NMs. NMs identified specific timeframes when RNs could participate and research staff would recruit a quorum of possible participants to join the focus group. Research staff scheduled 45–60 min interviews with NMs and IAB members. Verbal consent was obtained prior to each focus group and interview; all sessions were audio-recorded and transcribed. Both Phase I and Phase II of the evaluation were approved through expedited review by the NYU School of Medicine Institutional Review Board (IRB).

Semi-structured interviews and focus groups were analyzed using standard content analysis methods of isolating and grouping contextual themes without a predefined framework (Sandelowski, 2009). The research team members reflected a diverse group of professionals including a Health Services Researcher, Geriatric Nurse Practitioner, Nursing Research Coordinator and Data Analyst.

4. Key findings

We found universal agreement that the NICHE program and GRNs, and their focus on improving care of older adults, are assets to the institution. GRN-peers are aware that GRNs may engage in unit-based projects and attend the national conference and bring back fresh ideas. NMs are generally supportive of their RNs attaining additional training and skills. The NMs, as well as the IAB members, offer specific instances where GRNs can make a difference such as mentoring new RN Residents and Patient Care Technicians (PCTs), as well as advocating for vulnerable patients and their families. However, we uncovered a wide range of issues suggesting that there exists a host of misconceptions, gaps in knowledge and unfounded perceptions of the objectives and authority of the national NICHE program, as well as the roles and effectiveness of our local GRNs.

4.1. Emerging themes

4.1.1. Misconceptions and Gaps about the NICHE/GRN training program and practices

GRN-peers, NMs, and members of the IAB are unclear about the relationship between NICHE (the external body) and GRNs (internal to the institution). For example, some believed that this institution's GRN model is the national program or that national NICHE staff deliver the GRN training at our institution. Table 1 summarizes the positive and negative perceptions and attitudes about the NICHE program and GRNs.

Some NMs correctly noted that the national NICHE program scope spans the entire healthcare delivery spectrum and that the NICHE program helps hospitals prevent the “revolving door” of multiple readmissions of older adult patients to hospitals. But, many GRN-peers and NMs wrongly believed that NICHE has authority akin to other external and regulatory agencies such as The Joint Commission or Magnet Recognition. Moreover, GRN-peers and NMs confused GRN designation with ANCC geriatric certification and mistakenly identified the NICHE coordinator as a member of the institution's geriatric consult team.

> “I know that the GRN is a national certification… I assume [NICHE] is a governing body in the same way that Emergency Nurses Association or American Association of Critical Care Nurses [credentialing bodies]...” (NM)

> “I know that the hospital is very pro the nurses getting more certifications and GRN is a certification.”
>
> (GRN-peer)

> “I thought you had to be a certified GRN to be part of the program.”
>
> (GRN-peer)

In addition, the current eligibility and application process for GRN training seems shrouded in mystery. One GRN-peer stated:

> “Honestly, I do not know the ways to go about it [enrolling in the training program] if I was interested… I don't feel like there is enough awareness about the specific programs and trainings.”
>
> (GRN-peer)

GRN-peers express feelings of being out of the loop and do not understand how GRNs are recruited or how often training sessions are offered.

IAB members voiced support for GRNs and provided specific areas of strength: “I noticed that they are very good at identifying malnutrition” and “the GRN sometimes are in the room when the prognosis is not communicated accurately (to patient/family)….and they (the GRN) can ask the questions.” Yet, their comments also revealed a conflation of GRNs with all RNs… “in terms of metrics on the HCAPs there is variability in communication with nurses on the patient satisfaction.”

4.2. What do GRNs do?

These misconceptions and misunderstandings result in cascading numbers of misinformation and confusion involving the eligibility and recruitment to the training program and the distinctive roles, responsibilities and accountability of being a GRN (as well as corresponding benefits). Moreover, these perceptions may lead to resentment of GRNs among their peers, ambivalent support among some NMs and frustration among IAB members. And, it was not uncommon for GRN-peers and NMs to voice skepticism that GRN training was superior to RNs with years of experience with older adults.

> “Everyone on this unit is a GRN in one way or another… [it is not like] we got a code on an elderly person, quick find a GRN!”
>
> (GRN-peer)

> “I cannot recall a time I was like ‘Gosh, I am so glad you're with me, GRN!’”
>
> (GRN- peer)

> “I really haven't done any observations through the lens of this person is a GRN, what are they doing differently than this other person… You know, we have more than 200 staff members… Unless a person says I'm a GRN it's hard for me to always remember.” (NM)

> “A person with 30 years' experience behind them will have critical thinking that even a junior person with training going through the NICHE course…may not be as sharp…So years are not to be disregarded even if they do not have the title of GRN …I don't think one [didactic training vs. years of experience] is greater or worse…” (NM)

Table 1
Summary of staff nurse and nurse manager perceptions of the NICHE/GRN Program.

Staff Nurses	
Accurate perceptions	Misconceptions
• NICHE is focused on improving the care of older adults • GRNs are trained in some systematic way • There are GRNs on their units • GRNs may lead EBP / QI projects • GRNs use the SHARING screening tool to assess geriatric syndromes	• NICHE has external authority similar to that of Magnet • Completion of GRN training is similar to ANCC Geriatric Certification • Unable to identify individual GRNs • Unable to differentiate between projects led by GRNs and projects led by others
Nurse Managers	
Perceived benefits	Perceived challenges
• GRN training benefits the institution • Institutional support for NICHE/GRNs is worthwhile • NICHE Coordinator is an expert in geriatric nursing practices • GRNs are particularly helpful when mentoring new nurses and PCTs • They have a sufficient number of GRNs on their units	• It would be difficult to isolate and measure the impact of GRNs • Organizational factors may impede the goals of NICHE/GRNs • RNs with many years of experience may have same competencies as GRNs • Don't have a clear understanding of their responsibilities regarding GRN practices on their units

4.3. Institutional barriers to GRN effectiveness

Respondents also identified institutional level barriers that can further blur the potential impact of GRNs. NMs and IAB members, in particular, noted the absence of clear evidence of NICHE/GRNs on patient care outcomes, as well as the perception that outcomes on some units seem to remain unchanged despite the presence of GRNs. Moreover, the rapid tempo of change in hospital care, coupled with the plethora of institution-wide geriatric-related initiatives and projects on issues such as falls, delirium, early mobilization, and end-of-life that are spearheaded by providers other than RNs, makes it increasingly difficult to isolate the impact of any specific group of provider. One GRN-peer poignantly remarked:

> "I feel that any initiative regardless of whether it is geriatric related or otherwise kind of burns bright and flames out quick."
> (GRN-peer)

Nurse Managers noted the complexity of the practice environment hinders our ability to identify outcomes of the GRNS:

> "We (nurses) touch almost every initiative in the organization…I mean…if you look at surveys…we had the palliative care survey this year. We are part of the mother-baby survey this year…we just finished the stroke survey this year…we are getting ready to do another LVAD survey…we had to do mandatory training for all the staff for pulmonary hypertension because we see those patients…I think they've chosen to support the [GRN] program here and I think that's good…I think that additional support could come through the guise of maybe having someone who links everything up together, or, you know, is looking at projects that can be rolled out across the institution. I don't know if that's happening." (NM)

> "I think they [GRNs] could influence that range of interdisciplinary people…right after they take the program they have a lot to offer…I haven't actually seen it [but] I do believe there is probably some peer to peer education…not formally…right now there is nothing formalized to facilitate that…I doubt it's going much further than nurse to nurse." (NM)

Furthermore, unit assignments change frequently and GRNs themselves transfer or leave units making it even more difficult to nail down GRN impact. NMs in particular expressed concern about GRN supervision after training. NMs don't have a strong grasp on what's expected of the GRNs and, with competing priorities, the NMs are unsure of their ability or responsibility to assess GRN practices. As two NMs explained:

> "I think what the institution expects is that we have results from the program…whether that be less falls on your unit, less delirium, better discharge planning, whatever it might be…but that is very challenging in that our population is constantly changing and the patients in the hospital are getting sicker…also within the last six months again there's been a change in the bottom line [with Hospital X closing there's been increased patient volume here]..." (NM)

> "But as far as expectations for people who have been through it (GRN training) prior [to my joining this unit] I wouldn't know what the hospital expectation is and I don't, I don't have my own." (NM)

4.4. Participant recommendations

Despite the misconceptions and misunderstanding, study participants essentially support GRNs and the NICHE program and offered suggestions and recommendations to increase the programs' and practitioners' transparency and visibility. GRN-peers (and some NMs) could not name the GRNs on their units and so suggested that GRNs wear an identifying pin or other special symbol on their scrubs to increase visibility. Respondents requested more transparency as to the eligibility criteria for GRN training and adequate notice of upcoming training opportunities.

Members of the IAB recommended more high profile institutional visibility of the NICHE program and GRNs, including GRNs taking the lead on institutional-wide projects and promoting change across multiple units dealing with similar issues. They believed that GRNs could be potential collaborators on publications and inter-disciplinary rounds in non-hospital areas as well. These suggestions reflect strong sentiments of the potential value of GRNs but seem somewhat naïve in that GRN training is focused primarily on clinical issues and pays much less attention to leadership and communication skills. Furthermore, and equally important, GRNs are staff nurses who do not currently have protected time from their primary nursing duties for non-clinical activities.

The general goodwill towards GRNs manifests itself in recommendations to fortify their effectiveness and influence by amplifying their knowledge and skills in: (i) Leadership (projects, patient advocacy); (ii) Mentoring (new RN staff, PCTs); and (iii) communication (resolving disputes, escalating care, adjusting medications, end of

life).

These findings dovetails with some of those identified in Phase I (Rosenfeld et al., 2018). GRNs reported strong positive evaluations of the training program and indicate that they use the knowledge learned in training on a daily basis. However, they also reported resistance and resentment from some of their RN and PCT colleagues and implicit in their responses is a desire for more leadership skills to navigate difficult situations with nursing staff, inter-professional colleagues, family members and colleagues.

4.5. Summary of findings

The early commitment of NYULH to the NICHE model contributed to its current institution-wide elder-friendly culture. But the institution's commitment to geriatrics went far beyond NICHE and included the creation of a Geriatric Consult team (comprised of a Geriatric NP and Geriatricians), Palliative Care and End-of Life programs and other initiatives dealing with issues relevant to geriatric patients. Together, these initiatives have created a culture in which geriatric care is woven into the very fabric of the nursing care. Teasing out the contributions of NICHE/GRN is difficult, if not impossible. Our findings indicate that, at least in our institution, geriatric nursing practices are widespread but it is difficult to determine the extent to which the NICHE/GRNs were catalysts of these changes.

Linking outcomes to the NICHE program and presence of GRNs is further complicated in that the program was launched and expanded with little attention to a range of organizational factors that can facilitate or impede progress. Innovation does not necessarily spread organically or linearly; it requires strategic planning and development of effective messaging and other activities (Massoud, Nielsen, Nolan, Schall, & Sevin, 2006; Rogers, 2003). Anticipating and examining potential facilitators and barriers could have helped boost the success of NICHE programs (Brownson, Colditz, & Proctor, 2018; Luke, 2012; Meissner et al., 2013). Concepts and models from the field of Dissemination and Implementation (D&I) science can help increase the likelihood of effective diffusion and integration of innovative programs that foster the use of evidence-based practices, such as NICHE.

5. Discussion

The NICHE program at this NYULH catapulted itself from a small group of unit-based RNs trained and led by a charismatic faculty member using an organic, informal training method, to a workforce of 86 GRNs trained using a standardized curriculum and led by a full-time NICHE coordinator. The shift was well-intentioned and reasonably organized but the absence of a blueprint or plan for clear D&I of the initiative led to a wide range of misconceptions and missed opportunities. The challenging circumstances associated with the transition from charismatic leadership to formal organization are not unique to this case; it is a key concept of sociologist Max Weber (1978) that explains how societies and organizations change over time. Charismatic leaders lead and influence change among their followers through the sheer power of their magnetic personalities. Over time, when the charismatic person dies or leaves, the community or associations left behind must develop processes and methods to “institutionalize” the innovations and influence of the original charismatic leader. This typically takes the form of complex organizations and bureaucracies. So too with our NICHE program: from early years to present time, the program moved from a charismatic, unstructured approach to a more standardized merit-based approach.

5.1. Dissemination and implementation science: the missing link

Our findings, however, suggest that a more well-defined evaluation plan is required to ensure that all the dots are connected and sustained from GRN knowledge acquisition (i.e. training) to RN adoption of evidence-based geriatric practices and, hopefully, patient outcomes. If the ultimate goal is to create culture change in NICHE organizations, then training of GRNs to possess the appropriate knowledge and competence is the first, relatively easy, step. As documented in Phase I of our evaluation, our current GRN training programs in effective and successful. However, once geriatric knowledge and skills are acquired by the GRNs, they must be consistently shared with other RNs and reliably transferred to practice to enable real practice change.

The field of D&I science posits that, in order to bring about change, it is necessary to bridge the gap between research and practice. Early pioneers in Research Utilization and Evidence Based Practice (EBP), such as Titler (2014) and Stetler (1985), recognized the importance of assessing published research as a first step to introducing evidence into practice. But the work must go beyond identifying and assessing evidence to raise the likelihood that the evidence will make its way into standards of practice. Melnyk et al. (2018) found that RNs are not yet competent in meeting 24 competencies associated with EBP and they further identified multiple barriers that prevent clinicians from consistently implementing EBP into practice, such as misconceptions about the EBP process, lack of EBP mentors and inconsistent leadership support (Melnyk, 2016; Melnyk & Fineout-Overholt, 2015). In short, it has become clear that “translating research into practice” does not spontaneously spread across an institution; it requires a systematic approach to getting the word out and promoting standardized processes to implementing change. To prevent the possibility that research dies on the vine, it is necessary to focus on evidence based *interventions* that enhance likelihood that practitioners adopt, implement and sustain evidence-based practices (Leeman et al., 2017).

A variety of different terms are commonly used to describe this process of bringing evidence to the bedside, such as Knowledge/Research Translation; Knowledge to Action; and Dissemination/Implementation Science (Milat & Li, 2017). Regardless of the nomenclature, the consistency of the transfer, known as fidelity, is critical to standardization of care, as well as spread and sustainability of the initiative (Hamilton & Mittman, 2018). Many models and frameworks, upwards of 100 according to some reviews, have emerged to guide D&I efforts in health care (Birken et al., 2017; R. C. Brownson et al., 2018; Dolansky, Schexnayder, Patrician, & Sales, 2017; Milat & Li, 2017; Mitchell, Fisher, Hastings, Silverman, & Wallen, 2010; Rycroft-Malone & Bucknall, 2010). Among the most popular are RE-AIM (Gaglio, Shoup, & Glasgow, 2013), Consolidated Framework for Implementation Research (C-FIR) (Damschroder et al., 2009), Diffusion of Innovation (Rogers, 2003) and Promoting Action on Research Implementation in Health Services (PARiHS) (Harvey & Kitson, 2016). Common among these models and frameworks is interest in assessing readiness for proposed change, identifying and planning for potential barriers and facilitators that may impede or accelerate desired change, identifying data needs to monitor progress and having a formal implementation blueprint prior to launching an initiative (Birken et al., 2017; Dolansky et al., 2017; Harvey & Kitson, 2016).

Moreover, one of the key points of “translating evidence into practice” is the critical need to systematically plan for and monitor the pace and progress of efforts to bring about practice changes. Regrettably, many well-meaning programs, such as NICHE, fail to make the sustained impact hoped for due to insufficient attention to fidelity, uptake, and sustainability (Breitenstein et al., 2010; Breitenstein et al., 2010; Damschroder et al., 2009; Schillinger, 2010).

D&I science emphasizes that diffusing and sustaining innovations and practice changes may facilitate or hinder the likelihood and pace of the desired change, lead to partial success (as we found in our NICHE/GRN program) or failure. In the final analysis, the findings from the evaluation of our NICHE program led us to learn important lessons about effective methods for translating research into practice and the importance of building D&I processes into future program development.

5.2. Next steps

Findings from the evaluation informed a variety of possible strategies to strengthen and improve our GRN training program and allow for more effective dissemination and implementation of standards of geriatric care. Among these are (i) providing GRNs with unique, recognizable insignia for their IDs; (ii) semi-annual GRN newsletter distributed to all RNs to disseminate current practices and create a sense of community among the GRN workforce; and (iii) routine reports of GRN accomplishments at selected nursing council meetings. The NICHE coordinator – a highly respected, seasoned Geriatric Nurse Practitioner – now spends more time on clinical units to mentor GRNs, conduct huddles and share "pearls." Her regular presence in the clinical setting increases likelihood of consistent messaging and fidelity to the institution's standards of nursing practice. Finally, in collaboration with the institution's Center for Innovations in the Advancement of Care,[3] GRNs can receive support for their evidence-based practice projects, such as assistance in reviewing unit-based scorecard and other data to identify areas for improvement, conducting literature review, and submitting conference abstracts. These and other strategies are being routinely monitored and assessed to ensure that GRNs consistently disseminate and implement their geriatric knowledge and skills.

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References

Birken, S. A., Powell, B. J., Shea, C. M., Haines, E. R., Alexis Kirk, M., Leeman, J., … Presseau, J. (2017). Criteria for selecting implementation science theories and frameworks: Results from an international survey. Implementation Science, 12(124), 1–9. https://doi.org/https://doi.org/10.1186/s13012-017-0656-y.

Breitenstein, S. M., Fogg, L., Garvey, C., Hill, C., Resnick, B., & Gross, D. (2010). Measuring implementation fidelity in a community-based parenting intervention. *Nursing Research, 59*(3), 158–165. https://doi.org/10.1097/NNR.0b013e3181dbb2e2.

Breitenstein, S. M., Gross, D., Garvey, C. A., Hill, C., Fogg, L., & Resnick, B. (2010). Implementation fidelity in community-based interventions. *Research in Nursing & Health,* (2), 33. https://doi.org/10.1002/nur.20373.

Brown, H. (2016). NICHE hospitals report: Length of stay - second in a series. *Geriatric Nursing, 37*(3), 247–248. https://doi.org/10.1016/j.gerinurse.2016.04.005.

Brownson, R. C., Colditz, G. A., & Proctor, E. K. (2018). In R. C. Brownson, G. A. Colditz, & E. K. Proctor (Eds.). *Dissemination and implementation research in health: Translating science to practice*New York: Oxford Press (Second).

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. Implementation Science : IS, 4(1), 50. https://doi.org/https://doi.org/10.1186/1748-5908-4-50.

Dolansky, M. A., Schexnayder, J., Patrician, P. A., & Sales, A. (2017). Implementation science: New approaches to integrating quality and safety education for nurses competencies in nursing education. *Nurse Educator, 42*(5S Suppl 1), S12–S17. https://doi.org/10.1097/NNE.0000000000000422.

Fulmer, T., Mezey, M., Bottrell, M., Abraham, I., Sazant, J., Grossman, S., & Grisham, E. (2002). Nurses Improving Care for Healthsystem Elders (NICHE): Using outcomes and benchmarks for evidence-based practice. *Geriatric Nursing, 23*(3), 121–127. https://doi.org/10.1067/mgn.2002.125423.

Fulmer, T., Mezey, M., & Solomon, M. (2019). NICHE - the formative years. In T. Fulmer, K. Glassman, S. Greenberg, P. Rosenfeld, M. Gillmartin, & M. Mezey (Eds.). *NICHE: Nurses improving Care for Healthsystem Elders*. Springer Publishing.

Gaglio, B., Shoup, J. A., & Glasgow, R. E. (2013). The RE-AIM framework: A systematic review of use over time. *American Journal of Public Health, 103*(6), e38–e46. https://doi.org/10.2105/AJPH.2013.301299.

Hamilton, A., & Mittman, B. (2018). Implementation science in health care. In R. C. Brownson, G. A. Colditz, & E. K. Proctor (Eds.). *Dissemination and implementation research in health : Translating science to practice* (pp. 515). (2nd ed.). New York, NY: Oxford University Press.

Harvey, G., & Kitson, A. (2016). PARIHS revisited: From heuristic to integrated framework for the successful implementation of knowledge into practice. *Implementation Science, 11*(33), 1–13. https://doi.org/10.1186/s13012-016-0398-2.

Hendrix, C. C., Matters, L., West, Y., Stewart, B., & McConnell, E. S. (2011). The Duke-NICHE program: An academic-practice collaboration to enhance geriatric nursing care. *Nursing Outlook, 59*(3), 149–157. https://doi.org/10.1016/j.outlook.2011.02.007.

Inouye, S. K., Acampora, D., Miller, R. L., Fulmer, T., Hurst, L. D., & Cooney, L. M. (1993). The Yale Geriatric Care Program: A model of care to prevent functional decline in hospitalized elderly patients. *Journal of the American Geriatrics Society, 41*, 1345–1352.

Leeman, J., Calancie, L., Kegler, M. C., Escoffery, C. T., Herrmann, A. K., Thatcher, E., & Fernandez, M. E. (2017). Developing theory to guide building practitioners' capacity to implement evidence-based interventions. *Health Education & Behavior, 44*(1), 59–69. https://doi.org/10.1177/1090198115610572.

Luke, D. (2012). Viewing dissemination and implementation research through a network lens. In R. Brownson, G. Colditz, & E. Proctor (Eds.). *Dissemination and implementation research in health: Translating science to practice* (pp. 154–174). New York: Oxford University Press. Retrieved from http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780199751877.001.0001/acprof-9780199751877-chapter-8?print=pdf.

Massoud, M. R., Nielsen, G. A., Nolan, K., Schall, M. W., & Sevin, C. (2006). *A framework for spread from local improvements to system-wide change a framework for spread: From local improvements to system-wide change. IHI innovation series white paper*.

Meissner, H. I., Glasgow, R. E., Vinson, C. A., Chambers, D., Brownson, R. C., Green, L. W., … Mittman, B. (2013). The U.S. training institute for dissemination and implementation research in health. *Implementation Science, 8*(1), 12. https://doi.org/10.1186/1748-5908-8-12.

Melnyk, B. M. (2016). Level of evidence plus critical appraisal of its quality yields confidence to implement evidence-based practice changes. *Worldviews on Evidence-Based Nursing, 13*(5), 337–339. https://doi.org/10.1111/wvn.12181.

Melnyk, B. M., & Fineout-Overholt, E. (2015). *Evidence-based practice in nursing & healthcare: A guide to best practice* (3rd ed.). Philadelphia, PA: Wolters Kluwer.

Melnyk, B. M., Gallagher-Ford, L., Zellefrow, C., Tucker, S., Thomas, B., Sinnott, L. T., & Tan, A. (2018). The first U.S. study on nurses' evidence-based practice competencies indicates major deficits that threaten healthcare quality, safety, and patient outcomes. *Worldviews on Evidence-Based Nursing, 15*(1), 16–25. https://doi.org/10.1111/wvn.12269.

Mezey, M., Boltz, M., Esterson, J., & Mitty, E. (2005). Evolving models of geriatric nursing care. *Geriatric Nursing, 26*(1), 11–15. https://doi.org/10.1016/j.gerinurse.2004.11.012.

Mezey, M., Kobayashi, M., Grossman, S., Firpo, A., Fulmer, T., & Mitty, E. (2004). Nurses improving care to health system elders (NICHE): Implementation of best practice models. *Journal of Nursing Administration, 34*(10), 451–457.

Milat, A. J., & Li, B. (2017). Narrative review of frameworks for translating research evidence into policy and practice. *Public Health Research & Practice, 27*(1), 1–13. https://doi.org/10.17061/phrp2711704.

Mitchell, S. A., Fisher, C. A., Hastings, C. E., Silverman, L. B., & Wallen, G. R. (2010). A thematic analysis of theoretical models for translational science in nursing: Mapping the field. *Nursing Outlook, 58*(6), 287–300. https://doi.org/10.1016/j.outlook.2010.07.001.

NICHE (2016). *NICHE (nurses improving Care for Healthsystem Elders)*. 1–6. Retrieved from http://www.nicheprogram.org/.

Pfaff, J. (2002). The geriatric resource nurse model: A culture change. *Geriatric Nursing, 23*(3), 140–144. https://doi.org/10.1067/mgn.2002.125412.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press. Retrieved from https://books.google.com/books?id=9U1K5LjUOwEC.

Rosenfeld, P., Kwok, G., & Glassman, K. (2018). Assessing the perceptions and attitudes among geriatric resource nurses: Evaluating the NICHE program at a large academic medical center. *Gerontology & Geriatrics Education, 39*(3), 268–282. https://doi.org/10.1080/02701960.2018.1428577.

Rycroft-Malone, J., & Bucknall, T. (2010). *Models and frameworks for implementing evidence-based practice: Linking evidence to action.* Chichester, West Sussex: Wiley-Blackwell.

Sandelowski, M. (2009). What's in a name? Qualitative description revisited. *Research in Nursing & Health, 33*(1), 77–84. https://doi.org/10.1002/nur.20362.

Schillinger, D. (2010). An introduction to effectiveness, dissemination and implementation research. Retrieved from http://www.inspireresearch.org/resources/guide-referencelibrary/introduction-effectiveness-dissemination-and-implementation.

Stetler, C. B. (1985). Research utilization: Defining the concept. *The Journal of Nursing Scholarship, 17*(2), 40–44. https://doi.org/10.1111/j.1547-5069.1985.tb01415.x.

Titler, M. G. (2014). Overview of evidence-based practice and translation science. *Nursing Clinics of North America, 49*(3), 269–274. https://doi.org/10.1016/j.cnur.2014.05.001.

Weber, M. (1978). In G. Roth, & C. Wittich (Eds.). *Economy and society: An outline of interpretive sociology*. United States of America: University of California Press.

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