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Clinical Nurse Leader Knowledge Production to Quality Improvement in a Seamless Trajectory: Participatory Research Approach

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Abstract

Background: Health systems are actively implementing Clinical Nurse Leader (CNL) integrated care delivery across the U.S.

Problem: However, the CNL model is a complex health care intervention, making it difficult to generate evidence of effectiveness using traditional research frameworks.

Approach: Participatory research is a growing alternative to traditional research frameworks, emphasizing partnership with target community members in all phases of research activities. This

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paper describes a system-based participatory study that leveraged academic and practice knowledge to conduct research that was feasible and relevant, and which produced findings that were easily translated into systematic action by the health system.

Outcomes: Study data were used to produce improvements in the health system's CNL onboarding process, role differentiation, performance, recruitment, and growth plus development.

Conclusions: A participatory approach can be used in future CNL studies, providing a framework for research efforts and potentially speeding up CNL evidence generation and utilization in practice.

Keywords

Clinical Nurse Leader; CNL-Integrated Care Delivery; Nursing Models; Participatory Research

The science of health care delivery focuses on how patients actually receive care and has grown with the realization that current delivery models are not achieving the triple aim of better health, better care, and better value. [1] In response to this gap, the U.S. Affordable Care Act established a National Quality Strategy, the first national-level policy to set goals for improving the quality of America's health care, including the development and testing of new care delivery models that improve overall health care safety and effectiveness. [2] The influential *Future of Nursing* report emphasized the redesign of nursing care delivery as a promising approach to improving care quality and safety, and highlighted Clinical Nurse Leader (CNL) integrated care delivery as an innovative nursing model with great potential. [3]

The CNL was developed as a master's prepared RN who is educated to enhance the efficiency with which care is delivered and organize the coordination of care through collaboration with all health care team members. The original American Association of Colleges of Nursing (AACN) CNL White Paper, [4] with a recent update, [5] delineates the CNL education and practice framework. The stated goal of the CNL is to: (a) lead and sustain a culture of interdisciplinary collaboration as a basis for delivery of safe, comprehensive care; (b) laterally integrate care services across disciplines and care settings efficiently and cost effectively; and (c) apply evidence-based criteria for measuring the quality of microsystem care delivery and lead quality improvement (QI) processes based on evidence. Since the AACN White Paper was published, there has been documented growth in the adoption of CNLs into health system's nursing care models across the US and internationally. [6] However, the evidence for CNL-integrated care delivery effectiveness is limited, based mostly on weakly designed case study reports.[7] This is because the CNL care model is a complex health care intervention involving a wide variety of contextual variables such as staffing mix ratios, resource availability, and patient populations cared for, which makes them difficult to examine rigorously and systematically across diverse settings.

OBJECTIVE

To overcome this limitation, researchers are increasingly using a participatory approach when studying complex interventions, because of its suitability in foregrounding context-specific knowledge and implementation practices. [8] Participatory research is an umbrella term for a cluster of approaches that engage the potential beneficiaries and/or users of the

research in all phases of research activities. A recent review of participatory research found evidence that the approach can result in research that better recruits from the target population and implements the research in ways that take into consideration real-world contextual challenges.[9] The review also found that participatory research can generate participant capacity to use project goals beyond the primary study period, for example, by effecting changes that expand research findings to other populations or improving project infrastructures and/or processes. In this paper, we describe the systems-based participatory approach used to study the CNL care model, focusing on how the participatory approach resulted in data that were able to be immediately leveraged by the participating health care system stakeholders to improve their CNL initiative.

APPROACH

To ensure the participatory nature of the research, it was necessary to document activities in all stages of the partnered effort: engagement, formalization, mobilization, and maintenance. [10] Engagement involves identifying partners and partner interests. Formalization involves establishing decision-making processes. Mobilization involves system-level readiness and study conduct, including processes for ongoing data review and feedback. Maintenance involves findings dissemination and utilization. In terms of engagement, the initial connection began when the CNL researcher and leaders of a regional southwest US health care system came together in 2015 with a shared goal of generating a systematic understanding of CNL implementation and outcomes. The health system, comprised 4 four affiliated hospitals and a clinic network, launched its CNL initiative in 2010, and was looking for a way to “maximize” the initiative’s impact through a comprehensive assessment of the CNL role.

This led to ongoing discussions with a wider group of system-level leaders about (a) the type of evidence needed to understand the CNL care model’s implementation and outcomes, and (b) the type of knowledge needed to “maximize” CNL impact for the participating health system. The conceptual framework that guided discussion of how to study the health system’s CNL initiative was an empirically validated Clinical Nurse Leader Practice Model (CNLPM). [11] The CNLPM defines CNL practice as an ongoing process of continuous clinical leadership and also delineates the system-level readiness and structuring elements that are necessary to enable the enactment of continuous clinical leadership practices by CNLs at the microsystem level. The model was being scientifically validated as the study team connected, and it resonated with health system leaders as describing domains and pathways important to examine for the purposes of learning about and improving their CNL initiative.

Through these discussions the research design and research procedures were agreed upon and formalized into a comprehensive Memorandum of Understanding, ensuring that all data elements were relevant and could serve both scientific and health care system needs. Once scientific, ethical, and logistic elements of the study were identified, agreed on, and approved (by the health system and respective institutional review boards [IRBs]), data collection and analysis began. Data collection included survey administration and a series of focus groups and interviews, which aimed to measure and describe CNL practice in the

health care system. Based on health system input, the data were collected in stages designed to incur minimum interruption to clinical practice. All study findings were shared and discussed with health system stakeholders as they were being generated.

Based on the insights made from this iterative sharing of data and findings, the health system launched a post-study initiative to use study data and findings for QI purposes. This effort, while aligning with the tenets of participatory research, was not originally formalized as part of the study: it emerged based on the participatory process. The health care system created a multidisciplinary work group that included CNLs, leadership, human resources, organizational learning, and the study's principle investigator to develop an action plan based on study findings and discussions to improve their CNL initiative.

RESULTS

The research study generated a rich description of how the health care system operationalized their CNL care model. [12] The data collected to generate this rich description were designed, via the participatory approach, to serve both scientific and practice needs. Details of the scientific findings are described elsewhere.[12] In this paper we focus on how the health system was able to seamlessly translate the research findings into demonstrable system improvement, which resulted in enhanced sustainability of the CNL initiative.

Readiness for CNL Integrated Care Delivery

The CNLPM delineates system-level readiness components that shoudl be in place for CNL practice to emerge. The study identified CNL implementation strategies that were operationalized to a greater or lesser extent by the health system.[12] Importantly, many of the strategies, such as a system-level CNL orientation strategy, were identified through their absence, rather than presence. [12] Interviewees mentioned characteristics such as: "there was no orientation, we [CNLs] learned on the job, it was very last minute;" "They [CNLs] need to be socialized into the role;" and "The original orientation was basically CNLs orienting themselves and making their own role." In terms of educating health system staff about the new model, interviewees commented that the role was unique and not easily represented in "a PowerPoint presentation" and suggested educational modalities such as "exposure through presentations at committees and during rounds," and "givingexamples of a 'day in the life' to show [how CNL] goals are accomplished."

Based directly on these study findings, the health system launched a detailed CNL orientation infrastructure that included a mentoring program with focused activities and milestones, such as weekly journaling, establishment of a portfolio for tracking individual and microsystem development, and using an outline of goals and expectations for the role that serves as the basis for bi-weekly mentor evaluations of the CNL's progress towards independence. A resource binder was also created as a daily reference of valuable material related to their fundamental responsibilities. This binder builds on the orientation framework and includes information on CNL expectations and job description; where to locate unit specific metrics; frequently needed clinical, educational, and competency-based resources; and other resources to can support the CNL in providing high quality care. After the CNL orientation binder was introduced, a survey of the current CNLs found that over 90%

believed the binder provided the resources they needed to do their job, and 100% indicated the binder provided role clarity.

The health system also created educational tools to help clinicians and administrators better understand the CNL role. For example, a work group consisting of a CNL, nurse educator, and clinical nurse specialist created an overview presentation delineating and distinguishing CNL practices from these other roles. The presentation provided information on the education requirements of the roles, demonstrated how the different roles vary in practice, and explained how these individuals work together to improve the practice environment and patient outcomes through a clinical exemplar. The presentation is now used during the onboarding process of all new leaders throughout the system to help with clarification of the CNL role at all levels.

Structuring CNL Integrated Care Delivery

The CNLPM delineates CNL role structuring components that enable CNL practices. The study found evidence supporting the model components and specific CNL-level structural accountabilities that aligned one-to-one with AACN-defined CNL education end-competencies.[12] For example, the CNL competency health care policy and advocacy was operationalized by CNLs as an accountability to be a resource for the unit health care team, and the CNL competency clinical prevention and population health was operationalized by CNLs as a focus on high-risk patients. Importantly, the study identified administrative structuring elements that were critical to CNL success.[12] For example, it was determined that many CNLs who reported to unit-level managers were less likely to be responsible for CNL accountabilities and functioned instead more like a staff nurse or assistant manager.

Based on these findings, the health system reviewed and extensively modified its CNL job description and reporting structure, and created a CNL-specific evaluation tool to accurately reflect their role in the complex health care environment. Each CNL competency now includes a short statement describing its purpose in fulfilling the CNL role and a non-comprehensive list of examples to guide evaluation. For consistency, the same language is used in both the orientation competency checklist and annual evaluation criteria regarding role performance. The job description used similar language to capture the essence of the role within the system’s standardized format following the Professional Practice Model. The change in job description and evaluation criteria allows the CNL to be evaluated as an advanced generalist nurse leader rather than as a direct care clinical nurse, which is a better reflection of the CNL’s work and his/her contribution to the quality of integrated care in the microsystem.

CNL Practice

The study provided rich descriptions of CNL practices, including a wealth of communication strategies and ways CNLs supported staff engagement and strengthened interprofessional relationships and teamwork.[12] The study also described a trajectory in CNL practice expertise, from novice to expert (eg, from inexperienced-to-expert communicator). [12]

Based on these findings, the health system developed a structured plan for CNL leadership growth. The CNLs partnered with nurse leaders to create a professional development plan that guided them through well-timed didactic coursework and clinical training (Supplemental Digital Content, Table). The coursework was timed to correlate with CNL novice-to-expert practice over time, using study findings and the 2013 AACN competencies and for CNL education and practice report.[5] The CNL professional development plan was developed to facilitate the CNL novice to expert trajectory, while also helping them develop as leaders, including training in communication, team building, and leadership skills.

CNL Outcomes and Value

The study showed how the CNL care model improved unit-level care environments, such as staff engagement with and enactment of best practice activities, and promoting a climate of process, not task thinking.[12] The study was able to document improvements in care quality processes and showed how successful unit-level CNL process improvement projects spread to the entire system over time.

These findings created a sense of value in the CNL care model in health care leaders, which spurred commitment to sustaining and optimizing the care model over time. To do this, leaders renewed their goal of recruiting more CNLs for clinical units. They developed a CNL Fellowship Immersion Program to support candidates pursuing a graduate degree to become a CNL. The program requires an application process for all candidates, including panel interview. Selected fellows are paired with a current CNL preceptor to provide support and mentorship. The structured program provides support to complete up to 325 paid practicum hours. The program offers the security that, if CNL students are successful within their program, they would be placed into an open CNL position. The health system benefits in that the fellow has been oriented to the health care system, thus requiring less postgraduation onboarding support and the ability to lead QI initiatives faster once transitioned to a full-time independent CNL. Since adopting this strategy, CNLs have been implemented in 2 additional health care settings, and overall, open CNL positions have been reduced by 30% (from before the study began).

DISCUSSION

One of the benefits of participatory research is its ability to mobilize system action through collaborative effort to design research that addresses system concerns and creates data that health systems consider actionable.[14] Cargo and Mercer suggested that systems-based participatory research can achieve “added value” to research when compared with more traditional methods, including enhanced relevance of the research to the participating system, research that is better planned and less disruptive, and ownership in research findings that allows for action post-study.[10] This is in contrast to traditional research approaches, in which academically trained researchers are in full control of the study design, methods, and analysis, and for which the study findings are typically disseminated only in academic journals. [6] With this traditional approach, the end users of the research many times are not notified of study findings and even if so, typically not in ways that engage or empower them to use the research for policy or practice purposes.[13]

We believe that the participatory nature of this study led directly to research findings that the health system (a) believed in and therefore (b) felt empowered to use as an empirical basis for improvement. The participatory approach meant that the research questions addressed stakeholder concerns, was designed with stakeholder logistics and data needs in mind, and through a process of sharing and discussing findings as they were being generated, resulted in findings that health system stakeholders could immediately use to their benefit. In the formalization stage, researchers and partners worked together to decide what the research questions should be and how data should be collected to ensure it did not disrupt clinical practice. This effort created a robust sense of readiness and enthusiasm for commencing study procedures. In fact, the time between the first email establishing a potential collaboration and commencement of data collection was a brief 6 months, which included the process of developing and signing a Memorandum of Understanding between the university and health system and obtaining IRB approval at the health system.

This resulted in seamless and time efficient mobilization of the study procedures, including data collection, resulting in efficient and substantial recruitment for the survey and interviews. Robust recruitment was critical for capturing a representative sample of the health system and enhanced both the statistical and analytic power of the analyses. This occurred via continuous communication between partners to identify and avert potential issues. For example, email recruitment for survey participation went through many potential iterations as health system leaders worked with their colleagues to devise a strategy that did not consume human resources but would still reach eligible participants. In the maintenance phase, health system knowledge and expertise were actively sought when discussing and interpreting study findings as they were generated. For example, the interview findings were refined and sharpened through discussion with the health system team. As health system leaders discussed the findings, they brought up their own experiences that aligned with the collected data and helped interpret data in ways that made it clearer than it was in preliminary stages.

These engaged discussions led to the determination of systematic root causes for some of the findings, which led directly to the QI initiative after the study was completed. Importantly, this effort aligns with the tenets of participatory research, but was not originally formalized as part of the study: it emerged fortuitously based on the participatory process. In the poststudy stage, the health system took over, leading a broad team to enact projects described in the article, leveraging substantial health system resources (eg, funding for the CNL Fellowship Immersion Program) to improve their CNL initiative. The health system also has led the dissemination of this work to the CNL and broader community.

Limitations

The system-based participatory research approach used in this study resulted in scientific knowledge that was also actionable knowledge. However, while documented, the findings cannot be compared with a control setting, where the same study was done but without a participatory approach. Therefore, it is unknown if the approach was indeed more effective than traditional approaches. The high level of engagement enacted between researchers and system partners may be related to the system’s prior desire for an evaluation of their nursing

care delivery model: meaning the research was something they were already considering in some way before the collaboration started. This is both a potential weakness and strength of the participatory approach: it only works, or works best, when the research questions and system's health services questions are aligned from the beginning.

CONCLUSION

Nursing care delivery models are complex health care interventions involving diverse contexts, staffing mix ratios, resource availability, and patient populations cared for. This makes them difficult to examine rigorously and systematically across diverse settings. Participatory research is a growing alternative to traditional research frameworks, which emphasizes partnership with research target community members in all phases of research activities. For the CNL program of research, a systems-based participatory approach was effective in achieving study aims and resulted in poststudy system-initiated QI efforts. This was enabled because the research was designed to collect data that would benefit both rigorous scientific analyses and baseline data for QI. Lessons learned through this participatory engagement can be used in future CNL studies, and the findings can be used as evidence for future recruitment efforts, creating a broader participatory network and potentially speeding up CNL evidence generation and improving implementation knowledge.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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