

Perceptions of Nursing Practice: Capacity for High-Quality Nursing Home Care

Kirsten N. Corazzini, PhD, FGSA; Amy Vogelsmeier, PhD, RN; Eleanor S. McConnell, PhD, RN, GCNS-BC; Lisa Day, PhD, RN, CNE; Susan Kennerly, PhD, RN; Christine Mueller, PhD, RN, FAAN, FGSA; Jill T. Flanagan, MS; Karen Hawkins, BA; and Ruth A. Anderson, PhD, RN, FAAN

Emerging evidence indicates that harmful nursing home resident outcomes occur because of ineffective collaboration between registered nurses (RNs) and licensed practical nurses (LPNs) during assessment, care planning, delegation, and supervision. This observational, factorial vignette survey related video vignettes of RN–LPN collaboration in nursing home care to RN perceptions of: 1) current practice in their home; and 2) preferred practice in their home ($N = 444$ rated vignettes of nursing practice). Current practice ranged from collaboration with few or poor-quality connections and a lack of differentiation between RN and LPN roles (low-capacity practice) to strong RN–LPN connections and clearly differentiated roles (high-capacity practice); RNs identified high-capacity practice as preferred. Interventions that bring together RNs and LPNs to learn new ways of giving care by differentiating roles while also strengthening connections show promise as levers for changing quality of care in nursing homes.

Emerging evidence indicates that harmful nursing home resident outcomes, such as medication errors, pain, and poor quality measures as well as avoidable hospitalizations result from ineffective collaboration between registered nurses (RNs) and licensed practical nurses (LPNs) (Corazzini, Anderson, Mueller, Hunt-McKinney, et al., 2013; Corazzini et al., 2015; Corazzini, Anderson, Mueller, Thorpe, & McConnell, 2013; Vogelsmeier, Scott-Cawiezell, & Pepper, 2011). This ineffective collaboration involves few or no formal or informal connections between RNs and LPNs and a blurring of their scopes of practice. As a result, RNs and LPNs interchangeably perform assessment, care planning, delegation, and supervision (Corazzini, Anderson, Mueller, Hunt-McKinney, et al., 2013).

Interventions that bring together RNs and LPNs to learn new ways of giving care by differentiating roles and strengthening connections show promise as levers for changing RN–LPN collaboration (Corazzini et al., 2015). In nursing homes, unit-level teams of the nursing staff at all licensure levels are the foundational clinical teams for quality of care; studies focused on these teams suggest that efforts to improve quality and care outcomes should focus on their learning capacity (Anderson et al., 2012; Estabrooks et al., 2011; Mohr, Batalden, & Barach, 2004). Distinguishing the contributions of RNs and LPNs and strengthening the quality of RN–LPN connections foster the ability to exchange information and solve problems, integrating RN-level clinical expertise in a meaningful way. This ability to seek and share new knowledge and ideas with other members of the care team is known as reciprocal learning (Leykum et al., 2011), which has been related to the successful implementation of quality-

improvement initiatives (Leykum et al., 2011; Noël, Lanham, Palmer, Leykum, & Parchman, 2013).

However, acceptance of interventions targeting RN–LPN collaborations for unit-level team learning and higher quality of care requires an awareness of the differences between RN practice and LPN practice and the importance of the quality of their connections for achieving better resident outcomes. In foundational work to this study, RNs and LPNs in nursing homes described how they contribute to assessment, care planning, delegation, and supervision. Case study analysis comparing nursing homes yielded three general patterns of practice:

- Practice with a poor capacity for RN–LPN collaboration (poor connections and blurring of RN–LPN roles)
- Practice with a high capacity for RN–LPN collaboration (multiple formal and informal connections and clear distinctions between the scopes of practice and roles of RNs and LPNs)
- Practice with a mixed capacity for RN–LPN collaboration (elements of the first two patterns) (Corazzini, Anderson, Mueller, Hunt-McKinney, et al., 2013).

Compared with high-capacity practice, poor- and mixed-capacity practices were associated with poorer or more inconsistent quality of care outcomes (Corazzini, Mueller, et al., 2013).

A gap in understanding remains about how to measure these practice dimensions because the descriptive case study approach is not feasible in large-scale studies, which must rely on staff perceptions of practice. Thus, research is needed to examine whether RNs can recognize their own practice patterns and whether they can determine if their practice patterns are desirable for a high quality of care.

Awareness of practice also is relevant in designing interventions targeting RN–LPN collaboration to improve care quality. Specifically, the diffusion of innovation framework (Rogers, 1995) elucidates characteristics of an innovation that affects adoption, including the perceived compatibility and relative advantage of an innovation with what currently occurs in an organization (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). This framework has been widely adopted in health and social care to explain adoption of new care practices (Greenhalgh et al., 2004), including the adoption of new ways for staff to provide nursing care in nursing homes (Boström et al., 2012; McConnell et al., 2011). To predict whether nurses would be likely to adopt a new practice pattern, it is important to know whether they view

Actual practice was operationalized by a single item, 11-point Likert scale, ranging from “not at all like practice” to “just like practice.” Preferred practice was operationalized by a single item, 11-point Likert scale, ranging from “not at all desirable” to “very desirable.”

Additional Measures

Additional measures included RN perceptions of reciprocal learning (Leykum et al., 2011) and organizational characteristics of RNs’ nursing homes. Reciprocal learning was measured using Leykum et al.’s (2011) 5-item, 5-point reciprocal learning scale. Items describe aspects of team learning, such as whether new things are learned from one another in giving care. The scale has demonstrated adequate reliability in primary care practice settings (Leykum et al., 2011).

Organizational characteristics included publicly available comparisons of staffing, ownership, size, and quality. Data are available through the Centers for Medicare & Medicaid Services’ (CMS) nursing home compare website (www.medicare.gov/NursingHomeCompare/search.html). Staffing was measured as RN hours per resident day; ownership was measured as whether the nursing home was for-profit; size was measured as the number of certified beds; and quality was measured as the summary, 5-point quality measure derived from resident assessment data (Centers for Medicare & Medicaid Services, 2010). To facilitate the most parsimonious set of variables, additional staffing measures incorporating LPN hours per resident day and quality measures specific to pain and falls were not included.

Survey Procedures

All 162 video clips were uploaded to the Internet and embedded in Qualtrics, the Web-based survey platform. Each time a respondent accessed the survey, two videos of the short-stay patient and two videos of the long-stay resident were randomly sampled without replacement (Singleton et al., 1993) by the Qualtrics program. Therefore, each RN participant viewed and rated four vignettes.

Before the survey was administered, usability of the complete instrument was evaluated with a convenience sample of DONs attending a national conference. Research team members staffed a booth in the exhibit hall and recruited DONs (*N*

Analysis

Researchers estimated four hierarchical linear models of the simultaneous effects of nursing home-level and vignette-level characteristics on RN ratings of the vignettes. Specifically, two models were estimated of the ratings of pain vignettes: the degree to which nursing practice in the vignette reflected actual practice (model 1) and preferred practice (model 2), and two models were estimated of the ratings of falls vignettes: the degree to which nursing practice in the vignette reflected actual practice (model 3) and preferred practice (model 4). HLM 7.0 multilevel mod-

belief, on average, that the vignette showed current practice. Rather, all levels of practice were recognized as being related to current practice. The exception to this finding was the cross-level effect of reciprocal learning with the falls vignette scene 2 on rating. Specifically, RNs reporting higher levels of reciprocal learning, rated the version of scene 2 that shows high-capacity for care as more like practice in their nursing home relative to the version of scene 2 showing low-capacity for care ($p < .001$). Of the additional organizational contextual factors entered into the model, profit status, bed size, and CMS quality rating did not relate to rating. RN staffing levels, however, did relate to RN vignette rating of current practice.

Perceptions of Preferred Practice

Results of the multilevel models of the extent to which video vignettes portrayed preferred practice are summarized in Table 2. Unconditional models to estimate ICC indicated significant variance between vignettes and not between nursing homes, in sharp contrast to the RN ratings of actual practice. The null hypothesis was accepted for the test of randomly varying intercepts in the model for pain vignettes and falls vignettes. Therefore, only fixed effects of level-1 predictors with robust standard errors were estimated of the effects of vignette dimensions of practice on outcomes. Table 2 summarizes the descriptive means across practice falls by scene. High-capacity practice was preferred, on average, fixed (fixed

Vogelsmeier, A. A., Scott-Cawiezell, J. R., & Pepper, G. A. (2011). Medication reconciliation in nursing homes: Thematic differences between RN and LPN staff. *Journal of Gerontological Nursing*, 37(12), 56-63.

Kirsten N. Corazzini, PhD, FGSA, is Associate Professor, Duke University School of Nursing and Senior Fellow, Duke Center for the Study of Aging and Human Development. **Amy Vogelsmeier, PhD, RN**, is Associate Professor, Sinclair School of Nursing, University of Missouri, and 2009-2011 John A. Hartford Claire M. Fagin Fellow. **Eleanor S. McConnell, PhD, RN, GCNS-BC**, is Associate Professor, Duke University School of Nursing, Senior Fellow, Duke Center for the Study of Aging and Human Development, and Clinical Nurse Specialist and Nurse Scientist, Geriatric Research, Education and Clinical Center, Durham Veterans Affairs Medical Center. **Lisa Day, PhD, RN, CNE**, is Associate Professor, Duke University School of Nursing. **Susan Kennerly, PhD, RN**, is Professor, School of Nursing, University of North Carolina Charlotte. **Christine Mueller, PhD, RN, FAAN, FGSA**, is Professor and Associate Dean for Academic Programs, and holds the Long Term Care Professorship, School of Nursing, University of Minnesota. **Jill T. Flanagan, MS**, is Clinical Research Coordinator, Duke University School of Nursing. **Karen Hawkins, BA**, is Clinical Research Coordinator, Duke University School of Nursing. **Ruth A. Anderson, PhD, RN, FAAN**, is Professor and Associate Dean for Research, School of Nursing, University of North Carolina at Chapel Hill.

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