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Nursing in long-term institutional care

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CHAPTER 8

SUMMARY



In the past decades, the amount and the complexity of care in long-term institutional care for the older population have increased. At the same time, its quality is a cause for concern. Inadequacies are often associated with the number and the composition of nursing staff (skill mix). While there is tentative evidence that the total number of nursing staff in long-term institutional care is associated with better outcomes, inconsistent results are found concerning the relationship between the type of nursing staff (eg, registered nurses, nursing assistants) and quality of care outcomes (eg, pressure ulcers, pain). An explanation may be that most studies relied on secondary survey data (eg, mandatory inspection surveys). Furthermore, resident acuity factors that are an important determinant of care outcomes are predominantly not included in analyses. In addition, selected quality of care outcomes might have been, to a greater or lesser extent, sensitive to interventions performed by nursing staff.

As quality of care outcomes are highly affected by nursing care, it is important to reveal what is being done during the process of caregiving. Knowledge regarding what type, how much, and by whom nursing interventions are performed will contribute to the discussion about the relationship between nursing staff and quality of care. However, little is known about this. The overall aim of this dissertation was to provide insight into the process of nursing care using Donabedian's framework of quality of care in which 'process' refers to what is actually done in providing and receiving care. An assessment of the process is made either by direct observation and/or by reviewing recorded information. As Donabedian states that outcomes are the effects of the provided care, it should be able to be stated that the care that was provided was responsible for the outcome that was observed.

Chapter 1 introduces the key concepts of this dissertation, i.e., long-term institutional care, nursing staff, and quality of care and presents the aim and outline of the dissertation.

In order to determine what is actually done by nursing staff, **Chapter 2** described the development, validity, and inter-rater reliability of an observational instrument for identifying and examining the amount of time spent on nursing interventions in long-term institutional care. The Groningen Observational instrument for Long-Term Institutional Care (GO-LTIC) is based on the Nursing Interventions Classification (NIC). The first developmental stage in which items were generated resulted in a list of 281 potential setting-specific NIC interventions. In 2 rounds, these were presented to a Delphi panel which resulted in an initial GO-LTIC of 113 relevant nursing interventions. After a feasibility test, 3 frequently occurring interventions in practice were added. The final GO-LTIC comprised 116 nursing interventions categorized into the NIC domains; basic and complex physiological care, behavioral, safety, family, and health system. Inter-rater reliability for the identification of interventions showed substantial to almost perfect Cohen's kappa for interventions in the domains of basic and

complex physiological care. The kappa's for interventions in the behavioral, family, and health system domain ranged from fair to almost perfect. Interventions in the safety domain were often not identified. Intraclass correlation coefficients for the amount of time spent on interventions ranged from fair to excellent for the physiological domains and poor to excellent for the other domains. The clinical magnitude of differences in minutes, visualized by Bland Altman plots, was small, and no statistical significant differences between observers were found. Overall, the GO-LTIC demonstrated good content validity and acceptable inter-rater reliability.

Chapter 3 described a cross-sectional observational study that aimed to examine the relationship between the time spent on nursing interventions and the type of nursing staff, type of unit, and residents' acuity levels. Five Dutch long-term institutional care facilities participated. In total, 4 residential care units, 3 somatic units, and 6 psycho-geriatric units were included. Observations were performed by means of time-and-motion technique using the GO-LTIC. Residents' acuity levels representing residents' needs were based on the Dutch Care Severity Index. Observations were conducted with 136 nursing staff members comprised of 19 registered nurses, 89 nursing assistants, 9 primary caregivers, and 19 health care assistants. A total of 877 hours was observed for 102 nursing interventions categorized into 6 NIC domains for 335 residents. The results demonstrated that nursing staff spent most of their time on basic physiological interventions such as the self-care assistance of residents. Limited time was used for interventions in the family (eg, home maintenance assistance), behavioral (eg, active listening), and safety (eg, dementia management) domains. Differences in the amount of time spent on interventions between the types of nursing staff were minimal. Linear mixed models demonstrated that the type of unit rather than residents' acuity levels or the type of nursing staff was associated with the amount of time spent on interventions in domains. This study found limited evidence for task allocation among registered nurses, primary caregivers, and nursing assistants. Additionally, findings suggest that residents received similar care regardless of their needs.

Fundamental for providing quality of care is a process oriented, accurate, and complete record that reflects the planned care as agreed upon with residents. The aim of the retrospective cross-sectional study described in **Chapter 4** was to examine the accuracy of nursing documentation in long-term institutional care. For 197 residents' care plans, the content and coherence of nursing documentation was assessed using the D-Catch. This measurement instrument is based on the interrelated phases of the nursing process and quantifies the accuracy of: 1) record structure; 2) admission data; 3) nursing diagnosis; 4) nursing interventions; 5) progress and outcome evaluations; and 6) legibility of nursing reports. Results showed that care plans were largely structured according to the phases of the nursing process. Inaccuracies were especially determined in the description of residents'

care needs and stated nursing diagnoses as well as in progress and outcome reports. Admission reports frequently omitted a description of residents' care needs from which the nursing diagnoses should logically follow, and an inventory of nursing diagnoses was lacking in almost half of the care plans. In addition, the purpose of planned nursing interventions was frequently ambiguous, and progress and outcome notes largely lacked information about residents' health condition in relation to diagnoses and performed interventions. In somatic and psycho-geriatric units, significantly higher accuracy scores regarding some phases of nursing documentation were determined compared to residential care units. The inaccuracies in its content and coherence may complicate the continuity of care, adversely affect nursing outcomes and, consequently, jeopardize residents' safety and well-being.

To examine the consistency between the planned care as documented in residents' care plans and what was actually provided to them by which type of nursing staff, a cross-sectional study was executed (**Chapter 5**). Using the GO-LTIC, a review of nursing documentation was conducted concurrently with structured continuous observations. Four long-term care facilities participated. Data of 150 residents in 3 residential, 1 somatic, and 11 psycho-geriatric care units were collected. Observations of 143 nursing staff members of which 21 registered nurses, 73 nursing assistants, 17 primary caregivers, and 32 health care assistants were examined. The results showed that the consistency between documented and provided nursing interventions was especially high for the NIC domains of basic and complex physiological care and, to a lesser extent, for interventions in the behavioral domain. Documented but not observed safety interventions primarily concerned surveillance. Except for the safety domain, the probability that documented interventions were provided was high for all domains. Nursing assistants generally provided the interventions as documented. Though not significant, health care assistants also provided documented complex care interventions to residents which is beyond their scope of practice.

To determine if selected quality of care outcomes in long-term institutional care are actually responsive to nursing interventions, a systematic review was conducted (**Chapter 6**). The aim was to examine the association between the types of nursing staff and nursing-sensitive outcomes. Quality of care outcomes were considered nursing-sensitive when they could be associated with a nursing-sensitive outcome as described in the Nursing Outcomes Classification (NOC). In total, 15 articles were included. Of 33 quality of care outcomes, 21 were identified as nursing-sensitive of which 13 showed a significant association with nursing staff, specifically: Activities of daily living, aggressive behavior, bladder/bowel incontinence, contractures, expressive language skills, falls, infection (incl. vaccination), range of motion, pain, pressure ulcers, and weight loss. However, the results showed that, regarding the same outcome, the association between registered nurses, licensed practical nurses, certified nursing assistants, health care assistants, and these nursing-sensitive outcomes could

be positive (more staff leading to better outcomes), negative (more staff leading to worse outcomes), or have no association for either type of nursing staff. The inconclusive results make it difficult to provide recommendations on who should best perform which type of care.

In **Chapter 7**, the main findings of the studies in this dissertation were summarized and discussed regarding nursing care, nursing staff, and nursing outcomes in long-term institutional care. In addition, the methodological considerations related to the cross-sectional study designs and data collection methods were described. A recurring issue in the discussion concerned the person-centered care in long-term institutional care and the improvements that must be taken in this regard. The studies' results show that there is an emphasis on performing nursing interventions that concern the physical care needs of residents. Little attention is paid, for example, to the psychosocial needs of residents. In addition, hardly any role differentiation between nursing staff was found. If registered nurses, certified nursing assistants, and health care aids were deployed taking into account their scope of practice and specific knowledge and skills, this would improve the quality of care. Subsequently, if quality of care measurements were to include quality of care outcomes that are both relevant for long-term institutional care and are sensitive to nursing interventions, more insight would be obtained into the relationship between nursing staff and quality of care. Finally, this chapter presented the implications for practice and policy, education, and research. For example, besides clear job descriptions, management in long-term institutional care should provide for a vision in ongoing education of nursing staff. This may encompass establishing learning communities with regional schools of nursing. Furthermore, while bachelor registered nurses may contribute to the quality of care, few are yet employed in Dutch long-term institutional care. Quasi-experimental designs can help to gain insight into how they directly and/or indirectly contribute to quality of care outcomes.

