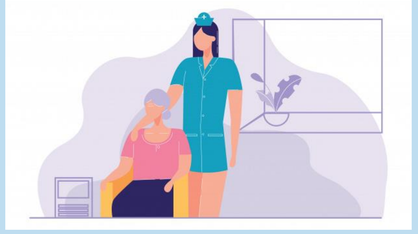
Identifying nurse-sensitive outcomes in district nursing care: a Delphi study

Jessica D Veldhuizen[1], Anne OE van den Bulck[2], Arianne MJ Elissen[2], Misja C Mikkers[3,4], Marieke J Schuurmans[5], Nienke Bleijenberg[1]

[1] Research Centre for Healthy and Sustainable Living, Faculty of Health Care, University of Applied Sciences Utrecht, Utrecht, The Netherlands; [2] Faculty of Health, Medicine and Life Sciences, Care and Public Health Research Institute (CAPHRI), Department of Health Services Research, Maastricht University, The Netherlands; [3] Dutch Healthcare Authority (NZa), Utrecht, The Netherlands; [4] Tilburg School of Economics and Management, Department of Economics, Tilburg, The Netherlands; [5] Education Centre, UMC Utrecht Academy, University Medical Centre Utrecht, Utrecht, The Netherlands



Background

Worldwide, the quality of **district nursing care (DNC)** at home is under pressure as demands are increasing due to the ageing population, growing care complexity, and shortage of DNC professionals. Therefore, it is crucial to **monitor the quality of DNC** on patient's health and wellbeing in terms of patient outcomes. However, **nurse-sensitive patient outcomes** to measure the quality of DNC are currently scarce.

Objective

To determine nurse-sensitive outcomes in district nursing care for community-living older people. Nurse-sensitive outcomes are defined as patient outcomes that are a) **relevant** based on the nurses' scope and domain of practice, and b) where nursing inputs and interventions have an influence on the patient outcomes (**influenceability**).

Methods

A **Delphi study** following the **RAND/UCLA Appropriateness Method (RAM)** with two rounds of data collection.

Identification of potentially relevant nurse-sensitive outcomes was done by **reviewing the literature.** Outcomes were extracted from **peer-reviewed scientific publications** (including the ICHOM standard set for older persons) as well as Dutch reports on what older people find important in DNC.

Experts were identified, being professionals in the field of DNC who had current or recent clinical experience as a district nurse combined with expertise in research, teaching, practice, or policy in the area of district nursing. **Data was collected** by an online questionnaire, followed by an expert panel meeting.

In both rounds, **experts scored the relevance and the influenceability** (i.e. the ability to have an influence on the outcome) of the identified on a nine-point Likert scale. Experts could also add and score additional outcomes. Data were analyzed after both rounds. A group median of 7-9 indicated that the outcome was relevant and/or influenceable. The disagreement index was used to measure agreement among experts.

Results

In total, **26 outcomes** of the 46 identified outcomes (56.5%) were assessed as nurse-sensitive by the experts (Table 1). The nurse-sensitive outcomes with the highest median scores on both relevance and influenceability were the patient's autonomy, the patient's decision making ability, satisfaction with delivered DNC, the quality of dying and death, and compliance of the patient with regard to needed care.

Table 1: Nurse-sensitiveness of outcomes for district nursing care

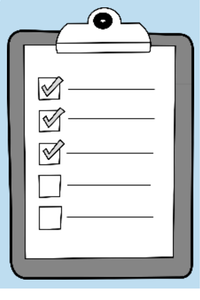
Outcomes assessed as **nurse sensitive** (being both relevant as influenceable)		
Group median 8 & 8*	Group median 8 & 7*	Group median 7 & 7*
• Autonomy of the patient • decision making ability • satisfaction with delivered district nursing care • quality of dying and death • Compliance of the patient with regard to needed care	• Activities of daily living • Dehydration • Informal caregiver burden • Decubitus • Meaningfull life • Quality of life • Unplanned hospital admission • Unplanned hospital readmission • Place of death • Falls • Intensity of district nursing • Unintentional weightloss	• Emergency department or service use • Pain • Mobility • Fatigue • Participation with social activities • Frailty • Delirium • Duration of district nursing
Outcomes assessed as unclear nurse sensitiveness (group median 4-6)		
• Polypharmacy • Fracture and wounds other than decubitus • Infection • Bladder continence • Bowel continence	• Dyspnea • Signs of depression • Problem behavior • Cognitive functioning • Substance use • Knowledge of the patient	• Communication • Loneliness • Nursing home admission • General practitioner visit • Total time at home
Outcomes assessed as not nurse sensitive (group median 1-3)		
• Multi-morbidity • Planned hospital admission • Death		

*Medians reflect the group scores of the experts regarding the relevance and influenceability respectively.

Discussion, conclusion and implication

Comparing our results to those by Joling et al. (1) and ICHOM (2), **similarities were found in 14 of the 26 nurse-sensitive outcomes.** Activities of daily living, falls, pain, participation in social activities, and informal caregiver burden were considered important outcomes by all three studies. Additionally, overlap with Joling et al. was found for outcomes including decubitus, unintentional weight loss, emergency department or service use, and unplanned hospital (re)admissions. Additional overlap with the ICHOM study was found for autonomy, frailty, decision making, and place of death. The additional 12 nurse-sensitive outcomes were mentioned in other relevant literature (3-5) or added by the experts. An important finding was that the experts agreed that **polypharmacy and mortality were not suitable as nurse-sensitive outcomes for DNC**. A possible explanation might be the focus of this study on the influenceability of the outcomes.

This study provides insight in what outcomes are necessary for DNC. The next step will be developing quality indicators to make the outcomes measurable and suitable for implementation in current practice.



1) Joling KJ, van Eenoo L, Vetrano DL, Smaardijk VR, Declercq A, Onder G, et al. Quality indicators for community care for older people: a systematic review. PLoS One. 2018;13: e0190298.; 2) Akpan A, Roberts C, Bandeen-Roche K, Batty B, Bausewein C, Bell D, et al. Standard set of health outcome measures for older persons. BMC Geriatr. 2018;18: 36.; 3) Cella D, Riley W, Stone A, Rothrock N, Reeve B, Yount S, et al. The patient-reported outcomes measurement information system (PROMIS) developed and tested its first wave of adult self-reported health outcome item banks: 2005-2008. J Clin Epidemiol. 2010;63: 1179-1194.; 4) Morris JN, Fries BE, Frijters D, Hirdes JP, Steel RK. InterRAI home care quality indicators. BMC Geriatr. 2013;13: 127.; 5) Keleher H, Parker R, Abdulwadud O, Francis K. Systematic review of the effectiveness of primary care nursing. Int J Nurs Pract. 2009;15: 16-24.

Correspondence to:
Jessica D. Veldhuizen

University of Applied Sciences Utrecht
Jessica.Veldhuizen@hu.nl

Twitter: @JDPoortV
LinkedIn: tinyurl.com/jessicaveldhuizen