



Contents lists available at ScienceDirect

Health Policy

journal homepage: [www.elsevier.com/locate/healthpol](http://www.elsevier.com/locate/healthpol)



## The methodological quality of nurse-sensitive indicators in Dutch hospitals: A descriptive exploratory research study

R.A.M.M. Kieft<sup>a,\*</sup>, D. Stalpers<sup>b</sup>, A.P.M. Jansen<sup>a</sup>, A.L. Francke<sup>c,d</sup>, D.M.J. Delnoij<sup>e,f</sup>

<sup>a</sup> Dutch Nurses' Association, PO Box 8212, 3503 RE, Utrecht, The Netherlands

<sup>b</sup> St. Antonius Academy, Hospital, PO Box 2500, 3430 EM, Nieuwegein, The Netherlands

<sup>c</sup> 1/NIVEL, Netherlands Institute for Health Services Research, PO Box 1568, 3500 BN, Utrecht, The Netherlands

<sup>d</sup> 2/EMGO+/VU Medical Center, Van der Boechorststraat 7, 1081 BT, Amsterdam, The Netherlands

<sup>e</sup> Transparency in Healthcare from the Patient's Perspective, Tranzo, Tilburg University, PO Box 90153, 5000 LE, Tilburg, The Netherlands

<sup>f</sup> National Health Care Institute, PO Box 320, 1110 AH Diemen, Netherlands

### ARTICLE INFO

#### Article history:

Received 28 March 2015

Received in revised form 23 May 2018

Accepted 25 May 2018

#### Keywords:

Nurse-sensitive indicators

Hospital care

Methodological quality

### ABSTRACT

**Objective:** Nurse-sensitive indicators (NSIs) are increasingly being developed and used to establish quality of nursing care in Western countries. The objective was to gain insights into the methodological quality of mandatory NSIs in Dutch hospitals, including indicators for pain, wound care, malnutrition and delirium. **Design:** A descriptive exploratory design was used, starting with desk research into publicly available documents and reports describing the development of the NSIs included in this study. We used the validated Appraisal of Indicators through Research and Evaluation (AIRE) instrument to evaluate the methodological quality.

**Results:** Although the purpose and relevance of each individual NSI have been described, no detailed information about the criteria for selecting these topics is available. It is not clear which specific stakeholders participated and how their input was used. We found no information about the process of collecting and compiling scientific evidence. It is unclear whether and to what extent the usability of NSIs has been tested.

**Conclusion:** The methodological quality of NSIs used in Dutch hospitals is less than optimal in various ways and it is therefore questionable if the indicators are accurate enough to identify changes or improve nursing practice. Our study also provides an example of how the methodological quality of NSIs can be assessed systematically, which is relevant considering the increasing use of NSIs in various countries.

© 2018 Elsevier B.V. All rights reserved.

### 1. Introduction

Nurses collect information in order to monitor the health status of patients, their functioning or well-being [1]. For instance, when a patient is immobile nurses examine the patient's skin to identify whether pressure ulcers may be present. With that information nurses can determine what interventions are appropriate. If the assessment is repeated on a regular basis, the assessment scores or outcomes will help nurses to monitor whether the patient is developing a pressure ulcer or whether the stage of the existing pressure ulcer is improving. In addition, nurses can evaluate the effectiveness of their interventions or actions by calculating the

actual pressure ulcer incidence at the unit level. It is then possible to compare the results between the units or even between organisations and determine which unit or organisation has the highest or lowest incidence. This information lets nurses evaluate the quality of nursing care.

To determine the state or quality level of nursing care, nurse-sensitive indicators (NSIs) are developed. NSIs are quantifiable items that monitor or give an indication of the quality of the nursing care provided [2]. 'Nurse-sensitive' means that the NSI scores are actually affected or influenced by nurses [3,4]. The quantifiable items can be calculated as a numerator and denominator. The numerator refers to the outcome of interest (e.g. the incidence of pressure ulcers at the unit level) and the denominator refers to the population at risk (e.g. the number of patients at the unit level). An NSI score needs to encapsulate aspects related to nursing practice and can be used to determine how a unit or an organisation is

\* Corresponding author.

E-mail address: [r.kieft@venvn.nl](mailto:r.kieft@venvn.nl) (R.A.M.M. Kieft).

performing against a certain threshold or norm [5]. An increasing number of studies have identified NSIs for monitoring the quality of nursing care [6–10] such as fatigue [6] or pressure ulcers [10]. Although the selection of NSIs can vary between healthcare sectors or contexts, the NSI scores are used for improving internal quality and external accountability. Internal quality improvement means that nurses evaluate nursing care and can visualise their contribution to patient outcomes [4,11]. Nurses can share and compare nursing quality internally or with other healthcare organisations, which helps identify and understand problems and formulate improvement goals. NSI scores are used for encouraging nursing professionals and organisations to improve performance at the macro (population) and micro (patient) levels [12].

External accountability is about how healthcare quality regulators (e.g. national quality commissions or healthcare inspectorates) control the functioning of the healthcare system and evaluate the impact of policies [13]. External accountability also covers governmental quality regulation, pay-for-performance contracts or consumer information [12,13]. In this case, NSI scores are needed to evaluate 'return on investment', to enable selective contracting or to help consumer choice.

In a review of measurable nursing quality information, Boo & Froelicher [14] and Magee et al. [15] have indicated that nursing information is used for different internal and external purposes. In order to compare and improve nursing care, attention needs to be paid to the methodological quality of NSIs [16,17]. The methodological quality refers to the development process and application of NSIs. The development describes the process in which scientific evidence is collected and compiled, for instance to strengthen the link with nursing care and patient outcomes or to demonstrate consistency of results across studies. The application implies the extent to which consistent, reliable and valid information is available [18,19]. It means that the NSI specification should be accompanied by clear and precise instructions [20]. The unit of analysis should be specified, as well as the target group and inclusion and exclusion criteria. The NSI should be piloted in practice to test data collection methods and to test if nurses can routinely collect information [16].

Over the past two decades various sets of NSIs have been identified and implemented in various Western countries. For example, in the United States the National Quality Forum (NQF) has developed fifteen NSIs including standardised performance measures to evaluate the quality of nursing care [21,22]. The measures were identified through a consensus development process involving various healthcare stakeholders. The NSIs are incorporated in a national database of nursing quality indicators (NDNQI), that provides quarterly or annual information about nursing care at unit level [23]. Examples of included NSIs are pressure ulcer prevalence, patient falls and falls with injury. In Canada a similar initiative has been set up, resulting in a Canadian Health Outcomes for Better Information and Care (C-HOBIC) project focussed on the collection of standardised patient outcomes reflective of nursing practice [24]. Various stakeholders, among others, the Canadian Nurses Association and Ontario's Ministry of Health and Long-Term Care supported the project. Patient outcomes related to functional status, self-care, symptom management and safety have been defined, including standardised measurements and empirical evidence linking them to nursing interventions [25]. The collection of outcomes and related (nursing) data provide information about the quality of nursing care. In Scotland the National Health Service (NHS) developed a national set of NSIs to evaluate the quality of nursing care, including the incidence of healthcare associated pressure ulcers, provision of nutritional screening and care planning and the incidence of healthcare associated pressure ulcers [26]. In Ireland a Framework for National Performance Indicators for Nursing and Midwifery has been developed in collaboration with the Irish

Health Services, including pressure ulcer incidence and falls incidence [27].

In the Netherlands the development and implementation of quality indicators to enhance quality of care is supported by the Dutch Government [28,29]. The Healthcare Inspectorate (linked to the Dutch Ministry of Health, Welfare and Sport) has developed a national supervision programme to identify areas where there are potential risks to the quality of hospital care. Since 2012, the Dutch Nurses' Association (V&VN) has been officially involved in the Inspectorate programme and is responsible for the NSI development process. This involves structural consultations with various departments of the Dutch Nurses' Association in which nursing professionals are represented. Nursing professionals with knowledge or expertise are also involved, depending the subject and aim of the NSI, and mandated to make decisions and approve the final draft NSIs. After approval by nursing professionals and experts, the NSI is submitted to the Inspectorate programme's committee and formally approved. The Inspectorate programme includes NSIs related to wound care, malnutrition, delirium and pain [30]. Hospitals are obliged to provide the information requested. The government can use the results to take actions or develop and adjust policy and strategy to improve nursing care [28]. For that reason, it is important to maintain efforts to strengthen the development and use of suitable NSIs. In this study we focused on the methodological quality of the mandatory Dutch NSIs related to inpatient hospital care and how that quality was assessed.

### 1.1. Study question

What is the methodological quality of the mandatory NSIs for Dutch hospitals?

## 2. Method

### 2.1. Research design

A descriptive exploratory design to assess the methodological quality of mandatory Dutch NSIs.

### 2.2. Composition and data collection

In order to assess the methodological quality, four researchers and nursing experts (RK, AJ, IvP and MH) identified and collected relevant publicly available documents and reports, such as policy documents, programme evaluation reports, publications and benchmarks from stakeholders, governmental agencies and regulatory authorities (Healthcare Inspectorate) and reports on websites ([www.vmszorg.nl](http://www.vmszorg.nl); [www.igz.nl](http://www.igz.nl); [www.venvn.nl](http://www.venvn.nl); [www.demedischspecialist.nl](http://www.demedischspecialist.nl); [www.nfu.nl](http://www.nfu.nl); <http://www.ziekenhuizentransparant.nl>; <http://fightmalnutrition.eu/>).

Documents, reports and benchmarks up to 2015 were included if the development or implementation process of NSIs related to inpatient hospital care was described. Policy, accountability and evaluation reports about the programme itself were also included (up to 2015).

The four researchers then assessed the methodological quality of the selected NSIs. There are various instruments for evaluating methodological quality, such as the Guidance for Evaluating Evidence and Measure Testing from National Quality Forum [19], the Guide to Inpatient Quality Indicators [31] or the Dutch validated Appraisal of Indicators through Research and Evaluation instrument, abbreviated as AIRE instrument [32]. However, the first two instruments mentioned focus on evaluating measurements or measures rather than quality indicators. The AIRE instrument appeared to be more appropriate for this study, as it is primarily intended for assessing the methodological quality of existing quality indicators

Download English Version:

<https://daneshyari.com/en/article/8817896>

Download Persian Version:

<https://daneshyari.com/article/8817896>

[Daneshyari.com](https://daneshyari.com)