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Evaluation of a pilot study to introduce outcome based home care in the Czech Republic

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ABSTRACT

Objectives: To evaluate a pilot study to introduce the outcome-based home care as part of a comprehensive client assessment system in Czech home care agencies.
Methods: A prospective observational study was conducted with 13 home care agencies. Nurses were instructed to assess their home care clients with the Resident Assessment Instrument-Home Care (RAI-HC), an internationally developed comprehensive assessment instrument for home care clients. In addition, the perception of nurses regarding general acceptability and clinical and management relevance of the RAI-HC was evaluated using a questionnaire, which included certain items from a published Belgian study for general practitioners. Three quality indicators were calculated with proposed risk adjustment methods and the adjusted rates were compared with publicly available provincial averages in Canada.
Results: Thirty-five home care nurses assessed 125 clients with the RAI-HC in total. The average time to complete one RAI-HC was 68 min for the first time and 35 min for the second. Based on established scales for activity of daily living, cognitive function and depression embedded in the RAI-HC, substantial difference in clients' characteristics amongst agencies were observed. The nurse's perception of the RAI-HC was generally more positive compared to the Belgian general practitioners. The adjusted rates of quality indicators varied substantially amongst agencies and the average rates were almost identical with the provincial averages from Canada.
Conclusion: Despite the time consuming assessment, home care nurses perceived the benefit of using the RAI-HC in their daily practice. An outcome based home care using routinely collected comprehensive client assessment seems to be feasible in Czech home care agencies.

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Introduction

In ageing societies where increasing numbers of people live longer with disease and disability, monitoring the quality of home care delivery is important for sustainable health and social care [1]: a wide range of skills amongst home care nurses can prevent unnecessary hospitalization and emergency care, while appropriate nursing intervention and referrals can delay institutionalization. Quality of care is a complex, multi-dimensional concept [2]. One method of identifying potentially good and poor professional quality of care involves the use of quality indicators, which aims to define performance of individual care providers based on care outcome, i.e. changes in patient health status between two or more time points [3]. To produce such outcome based quality indicators, it is essential to obtain reliable data on client condition which are collected regularly. In the area of home care, quality indicators based on routinely collected client assessment data such as the Resident Assessment Instrument for Home Care (RAI-HC) have been developed [4,5]. The RAI-HC is a comprehensive assessment instrument for home care agencies containing over 300 items which is widely used internationally [6]. Quality indicators based on the RAI-HC are now being used in public reports that can be used for best practice comparison between home care agencies in Canada [7].

As with other ageing societies, the Czech Republic is in need of improvement in quality of home care. Currently about 7% of the elderly population is using home care under health care insurance [8]. The elderly population is projected to dramatically increase to over 30% over the next 30 years [9] with a trend moving away from intergenerational cohabitation, an increase in employment levels particularly among women and stricter links between regular employment and social security [10], all of which challenge traditional modes of caregiving. Effective and efficient home health care is therefore crucial for sustainable health and social care in the near future, however it is still far from being possible to refer to a common set of assessment information at the national level. Rather a few international studies have indicated fairly poor quality for Czech home care [11,12].

For the purpose of introducing outcome based home care in the Czech Republic in the future, a pilot study was conducted. We introduced the RAI-HC into interested home care agencies, demonstrated how quality indicators consider various risk profiles across agencies, and examined nurses' perception of added value of the RAI-HC in their daily practice.

Material and methods

Design

A prospective observational study was conducted without a control group.

Participants

Home care agencies were recruited to participate in the study at a conference in April 2013 (7th International Conference of Home Care Nurses, in Brno, the Czech Republic) on a voluntary basis. Among the three categories of home care clients under the Czech health insurance (i.e. long-term care clients, palliative care clients and acute care clients), long-term and palliative clients aged 18 years or older were included in the study. There was no further exclusion criteria.

Data collection

In the participating agencies, eligible clients were assessed twice with an interval of at least 60 days using the RAI-HC in May and July 2013. Two times assessment with a certain interval was needed to calculate quality indicators focusing on outcome (i.e. change in health status). Experienced home care nurses were trained in completing the RAI-HC in advance and all the participating agencies were instructed on how to use the RAI-HC prior to client enrollment. Filled RAI-HCs were sent to Palacký University without client identification at the end of the study period.

In addition to collecting the RAI-HC, a web-based survey was conducted at the end of the study period with those nurses who used the RAI-HC. The survey was anonymous and the nurses provided their consent to participate by starting the survey. The survey included (1) the time needed for completing a RAI-HC for their first use and the second use and (2) their perception of using RAI-HC. The question items regarding their perception of the RAI-HC were based on a published Belgium study for general practitioners (GPs) who used the RAI-HC in their practice [13]. It contains 21 items covering general acceptability and clinical and management relevance of the RAI-HC using a 5-point Likert scale. Since the Belgian study was meant for GPs in a web-based interface application, only 10 relevant questions for this study were asked.

All the necessary steps were taken to protect the privacy and confidentiality of the identification of both clients and agencies in order to have the study in full compliance with the Declaration of Helsinki.

Quality indicators and risk adjustment methods

Definitions of quality indicators used in the current study were described in Table 1. Three quality indicators of *falls*, *incontinence* and *communication* were chosen because they were part of scientifically developed indicators [5] and are being currently used in public reporting in Ontario, Canada [7].

Covariates were used to adjust for differences in client populations that may bias the rates of quality indicators, since home care agencies that provide care to more impaired clients will tend to have higher unadjusted rates, regardless of the quality of care they provide [4]. Covariates were developed based on an comprehensive evaluation of their distributional properties, strengths of association with the outcomes of interest, consistency of findings across jurisdictions and potential for clinically inappropriate adjustment (e.g. benzodiazepine use was not considered a reasonable adjuster for falls) [5]. Calculation of adjusted quality indicators is similar to the concept of indirect standardization, in which the ratio of the observed to expected events is calculated then multiplied by the crude rate in the standard population [14]. In the current project, the standard population was the average of the participated agencies.