

Impact of person-centred interventions on patient outcomes in acute care settings

^{1,2}Maja Klančnik Gruden, ^{3,4}Eva Turk, ^{1,5}Brendan McCormack, ²Gregor Štiglic,

¹University of Maribor, Faculty of Health Sciences, Maribor, Slovenia

²University Medical Centre Ljubljana, Ljubljana, Slovenia

³University of Maribor, Medical Faculty, Maribor, Slovenia

⁴University of South-Eastern Norway, Drammen, Norway

⁵Queen Margaret University, School of Health Sciences, Edinburgh, United Kingdom



Introduction

One of the actions that enhances the safety of patients is prevention of adverse events¹. The most commonly reported adverse events in acute care settings are pressure injuries, patient falls, and nosocomial infections. The other important safety incidents are medication errors that are less frequently reported but could often be prevented².

Enhancing the safety in health care delivery systems needs to adopt a continuous improvement approach, so that quality is placed at the core of the system. Integrating the philosophy of person-centredness into health care has the potential to create cultures that focus on learning and development from adverse events and develop integrated whole-team strategies for continuously improving the quality of care.

In this review, person-centredness is perceived as a complex approach to people following principles of individuality (work with patient's beliefs and values), self-determination (shared decision-making), engagement (collaboration, partnership, connectedness, and mutual understanding), compassion (sympathetic presence), holistic care, and respect for employees' wellbeing and perceptions.

The aim

The aim was to gather, assess, and synthesize existing research knowledge on person-centered interventions that aimed to improve patient outcomes in acute care settings with a focus on the prevention of pressure injuries, patient falls, medication errors, and cross infections.

The research questions were as follows:

What do person-centered interventions involve?

How do person-centered interventions impact on the occurrence of patient safety incidents (accidental falls, pressure ulcers, medication errors, cross infections) compared with traditional health care (eg, health care that is not specifically identified as being person-centered) in acute care settings?

Which interventions show improvement in patient outcomes?

Method

A quantitative systematic review was conducted. A systematic search of the PubMed (MEDLINE), Cumulative Index to Nursing and Allied Health Literature, Scopus, Web of Science, and Pro-Quest Dissertations databases was conducted between February and March 2018. Literature between January 2003 and January 2018 published in English language was included. Details of the search strategy including search terms are listed in Table 1.

Table 1. PICOT Search Terms Used for All Databases and Search Strategy

PICOT criteria	Search Terms	Inclusion/Exclusion criteria
Population of interest	hospitals OR acute care setting OR hospital setting	Inclusions: hospitalized patients Exclusions: long-term care populations, nursing homes, institutionalized persons, out-patient setting
Intervention of interest	person-centered OR person-centred* OR patient-centered care OR patient-centred* OR patient-focused	Inclusions: interventions that suited the definitions of person-centredness and patient-centredness Exclusions: interventions described as patient-centred but did not include the aspect of patient-participation
Comparison	/	Inclusions: any comparison group, including randomized control group or cohort design with subject as own control
Outcomes	pressure ulcer OR pressure injury OR accidental falls OR medication errors OR cross infection	Inclusions: One or more of listed outcomes measured over follow-up of at least 1 month Exclusions: studies reports other outcomes (i.g. satisfaction, time, use of call buzzers)
Time frame	/	Follow-up of 1 month or longer

Search outcomes

We identified 397 potential studies in the databases we searched and a further 13 studies through hand searches, representing 212 unduplicated studies. A review of title and abstract excluded 173 articles, leaving 39 studies for full-text review. Thirty-three studies failed to meet the inclusion criteria (23 studies – because the intervention did not match the definition of person-centredness or patient-centredness and/or the outcomes did not match the searched outcomes, 4 studies – because they did not meet the comparison criteria (no comparison group), 3 studies – because they were systematic reviews, 2 studies – because the population was outside of the acute care setting) and 1 study – because it was methodologically inadequate, leaving 6 articles for review.

Assessment of the risk of bias and quality of studies

The risk of bias was assessed using the Cochrane Consumers and Communication rating approach Grading of Recommendations Assessment, Development and Evaluation criteria³. The quality of each included study was graded using the Mixed Methods Appraisal Tool⁴.

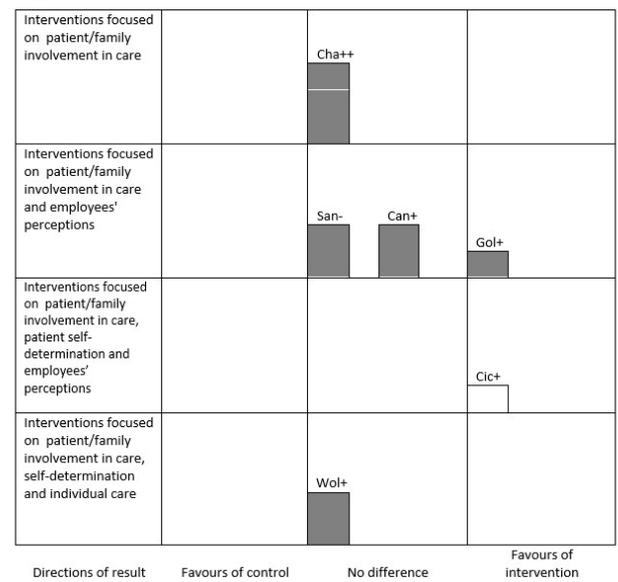
Results

We found 6 studies that described 5 different fields of person-centred interventions: pressure ulcer prevention care bundle, bedside report, rounding, environmental adjustment and patient-centred care interventions. We grouped them into 4 categories according to their relationship with particular principles of person-centredness. We summarized the evidence with the use of a harvest plot (Figure 1).

Legend:

- Shading of bar: statistical confidence
- Evidence of significant effect at 5% level
- p-values not reported/estimable
- Height of bar: quality of study
- High bar = high quality
- Mid-high bar = medium quality
- Low bar = low quality
- Symbol: Risk of bias of study
- ++ Low risk of bias
- + Moderate risk of bias
- High risk of bias

Figure 1: A Harvest plot summarizing the results from the person-centered interventions on patient outcomes



Conclusion and Future work

The review showed that there is insufficient rigorous evidence to support the use of person-centred interventions in reducing patient falls. For the other outcomes (pressure ulcers, medication errors, and cross infections), existing research provides an insufficient evidence base upon which to draw conclusions. Reasons for these results are complex. The small number of studies in this field may be illustrative of the fact that the theory of person-centredness is still in its ascendancy.

Further studies that adopt a mixed-methods design are required that would support or refute the impact of person-centred interventions.

References:

- World Health Organization. World Alliance for Patient Safety Forward Programme 2008 –2009. Document WHO/IER/PSP/ 2008.04. http://www.who.int/patientsafety/information_center/reports/Alliance_Foward_Programme_2008.pdf (3 August 2018, date last accessed).
- Council Recommendation of 9 June 2009 on patient safety, including the prevention and control of healthcare associated infections. *OJ C*. 2009; 15:1-6.
- Ryan R, Hill S. How to GRADE the quality of the evidence. CCGG. Version 3.0. La Trobe University, Melbourne: 2016. <http://ccrg.cochrane.org/author-resources> (1.12.2016, date last assessed).
- Hong Q, Pluye P, Fàbregues S, Bartletta G, Boardman F. et al. Mixed Methods Appraisal Tool (MMAT) Version 2018. User guide. <http://mixedmethodsappraisaltoolpublic.pbworks.com/> (1.12.2018, date last assessed).

Acknowledgement

More details can be found in our paper published in JNCQ: <https://europepmc.org/article/med/32032336>