Nurse-led interventions for multimorbidity: a mixed-methods systematic review

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Abstract

We conducted a mixed-methods systematic review of the literature to establish what the effective elements were of nurse-led care for people with multimorbidity (having two or more chronic conditions). We found that most interventions were variations on case-management-type interventions, and that while these interventions were well-received by patients and clinicians, there was inconsistent evidence to support their impact on healthcare utilisation, mortality and other important outcomes.

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Background

- Multimorbidity refers to the state of having two or more chronic conditions.
- It is very common in people with palliative care needs
- This review is focused on *general* multimorbidity, rather than any specific clusters of (comorbid) diseases.
- Multimorbidity affects around 20-25% of people in Scotland, and is strongly associated with advanced age and socioeconomic deprivation
- Nurse-led interventions for multimorbidity have been evaluated systematically before, but often these incorporate findings from studies which target comorbidity clusters and may not be transferrable to generally multimorbid populations

Methods & Aim

- This study aims to identify (1) which nurse-led interventions there are for multimorbidity, and (2) which outcomes are improved by these interventions
- Cochrane CENTRAL, CINAHL, Embase, MEDLINE searched from inception to Oct 2020
- OpenGrey, Journal of comorbidity and reference mining provided grey literature
- Joanna Briggs Institute methodology for mixed-methods reviews followed
- 28 reports of 20 studies included, mostly (n=15) quantitative

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Intervention components and intervention type

- Adapted Cochrane EPOC taxonomy[1] used to classify interventions. 2-level classification:
  - **Components** = identifiable parts of interventions but not necessarily the overall type
  - **Overall type** = category which most adequately describes the overall intervention

Top 10 intervention 'components'
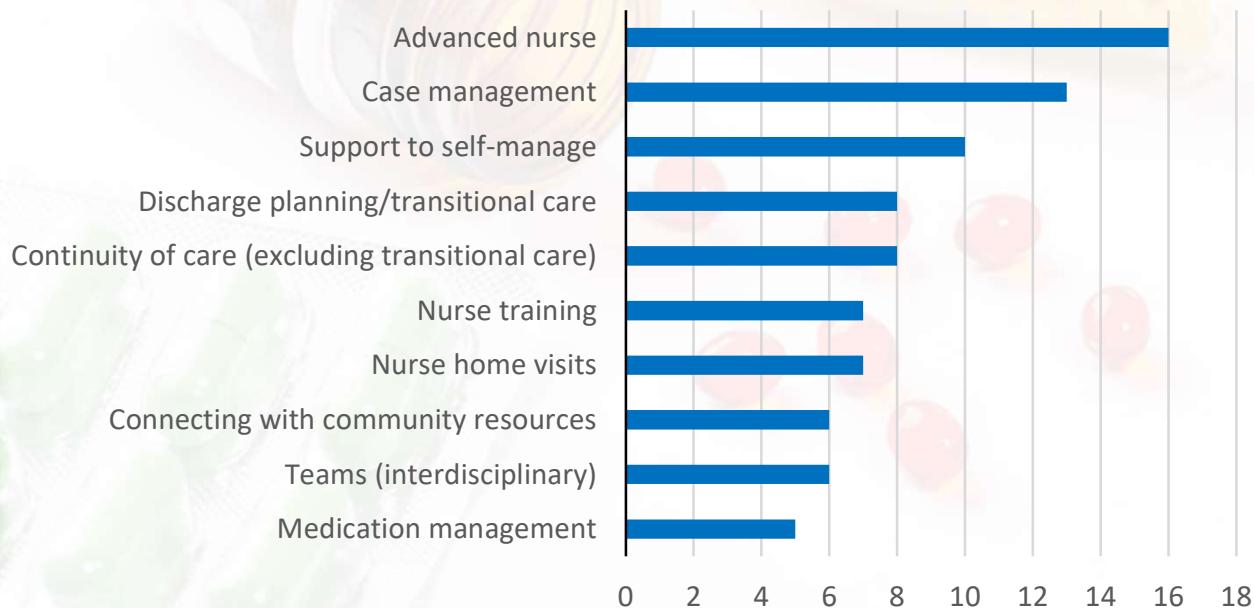
Interventions by overall type

1. EFFECTIVE PRACTICE AND ORGANISATION OF CARE (EPOC). 2015. *EPOC Taxonomy [Online]*. Cochrane Collaboration. Available: https://epoc.cochrane.org/epoc-taxonomy [Accessed June 2021].

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Impact on outcomes

Core Outcome Set for Multimorbidity Research[1] (COSmm) used as a framework for classification of outcomes

	Case-management	Transitional care	Supported self-management	Nurse-led interdisciplinary team	ICT interventions
HRQoL	Improved	Improved	Mixed		
Mental health	Mixed		Unaffected		
Mortality	Mixed	Mixed			
Self-rated health		Improved			
Self-management behaviour	*Improved		Mixed		
Self-efficacy		Improved	Unaffected		
Caregiver burden/support	Mixed				
Pain	Improved				
Activities of daily living	Improved				
Physical function	Mixed				
Physiological measures					Mixed
Disease management	*Improved				
Nutrition	Improved				
Falls risk	Unaffected				
Communication	*Improved	*Mixed			
Prioritisation	Improved				
Trust and advocacy	*Improved				
Health care use	Mixed	Improved			
Costs	Mixed	Mixed	Mixed		
Quality of health care (patient-rated)	Improved	*Mixed			
Quality of health care (nurse/physician rated)	Mixed				
Case-finding	Mixed			Mixed	
*Qualitative evidence only			*Italicised outcomes not COSmm outcomes*		

Conclusion

Most interventions were either case-management, or employed components of nursing case-management (such as supporting self-management or smoothing care transitions). The qualitative and PROMs evidence supporting these interventions suggests they are agreeable to patients and clinicians. Cost-neutrality was evident in some interventions, and transitional care was able to evidence a reduction in short-term healthcare utilisation.

1. SMITH, S. M., WALLACE, E., SALISBURY, C., SASSEVILLE, M., BAYLISS, E. & FORTIN, M. 2018. *A Core Outcome Set for Multimorbidity Research (COSmm)*. The Annals of Family Medicine, 16, 132-138.

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