Upload image

Jun 07, 2020

Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol

Gladys Yinusa[1], Janet Scammell[1], Jane Murphy[2], Gráinne Ford[3]

[1]Department of Nursing Science, Faculty of Health and Social Sciences, Bournemouth University, Bournemouth United Kingdom;
[2]Department of Rehabilitation & Sport Sciences, Faculty of Health and Social Sciences, Bournemouth University, United Kingdom;
[3]Dietetic Department, The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust, Bournemouth United Kingdom

1 Works for me dx.doi.org/10.17504/protocols.io.bgzajx2e

Gladys Yinusa
Bournemouth University

ABSTRACT

Objective: The review will examine the evidence and characteristics of multidisciplinary care interventions in food and nutritional care provision for adult in-patients.

Introduction: Providing appropriate nutritional care is fundamental in patient-centred care. Nutritional care requires a coordinated approach to the delivery of food and fluids by different healthcare professionals and the wider hospital staff.
Evidence demonstrates improved patients' clinical outcomes by enhancing hospital food and providing nutritional care throughout a patient's pathway. While there are good examples of nutritional care initiatives, implementing appropriate nutritional care remain a challenge. Managing malnutrition particularly with adult in-patients on admission or at risk of becoming malnourished requires multidisciplinary care; the hospital team plays a crucial role in ensuring these patients' nutritional needs are met.
The review aims to identify the evidence with specific focus on reported multidisciplinary coordination and collaboration excluding artificial nutritional support (enteral and parenteral nutrition)a domain where well-established evidence already exists.

Inclusion criteria: The context is limited to the hospital setting with an adult in-patient population. Studies involving healthcare professionals or the wider hospital staff will be included.

Methods: Primary evidence will be included from both published and unpublished sources. The search strategy will follow the three-step process recommended by Joanna Briggs Institute' (JBI). Data will be extracted after screening from relevant papers by two or more independent reviewers and one or more verifier using a developed data extraction tool. A narrative description of findings will be reported following the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines.

Introduction

Key nutrition interventions and strategies to reduce malnutrition have been recommended and some integrated into standard guidelines and policies. For instance, the recommendations for nutrition screening in routine practice to identify people with (or at risk of) malnutrition using validated malnutrition screening tools by the European Society for Clinical Nutrition and Metabolism, British Association of Parenteral and Enteral Nutrition and the National Institute for Clinical Excellence in the UK.[13,14] Nutrition screening as the first step enables appropriate interventions with subsequent monitoring and assessment to be implemented. Global consensus on core diagnostic criteria for malnutrition has also been proposed to enable comparison of malnutrition prevalence, interventions, and outcomes across the world.[15] Other strategies include the Protected Mealtime policy (2004) implemented in the UK aimed at avoiding all non-urgent activity on the wards during mealtimes and allowing patients to have uninterrupted meals.[16] Mealtime volunteers have been shown to provide valuable support on the ward to assist with eating and drinking processes.[17] However, barriers to the effective implementation of this model into practice have been reported.[18,19] While supportive interventions are reported to have a beneficial effect for patients, the specific features of collaborative working approaches remain unclear.

Citation: Gladys Yinusa, Janet Scammell, Jane Murphy, GrÃÂ¡inne Ford (06/07/2020). Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. https://dx.doi.org/10.17504/protocols.io.bgzajx2e

In providing nutritional care, hospital staff play a significant role in ensuring that patients' nutritional needs are met. Some studies, guidance documents, and reports have similarly highlighted the importance of implementing an multidisciplinary approach to address the problem with the emphasis on a person-centred approach.[2,21,22] The use of the term 'nutritional care' in this paper refers to a coordinated approach to the delivery of food and fluids by different healthcare professionals and views the patient as an individual with needs and preferences.[23] In a systematic review, Feinberg et al.[24] reported a lack of quality evidence that examined different forms of nutrition support including general support, fortified foods, and artificial nutrition support. Rasmussen et al.[25] suggested from a systematic review and meta-analysis that providing multidisciplinary nutrition support for older patients may have a positive effect on patients' clinical outcomes, mortality and quality of life. This review sought to assess the effectiveness of multidisciplinary nutrition support studies including randomised controlled trials and excluding heterogeneous studies on multidisciplinary interventions of interest to this review. Moreover, the nature of the multidisciplinary coordinated approach merits more exploration.

Evidence on the impact of complex nutritional care is well documented, including enteral or parenteral nutrition as part of artificial nutritional support for some patients.[26-28] In contrast, knowledge on the coordinated delivery of other forms of nutritional care such as support for patients in the meal environment including meal support and eating support, is sparse.
The present review aims to map and identify the nature of the evidence for the provision of food and nutritional care with a specific focus on reported multidisciplinary coordination and collaboration. The present study aims to map the diverse literature about multidisciplinary care and to review what has been studied and how it has been studied.

Review questions

The scoping review will be guided by this research question and the following sub-questions:

What are the features of multidisciplinary collaborative care approaches implemented to improve the provision of food and nutritional care to hospitalised adult inpatients?

- What disciplines are involved in the multidisciplinary collaborations and what component of nutritional care are implemented?
- What collaborative activities, processes and outcomes of multidisciplinary nutritional care are reported?

DOI

dx.doi.org/10.17504/protocols.io.bgzajx2e

PROTOCOL CITATION

Gladys Yinusa, Janet Scammell, Jane Murphy, Gráinne Ford 2020. Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. **protocols.io** dx.doi.org/10.17504/protocols.io.bgzajx2e

KEYWORDS

Malnutrition, Adult Inpatient, Hospital, Multidisciplinary care, Nutritional care

CREATED

May 30, 2020

LAST MODIFIED

Jun 07, 2020

Protocol and Registration

1 The scoping review protocol will be registered and made publicly available at protocols.io.

Eligibility Criteria

2 The inclusion criteria will be guided by the Population Concept Context (PCC) framework recommended by JBI and will be used to develop the search strategy.[29]

2.1 Population: This review will include studies with any hospital staff whose role contributes to providing for patient's nutritional care such as clinicians, nursing and allied health professionals and clinical and non-clinical support personnel including volunteers, patients and relatives. The patient population group of interest will be aged 18 years and above.

2.2 Concept: This review will consider the concept of delivering multidisciplinary care and identify evidence on multidisciplinary team working aimed at enhancing nutritional care in hospital settings. In this review, multidisciplinary interventions involving two or more professional groups across different studies and at different stages of the patient's nutrition pathway, including screening, eating support and meal environment, will be considered. Studies on artificial nutritional support including oral nutrition supplements, enteral tube feeding, and parenteral nutrition will be excluded. Studies that focus primarily on the disease condition, prevalence or risk factors leading to malnutrition will likewise be excluded.

2.3 Context: This review will consider studies limited to hospital settings. Interventionstudies implemented within the hospital setting, with multidisciplinary follow-up after discharge will be considered. Interventions with a primary focus on providing nutritional care outside the context of the hospital setting (such as in the community and home care) will be excluded. Adult hospital care only will be included. No year limit will be placed and studies from all geographical locations will be considered.

Information Sources

3 This scoping review will consider primary sources qualitative, quantitative and mixed-methods research studies using any methodological approach. To allow for inclusion, published or unpublished (grey literature) papers that meet the eligibility criteria will be included. Articles published in English language and English translated papers will be considered.

Method

4 This protocol is presented in accordance with the Joanna Briggs Institute (JBI) manual for developing a scoping review protocol.[29]The proposed scoping review will be reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews (PRISMA-ScR) guidelines.[30]

Search strategy

5 The search strategy will aim to locate both published and unpublished primary studies.The search strategy follows the three-step process recommended by JBI to identify both published and unpublished studies and reviews. An initial limited search of MEDLINE Complete and CINAHL Complete databases was undertaken to identify articles on the topic. The text words contained in the title and abstract of relevant articles, and then index terms used to describe the articles were used to develop a full search strategy for MEDLINE Complete (Appendix I).

The search strategy, including all identified keywords and index terms will be adapted for each included information source including Embase, Cochrane, HMIC, BNI and Scopus. In addition, searches will be conducted in NICE Evidence, and Open Grey for unpublished studies. The reference list of articles identified for full-text review and included in the

Citation: Gladys Yinusa, Janet Scammell, Jane Murphy, GrÃÂ¡inne Ford (06/07/2020). Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. https://dx.doi.org/10.17504/protocols.io.bgzajx2e

review will be screened for additional papers. The next stage will involve conducting a second search using all the identified keywords and index terms across all databases and then finally in the third step, a hand search through the reference list of included studies will also be conducted. Where relevant, authors of primary studies or reviews may be contacted for further information.

Study selection

6 Following the search, all identified records will be collated and uploaded into EndNoteX9.2 (Clarivate Analytics, PA, USA, 2019) bibliographic software to manage citations and remove duplicates. Excel spread sheets will be used alongside Endnote for title and abstract screening formatted with the drop-down rating options Include, Exclude or Maybe for assessment against the inclusion criteria for the review.

The titles and abstracts will be screened by three independent reviewers. Potentially relevant papers will be retrieved in full and the full text of selected citations will be assessed in detail against the inclusion criteria by three independent reviewers with a forth for arbitration where necessary. Reasons for exclusion of full text papers that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion and consensus, or with a fourth reviewer where needed. The results of the search will be reported in full in the final scoping review and presented in a flow diagram following thePRISMA-ScR guideline.[30]

Data Extraction

7 Data will be extracted from papers included in the scoping review by two or more independent reviewers and one or more verifier using a data extraction tool developed and tested by the four member review team. The data extracted will include specific details about the population, concept, context, methods and key findings relevant to the scoping review question. A draft extraction tool is provided (Appendix II). Any modifications made will be detailed in the final scoping review report. Any disagreements between the reviewers will be resolved through discussion, or with a fourth reviewer. Authors of papers will be contacted to request missing or additional data, where required. Considering the aim of this scoping review and the potential of heterogeneous research methods, meta-analysis of will not be conducted.

Data Presentation

8 The extracted data will be mapped and presented in a tabular form in a manner that aligns with the objective of this scoping review including; the identified characteristics of multidisciplinary nutritional care such as the professional disciplines involved, the aspects of nutritional care implemented, inputs, processes and reported outcomes at the patient, team and organisational level. A narrative description will accompany the tabulated findings in relation to the questions posed by this review.

Conflict of Interest

9 The authors declare no conflict of interest.

References

10

1. Barker L, Gout B, Crowe T. Hospital malnutrition: prevalence, identification and impact on patients and the healthcare system. International journal of environmental research and public health.2011; 8(2):514-27.

2. Tappenden KA, Quatrara B, Parkhurst ML, Malone AM, Fanjiang G, Ziegler TR. Critical Role of Nutrition in Improving Quality of Care: An Interdisciplinary Call to Action to Address Adult Hospital Malnutrition. Medsurg Nursing.2013; 22(3):147-65.

3. Leij-Halfwerk S, Verwijs MH, van Houdt S, Borkent JW, Guaitoli PR, Pelgrim T, et al. Prevalence of protein-energy malnutrition risk in European older adults in community, residential and hospital settings, according to 22 malnutrition screening tools validated for use in adults≥ 65 years: A systematic review and meta-analysis. Maturitas.2019.

4. Cederholm T, Barazzoni R, Austin P, Ballmer P, Biolo G, Bischoff F, et al. ESPEN guidelines on definitions and terminology of clinical nutrition. European Society for Clinical Nutrition and Metabolism.2017.

Citation: Gladys Yinusa, Janet Scammell, Jane Murphy, GrÃÂ¡inne Ford (06/07/2020). Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. https://dx.doi.org/10.17504/protocols.io.bgzajx2e

5. Corkins MR, Guenter P, DiMaria-Ghalili RA, Jensen GL, Malone A, Miller S, et al. Malnutrition diagnoses in hospitalized patients: United States, 2010. Journal of Parenteral and Enteral Nutrition.2014; 38(2):186-95.

6. Henderson S, Moore N, Lee E, Witham MD. Do the malnutrition universal screening tool (MUST) and Birmingham nutrition risk (BNR) score predict mortality in older hospitalised patients? BMC geriatrics.2008; 8:26.

7. Allard JP, Keller H, Jeejeebhoy KN, Laporte M, Duerksen DR, Gramlich L, et al. Decline in nutritional st atus is associated with prolonged length of stay in hospitalized patients admitted for 7 days or more: A prospective cohort study. Clinical Nutrition.2016; 35(1):144-52.

8. Correia MITD, Hegazi RA, Higashiguchi T, Michel J-P, Reddy BR, Tappenden KA, et al. Evidence-based recommendations for addressing malnutrition in health care: an updated strategy from the feedM. E. Global Study Group. Journal of the American Medical Directors Association.2014; 15(8):544-50.

9. Freijer K, Tan SS, Koopmanschap MA, Meijers JMM, Halfens RJG, Nuijten MJC. The economic costs of disease related malnutrition. Clinical nutrition.2013; 32(1):136-41.

10. Ruiz AJ, Buitrago G, Rodríguez N, Gómez G, Sulo S, Gómez C, et al. Clinical and economic outcomes associated with malnutrition in hospitalized patients. Clinical nutrition.2019; 38(3):1310-6.

11. Elia M. The cost of malnutrition in England and potential cost savings from nutritional interventions (short version). BAPEN Available online: www bapen org uk/pdfs/economic-report-short pdf.2015.

12. Goates S, Du K, Braunschweig CA, Arensberg MB. Economic burden of disease-associated malnutrition at the state level. PloS one.2016; 11(9):e0161833.

13. Kondrup J, Allison SP, Elia M, Vellas B, Plauth M. ESPEN guidelines for nutrition screening 2002. Clinical nutrition.2003; 22(4):415-21.

14. National Institute for Health and Care Excellence. Nutrition support in adults : Evidence update August 2013. National Institute for Health and Care Excellence (NICE).2013.

15. Cederholm T, Jensen GL, Correia MITD, Gonzalez MC, Fukushima R, Higashiguchi T, et al. GLIM criteria for the diagnosis of malnutrition–A consensus report from the global clinical nutrition community. Journal of cachexia, sarcopenia and muscle.2019; 10(1):207-17.

16. Hospital Caterers Association. Protected mealtimes policy. HCA, London.2004.

17. Green SM, Martin HJ, Roberts HC, Sayer AA. A systematic review of the use of volunteers to improve mealtime care of adult patients or residents in institutional settings. Journal of Clinical Nursing.2011; 20(13-14):1810-23.

18. Keller H, Allard J, Vesnaver E, Laporte M, Gramlich L, Bernier P, et al. Barriers to food intake in acute care hospitals: a report of the Canadian Malnutrition Task Force. Journal of Human Nutrition & Dietetics.2015; 28(6):546-57.

19. Eide HD, Halvorsen K, Almendingen K. Barriers to nutritional care for the undernourished hospitalised elderly: perspectives of nurses. Journal of Clinical Nursing.2015; 24(5-6):696-706.

20. Baldwin C, Kimber KL, Gibbs M, Weekes CE. Supportive interventions for enhancing dietary intake in malnourished or nutritionally at-risk adults. Cochrane Database Syst Rev.2016; (12).

21. Francis R. Report of the Mid Staffordshire NHS Foundation Trust public inquiry: executive summary. The Stationery Office; 2013.

22. Volkert D. Malnutrition in older adults-urgent need for action: A plea for improving the nutritional situation of older adults. Gerontology.2013; 59(4):328-33.

23. Healthcare Improvement Scotland. Food, fluid and nutritional care standards. 2014.

Citation: Gladys Yinusa, Janet Scammell, Jane Murphy, GrÃÂ¡inne Ford (06/07/2020). Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. https://dx.doi.org/10.17504/protocols.io.bgzajx2e

24. Feinberg J, Nielsen EE, Korang SK, Engell KH, Nielsen MS, Zhang K, et al. Nutrition support in hospitalised adults at nutritional risk. Cochrane Database Syst Rev.2017; (5).

25. Rasmussen NML, Belqaid K, Lugnet K, Nielsen AL, Rasmussen HH, Beck AM. Effectiveness of multidisciplinary nutritional support in older hospitalised patients: A systematic review and meta-analyses. Clinical Nutrition ESPEN.2018; 27:44-52.

26. Zhang L, Sanders L, Fraser RJL. Nutritional support teams increase percutaneous endoscopic gastrostomy uptake in motor neuron disease. World Journal of Gastroenterology.2012; 18(44):6461-7.

27. Mistry J, Porter S, Lee A, Rajanayagam J, Palmer M, Ko S, et al. Economic costs of parenteral nutrition with a nutritional support team. Journal of Gastroenterology and Hepatology (Australia).2014; 29:145.

28. Ruijter EM, Roodenburg AJC, Kuipers WR, Dagnelie PC. Nutritional practices in hospital setting: literature review and qualitative study on oral nutritional supplements. January; 2016.

29. Peters M, Godfrey C, McInerney P, Soares C, Khalil H, Parker D. The Joanna Briggs Institute reviewers' manual 2015: methodology for JBI scoping reviews. 2015.

30. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Annals of internal medicine.2018.

Appendix I: Medline complete search conducted in Dec 2019

11

DOMAIN	Alternative words/Concept expansion	Search	Query	Records retrieved

Citation: Gladys Yinusa, Janet Scammell, Jane Murphy, GrÃÂ¡inne Ford (06/07/2020). Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. https://dx.doi.org/10.17504/protocols.io.bgzajx2e

Nutritional care	Nutrition* care Nutrition* intake Nutrition* intervention* Nutrition support **MESH** Malnutrition · Malnutrition · Protein-energy malnutrition Nutrition Policy Meals Nutrition assessment Nutrition Therapy	#1	TI "nutrition* care" OR "nutrition* intervention*" OR "nutrition* support* OR "nutrition therapy" OR "nutrition* intake" AB "nutrition* care" OR "nutrition* intervention*" OR "nutrition* support* OR "nutrition therapy" OR "nutrition* intake"	**12698**
		#2	(MH "Nutrition Assessment") OR (MH "Nutrition Policy+") OR (MH "Nutrition Therapy+") OR (MH "Malnutrition+") OR (MH "Meals+")	**229766**
		#3	#1 OR #2	**237,770**
Multidisciplinary delivery	Multidisciplinary Inter- disciplinary Interprofessional Teamwork Multidisciplinary team Interdisciplinary support Health professional Staff **MESH** MH "Interdisciplinary Communication" Crew Resource Management, Healthcare")	#4	AB (multidisciplinary or "multi-disciplinary" or "integrative team" or interdisciplinary or "inter- disciplinary" or interprofessional or "inter-professional" or "healthcare team" or teamwork* or "team work*") OR TI (multidisciplinary or "multi- disciplinary" or "integrative team" or interdisciplinary or "inter- disciplinary" or interprofessional or "inter- professional" or "healthcare team" or teamwork* or "team work*)	**129,224**
		#5	(MH "Interdisciplinary Communication")	
		#6	(MH "Crew Resource Management, Healthcare")	
		#7	#4 OR #5 OR #6	**147,769**
Hospital Setting	Hospital Inpatient Ward* inpatient In-patient **MESH** Inpatient	#8	AB ("acute setting*" or hospital* or "acute hospital*" or "acute care" or ward* or inpatient* or "in-patient*") OR TI ("acute setting*" or hospital* or "acute hospital*" or "acute care" or ward* or inpatient* or "in-patient*")	**2,642,671**
		#9	(MH "Hospitals+") OR (MH "Hospital Units+")	**354,285**

Citation: Gladys Yinusa, Janet Scammell, Jane Murphy, GrÃÂ¡inne Ford (06/07/2020). Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. https://dx.doi.org/10.17504/protocols.io.bgzajx2e

		#10	(MH "Inpatients")	**19,595**
		#11	#8 OR #9 OR #10	**2,797,693**
		#12	#3 AND #7 AND #11	**828**
	Limited to; · No date · English and English translated	#13	#3 AND #7 AND #11	**586**

Appendix II

12 **Appendix II.pdf**

Citation: Gladys Yinusa, Janet Scammell, Jane Murphy, GrÃÂ¡inne Ford (06/07/2020). Multidisciplinary provision of food and nutritional care to hospitalised adult in-patients: A scoping review protocol. https://dx.doi.org/10.17504/protocols.io.bgzajx2e