National Institute for Health and Care Excellence

Draft for consultation

End of life care for adults service delivery

[M] Evidence review: Optimal transition and Facilitating discharge

NICE guideline

Evidence review

April 2019

Draft for consultation

This evidence review was developed by the National Guideline Centre

Disclaimer

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and, where appropriate, their carer or guardian.

Local commissioners and providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

NICE guidelines cover health and care in England. Decisions on how they apply in other UK countries are made by ministers in the Welsh Government, Scottish Government, and Northern Ireland Executive. All NICE guidance is subject to regular review and may be updated or withdrawn.

ISBN
[add for final publication version only, delete this text for consultation version]

Contents

1

1 Optimal transition between care settings Facilitating discharge

1.1 Review question 1: What service models (or service components) enable an optimal transition between care settings in people in their last year of life?

1.2 Introduction

Smooth Transitions

Transition is a purposeful, planned process that addresses the medical, social and psychological needs of a person as they move from one system/place to another. Throughout this guideline many transition points have been identified, for example from one service provider to another, from one setting to another from one age group to another and from one life style to another.

There appear to be no studies which are universally applicable to all transitions. Studies have included transitions between teams for example within a hospital or from hospital to home. Usually systems have been developed locally to meet identified problems with transitions, for example the use of a form or computer template, patient held records similar to those used in ante natal care.

Probably the group where transition has been studied most is the transfer from children's to young persons or adult services and most of this work has been undertaken in cancer service and for those with learning difficulties. Another area where work has been undertaken is in the discharge of people from hospital to home and the copying letters to patients is an initiative, which has its roots in this area.

There appear to be some principles, which can help to make these transitions smoother. These include effective methods of communication, verbal, written, and electronic, between all those involved. It is most effective if the person who is being transferred and their relatives, carers and those important to them are all included. However there does not appear to be one factor that overwhelmingly contributes to a smooth discharge but a number of things which taken in combination makes transitions smoother.

Rapid Discharge

For patients who require rapid discharge to their preferred place of death (usually their home from hospital) there is a need for a clear process that allows for the timely initiation of resources with which to facilitate this care planning. This may or may not necessitate rapid access to specialist palliative care.

It is dependent on the patient's wishes being known to health care professional and relatives usually in the form of and Advanced Care Plan (ACP) and Do Not Resuscitate (DNR) orders and the ability of local system processes to enable the prompt implementation of support services once the patient has arrived at their preferred place of death. As with all rapid discharges what underpins them is effective communication with all parties and clear, concise documentation that allows for a smooth transition of care.

With an ever-increasing pressure on services provided by health care providers, there is a widespread recognition that effective discharge planning from the time of admission is essential to enable a patient centred pathway, which is both safe and effective. The rapid

discharge of patients is multi-factorial being dependent on realistic estimated day of discharge, senior decision making, effective communication, liaison with other health care partners, the families and most importantly the patient themselves.

Much has been written in the literature regarding discharge, which has accumulated in national programmes such as the 'SAFER' bundle and most recently the 'End PJ paralysis' campaign both of which have seen improvements in improving the discharge process for patients.

1.3 PICO table

For full details see the review protocol in Appendix A.

Table 1: PICO characteristics of review question

Population	Adults (aged over 18 or over) with progressive life-limiting conditions thought to be entering the last year of life.

Interventions	• Service models or components enabling an optimal transition between care settings, for example:
	  ○ Lead health professional
	  ○ Methods of recording and sharing information
	  ○ Out of hours procedures
	  ○ Advance care planning
	  ○ Discharge planning team
	  ○ Dedicated transport services
	  ○ Involvement of carers
	  ○ Integration of health and social care

Comparisons	• To each other (alone or in combination) • No specific facilitators of an optimal transition between care settings (usual care)
Outcomes	CRITICAL - Quality of life (Continuous) - Preferred and actual place of death (Dichotomous) - Preferred and actual place of care (Dichotomous) IMPORTANT - Length of survival (Continuous) - Length of stay (Continuous) - Hospitalisation (Dichotomous) - Number of hospital visits (Continuous/Dichotomous) - Number of visits to accident and emergency (Dichotomous) - Number of unscheduled admissions (Dichotomous) - Use of community services (Dichotomous) - Avoidable/inappropriate admissions to ICU (Dichotomous) - Inappropriate attempts at cardiopulmonary resuscitation (Dichotomous) - Staff satisfaction (Continuous) - Patient/carer reported outcomes (satisfaction) (Continuous)
Study design	• Systematic reviews • RCTs • Non-randomised comparative studies, including before and after studies and interrupted-time series

1.4 Review question 2: What is the best way to facilitate discharge of a person in their last year of life back to the

community from another setting (for example, the hospital)?

For full details see review protocol in Appendix A.

Table 2: PICO characteristics of review question

Population	Adults (aged over 18 or over) with progressive life-limiting conditions thought to be entering the last year of life.
Interventions	Service model or policy to facilitate discharge back to the community from other setting, (for example hospitals). Interventions would include: Rapid discharge pathways Discharge planning
Comparisons	To each other (alone or in combination) No standardized model or policy to facilitate discharge (usual care)
Outcomes	CRITICAL - Quality of life (Continuous) - Preferred and actual place of death (Dichotomous) - Preferred and actual place of care (Dichotomous) IMPORTANT - Length of survival (Continuous) - Length of stay (Continuous) - Hospitalisation (Dichotomous) - Number of hospital visits (Continuous/Dichotomous) - Number of visits to accident and emergency (Dichotomous) - Number of unscheduled admissions (Dichotomous) - Use of community services (Dichotomous) - Avoidable/inappropriate admissions to ICU (Dichotomous) - Inappropriate attempts at cardiopulmonary resuscitation (Dichotomous) - Staff satisfaction (Continuous) - Patient/carer reported outcomes (satisfaction) (Continuous)
Study design	Systematic reviews RCTs Non-randomised comparative studies, including before and after studies and interrupted-time series

1.5 Clinical evidence

1.5.1 Included studies

Optimal transition

A search was conducted for randomised trials or non-randomised comparative studies on service models (or service components) enabling an optimal transition between care settings for people in their last year of life.

One study was included in the review;[131] this is summarised in Table 3 below. Evidence from this study is summarised in the clinical evidence summary below (Table 4). See also the study selection flow chart in Appendix C, forest plots in Appendix F, study evidence tables in Appendix E, and GRADE tables in Appendix G.

Facilitating discharge

A search was conducted for randomised trials or non-randomised comparative studies on service models (or policies) to facilitate discharge of people in their last year of life back to the community from other setting. No evidence was found for this review.

1.5.2 Excluded studies

See the excluded studies list in Appendix H.

1.5.3 Summary of clinical studies included in the evidence review

Table 3: Summary of studies included in review 1 – optimal transition between services

Study	Intervention and comparison	Population	Outcomes	Comments
Wong 2016[131]	Service models or components enabling an optimal transition between care settings. Transitional Care Palliative - End Stage Heart Failure (TCP-ESHF): this group received home visits/telephone calls every week for the first month and less frequently during the subsequent months for a total of 12 months. No specific facilitators of an optimal transition between care settings (usual care). Usual care: PC medical clinic consultation, discharge advice on symptom management and medication and referrals if appropriate (for example, home visits).	People with End Stage Heart Failure (ESHF) (at least two of the following: i) CHF NYHA class stage III or IV, ii) patient thought to be in their last year of life by clinicians, iii) repeated hospital admissions (3 within 1 year)with symptoms of HF or iv) existence of physical or psychological symptoms despite optimal tolerated therapy) N=84 Hong Kong (China)	Quality of life Number of unscheduled admissions Patient/carer reported outcomes (satisfaction)	RCT

See Appendix E for full evidence tables.

1.5.4 Clinical evidence summary tables: optimal transition between care settings

Table 4: Clinical evidence summary: Model enabling an optimal transition compared to usual care for EOLC

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Usual care	Risk difference with Model enabling an optimal transition (95% CI)
Quality of life (McGill total score) 4 weeks after discharge Possible range 0-10	84 (1 study) 4 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean quality of life (Mcgill total score) 4 weeks after discharge in the control groups was 6.46	The mean quality of life (Mcgill total score) 4 weeks after discharge in the intervention groups was 1.11 higher (0.29 to 1.93 higher)
Number of unscheduled admissions (people readmitted) at 28 days	84 (1 study) 4 weeks	⨁⊖⊖⊖ VERY LOW[a,b,c] due to risk of bias, indirectness, imprecision	RR 0.72 (0.34 to 1.52)	293 per 1000	82 fewer per 1000 (from 193 fewer to 152 more)
Number of unscheduled admissions (people readmitted) at 84 days	84 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, indirectness	RR 0.53 (0.33 to 0.88)	610 per 1000	287 fewer per 1000 (from 73 fewer to 409 fewer)
Number of unscheduled admissions (Number of readmissions) 4 weeks	84 (1 study) 4 weeks	⨁⊖⊖⊖ VERY LOW[a,b,c] due to risk of bias, indirectness, imprecision		The mean number of unscheduled admissions (n of readmissions) 4 weeks in the control groups was 0.41 days	The mean number of unscheduled admissions (n of readmissions) 4 weeks in the intervention groups was 0.2 lower (0.44 lower to 0.04 higher)
Number of unscheduled admissions (Number of readmissions) 12 weeks	84 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of		The mean number of unscheduled admissions (n of readmissions) 12 weeks in the control groups was	The mean number of unscheduled admissions (n of readmissions) 12 weeks in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Usual care	Risk difference with Model enabling an optimal transition (95% CI)
		bias, indirectness		1.1 days	0.68 lower (1.05 to 0.31 lower)
Patients satisfaction 4 weeks after discharge	84 (1 study) 4 weeks	⨁⨁⊖⊖ LOW[a] due to risk of bias		The mean patients satisfaction 4 weeks after discharge in the control groups was 36.55	The mean patients satisfaction 4 weeks after discharge in the intervention groups was 12.29 higher (6.86 to 17.72 higher)

[a] Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias
[b] Downgraded by 1 increment if the confidence interval crossed 1 MID or downgraded by 2 increments if the confidence interval crossed both MIDs
[c] Downgraded by 1 or 2 increments because the majority of the evidence had indirect outcomes

1.5.5 Clinical evidence summary tables: facilitating discharge

None.

See Appendix G for full GRADE tables.

1.6 Economic evidence

1.6.1 Included studies

1.6.1.1 Optimal transition between settings

No relevant health economic studies were identified.

1.6.1.2 Facilitating discharge

No relevant health economic studies were identified.

1.6.2 Excluded studies

1.6.2.1 Optimal transition between settings

No health economic studies that were relevant to this question were excluded due to assessment of limited applicability or methodological limitations.

See also the health economic study selection flow chart in Appendix D.

1.6.2.2 Facilitating discharge

No health economic studies that were relevant to this question were excluded due to assessment of limited applicability or methodological limitations.

See also the health economic study selection flow chart in Appendix D.

1.6.3 Unit costs for optimal transition between settings and facilitating discharge

Table 5 reports the hourly costs of staff time for healthcare professionals that might be part of a service model pathway that supports optimal transition between settings or facilitates discharge for people in the last year of life. The cost of patient contact as opposed to per working hour has been reported where available.

Table 5: UK costs of staff time for health care professional that might be part of a service model pathway that supports optimal transition between settings or facilitates discharge for people in the last year of life

Staff Member	Unit Cost of Staff Time[(a)]
Hospital-based staff	
Hospital-based scientific and professional staff[(b)]	£24-£77 per working hour (Band 2 – Band 8b)
Hospital-based nurses	£86-£130 per hour of patient contact (Band 5 – 7)
Hospital-based doctors	£29-£106 (FY1 – Consultant)
Community-based staff	
General practitioner	£199 per hour of patient contact
Community-based scientific and professional Staff	£23-£74 per working hour (Band 2 – Band 8b)
Community nurse	£22-£73 per working hour (Band 2 – Band 8b)
Nurse (GP practice)	£36 per working hour
Social Worker (adult services)	£55 per hour of client-related work

(a) Source: Curtis (2016)[27]

(b) Please see Curtis (2016)[27] for details of the health care professionals included in this category by band. Examples include: physiotherapists, occupational therapists, counsellors, pharmacists.

1.7 Resource costs

Recommendations made based on this review (see section 1.9) are not expected to have a substantial impact on resources.

1.8 Evidence statements

1.8.1 Optimal transition between settings

1.8.1.1 Clinical evidence statements

Model enabling an optimal transition compared to usual care (Wong 2016) for EOLC

One study compared a model of optimal transition versus usual care. There was evidence of clinically important benefit of optimal transition for patients' quality of life (n=84; very low quality). The evidence also showed a clinical benefit in the number of people readmitted, number of readmissions at 12 weeks and patient satisfaction (n=84; very low quality). The evidence showed no clinically important difference in the number of readmissions at four weeks post-intervention (n=84; very low quality).

1.8.1.2 Health economic evidence statements

- No relevant economic evaluations were identified.

1.8.2 Facilitating discharge

1.8.2.1 Clinical evidence statements

- No evidence was identified for this question.

1.8.2.2 Health economic evidence statements

- No relevant economic evaluations were identified.

1.9 Recommendations

M1. For advice on transitions between care settings for adults with social care needs see the NICE guideline on transition between inpatient hospital settings and community or care home settings for adults with social care needs.

M2. Develop systems to support the smooth and rapid transfer between care settings for adults approaching the end of their life. For example, organise services so that:

- ambulances or other transport services can move people between care settings without delay and in an efficient and compassionate way
- care packages and equipment are available to enable adults approaching the end of their life to move to their preferred place of care.

M3. Develop an agreed transfer policy between ambulance service providers and acute care providers to enable the rapid transfer of adults approaching the end of their life to their preferred place of care whenever rapid transfer is a priority.

1.9.1 Research Recommendations

The Committee considered the following topic for research in this area:

RR4. Facilitating transfer from hospital to home

What is the optimal way of discharging people in the last year of life from hospitals back to their usual place of residence?

Why this is important

The committee found there was very little evidence on transferring adults between settings in the last year of life. One of the most important transfers is from hospital to home or the person's usual place of residence such as a nursing home, especially when death is imminent. Such discharges are often delayed because of medical or nursing problems, some of which however, could be managed well in the community with key equipment or medication; and frequently by unmet social care needs. The consequences of delayed discharge include people staying and dying in inappropriate care settings such as an acute hospital ward when it is not their preferred place of care, or not necessary from a medical or nursing perspective.

Key factors in ensuring prompt discharge with care and compassion include importance of having clear communication and processes between services providing care in the two settings, and also those providing transport. Please see appendix I for further details.

1.10 Rationale and impact

1.10.1 Why the committee made the recommendations

There was very little evidence on transferring adults between settings in the last year of life. However, the committee agreed that the availability of efficient and timely transfer is important to ensure that people can be moved quickly to their preferred place of care when needed.

The committee also discussed the consequences of delayed transfer, which can result in people staying in inappropriate care settings or being cared for and dying in settings other than their preferred place of care, and the importance of having clear communication and processes between services providing care and those providing transport.

The committee developed recommendations to reinforce good practice and support the advice in NICE's guideline on transition between inpatient hospital settings and community or care home settings for adults with social care needs. The committee also noted that more research is needed to determine the optimal service configuration for transfer of people with different conditions and at different stages during the last year of life (see research recommendations 3 and 6s RR3 and RR6).

The committee also agreed that poor and slow access to care packages and equipment can delay transfer between settings and prevent people from being cared for in their preferred setting, so highlighted the need to organise this support to enable timely transfer.

1.10.2 Impact of the recommendations on practice

Effective and timely transfer is likely to reduce the number of people dying in hospital, because most people wish to die in a community setting (for example, their own home or care home, or in a hospice). This may reduce the need for hospital services but increase demand for services in the community.

Further details of the evidence and the committee's discussions can also be found in evidence review C: barriers to accessing end of life care services.

1.11 The committee's discussion of the evidence

1.11.1 Interpreting the evidence

1.11.1.1 The outcomes that matter most

The committee identified quality of life of people in the last year of life, actual and preferred place of death, actual and preferred place of care and length of stay as critical outcomes to measure the impact of service models or components on enabling optimal transition between care settings and facilitating discharge.

The following outcomes were identified as important for discharge and transition from palliative care settings; length of survival, length of hospital stay, hospitalisation, number of hospital visits, number of visits to accident and emergency, number of unscheduled admissions, use of community services, avoidable/inappropriate admissions to ICU, inappropriate attempts at cardiopulmonary resuscitation and staff, patient and carer satisfaction.

See tables 7 and 8 in the Methods chapter for a detailed explanation of why the committee selected these outcomes.

Optimal transition No evidence was identified for actual and preferred place of death, actual and preferred place of care, and length of survival were not reported, length of stay, hospitalisation, number of hospital visits, number of visits to accident and emergency, use of community services, avoidable/inappropriate admissions to ICU, inappropriate attempts at cardiopulmonary resuscitation, length of survival and staff satisfaction.

Facilitating discharge

No evidence was found for this review.

1.11.1.2 The quality of the evidence

Optimal transition

One study addressed the effect of service models (or service components) on enabling optimal transition between care settings in people in their last year of life.

The quality of evidence ranged from very low to low. This was due to selection and performance bias, resulting in a high risk of bias rating, and imprecision . Indirectness in some outcomes further contributed to the final GRADE rating.

While the Committee acknowledged the methodological robustness of the included study, it was noted that the intervention was only delivered to patients with end-stage heart failure. Given that this was the only study included in the review, there would be a need to extend the finding for a general population of people in their last year of life. The Committee agreed that this would be inappropriate.

Facilitating discharge

No evidence was found for this review.

1.11.1.3 Benefits and harms

Optimal transition

The Committee considered the evidence included in the review. The Committee noted that the evidence was limited and only included patients with end-stage heart failure. They agreed that there was a noteworthy difference in quality of life between groups, but were unsure if the observed ~10% difference in QoL between the intervention and control group was sufficient to be deemed clinically significant. The Committee commented that there was a visible reduction in unscheduled admissions at 12 weeks with a nurse-led intervention when compared to usual care, but a lack of evidence of effect at 4 weeks. The Committee also agreed that the improved patient satisfaction following home visits/telephone calls was of a clinically important benefit to the patient.

Facilitating discharge

No evidence was found for this review.

Summary

Overall, the Committee acknowledged that the intervention appeared to have positive outcomes for the review population of patients with heart failure, but felt they could not generalise these outcomes for a wider cohort of people in the last year of life. The Committee agreed that the evidence was too limited to formulate an evidence-based recommendation. However, they agreed that a consensus recommendation on the discharge and transition in care settings for people in the last year of life would be justified, as this is likely to improve care and health outcomes. The Committee considered that optimal transition between palliative care settings could result from all aspects of care functioning effectively in coordination, given that coordination of care may promote improved patient outcomes. Commissioning models should address: palliative care ambulance, pharmacy, community nurses, and junior doctors, with a focus on increased speed/urgency of service delivery. Commissioners when planning for patients in the last year of life should ensure patients have access to models such as hospital discharge planning and a community based case manager. The Committee added that education in A&E and the use of a rapid discharge flow chart may aid smooth transition and discharge.

1.11.2 Cost effectiveness and resource use

Optimal transition

What determines whether a transition is optimal will vary as it depends on the purpose of the transition. If the purpose of the transition is to save or extend a person's life (for example an emergency ambulance to transition a person from home to hospital) then it might not be possible to ensure the transition is comfortable for the person but it could still be considered optimal due to other factors such as speed, expertise of staff, access to necessary equipment available or successful resuscitation. If the purpose of the transition is to discharge a person out of hospital to enable them to die in the comfort of their usual place of residence then ensuring a comfortable transition (achieved through effective planning) would be what determined if it was considered optimal. In the latter type of transition, effective and efficient organisation of the person's care package would be essential. Achieving this will determine whether they are comfortable at home and would reduce the risk of them returning into hospital to manage their symptoms. This could be achieved through a number of different interventions. Information sharing, out of hours services, having an end of life facilitator or lead health professional, advanced care planning, dedicated end of life ambulance services, community services and care coordination services are all among the things that could help achieve optimal transitions.

It is a given that services should be provided to ensure transitions are optimal as this is fundamental to good quality care but how this is achieved and the effect this has on costs will vary. It will depend on the individual circumstance of the person transitioning between care settings. In some circumstances keeping a person out of hospital might be more costly, for example if they require 24/7 nursing support and a lot of pain management, and in some it might be less costly for example if they are being cared for by a family member.

No health economic evidence was identified for this review question.

The committee felt that the evidence did not allow for an estimation of the costs or cost effectiveness of achieving optimal transitions for people in the last year of life.

Facilitate discharge

The Committee considered facilitating discharge to be a transition, therefore please see the section above on optimal transitions.

No health economic evidence was identified for this review question.

1.11.3 Other factors the committee took into account

The Committee noted it would be desirable to have more research addressing services to facilitate a smooth discharge/transition in palliative care, given the paucity of evidence produced in this review. The need for similar studies including patients with conditions other than heart failure (for example, cancer) was highlighted. The Committee also acknowledged potential difficulties in conducting a RCT to address this review question, given the extended time required to conduct and publish a RCT and the subsequent limits to applicability within the NHS. The Committee raised the potential for further research, with a need for robust research (including non-randomised studies) to assess smooth transition/rapid discharge in those in their last year of life.

References

1. Aaltonen M, Raitanen J, Forma L, Pulkki J, Rissanen P, Jylha M. Burdensome transitions at the end of life among long-term care residents with dementia. Journal of the American Medical Directors Association. 2014; 15(9):643-648

2. Abarshi E, Echteld M, Van den Block L, Donker G, Deliens L, Onwuteaka-Philipsen B. Transitions between care settings at the end of life in the Netherlands: Results from a nationwide study. Palliative Medicine. 2010; 24(2):166-174

3. Adam J. Discharge planning of terminally ill patients home from an acute hospital. International Journal of Palliative Nursing. 2000; 6(7):338-345

4. Allen J, Hutchinson AM, Brown R, Livingston PM. Quality care outcomes following transitional care interventions for older people from hospital to home: a systematic review. BMC Health Services Research. 2014; 14:346

5. Alonso-Babarro A, Bruera E, Varela-Cerdeira M, Boya-Cristia MJ, Madero R, Torres-Vigil I et al. Can this patient be discharged home? Factors associated with at-home death among patients with cancer. Journal of Clinical Oncology. 2011; 29(9):1159-1167

6. Ang WH, Lang SP, Ang E, Lopez V. Transition journey from hospital to home in patients with cancer and their caregivers: a qualitative study. Supportive Care in Cancer. 2016; 24(10):4319-4326

7. Anonymous. Care transitions among Medicare beneficiaries at the end of life. Nursing. 2017; 47(6):43-44

8. Aparecida Partezani Rodrigues R, Marques S, Kusumota L, Barros dos Santos E, Roberto da Silva Fhon J, Cristina Coelho Fabricio-Wehbe S. Transition of care for the elderly after cerebrovascular accidents - from hospital to the home. Revista Latino-Americana de Enfermagem (RLAE). 2013; 21(special):216-224

9. Arendts G, Dickson C, Howard K, Quine S. Transfer from residential aged care to emergency departments: An analysis of patient outcomes. Internal Medicine Journal. 2012; 42(1):75-82

10. Arling G, Kane RL, Cooke V, Lewis T. Targeting residents for transitions from nursing home to community. Health Services Research. 2010; 45(3):691-711

11. Aziz AF, Aziz NA, Nordin NA, Ali MF, Sulong S, Aljunid SM. What is next after transfer of care from hospital to home for stroke patients? Evaluation of a community stroke care service based in a primary care clinic. Journal of Neurosciences in Rural Practice. 2013; 4(4):413-420

12. Bone AE, Gao W, Gomes B, Sleeman KE, Maddocks M, Wright J et al. Factors associated with transition from community settings to hospital as place of death for adults aged 75 and older: A population-based mortality follow-back survey. Journal of the American Geriatrics Society. 2016; 64(11):2210-2217

13. Boockvar KS, Burack OR. Organizational relationships between nursing homes and hospitals and quality of care during hospital-nursing home patient transfers. Journal of the American Geriatrics Society. 2007; 55(7):1078-1084

14. Borrill DJ, Gillon SC. Discharging patients home from hospital at the end of life. British Journal of Hospital Medicine. 2017; 78(2):97-102

15. Boyd K, Murray SA. Recognising and managing key transitions in end of life care. BMJ. 2010; 341:c4863

16. Broadstock M. Suicide prevention topic 12: What is the efficacy of discharge planning protocols, i.e., managing the transition from hospital to community? What should be included in the plan? NZHTA Report 12. Christchurch, NZ. New Zealand Health Technology Assessment (NZHTA), 2002. Available from: http://nzhta.chmeds.ac.nz/publications/topic12.pdf

17. Burge FI, Lawson B, Critchley P, Maxwell D. Transitions in care during the end of life: changes experienced following enrolment in a comprehensive palliative care program. BMC Palliative Care. 2005; 4:3

18. Callahan CM, Tu W, Unroe KT, LaMantia MA, Stump TE, Clark DO. Transitions in care in a nationally representative sample of older Americans with dementia. Journal of the American Geriatrics Society. 2015; 63(8):1495-1502

19. Casotto V, Rolfini M, Ferroni E, Savioli V, Gennaro N, Avossa F et al. End-of-life place of care, health care settings, and health care transitions among cancer patients: Impact of an integrated cancer palliative care plan. Journal of Pain and Symptom Management. 2017; 54(2):167-175

20. Centeno MM, Kahveci KL. Transitional care models: Preventing readmissions for high-risk patient populations. Critical Care Nursing Clinics of North America. 2014; 26(4):589-597

21. Chan B, Goldman LE, Sarkar U, Schneidermann M, Kessell E, Guzman D et al. The effect of a care transition intervention on the patient experience of older multi-lingual adults in the safety net: Results of a randomized controlled trial. Journal of General Internal Medicine. 2015; 30(12):1788-1794

22. Chipps J, Grey A, Hilton G, Linford J, Pearce S, Thomas T. The discharge process for palliative care patients. Nursing Standard. 1997; 11(42):41-44

23. Coombs MA, Darlington AE, Long-Sutehall T, Pattison N, Richardson A. Transferring patients home to die: What is the potential population in UK critical care units? BMJ Supportive & Palliative Care. 2017; 7(1):98-101

24. Coombs MA, Nelson K, Psirides AJ, Suter N, Pedersen A. Characteristics and dying trajectories of adult hospital patients from acute care wards who die following review by the rapid response team. Anaesthesia and Intensive Care. 2016; 44(2):262-269

25. Cortes TA, Wexler S, Fitzpatrick JJ. The transition of elderly patients between hospitals and nursing homes. Improving nurse-to-nurse communication. Journal of Gerontological Nursing. 2004; 30(6):10-15, quiz 52-53

26. Cummings GG, Reid RC, Estabrooks CA, Norton PG, Cummings GE, Rowe BH et al. Older persons' transitions in care (OPTIC): A study protocol. BMC Geriatrics. 2012; 12:75

27. Curtis L, Burns A. Unit costs of health & social care 2016. Canterbury. University of Kent Personal Social Services Research Unit, 2016.

28. D'Angelo D, Chiara M, Vellone E, Alvaro R, Casale G, Stefania L et al. Transitions between care settings after enrollment in a palliative care service in Italy: A retrospective analysis. International Journal of Palliative Nursing. 2013; 19(3):110-115

29. Darlington A-SE, Long-Sutehall T, Richardson A, Coombs MA. A national survey exploring views and experience of health professionals about transferring patients from critical care home to die. Palliative Medicine. 2015; 29(4):363-370

30. Davies SL, Goodman C, Bunn F, Victor C, Dickinson A, Iliffe S et al. A systematic review of integrated working between care homes and health care services. BMC Health Services Research. 2011; 11:320

31. Devi PS. A timely referral to palliative care team improves quality of life. Indian Journal of Palliative Care. 2011; 17(Suppl):S14-16

32. do Carmo TM, Paiva BS, de Siqueira MR, da Rosa Ld.e T, de Oliveira CZ, Nascimento MS et al. A phase II study in advanced cancer patients to evaluate the early transition to palliative care (the PREPArE trial): protocol study for a randomized controlled trial. Trials. 2015; 16:160

33. Downar J, Barua R, Rodin D, Lejnieks B, Gudimella R, McCredie V et al. Changes in end of life care 5 years after the introduction of a rapid response team: A multicentre retrospective study. Resuscitation. 2013; 84(10):1339-1344

34. Drake K. Care transitions at the end of life. Nursing Management. 2016; 47(10):20-28

35. Dumont I, Dumont S, Turgeon J. Continuity of care for advanced cancer patients. Journal of Palliative Care. 2005; 21(1):49-56

36. Erickson SE, Fried TR, Cherlin E, Johnson-Hurzeler R, Horwitz SM, Bradley EH. The effect of inpatient hospice units on hospice use post-admission. Home Health Care Services Quarterly. 2002; 21(2):73-83

37. Escarrabill J. Discharge planning and home care for end-stage COPD patients. European Respiratory Journal. 2009; 34(2):507-512

38. Espinosa L, Young A, Walsh T. Barriers to intensive care unit nurses providing terminal care: An integrated literature review. Critical Care Nursing Quarterly. 2008; 31(1):83-93

39. Fainsinger RL, Bruera E, MacMillan K. Innovative palliative care in Edmonton. Canadian Family Physician. 1997; 43:1983-1986

40. Farkas J, Kadivec S, Kosnik M, Lainscak M. Effectiveness of discharge-coordinator intervention in patients with chronic obstructive pulmonary disease: study protocol of a randomized controlled clinical trial. Respiratory Medicine. 2011; 105(Suppl 1):S26-30

41. Feitell S, Hankins SR, Eisen HJ. Adjunctive therapy and management of the transition of care in patients with heart failure. Cardiology Clinics. 2014; 32(1):163-174

42. Feltner C, Jones CD, Cene CW, Zheng ZJ, Sueta CA, Coker-Schwimmer EJ et al. Transitional care interventions to prevent readmissions for persons with heart failure: A systematic review and meta-analysis. Annals of Internal Medicine. 2014; 160(11):774-784

43. Fried TR, van Doorn C, O'Leary JR, Tinetti ME, Drickamer MA. Older persons' perceptions of home and hospital as sites of treatment for acute illness. American Journal of Medicine. 1999; 107(4):317-323

44. Fried TR, Van Doorn C, O'Leary JR, Tinetti ME, Drickamer MA. Older persons' preferences for site of terminal care. Annals of Internal Medicine. 1999; 131(2):109-112

45. Giuffrida J. Palliative care in your nursing home: Program development and innovation in transitional care. Journal Of Social Work In End-Of-Life & Palliative Care. 2015; 11(2):167-177

46. Goelz T, Wuensch A, Stubenrauch S, Bertz H, Wirsching M, Fritzsche K. Addressing the transition from curative to palliative care: Concept and acceptance of a specific communication skills training for physicians in oncology--COM-ON-p. Onkologie. 2010; 33(1-2):65-69

47. Gott M, Gardiner C, Ingleton C, Seymour J, Noble B, Bennett M. Transitions to palliative care for older people in acute hospitals. Palliative Medicine. 2010; 24(2):215-216

48. Gott M, Ingleton C, Bennett MI, Gardiner C. Transitions to palliative care in acute hospitals in England: Qualitative study. BMJ. 2011; 342(7802):1-7

49. Gott M, Ingleton C, Gardiner C, Richards N, Cobb M, Ryan A et al. Transitions to palliative care for older people in acute hospitals: a mixed-methods study Health Services and Delivery Research. 2013; 1(11)

50. Grainger MN, Hegarty S, Schofield P, White V, Jefford M. Discussing the transition to palliative care: Evaluation of a brief communication skills training program for oncology clinicians. Palliative and Supportive Care. 2010; 8(4):441-447

51. Gray LC, Peel NM, Crotty M, Kurrle SE, Giles LC, Cameron ID. How effective are programs at managing transition from hospital to home? A case study of the Australian Transition Care Program. BMC Geriatrics. 2012; 12:6

52. Green E, Gardiner C, Gott M, Ingleton C. Exploring the extent of communication surrounding transitions to palliative care in heart failure: The perspectives of health care professionals. Journal of Palliative Care. 2011; 27(2):107-116

53. Green E, Gott M, Wong J. Why do adults with palliative care needs present to the emergency department? A narrative review of the literature. Progress in Palliative Care. 2016; 24(4):195-203

54. Greysen SR, Hoi-Cheung D, Garcia V, Kessell E, Sarkar U, Goldman L et al. "Missing pieces"--functional, social, and environmental barriers to recovery for vulnerable older adults transitioning from hospital to home. Journal of the American Geriatrics Society. 2014; 62(8):1556-1561

55. Harrison MB, Browne GB, Roberts J, Tugwell P, Gafni A, Graham ID. Quality of life of individuals with heart failure: a randomized trial of the effectiveness of two models of hospital-to-home transition. Medical Care. 2002; 40(4):271-282

56. Heidenreich PA, Sahay A, Mittman BS, Oliva N, Gholami P, Rumsfeld JS et al. Facilitation of a multihospital community of practice to increase enrollment in the hospital to home national quality improvement initiative. Joint Commission Journal on Quality & Patient Safety. 2015; 41(8):361-369

57. Hendrix C, Tepfer S, Forest S, Ziegler K, Fox V, Stein J et al. Transitional Care Partners: a hospital-to-home support for older adults and their caregivers. Journal of the American Association of Nurse Practitioners. 2013; 25(8):407-414

58. Hoover C, Plamann J, Beckel J. Outcomes of an interdisciplinary transitional care quality improvement project on self-management and health care use in patients with heart failure. Journal of Gerontological Nursing. 2016; 43(1):23-31

59. Hopkins B, Gold M, Wei A, Grigoriadis G. Improving the transition to palliative care for patients with acute leukemia: A coordinated care approach. Cancer Nursing. 2017; 40(3):e17-e23

60. Houghton A, Bowling A, Clarke KD, Hopkins AP, Jones I. Does a dedicated discharge coordinator improve the quality of hospital discharge? Quality in Health Care. 1996; 5(2):89-96

61. Hui D, Elsayem A, Palla S, De La Cruz M, Li Z, Yennurajalingam S et al. Discharge outcomes and survival of patients with advanced cancer admitted to an acute palliative care unit at a comprehensive cancer center. Journal of Palliative Medicine. 2010; 13(1):49-57

62. Ingleton C, Payne S, Sargeant A, Seymour J. Barriers to achieving care at home at the end of life: transferring patients between care settings using patient transport services. Palliative Medicine. 2009; 23(8):723-730

63. Jones D, Moran J, Winters B, Welch J. The rapid response system and end-of-life care. Current Opinion in Critical Care. 2013; 19(6):616-623

64. Klinkenberg M, Visser G, van Groenou MI, van der Wal G, Deeg DJ, Willems DL. The last 3 months of life: care, transitions and the place of death of older people. Health & Social Care in the Community. 2005; 13(5):420-430

65. Ko W, Deliens L, Miccinesi G, Giusti F, Moreels S, Donker GA et al. Care provided and care setting transitions in the last three months of life of cancer patients: A nationwide monitoring study in four European countries. BMC Cancer. 2014; 14:960

66. Kotzsch F, Stiel S, Heckel M, Ostgathe C, Klein C. Care trajectories and survival after discharge from specialized inpatient palliative care--results from an observational follow-up study. Supportive Care in Cancer. 2015; 23(3):627-634

67. Lainscak M, Kadivec S, Kosnik M, Benedik B, Bratkovic M, Jakhel T et al. Discharge coordinator intervention prevents hospitalizations in patients with COPD: A randomized controlled trial. Journal of the American Medical Directors Association. 2013; 14(6):450.e451-456

68. LaMantia MA, Scheunemann LP, Viera AJ, Busby-Whitehead J, Hanson LC. Interventions to improve transitional care between nursing homes and hospitals: A systematic review. Journal of the American Geriatrics Society. 2010; 58(4):777-782

69. Langhorne P, Jepsen BG, Larsen T. Early home-supported discharge after stroke: A brief report on the practical implementation. International Journal of Rehabilitation Research. 2014; 37(2):192-194

70. Langhorne P, Taylor G, Murray G, Dennis M, Anderson C, Bautz-Holter E et al. Early supported discharge services for stroke patients: A meta-analysis of individual patients' data. Lancet. 2005; 365(9458):501-506

71. Le Berre M, Maimon G, Sourial N, Guériton M, Vedel I. Impact of transitional care services for chronically ill older patients: A systematic evidence review. Journal of the American Geriatrics Society. 2017; 65(7):1597-1608

72. Lin IP, Wu SC, Huang ST. Continuity of care and avoidable hospitalizations for chronic obstructive pulmonary disease (COPD). Journal of the American Board of Family Medicine: JABFM. 2015; 28(2):222-230

73. Lin Y, Myall M, Jarrett N. Uncovering the decision-making work of transferring dying patients home from critical care units: An integrative review. Journal of Advanced Nursing. 2017; Epublication

74. Linden A, Butterworth SW. A comprehensive hospital-based intervention to reduce readmissions for chronically ill patients: A randomized controlled trial. American Journal of Managed Care. 2014; 20(10):783-792

75. Manderson B, McMurray J, Piraino E, Stolee P. Navigation roles support chronically ill older adults through healthcare transitions: A systematic review of the literature. Health & Social Care in the Community. 2012; 20(2):113-127

76. McBride D. Community-based palliative care teams reduce use of acute care at end of life. ONS connect. 2014; 29(3):44

77. McCauley KM, Bixby MB, Naylor MD. Advanced practice nurse strategies to improve outcomes and reduce cost in elders with heart failure. Disease Management. 2006; 9(5):302-310

78. Medical Emergency Team End-of-Life Care Investigators. The timing of Rapid-Response Team activations: a multicentre international study. Critical Care and Resuscitation. 2013; 15(1):15-20

79. Meier DE, Beresford L. Palliative care's challenge: facilitating transitions of care. Journal of Palliative Medicine. 2008; 11(3):416-421

80. Menec VH, Nowicki S, Kalischuk A. Transfers to acute care hospitals at the end of life: Do rural/remote regions differ from urban regions? Rural & Remote Health. 2010; 10(1):1281

81. Mesteig M, Helbostad JL, Sletvold O, Rosstad T, Saltvedt I. Unwanted incidents during transition of geriatric patients from hospital to home: A prospective observational study. BMC Health Services Research. 2010; 10:1

82. Miller SC, Lima JC, Intrator O, Martin E, Bull J, Hanson LC. Palliative care consultations in nursing homes and reductions in acute care use and potentially burdensome end-of-life transitions. Journal of the American Geriatrics Society. 2016; 64(11):2280-2287

83. Moback B, Gerrard R, Minton O, Campbell J, Taylor L, Stone PC. Evaluating a fast-track discharge service for patients wishing to die at home. International Journal of Palliative Nursing. 2011; 17(10):501-506

84. Money AG, Atwal A, Young KL, Day Y, Wilson L, Money KG. Using the Technology Acceptance Model to explore community dwelling older adults' perceptions of a 3D interior design application to facilitate pre-discharge home adaptations. BMC Medical Informatics and Decision Making. 2015; 15:73

85. Morrison J, Palumbo MV, Rambur B. Reducing preventable hospitalizations with two models of transitional care. Journal of Nursing Scholarship. 2016; 48(3):322-329

86. National Institute for Health and Care Excellence. Developing NICE guidelines: the manual. London. National Institute for Health and Care Excellence, 2014. Available from: http://www.nice.org.uk/article/PMG20/chapter/1%20Introduction%20and%20overview

87. Naylor MD, Brooten D, Campbell R, Jacobsen BS, Mezey MD, Pauly MV et al. Comprehensive discharge planning and home follow-up of hospitalized elders: A randomized clinical trial. JAMA. 1999; 281(7):613-620

88. Naylor MD, Brooten DA, Campbell RL, Maislin G, McCauley KM, Schwartz JS. Transitional care of older adults hospitalized with heart failure: A randomized, controlled trial. Journal of the American Geriatrics Society. 2004; 52(5):675-684

89. Nelson JE, Mathews KS, Weissman DE, Brasel KJ, Campbell M, Curtis JR et al. Integration of palliative care in the context of rapid response: A report from the improving palliative care in the ICU advisory board. Chest. 2015; 147(2):560-569

90. Ng AY, Wong FK, Lee PH. Effects of a transitional palliative care model on patients with end-stage heart failure: study protocol for a randomized controlled trial. Trials. 2016; 17:173

91. Nielsen JD, Palshof T, Mainz J, Jensen AB, Olesen F. Randomised controlled trial of a shared care programme for newly referred cancer patients: Bridging the gap between general practice and hospital. Quality & Safety in Health Care. 2003; 12(4):263-272

92. Noro A, Poss JW, Hirdes JP, Finne-Soveri H, Ljunggren G, Bjornsson J et al. Method for Assigning Priority Levels in Acute Care (MAPLe-AC) predicts outcomes of acute hospital care of older persons--a cross-national validation. BMC Medical Informatics and Decision Making. 2011; 11:39

93. Oliver C, Mucci F. A partnership to improve continuity of care for terminally ill persons in the community. Canadian Oncology Nursing Journal. 2000; 10(1):40-41

94. Ornstein K, Smith KL, Foer DH, Lopez-Cantor MT, Soriano T. To the hospital and back home again: A nurse practitioner-based transitional care program for hospitalized homebound people. Journal of the American Geriatrics Society. 2011; 59(3):544-551

95. Parkes CM. Terminal care: Home, hospital, or hospice? Lancet. 1985; 1(8421):155-157

96. Penders YW, Van den Block L, Donker GA, Deliens L, Onwuteaka-Philipsen B, Euro I. Comparison of end-of-life care for older people living at home and in residential homes: A mortality follow-back study among GPs in the Netherlands. British Journal of General Practice. 2015; 65(640):e724-730

97. Phillips CO, Wright SM, Kern DE, Singa RM, Shepperd S, Rubin HR. Comprehensive discharge planning with postdischarge support for older patients with congestive heart failure: A meta-analysis. JAMA. 2004; 291(11):1358-1367

98. Phongtankuel V, Scherban BA, Reid MC, Finley A, Martin A, Dennis J et al. Why do home hospice patients return to the hospital? A study of hospice provider perspectives. Journal of Palliative Medicine. 2016; 19(1):51-56

99. Ranganathan A, Dougherty M, Waite D, Casarett D. Can palliative home care reduce 30-day readmissions? Results of a propensity score matched cohort study. Journal of Palliative Medicine. 2013; 16(10):1290-1293

100. Readding LA. Hospital to home: Smoothing the journey for the new ostomist. British Journal of Nursing. 2005; 14(16):S16-20

101. Reinke LF, Engelberg RA, Shannon SE, Wenrich MD, Vig EK, Back AL et al. Transitions regarding palliative and end-of-life care in severe chronic obstructive pulmonary disease or advanced cancer: Themes identified by patients, families, and clinicians. Journal of Palliative Medicine. 2008; 11(4):601-609

102. Robinson J, Gott M, Gardiner C, Ingleton C. A qualitative study exploring the benefits of hospital admissions from the perspectives of patients with palliative care needs. Palliative Medicine. 2015; 29(8):703-710

103. Rockers TH, Hoagland B. Continuum of care comes full circle. Adding hospice care allows a Denver system to better meet patient needs. Health Progress. 1994; 75(7):44-45, 51

104. Rosenberg M, Rosenberg L. Integrated model of palliative care in the emergency department. Western Journal of Emergency Medicine. 2013; 14(6):633-636

105. Rubenstein LZ, Josephson KR, Harker JO, Miller DK, Wieland D. The Sepulveda GEU Study revisited: long-term outcomes, use of services, and costs. Aging. 1995; 7(3):212-217

106. Sahlberg-Blom E, Ternestedt BM, Johansson JE. The last month of life: Continuity, care site and place of death. Palliative Medicine. 1998; 12(4):287-296

107. Schweitzer B, Blankenstein N, Slort W, Knol DL, Deliens L, Van Der Horst H. Writing information transfers for out-of-hours palliative care: A controlled trial among GPs. Scandinavian Journal of Primary Health Care. 2016; 34(2):186-195

108. Sharma G, Freeman J, Zhang D, Goodwin JS. Continuity of care and intensive care unit use at the end of life. Archives of Internal Medicine. 2009; 169(1):81-86

109. Smeenk FW, Witte LP, Haastregt JC, Schipper RM, Biezemans HP, Crebolder HF. Transmural care. A new approach in the care for terminal cancer patients: Its effects on re-hospitalization and quality of life. Patient Education and Counseling. 1998; 35(3):189-199

110. Stauffer BD, Fullerton C, Fleming N, Ogola G, Herrin J, Stafford PM et al. Effectiveness and cost of a transitional care program for heart failure: A prospective study with concurrent controls. Archives of Internal Medicine. 2011; 171(14):1238-1243

111. Summerton H. Discharge planning: Establishing an effective coordination team. British Journal of Nursing. 1998; 7(20):1263-1267

112. Tam B, Salib M, Fox-Robichaud A. The effect of rapid response teams on end-of-life care: A retrospective chart review. Canadian Respiratory Journal. 2014; 21(5):302-306

113. Tan YY, Blackford J. 'Rapid discharge': Issues for hospital-based nurses in discharging cancer patients home to die. Journal of Clinical Nursing. 2015; 24(17-18):2601-2610

114. Tang VL, French CJ, Cipher DJ, Rastogi P. Trends in hospice referral and length of stay at a veterans hospital over the past decade. American Journal of Hospice & Palliative Medicine. 2013; 30(5):432-436

115. Tangeman JC, Rudra CB, Kerr CW, Grant PC. A hospice-hospital partnership: Reducing hospitalization costs and 30-day readmissions among seriously ill adults. Journal of Palliative Medicine. 2014; 17(9):1005-1010

116. Tena-Nelson R, Santos K, Weingast E, Amrhein S, Ouslander J, Boockvar K. Reducing potentially preventable hospital transfers: Results from a thirty nursing home collaborative. Journal of the American Medical Directors Association. 2012; 13(7):651-656

117. Thomas C, Ramcharan A. Why do patients with complex palliative care needs experience delayed hospital discharge? Nursing Times. 2010; 106(25):15-17

118. Tibaldi V, Isaia G, Bergerone S, Moiraghi C, Gariglio F, Marchetto C et al. A randomized clinical trial on the efficacy of an early discharge to a hospital at home

service of elderly patients with acute decompensation of severe chronic heart failure. Giornale di Gerontologia. 2013; 61(2):78-85

119. Toles MP, Abbott KM, Hirschman KB, Naylor MD. Transitions in care among older adults receiving long-term services and supports. Journal of Gerontological Nursing. 2012; 38(11):40-47

120. Turley M, Wang S, Meng D, Kanter MH, Garrido T. An information model for automated assessment of concordance between advance care preferences and care delivered near the end of life. Journal of the American Medical Informatics Association. 2016; 23(e1):e118-124

121. Utens CMA, Goossens LMA, Smeenk FWJM, Rutten-van Molken MPMH, Van Vliet M, Braken MW et al. Early assisted discharge with generic community nursing for chronic obstructive pulmonary disease exacerbations: Results of a randomised controlled trial. BMJ Open. 2012; 2 (5):e001684

122. Van den Block L, Pivodic L, Pardon K, Donker G, Miccinesi G, Moreels S et al. Transitions between health care settings in the final three months of life in four EU countries. European Journal of Public Health. 2015; 25(4):569-575

123. Verhaegh KJ, MacNeil-Vroomen JL, Eslami S, Geerlings SE, de Rooij SE, Buurman BM. Transitional care interventions prevent hospital readmissions for adults with chronic illnesses. Health Affairs. 2014; 33(9):1531-1539

124. Walsh S, Kingston RD. The use of hospital beds for terminally ill cancer patients. European Journal of Surgical Oncology. 1988; 14(5):367-370

125. Wang SY, Aldridge MD, Gross CP, Canavan M, Cherlin E, Johnson-Hurzeler R et al. Transitions between healthcare settings of hospice enrollees at the end of life. Journal of the American Geriatrics Society. 2016; 64(2):314-322

126. Watkins L. An evidence-based strategy for transitioning patients from the hospital to the community. North Carolina Medical Journal. 2012; 73(1):48-50

127. Watkins L, Hall C, Kring D. Hospital to home: A transition program for frail older adults. Professional Case Management. 2012; 17(3):117-123; quiz 124-115

128. Weaver LA, Doran KA. Telephone follow-up after cardiac surgery: facilitating the transition from hospital to home. American Journal of Nursing. 2001; 101(5):24OO-24SS

129. Wills LA. Continuity of care for patients with malignant disease. Postgraduate Medical Journal. 1978; 54(632):391-394

130. Wilson SA. The transition to nursing home life: A comparison of planned and unplanned admissions. Journal of Advanced Nursing. 1997; 26(5):864-871

131. Wong FKY, Ng AYM, Lee PH, Lam PT, Ng JSC, Ng NHY et al. Effects of a transitional palliative care model on patients with end-stage heart failure: A randomised controlled trial. Heart. 2016; 102(14):1100-1108

132. Wood JK. Facilitating care transitions for older adults. Minnesota Medicine. 2013; 96(1):52-53

133. Yung Ying T. Facilitating terminal discharge: fulfilling the hospitalised patient's wish for home death in the final hours. International Journal of Palliative Nursing. 2016; 22(11):541-548

134. Zhao Y. Effects of a discharge planning intervention for elderly patients with coronary heart disease in Tianjin, China: a randomized controlled trial. Hong Kong Polytechnic University (People's Republic of China). 2004

Appendices

Appendix A: Review protocols

Table 6: Review protocol for what service models (or service components) enable an optimal transition between care settings in people in their last year of life?

Question number: 10

Relevant section of Scope:

Service delivery models for end of life care, including both acute, community and third sector settings covering:

- types of services (supportive and palliative care) provided by generalists and specialists during the course of the last year of life,
- who delivers the services and how, multidisciplinary team composition,
- timing and review of service provision,
- location of services, for example, place of care**,**
- out of hours, weekend and 24/7 availability of services.

Field names are based on PRISMA-P.]

ID	Field	Content
I	Review question	What service models (or service components) enable an optimal transition between care settings in people in their last year of life?
II	Type of review question	Intervention A review of health economic evidence related to the same review question was conducted in parallel with this review. For details see the health economic review protocol for this NICE guideline.
III	Objective of the review	To identify what service models or service components enable an optimal transition between care settings in people in their last year of life.
IV	Eligibility criteria – population / disease / condition / issue / domain	Adults (aged over 18 or over) with progressive life-limiting conditions thought to be entering the last year of life.
V	Eligibility criteria – intervention(s) / exposure(s) / prognostic factor(s)	• Service models or components enabling an optimal transition between care settings, for example: ○ Lead health professional ○ Methods of recording and sharing information ○ Out of hours procedures ○ Advance care planning ○ Discharge planning team ○ Dedicated transport services ○ Involvement of carers ○ Integration of health and social care
VI	Eligibility criteria – comparator(s) / control	• To each other (alone or in combination) • No specific facilitators of an optimal transition between care

	or reference (gold) standard	settings (usual care)
VII	Outcomes and prioritisation	CRITICAL • Quality of life (Continuous) • Preferred and actual place of death (Dichotomous) • Preferred and actual place of care (Dichotomous) IMPORTANT • Length of survival (Continuous) • Length of stay (Continuous) • Hospitalisation (Dichotomous) • Number of hospital visits (Dichotomous) • Number of visits to accident and emergency (Dichotomous) • Number of unscheduled admissions (Dichotomous) • Use of community services (Dichotomous) • Avoidable/inappropriate admissions to ICU (Dichotomous) • Inappropriate attempt at cardiopulmonary resuscitation (Dichotomous) • Staff satisfaction (Continuous) • Patient/carer reported outcomes (satisfaction) (Continuous)
VIII	Eligibility criteria – study design	• Systematic reviews • RCTs • Non-randomised comparative studies, including before and after studies.
IX	Other inclusion exclusion criteria	Exclusions: • Children (17 years or younger) • Studies will only be included if they reported one or more of the outcomes listed above • Descriptive (non-comparative) studies will be excluded
X	Proposed sensitivity / subgroup analysis, or meta-regression	Subgroups to be analysed if heterogeneity found: • Younger adults (aged 18-25) • Frail elderly • People with dementia • People with hearing loss • People with advanced heart and lung disease • People in prisons • Socioeconomic inequalities (people from lower income brackets) • Homeless people/vulnerably housed • Travelers • People with learning difficulties • People with disabilities • People with mental health problems • Migrant workers • LGBT • People in whom life-prolonging therapies are still an active option

XI	Selection process – duplicate screening / selection / analysis	Quality assurance will be undertaken by a senior research fellow prior to completion. Review strategy/other analysis: • Information on identification tools used as part of a service will be extracted. • Due to the expected complexity of the service models implemented in the studies, studies will be reported separately if necessary. In such case, studies on the populations included in the subgroup list will be highlighted to the Committee and will be considered when making the recommendations
XII	Data management (software)	• Pairwise meta-analyses were performed using Cochrane Review Manager (RevMan5). • GRADEpro was used to assess the quality of evidence for each outcome. • Endnote was used for: o Bibliography, citations, sifting and reference management • Evibase was used for • Data extraction and quality assessment / critical appraisal
XIII	Information sources – databases and dates	Clinical search databases to be used: Medline, Embase, Cochrane Library, Current Nursing and Allied Health Literature (CINAHL), PsycINFO, Healthcare Management Information Consortium (HMIC), Social Policy and Practice (SSP), Applied Social Sciences Index and Abstracts (ASSIA) Date: All years Health economics search databases to be used: Medline, Embase, NHSEED, HTA Date: Medline, Embase from 2014 NHSEED, HTA – All years Language: Restrict to English only A call for evidence was also conducted.
XIV	Identify if an update	Not applicable
XV	Author contacts	https://www.nice.org.uk/guidance/indevelopment/gid-cgwave0799
XVI	Highlight if amendment to previous protocol	For details please see section 4.5 of Developing NICE guidelines: the manual.
XVII	Search strategy – for one database	For details please see Appendix B
XVIII	Data collection process – forms / duplicate	A standardised evidence table format will be used, and published as Appendix D.
XIX	Data items – define all variables to be collected	For details please see evidence tables in Appendix D (clinical evidence tables)
XX	Methods for assessing bias at outcome / study level	Standard study checklists were used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual The risk of bias across all available evidence was evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working

		group http://www.gradeworkinggroup.org/ [Please document any deviations/alternative approach when GRADE isn't used or if a modified GRADE approach has been used for non-intervention or non-comparative studies.]
XXI	Criteria for quantitative synthesis	For details please see section 6.4 of Developing NICE guidelines: the manual.
XXII	Methods for quantitative analysis – combining studies and exploring (in)consistency	For details please see the separate Methods report for this guideline.
XXIII	Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual. [Consider exploring publication bias for review questions where it may be more common, such as pharmacological questions or certain disease areas. Describe any steps taken to mitigate against publication bias, such as examining trial registries.]
XXIV	Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual.
XXV	Rationale / context – what is known	For details please see the introduction to the evidence review.
XXVI	Describe contributions of authors and guarantor	A multidisciplinary committee [https://www.nice.org.uk/guidance/indevelopment/gid-cgwave0799] developed the evidence review. The committee was convened by the National Guideline Centre (NGC) and chaired by Mark Thomas in line with section 3 of Developing NICE guidelines: the manual. Staff from NGC undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost-effectiveness analysis where appropriate, and drafted the evidence review in collaboration with the committee. For details please see Developing NICE guidelines: the manual.
XXVII	Sources of funding / support	NGC is funded by NICE and hosted by the Royal College of Physicians.
XXVIII	Name of sponsor	NGC is funded by NICE and hosted by the Royal College of Physicians.
XXIX	Roles of sponsor	NICE funds NGC to develop guidelines for those working in the NHS, public health and social care in England.
XXX	PROSPERO registration number	Not registered

Table 7: Review protocol for what is the best way to facilitate discharge of a person in their last year of life back to the community from another setting (for example, the hospital)?

Question number: 11

Relevant section of Scope:

Service delivery models for end of life care, including both acute, community and third sector settings covering:

- types of services (supportive and palliative care) provided by generalists and specialists during the course of the last year of life,
- who delivers the services and how, multidisciplinary team composition,

- timing and review of service provision,
- location of services, for example, place of care**,**
- out of hours, weekend and 24/7 availability of services.

Field names are based on PRISMA-P.]

ID	Field	Content
I	Review question	What is the best way to facilitate discharge of a person in their last year of life back to the community from another setting (for example, the hospital)?
II	Type of review question	Intervention A review of health economic evidence related to the same review question was conducted in parallel with this review. For details see the health economic review protocol for this NICE guideline.
III	Objective of the review	To identify the most clinically and cost-effective way to discharge back to a preferred place of care from another setting.
IV	Eligibility criteria – population / disease / condition / issue / domain	Adults (aged over 18 or over) with progressive life-limiting conditions thought to be entering the last year of life.
V	Eligibility criteria – intervention(s) / exposure(s) / prognostic factor(s)	• Service model or policy to facilitate discharge back to the community from other setting (for example hospitals) interventions would include: ○ Rapid discharge pathways ○ Discharge planning
VI	Eligibility criteria – comparator(s) / control or reference (gold) standard	• To each other (alone or in combination) • No standardized model or policy to facilitate discharge (usual care)
VII	Outcomes and prioritisation	CRITICAL • Quality of life (Continuous) • Preferred and actual place of death (Dichotomous) • Preferred and actual place of care (Dichotomous) IMPORTANT • Length of survival (Continuous) • Length of stay (Continuous) • Hospitalisation (Dichotomous) • Number of hospital visits (Dichotomous) • Number of visits to accident and emergency (Dichotomous) • Number of unscheduled admissions (Dichotomous) • Use of community services (Dichotomous) • Avoidable/inappropriate admissions to ICU (Dichotomous) • Inappropriate resuscitation (Dichotomous) Staff satisfaction (Continuous) Patient/carer reported outcomes (satisfaction) (Continuous)

VIII	Eligibility criteria – study design	• Systematic reviews • RCTs • Non-randomised comparative studies, including before and after studies.
IX	Other inclusion exclusion criteria	Exclusions: • Children (17 years or younger) • Studies will only be included if they reported one or more of the outcomes listed above • Descriptive (non-comparative) studies will be excluded
X	Proposed sensitivity / subgroup analysis, or meta-regression	Subgroups to be analysed if heterogeneity found: • Younger adults (aged 18-25) • Frail elderly • People with dementia • People with hearing loss • People with advanced heart and lung disease • People in prisons • Socioeconomic inequalities (people from lower income brackets) • Homeless people/vulnerably housed • Travelers • People with learning difficulties • People with disabilities • People with mental health problems • Migrant workers • LGBT • People in whom life-prolonging therapies are still an active option
XI	Selection process – duplicate screening / selection / analysis	Quality assurance will be undertaken by a senior research fellow prior to completion. Review strategy/other analysis: • Information on identification tools used as part of a service will be extracted. • Due to the expected complexity of the service models implemented in the studies, studies will be reported separately if necessary. In such case, studies on the populations included in the subgroup list will be highlighted to the Committee and will be considered when making the recommendations
XII	Data management (software)	• Pairwise meta-analyses were performed using Cochrane Review Manager (RevMan5). • GRADEpro was used to assess the quality of evidence for each outcome. • Endnote was used for: ○ Bibliographies / citations, text mining, and study sifting • Evibase was used for • Data extraction and quality assessment / critical appraisal
XIII	Information sources – databases and dates	Databases: Medline, Embase, The Cochrane LIbrary Date limits for search: all years Language: English only

		A call for evidence was also conducted.
XIV	Identify if an update	Not applicable
XV	Author contacts	https://www.nice.org.uk/guidance/indevelopment/gid-cgwave0799
XVI	Highlight if amendment to previous protocol	For details please see section 4.5 of Developing NICE guidelines: the manual.
XVII	Search strategy – for one database	For details please see Appendix B
XVIII	Data collection process – forms / duplicate	A standardised evidence table format will be used, and published as Appendix D of the evidence report.
XIX	Data items – define all variables to be collected	For details please see evidence tables in Appendix D (clinical evidence tables)
XX	Methods for assessing bias at outcome / study level	Standard study checklists were used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual The risk of bias across all available evidence was evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/ [Please document any deviations/alternative approach when GRADE isn't used or if a modified GRADE approach has been used for non-intervention or non-comparative studies.]
XXI	Criteria for quantitative synthesis	For details please see section 6.4 of Developing NICE guidelines: the manual.
XXII	Methods for quantitative analysis – combining studies and exploring (in)consistency	For details please see the separate Methods report for this guideline.
XXIII	Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual. [Consider exploring publication bias for review questions where it may be more common, such as pharmacological questions or certain disease areas. Describe any steps taken to mitigate against publication bias, such as examining trial registries.]
XXIV	Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual.
XXV	Rationale / context – what is known	For details please see the introduction to the evidence review.
XXVI	Describe contributions of authors and guarantor	A multidisciplinary committee [https://www.nice.org.uk/guidance/indevelopment/gid-cgwave0799] developed the evidence review. The committee was convened by the National Guideline Centre (NGC) and chaired by Mark Thomas in line with section 3 of Developing NICE guidelines: the manual. Staff from NGC undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost-effectiveness analysis where appropriate, and drafted the evidence review in collaboration with the committee. For details please see Developing NICE guidelines: the manual.
XXVII	Sources of funding / support	NGC is funded by NICE and hosted by the Royal College of Physicians.

XXVIII	Name of sponsor	NGC is funded by NICE and hosted by the Royal College of Physicians.
XXIX	Roles of sponsor	NICE funds NGC to develop guidelines for those working in the NHS, public health and social care in England.
XXX	PROSPERO registration number	Not registered

1 **Table 8: Health economic review protocol**

Review question	All questions – health economic evidence
Objectives	To identify health economic studies relevant to any of the review questions.
Search criteria	• Populations, interventions and comparators must be as specified in the clinical review protocol above. • Studies must be of a relevant health economic study design (cost–utility analysis, cost-effectiveness analysis, cost–benefit analysis, cost–consequences analysis, comparative cost analysis). • Studies must not be a letter, editorial or commentary, or a review of health economic evaluations. (Recent reviews will be ordered although not reviewed. The bibliographies will be checked for relevant studies, which will then be ordered.) • Unpublished reports will not be considered unless submitted as part of a call for evidence. • Studies must be in English.
Search strategy	A health economic study search will be undertaken using population-specific terms and a health economic study filter – see Appendix D
Review strategy	Studies not meeting any of the search criteria above will be excluded. Studies published before 2007, abstract-only studies and studies from non-OECD countries or the USA will also be excluded. Each remaining study will be assessed for applicability and methodological limitations using the NICE economic evaluation checklist which can be found in Appendix H of Developing NICE guidelines: the manual (2014).[86] **Inclusion and exclusion criteria** • If a study is rated as both 'Directly applicable' and with 'Minor limitations' then it will be included in the guideline. A health economic evidence table will be completed and it will be included in the health economic evidence profile. • If a study is rated as either 'Not applicable' or with 'Very serious limitations' then it will usually be excluded from the guideline. If it is excluded then a health economic evidence table will not be completed and it will not be included in the health economic evidence profile. • If a study is rated as 'Partially applicable', with 'Potentially serious limitations' or both then there is discretion over whether it should be included. **Where there is discretion** The health economist will make a decision based on the relative applicability and quality of the available evidence for that question, in discussion with the guideline committee if required. The ultimate aim is to include health economic studies that are helpful for decision-making in the context of the guideline and the current NHS setting. If several studies are considered of sufficiently high applicability and methodological quality that they could all be included, then the health economist, in discussion with the committee if required, may decide to include only the most applicable studies and to selectively exclude the remaining studies. All studies excluded on the basis of applicability or methodological limitations will be listed with explanation as excluded health economic studies in Appendix M.

	The health economist will be guided by the following hierarchies. *Setting:* • UK NHS (most applicable). • OECD countries with predominantly public health insurance systems (for example, France, Germany, Sweden). • OECD countries with predominantly private health insurance systems (for example, Switzerland). • Studies set in non-OECD countries or in the USA will be excluded before being assessed for applicability and methodological limitations. *Health economic study type:* • Cost–utility analysis (most applicable). • Other type of full economic evaluation (cost–benefit analysis, cost-effectiveness analysis, cost–consequences analysis). • Comparative cost analysis. • Non-comparative cost analyses including cost-of-illness studies will be excluded before being assessed for applicability and methodological limitations. *Year of analysis:* • The more recent the study, the more applicable it will be. • Studies published in 2007 or later but that depend on unit costs and resource data entirely or predominantly from before 2007 will be rated as 'Not applicable'. • Studies published before 2007 will be excluded before being assessed for applicability and methodological limitations. *Quality and relevance of effectiveness data used in the health economic analysis:* • The more closely the clinical effectiveness data used in the health economic analysis match with the outcomes of the studies included in the clinical review the more useful the analysis will be for decision-making in the guideline.

Appendix B: Literature search strategies

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2017 https://www.nice.org.uk/guidance/pmg20/resources/developing-nice-guidelines-the-manual-pdf-72286708700869

For more detailed information, please see the Methodology Review.

B.1 Clinical search literature search strategy

Searches for were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 9: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (Ovid)	1946 – 04 January 2019	Exclusions
Embase (Ovid)	1974 – 04 January 2019	Exclusions
The Cochrane Library (Wiley)	Cochrane Reviews to Issue 1	None

Database	Dates searched	Search filter used
	of 12, January 2019 CENTRAL to Issue 1 of 12, January 2019 DARE, and NHSEED to Issue 2 of 4 2015 HTA to Issue 4 of 4 2016	
CINAHL, Current Nursing and Allied Health Literature (EBSCO)	Inception – 04 January 2019	Limiters - English Language; Exclude MEDLINE records; Publication Type: Clinical Trial, Journal Article, Meta Analysis, Randomized Controlled Trial, Systematic Review: Age Groups: All Adult; Language: English
PsycINFO (ProQuest)	Inception – 04 January 2019	Study type
HMIC. Healthcare Management Information Consortium (Ovid)	1979 – 04 January 2019	Exclusions
SPP, Social Policy and Practice	1981 – 04 January 2019	Study types
ASSIA, Applied Social Sciences Index and Abstracts (ProQuest)	1987 – 04 January 2019	None

1

2

3

4 **Medline (Ovid) search terms**

1.	Palliative care/
2.	Terminal care/
3.	Hospice care/
4.	palliat*.ti,ab.
5.	Terminally Ill/
6.	((terminal* or long term or longterm) adj2 (care* or caring or ill*)).ti,ab.
7.	((dying or terminal) adj (phase* or stage*)).ti,ab.
8.	life limit*.ti,ab.
9.	Nursing Homes/
10.	((care or nursing) adj2 (home or homes)).ti,ab.
11.	Respite Care/
12.	((respite or day) adj2 (care or caring)).ti,ab.

13.	Hospices/
14.	hospice*.ti,ab.
15.	exp Advance Care Planning/
16.	(advance* adj2 (plan* or decision* or directive*)).ti,ab.
17.	living will*.ti,ab.
18.	*Patient care planning/
19.	*Attitude to Death/
20.	(attitude* adj3 (death* or dying*)).ti,ab.
21.	*Physician-Patient Relations/
22.	*Long-Term Care/
23.	*"Delivery of Health Care"/
24.	(end adj2 life).ti,ab.
25.	EOLC.ti,ab.
26.	((last or final) adj2 (year or month*) adj2 life).ti,ab.
27.	((dying or death) adj2 (patient* or person* or people or care or caring)).ti,ab.
28.	or/1-27
29.	letter/
30.	editorial/
31.	news/
32.	exp historical article/
33.	Anecdotes as Topic/
34.	comment/
35.	case report/
36.	(letter or comment*).ti.
37.	or/29-36
38.	randomized controlled trial/ or random*.ti,ab.
39.	37 not 38
40.	animals/ not humans/
41.	exp Animals, Laboratory/
42.	exp Animal Experimentation/
43.	exp Models, Animal/
44.	exp Rodentia/
45.	(rat or rats or mouse or mice).ti.
46.	or/39-45
47.	28 not 46
48.	limit 47 to English language
49.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
50.	48 not 49
51.	*"Continuity of Patient Care"/
52.	*Aftercare/ or *Patient discharge/ or *Patient handoff/ or *Patient transfer/ or *Transitional care/
53.	Patient Discharge Summaries/
54.	((patient* or person* or people or nursing* or clinic*) adj (discharg* or handover* or hand* over* or handoff* or hand off* or signout* or sign* out* or signover* or sign* over*)).ti,ab.

55.	((care or caring or serv*) adj2 (continu* or change* or transition* or transfer*)).ti,ab.
56.	(discharg* adj2 (facilitat* or rapid* or pathway* or path way* or plan* or program*)).ti,ab.
57.	or/51-56
58.	50 and 57
59.	After-Hours Care/
60.	((morning* or evening* or weekday or weekend* or 7 day or seven day or seven-day or after-hour* or 24 hour* or 24hour* or twenty-four-hour* or out-of-hour* or 9-5 or Monday-Friday or Saturday or Sunday) adj3 (service* or access* or availab* or hour* or appointment* or care or caring or palliativ* or pharmacy* or telephone* or advic* or advis* or consult* or support* or nurs* or speciali* or physician* or doctor* or expert* or professional* or paramedic* or general practioner* or GP* or social worker* or case worker* or ambulance* or health worker* or physiotherapist* or therapist*)).ti,ab.
61.	rapid response.ti,ab.
62.	Hospital Rapid Response Team/
63.	(critical care adj2 outreach).ti,ab.
64.	medical emergency team*.ti,ab.
65.	(hospital* adj2 home*).ti,ab.
66.	hospital at night.ti,ab.
67.	("NHS 111" or "NHS 24" or "NHS Direct").ti,ab.
68.	exp telemedicine/
69.	(telehealth* or tele-health* or telemedicine* or tele-medicine* or teleconsult* or tele-consult* or tele-monitor* or telemonitor* or telemanag* or tele-manag* or telepharm* or tele-pharm* or telenurs* or tele-nurs* or tele-homecare or telehomecare or tele-support or telesupport or mobile health or ehealth or e-health or mhealth or m-health).ti,ab.
70.	hotlines/
71.	(hotline* or helpline* or help-line* or call cent* or call service*).ti,ab.
72.	((email* or e-mail* or telephone* or phone* or video*) adj3 (servic* or advic* or advis* or consult* or support* or care* or caring* or appoint*)).ti,ab.
73.	or/59-72
74.	(commission* adj2 (support* or service* or model*)).ti,ab.
75.	((service* or program* or co-ordinat* or co ordinat* or coordinat*) adj2 (model* or deliver* or strateg* or support* or access* or method* or system* or policies or policy or availab*)).ti,ab.
76.	Critical Pathways/
77.	((critical or clinic* or service* or care) adj2 path*).ti,ab.
78.	Patient Care Bundles/
79.	(care adj2 (bundle* or service* or package* or standard*)).ti,ab.
80.	or/74-79
81.	(assess* or criteria* or predict* or recogni* or identif* or refer*).ti,ab.
82.	50 and 80 and 81
83.	gold standard*.ti,ab.
84.	50 and 83
85.	(amber adj2 bundle).ti,ab.
86.	82 or 84 or 85
87.	patient care team/
88.	interdisciplinary communication/
89.	(((interdisciplin* or inter-disciplin* or interprofession* or inter-profession* or multidisciplin* or multi-disciplin* or multi-profession* or multiprofession* or

	transprofession* or trans-profession*) adj2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or collaborat* or relat*)) or MDT or IDT).ti,ab.
90.	(((integrat* or network*) adj2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or collaborat* or relat*)) or MDT or IDT).ti,ab.
91.	(key adj2 work*).ti,ab.
92.	((healthcare or care) adj2 (lead or leader or leads or facilitat*)).ti,ab.
93.	((healthcare or care) adj1 profession*).ti,ab.
94.	*Case Management/
95.	(case adj2 manage*).ti,ab.
96.	(co-ordinator* or coordinator* or coordinate* or co-ordinate*).ti,ab.
97.	Or/87-96
98.	interdisciplinary communication/
99.	exp Communication Barriers/
100.	(communicat* or discuss* or speak* or talk* or convers* or contact).ti,ab.
101.	((handover or hand over or share or shared or sharing or transfer*) adj3 information*).ti,ab.
102.	(followup or follow up).ti,ab.
103.	(palliativ* adj2 (care or caring)).ti,ab.
104.	Or/98-103
105.	50 and 97 and 104
106.	Social Welfare/ec, ed, es, eh, ma, st, sn, td [Economics, Education, Ethics, Ethnology, Manpower, Standards, Statistics & Numerical Data, Trends]
107.	Charities/ec, ed, es, ma, mt, og, st, sn, sd, td, ut [Economics, Education, Ethics, Manpower, Methods, Organization & Administration, Standards, Statistics & Numerical Data, Supply & Distribution, Trends, Utilization]
108.	Home Care Services/ec, ed, es, ma, mt, og, st, sn, sd, td, ut [Economics, Education, Ethics, Manpower, Methods, Organization & Administration, Standards, Statistics & Numerical Data, Supply & Distribution, Trends, Utilization]
109.	Community Health Nursing/ec, ed, es, ma, mt, og, st, sn, sd, td, ut [Economics, Education, Ethics, Manpower, Methods, Organization & Administration, Standards, Statistics & Numerical Data, Supply & Distribution, Trends, Utilization]
110.	Telemedicine/ec, es, ma, mt, og, st, sn, td, ut [Economics, Ethics, Manpower, Methods, Organization & Administration, Standards, Statistics & Numerical Data, Trends, Utilization]
111.	exp remote consultation/
112.	*telemedicine/ or *telepathology/ or *teleradiology/ or *telerehabilitation/
113.	(telemedicine or tele medicine or telehealth or tele health or virtual hospital* or helpline* or help line* or rapid response team* or telepathology or teleradiology or telerehabilitatio).ti,ab.
114.	((tele* or remote) adj2 consult*).ti,ab.
115.	Mobile Health Units/ec, es, ma, og, st, sn, sd, td, ut [Economics, Ethics, Manpower, Organization & Administration, Standards, Statistics & Numerical Data, Supply & Distribution, Trends, Utilization]
116.	(mobile adj2 (health or care) adj2 unit*).ti,ab.
117.	(hospital-based home care or HBHC or hospital-based hospice care or acute hospital care).ti,ab.
118.	(hospital adj3 (domicil* or home)).ti,ab.

119.	home hospitali*ation.ti,ab.
120.	exp Home Care Agencies/
121.	(social adj (welfare or care)).ti,ab.
122.	(nurs* adj4 (home-visit* or home visit* or home-based or home based)).ti,ab.
123.	((district* or communit* or home or visit*) adj nurs*).ti,ab.
124.	(community adj2 (health care or healthcare or nursing or nurse*)).ti,ab.
125.	((hospitali*ation* or admission* or readmission* or admit*) adj3 (reduc* or avoid* or prevent* or inappropiate or increase* or risk*)).ti,ab.
126.	Or/106-125
127.	exp Advance Care Planning/
128.	(advance* adj2 (plan* or decision* or directive*)).ti,ab.
129.	living will*.ti,ab.
130.	or/127-129
131.	Caregivers/
132.	Spouses/
133.	Family/
134.	(spouse* or wife or wives or husband* or carer* or caregiver* or care giver* or significant other* or friend* or partner* or family or families or individual* or sibling* or brother* or sister* or relative or relatives or mothers* or daughters* or father* or son or sons or uncle* or aunt* or grand mother* or grandmother* or grandfather* or grand father* or aunt* or uncle* or cousin* or niece* or nephew*).ti,ab.
135.	Or/131-134
136.	((replacement or break* or holiday* or respite) adj3 (care* or service*)).ti,ab.
137.	((communit* or support* or psychosocial* or psycholog*) adj3 (service* or group* or system*)).ti,ab.
138.	((group* or support* or psychosocial* or psycholog*) adj3 (selfhelp or self help or therap*)).ti,ab.
139.	((psychosocial* or psycholog*) adj2 support*).ti,ab.
140.	Self-Help Groups/
141.	exp social support/
142.	Counseling/
143.	(counseling or counselling*).ti,ab.
144.	(buddy* or buddies).ti,ab.
145.	((health* or medical*) adj2 check*).ti,ab.
146.	((spouse* or wife or wives or husband* or carer* or caregiver* or care giver* or significant other* or friend* or partner* or family or families or individual* or sibling* or brother* or sister* or relative or relatives or mothers* or daughters* or father* or son or sons or uncle* or aunt* or grand mother* or grandmother* or grandfather* or grand father* or aunt* or uncle* or cousin* or niece* or nephew*) adj3 (education or educate or educating or information or literature or leaflet* or booklet* or pamphlet* or website* or knowledge)).ti,ab.
147.	or/136-146
148.	50 and 135 and 147
149.	"referral and consultation"/
150.	(referral* or referred or referring or refer or refers or consult*).ti,ab.
151.	(recommend* or direct*).ti,ab.
152.	or/149-151
153.	(service* adj3 (provision* or deliver* or addition* or method* or time* or timing or frequent* or frequenc* or review* or ident* or assess*)).ti,ab.

154.	50 and (73 or 97 or 126 or 130 or 152 or 153)
155.	58 or 86 or 105 or 148 or 154

1 **Embase (Ovid) search terms**

1.	*Palliative therapy/
2.	*Terminal care/
3.	*Hospice care/
4.	palliat*.ti,ab.
5.	*Terminally ill patient/
6.	((terminal* or long term or longterm) adj2 (care* or caring or ill*)).ti,ab.
7.	((dying or terminal) adj (phase* or stage*)).ti,ab.
8.	life limit*.ti,ab.
9.	*Nursing home/
10.	((care or nursing) adj2 (home or homes)).ti,ab.
11.	*Respite Care/
12.	((respite or day) adj2 (care or caring)).ti,ab.
13.	*Hospice/
14.	hospice*.ti,ab.
15.	living will*.ti,ab.
16.	*Attitude to Death/
17.	(attitude* adj3 (death* or dying*)).ti,ab.
18.	*Doctor patient relation/
19.	*Long term care/
20.	*Health care delivery/
21.	(end adj2 life).ti,ab.
22.	EOLC.ti,ab.
23.	((last or final) adj2 (year or month*) adj2 life).ti,ab.
24.	((dying or death) adj2 (patient* or person* or people or care or caring)).ti,ab.
25.	or/1-24
26.	letter.pt. or letter/
27.	note.pt.
28.	editorial.pt.
29.	case report/ or case study/
30.	(letter or comment*).ti.
31.	or/26-30
32.	randomized controlled trial/ or random*.ti,ab.
33.	31 not 32
34.	animal/ not human/
35.	nonhuman/
36.	exp Animal Experiment/
37.	exp Experimental Animal/
38.	animal model/
39.	exp Rodent/
40.	(rat or rats or mouse or mice).ti.
41.	or/33-40
42.	25 not 41

43.	limit 42 to English language
44.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
45.	43 not 44
46.	*patient care/ or *case management/ or *patient care planning/ or *rapid response team/
47.	*aftercare/
48.	*hospital discharge/
49.	*clinical handover/
50.	*transitional care/
51.	*patient care planning/
52.	*medical record/
53.	((patient* or person* or people or nursing* or clinic*) adj (discharg* or handover* or hand* over* or handoff* or hand off* or signout* or sign* out* or signover* or sign* over*)).ti,ab.
54.	((care or caring or serv*) adj2 (continu* or change* or transition* or transfer*)).ti,ab.
55.	(discharg* adj2 (facilitat* or rapid* or pathway* or path way* or plan* or program*)).ti,ab.
56.	or/46-55
57.	45 and 56
58.	(after hours care or after-hours care).ti,ab.
59.	((morning* or evening* or weekday or weekend* or 7 day or seven day or seven-day or after-hour* or 24 hour* or 24hour* or twenty-four-hour* or out-of-hour* or 9-5 or Monday-Friday or Saturday or Sunday) adj3 (service* or access* or availab* or hour* or appointment* or care or caring or palliativ* or pharmacy* or telephone* or advic* or advis* or consult* or support* or nurs* or speciali* or physician* or doctor* or expert* or professional* or paramedic* or general practioner* or GP* or social worker* or case worker* or ambulance* or health worker* or physiotherapist* or therapist*)).ti,ab.
60.	rapid response.ti,ab.
61.	rapid response team/
62.	(critical care adj2 outreach).ti,ab.
63.	medical emergency team*.ti,ab.
64.	(hospital* adj2 home*).ti,ab.
65.	hospital at night.ti,ab.
66.	("NHS 111" or "NHS 24" or "NHS Direct").ti,ab.
67.	exp telehealth/
68.	(telehealth* or tele-health* or telemedicine* or tele-medicine* or teleconsult* or tele-consult* or tele-monitor* or telemonitor* or telemanag* or tele-manag* or telepharm* or tele-pharm* or telenurs* or tele-nurs* or tele-homecare or telehomecare or tele-support or telesupport or mobile health or ehealth or e-health or mhealth or m-health).ti,ab.
69.	telephone/
70.	(hotline* or helpline* or help-line* or call cent* or call service*).ti,ab.
71.	((email* or e-mail* or telephone* or phone* or video*) adj3 (servic* or advic* or advis* or consult* or support* or care* or caring* or appoint*)).ti,ab.
72.	or/58-71
73.	(commission* adj2 (support* or service* or model*)).ti,ab.
74.	((service* or program* or co-ordinat* or co ordinat* or coordinat*) adj2 (model* or deliver* or strateg* or support* or access* or method* or system* or policies or policy or availab*)).ti,ab.
75.	*Clinical Pathway/

76.	((critical or clinic* or service* or care) adj2 path*).ti,ab.
77.	*Care Bundle/
78.	(care adj2 (bundle* or service* or package* or standard*)).ti,ab.
79.	or/73-78
80.	(assess* or criteria* or predict* or recogni* or identif* or refer*).ti,ab.
81.	45 and 79 and 80
82.	gold standard*.ti,ab.
83.	45 and 82
84.	(amber adj2 bundle).ti,ab.
85.	81 or 83 or 84
86.	interdisciplinary communication/
87.	patient care team*.ti,ab.
88.	(((interdisciplin* or inter-disciplin* or interprofession* or inter-profession* or multidisciplin* or multi-disciplin* or multi-profession* or multiprofession* or transprofession* or trans-profession*) adj2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or collaborat* or relat*)) or MDT or IDT).ti,ab.
89.	(((integrat* or network*) adj2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or collaborat* or relat*)) or MDT or IDT).ti,ab.
90.	(key adj2 work*).ti,ab.
91.	((healthcare or care) adj2 (lead or leader or leads or facilitat*)).ti,ab.
92.	((healthcare or care) adj1 profession*).ti,ab.
93.	*Case Management/
94.	(case adj2 manage*).ti,ab.
95.	(co-ordinator* or coordinator* or coordinate* or co-ordinate*).ti,ab.
96.	Or/86-95
97.	(advance* adj2 (plan* or decision* or directive*)).ti,ab.
98.	living will*.ti,ab.
99.	97 or 98
100.	*Caregiver/
101.	*Spouse/
102.	*Family/
103.	(spouse* or wife or wives or husband* or carer* or caregiver* or care giver* or significant other* or friend* or partner* or family or families or individual* or sibling* or brother* or sister* or relative or relatives or mothers* or daughters* or father* or son or sons or uncle* or aunt* or grand mother* or grandmother* or grandfather* or grand father* or aunt* or uncle* or cousin* or niece* or nephew*).ti,ab.
104.	Or/100-103
105.	((replacement or break* or holiday* or respite) adj3 (care* or service*)).ti,ab.
106.	((communit* or support* or psychosocial* or psycholog*) adj3 (service* or group* or system*)).ti,ab.
107.	((group* or support* or psychosocial* or psycholog*) adj3 (selfhelp or self help or therap*)).ti,ab.
108.	((psychosocial* or psycholog*) adj2 support*).ti,ab.
109.	*Self-Help/
110.	*Social support/

111.	*Counseling/
112.	(counseling or counselling*).ti,ab.
113.	(buddy* or buddies).ti,ab.
114.	((health* or medical*) adj2 check*).ti,ab.
115.	((spouse* or wife or wives or husband* or carer* or caregiver* or care giver* or significant other* or friend* or partner* or family or families or individual* or sibling* or brother* or sister* or relative or relatives or mothers* or daughters* or father* or son or sons or uncle* or aunt* or grand mother* or grandmother* or grandfather* or grand father* or aunt* or uncle* or cousin* or niece* or nephew*) adj3 (education or educate or educating or information or literature or leaflet* or booklet* or pamphlet* or website* or knowledge)).ti,ab.
116.	or/105-115
117.	45 and 104 and 116
118.	interdisciplinary communication/
119.	(communicat* or discuss* or speak* or talk* or convers* or contact).ti,ab.
120.	((handover or hand over or share or shared or sharing or transfer*) adj3 information*).ti,ab.
121.	(followup or follow up).ti,ab.
122.	(palliativ* adj2 (care or caring)).ti,ab.
123.	Or/118-121
124.	45 and 96 and 123
125.	*social welfare/
126.	*community health nursing/ or *community care/
127.	*senior center/
128.	*telemedicine/ or *telehealth/
129.	*teleconsultation/
130.	(telehealth or tele health or virtual hospital* or helpline* or help line* or rapid response team* or mobile health unit*).ti,ab.
131.	*home care/ or *home health agency/ or *home monitoring/ or *home oxygen therapy/ or *home physiotherapy/ or *home rehabilitation/ or *home respiratory care/ or *respite care/ or *visiting nursing service/
132.	*health care personnel/ or *health auxiliary/ or *nursing home personnel/
133.	(telemedicine or tele medicine or telehealth or tele health or virtual hospital* or helpline* or help line* or rapid response team* or telepathology or teleradiology or telerehabilitatio).ti,ab.
134.	((tele* or remote) adj2 consult*).ti,ab.
135.	(mobile adj2 (health or care) adj2 unit*).ti,ab.
136.	(hospital-based home care or HBHC or hospital-based hospice care or acute hospital care).ti,ab.
137.	(hospital adj3 (domicil* or home)).ti,ab.
138.	home hospitali*ation.ti,ab.
139.	(social adj (welfare or care)).ti,ab.
140.	(nurs* adj4 (home-visit* or home visit* or home-based or home based)).ti,ab.
141.	((district* or communit* or home or visit*) adj nurs*).ti,ab.
142.	(community adj2 (health care or healthcare or nursing or nurse*)).ti,ab.
143.	((hospitali*ation* or admission* or readmission* or admit*) adj3 (reduc* or avoid* or prevent* or inappropiate or increase* or risk*)).ti,ab.
144.	Or/125-143
145.	exp patient referral/

146.	(referral* or referred or referring or refer or refers or consult*).ti,ab.
147.	(recommend* or direct*).ti,ab.
148.	or/145-147
149.	(service* adj3 (provision* or deliver* or addition* or method* or time* or timing or frequent* or frequenc* or review* or ident* or assess*)).ti,ab.
150.	45 and (72 or 96 or 99 or 144 or 148 or 149)
151.	57 or 85 or 124 or 117 or 150

1 **Cochrane Library (Wiley) search terms**

#1.	MeSH descriptor: [Palliative Care] this term only
#2.	MeSH descriptor: [Terminal Care] this term only
#3.	MeSH descriptor: [Hospice Care] this term only
#4.	palliat*:ti,ab
#5.	MeSH descriptor: [Terminally Ill] this term only
#6.	((terminal* or long term or longterm) near/2 (care* or caring or ill*)):ti,ab
#7.	((dying or terminal) near (phase* or stage*)):ti,ab
#8.	life limit*:ti,ab
#9.	MeSH descriptor: [Nursing Homes] explode all trees
#10.	MeSH descriptor: [Respite Care] this term only
#11.	((respite or day) near/2 (care or caring)):ti,ab
#12.	MeSH descriptor: [Hospices] this term only
#13.	hospice*:ti,ab
#14.	MeSH descriptor: [Patient Care Planning] this term only
#15.	MeSH descriptor: [Attitude to Death] explode all trees
#16.	(attitude* near/3 (death* or dying*)):ti,ab
#17.	MeSH descriptor: [Physician-Patient Relations] this term only
#18.	MeSH descriptor: [Long-Term Care] this term only
#19.	MeSH descriptor: [Delivery of Health Care] this term only
#20.	(end near/2 life):ti,ab
#21.	EOLC:ti,ab
#22.	((last or final) near/2 (year or month*) near/2 life):ti,ab
#23.	((dying or death) near/2 (patient* or person* or people or care or caring)):ti,ab
#24.	MeSH descriptor: [Advance Care Planning] explode all trees
#25.	(advance* near/2 (plan* or decision* or directive*)):ti,ab
#26.	(or #1-#25)
#27.	MeSH descriptor: [Continuity of Patient Care] this term only
#28.	MeSH descriptor: [Aftercare] this term only
#29.	MeSH descriptor: [Patient Discharge] this term only
#30.	MeSH descriptor: [Patient Handoff] this term only
#31.	MeSH descriptor: [Patient Transfer] this term only
#32.	MeSH descriptor: [Transitional Care] this term only
#33.	MeSH descriptor: [Patient Discharge Summaries] this term only
#34.	((patient* or person* or people or nursing* or clinic*) near (discharg* or handover* or hand* over* or handoff* or hand off* or signout* or sign* out* or signover* or sign* over*)):ti,ab
#35.	((care or caring or serv*) near/2 (continu* or change* or transition* or transfer*)):ti,ab

#36.	(discharg* near/2 (facilitat* or rapid* or pathway* or path way* or plan* or program*)):ti,ab
#37.	(or #27-#36)
#38.	#26 and #37
#39.	MeSH descriptor: [After-Hours Care] explode all trees
#40.	((morning* or evening* or weekday or weekend* or 7 day or seven day or seven-day or after-hour* or 24 hour* or 24hour* or twenty-four-hour* or out-of-hour* or 9-5 or Monday-Friday or Saturday or Sunday) near/3 (service* or access* or availab* or hour* or appointment* or care or caring or palliativ* or pharmacy* or telephone* or advic* or advis* or consult* or support* or nurs* or speciali* or physician* or doctor* or expert* or professional* or paramedic* or general practioner* or GP* or social worker* or case worker* or ambulance* or health worker* or physiotherapist* or therapist*)):ti,ab
#41.	rapid next response:ti,ab
#42.	MeSH descriptor: [Hospital Rapid Response Team] explode all trees
#43.	medical next emergency next team*:ti,ab
#44.	(hospital* near/2 home*):ti,ab
#45.	hospital next at next night:ti,ab
#46.	(NHS next (111 or 24 or direct)):ti,ab
#47.	MeSH descriptor: [Telemedicine] this term only
#48.	(telehealth* or tele-health* or telemedicine* or tele-medicine* or teleconsult* or tele-consult* or tele-monitor* or telemonitor* or telemanag* or tele-manag* or telepharm* or tele-pharm* or telenurs* or tele-nurs* or tele-homecare or telehomecare or tele-support or telesupport or mobile health or ehealth or e-health or mhealth or m-health):ti,ab
#49.	MeSH descriptor: [Hotlines] explode all trees
#50.	(hotline* or helpline* or help-line* or call cent* or call service*):ti,ab
#51.	((email* or e-mail* or telephone* or phone* or video*) near/3 (servic* or advic* or advis* or consult* or support* or care* or caring* or appoint*)):ti,ab
#52.	(or #39-#51)
#53.	(commission* near/2 (support* or service* or model*)):ti,ab
#54.	((service* or program* or co-ordinat* or co ordinat* or coordinat*) near/2 (model* or deliver* or strateg* or support* or access* or method* or system* or policies or policy or availab*)):ti,ab
#55.	MeSH descriptor: [Critical Pathways] explode all trees
#56.	((critical or clinic* or service* or care) near/2 path*):ti,ab
#57.	MeSH descriptor: [Patient Care Bundles] explode all trees
#58.	(care near/2 (bundle* or service* or package* or standard*)):ti,ab
#59.	(or #53-#58)
#60.	(assess* or criteria* or predict* or recogni* or identif* or refer*):ti,ab
#61.	#26 and #59 and #60
#62.	gold standard*:ti,ab
#63.	#26 and #62
#64.	(amber near/2 bundle):ti,ab
#65.	#61 or #63 or #64
#66.	MeSH descriptor: [Patient Care Team] explode all trees
#67.	MeSH descriptor: [Interdisciplinary Communication] explode all trees
#68.	(((interdisciplin* or inter-disciplin* or interprofession* or inter-profession* or multidisciplin* or multi-disciplin* or multi-profession* or multiprofession* or transprofession* or trans-profession*) near/2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or

	collaborat* or relat*)) or MDT or IDT):ti,ab
#69.	((integrat* or network*) near/2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or collaborat* or relat*)):ti,ab
#70.	(key near/2 work*):ti,ab
#71.	((healthcare or care) near/2 (lead or leader or leads or facilitat*)):ti,ab
#72.	((healthcare or care) near/1 profession*):ti,ab
#73.	MeSH descriptor: [Case Management] this term only
#74.	(case near/2 manage*):ti,ab
#75.	(co-ordinator* or coordinator* or coordinate* or co-ordinate*):ti,ab
#76.	(or #66-#75)
#77.	MeSH descriptor: [Advance Care Planning] explode all trees
#78.	(advance* near/2 (plan* or decision* or directive*)):ti,ab
#79.	living will*:ti,ab
#80.	(or #77-#79)
#81.	MeSH descriptor: [Caregivers] this term only
#82.	MeSH descriptor: [Spouses] this term only
#83.	MeSH descriptor: [Family] this term only
#84.	(spouse* or wife or wives or husband* or carer* or caregiver* or care giver* or significant other* or friend* or partner* or family or families or individual* or sibling* or brother* or sister* or relative or relatives or mothers* or daughters* or father* or son or sons or uncle* or aunt* or grand mother* or grandmother* or grandfather* or grand father* or aunt* or uncle* or cousin* or niece* or nephew*):ti,ab
#85.	(or #81-#84)
#86.	((replacement or break* or holiday* or respite) near/3 (care* or service*)):ti,ab
#87.	((communit* or support* or psychosocial* or psycholog*) near/3 (service* or group* or system*)):ti,ab
#88.	((group* or support* or psychosocial* or psycholog*) near/3 (selfhelp or self help or therap*)):ti,ab
#89.	((psychosocial* or psycholog*) near/2 support*):ti,ab
#90.	MeSH descriptor: [Self-Help Groups] this term only
#91.	MeSH descriptor: [Social Support] explode all trees
#92.	MeSH descriptor: [Counseling] this term only
#93.	(counseling or counselling*):ti,ab
#94.	(buddy* or buddies):ti,ab
#95.	(health or medical*) near/3 check*:ti,ab
#96.	(spouse* or wife or wives or husband* or carer* or caregiver* or care giver* or significant other* or friend* or partner* or family or families or individual* or sibling* or brother* or sister* or relative or relatives or mothers* or daughters* or father* or son or sons or uncle* or aunt* or grand mother* or grandmother* or grandfather* or grand father* or aunt* or uncle* or cousin* or niece* or nephew*) near/3 (education or educate or educating or information or literature or leaflet* or booklet* or pamphlet* or website* or knowledge):ti,ab
#97.	(or #86-#96)
#98.	#26 and #85 and #97
#99.	MeSH descriptor: [Interdisciplinary Communication] explode all trees
#100.	MeSH descriptor: [Communication Barriers] explode all trees
#101.	(communicat* or discuss* or speak* or talk* or convers* or contact):ti,ab
#102.	((handover or hand over or share or shared or sharing or transfer*) near/3

	information*):ti,ab
#103.	(followup or follow up):ti,ab
#104.	(palliativ* near/2 (care or caring)):ti,ab
#105.	(or #99-#104)
#106.	#26 and #76 and #105
#107.	MeSH descriptor: [Social Welfare] explode all trees
#108.	MeSH descriptor: [Charities] explode all trees
#109.	MeSH descriptor: [Adult Day Care Centers] explode all trees
#110.	MeSH descriptor: [Community Health Nursing] explode all trees
#111.	MeSH descriptor: [Home Care Services] explode all trees
#112.	MeSH descriptor: [Senior Centers] explode all trees
#113.	MeSH descriptor: [Telemedicine] this term only
#114.	MeSH descriptor: [Remote Consultation] explode all trees
#115.	(telehealth or tele health or virtual hospital* or helpline* or help line* or rapid response team*):ti,ab
#116.	MeSH descriptor: [Mobile Health Units] explode all trees
#117.	((community based or community dwelling home or rural) near/3 (care or health care or healthcare)):ti,ab
#118.	(hospital-based home care or HBHC or hospital-based hospice care or acute hospital care):ti,ab
#119.	((hospitali*ation* or admission* or readmission* or admit*) near/3 (reduc* or avoid* or prevent* or inappropiate or increase* or risk*)):ti,ab
#120.	(home based versus hospital based):ti,ab
#121.	(hospital near/3 (domicil* or home)):ti,ab
#122.	(home hospitali*ation):ti,ab
#123.	MeSH descriptor: [Home Care Services, Hospital-Based] explode all trees
#124.	MeSH descriptor: [Home Health Nursing] explode all trees
#125.	MeSH descriptor: [Homemaker Services] explode all trees
#126.	MeSH descriptor: [Home Care Agencies] explode all trees
#127.	MeSH descriptor: [Home Health Aides] explode all trees
#128.	(social care):ti,ab
#129.	MeSH descriptor: [Nurses, Community Health] explode all trees
#130.	(nurs* near/4 (home-visit* or home visit* or home-based or home based)):ti,ab
#131.	((district* or communit* or home or visit*) near nurs*):ti,ab
#132.	(Or #107-#131)
#133.	MeSH descriptor: [Referral and Consultation] explode all trees
#134.	(referral* or referred or referring or refer or refers or consult*):ti,ab
#135.	(recommend* or direct*):ti,ab
#136.	(or #133-#135)
#137.	service* near/3 (provision* or deliver* or addition* or method* or time* or timing or frequent* or frequenc* or review* or ident* or assess*):ti,ab
#138.	#26 and(#52 or #76 or #80 or #132 or #136 or #137)
#139.	#38 or #65 or #98 or #106 or #138

1 **CINAHL (EBSCO) search terms**

S1.	MH Palliative care
S2.	MH Terminal care

S3.	MH Hospice care
S4.	TI palliat* OR AB palliat*
S5.	MW Terminally ill
S6.	TI (terminal* or long term or longterm) AND TI (care* or caring or ill*)
S7.	AB (terminal* or long term or longterm) AND AB (care* or caring or ill*)
S8.	TI (dying or terminal) AND TI (phase* or stage*)
S9.	AB (dying or terminal) AND AB (phase* or stage*)
S10.	TI life limit* OR AB life limit*
S11.	MH Nursing homes
S12.	TI (care or nursing) AND TI (home or homes)
S13.	AB (care or nursing) AND AB (home or homes)
S14.	MH Respite care
S15.	TI (respite or day) AND TI (care or caring)
S16.	AB (respite or day) AND AB (care or caring)
S17.	MH Hospices
S18.	TI Hospice* OR AB Hospice*
S19.	(MH "Patient Care Plans")
S20.	MH Attitude to Death
S21.	TI attitude* AND TI (death* or dying)
S22.	AB attitude* AND AB (death* or dying)
S23.	MH Physician-Patient Relations
S24.	(MH "Long Term Care")
S25.	(MH "Health Care Delivery")
S26.	TI end AND TI life OR AB end AND AB life
S27.	TI EOLC OR AB EOLC
S28.	TI (last or final) AND TI (year or month) AND TI life
S29.	AB (last or final) AND AB (year or month) AND AB life
S30.	TI (dying or death) AND TI (patient* or person* or people or care or caring)
S31.	AB (dying or death) AND AB (patient* or person* or people or care or caring)
S32.	TI advance* AND TI (plan* or decision* or directive*)
S33.	AB advance* AND AB (plan* or decision* or directive*)
S34.	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33
S35.	MH Continuity of Patient Care OR MH Aftercare OR MH Patient discharge OR MH Patient handoff OR MH Patient transfer OR MH Transitional care
S36.	(MM "Discharge Planning") OR (MM "Patient Discharge Summaries")
S37.	TI (((patient* or person* or people or nursing* or clinic*)) AND TX ((discharg* or handover* or hand* over* or handoff* or hand off* or signout* or sign* out* or signover* or sign* over*))
S38.	AB (((patient* or person* or people or nursing* or clinic*)) AND AB ((discharg* or handover* or hand* over* or handoff* or hand off* or signout* or sign* out* or signover* or sign* over*))
S39.	AB ((care or caring or serv*)) AND AB ((continu* or change* or transition* or transfer*))
S40.	TI ((care or caring or serv*)) AND TI ((continu* or change* or transition* or transfer*))
S41.	TI discharg* AND TI (facilitat* or rapid* or pathway* or path way* or plan* or program*)

	)
S42.	AB discharg* AND AB (facilitat* or rapid* or pathway* or path way* or plan* or program*))
S43.	S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42
S44.	S34 AND S43
S45.	out of hours care
S46.	((morning* or evening* or weekday or weekend* or 7 day or seven day or seven-day or after-hour* or 24 hour* or 24hour* or twenty-four-hour* or out-of-hour* or 9-5 or Monday-Friday or Saturday or Sunday) n3 (service* or access* or availab* or hour* or appointment* or care or caring or palliativ* or pharmacy* or telephone* or advic* or advis* or consult* or support* or nurs* or speciali* or physician* or doctor* or expert* or professional* or paramedic* or general practioner* or GP* or social worker* or case worker* or ambulance* or health worker* or physiotherapist* or therapist*))
S47.	rapid response
S48.	(critical care n2 outreach) OR medical emergency team* OR (hospital* n2 home*) OR hospital at night
S49.	NHS 111 OR NHS 24 OR NHS Direct
S50.	(MH "Telemedicine") OR (MH "Telehealth")
S51.	(telehealth* or tele-health* or telemedicine* or tele-medicine* or teleconsult* or tele-consult* or tele-monitor* or telemonitor* or telemanag* or tele-manag* or telepharm* or tele-pharm* or telenurs* or tele-nurs* or tele-homecare or telehomecare or tele-support or telesupport or mobile health or ehealth or e-health or mhealth or m-health)
S52.	(MH "Telephone Information Services")
S53.	(hotline* or helpline* or help-line* or call cent* or call service*)
S54.	((email* or e-mail* or telephone* or phone* or video*) n3 (servic* or advic* or advis* or consult* or support* or care* or caring* or appoint*))
S55.	S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54
S56.	TI commission* AND TI ((support* or service* or model*))
S57.	AB commission* AND AB ((support* or service* or model*))
S58.	TI (service* or program* or co-ordinat* or co ordinat* or coordinat*) AND TI (model* or deliver* or strateg* or support* or access* or method* or system* or policies or policy or availab*)
S59.	AB (service* or program* or co-ordinat* or co ordinat* or coordinat*) AND AB (model* or deliver* or strateg* or support* or access* or method* or system* or policies or policy or availab*)
S60.	TI (critical or clinic* or service* or care) AND TI path*
S61.	AB (critical or clinic* or service* or care) AND AB path*
S62.	TI care AND TI (bundle* or service* or package* or standard*)
S63.	AB care AND AB (bundle* or service* or package* or standard*)
S64.	S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63
S65.	TI (assess* or criteria* or predict* or recogni* or identif* or refer*) OR AB (assess* or criteria* or predict* or recogni* or identif* or refer*)
S66.	S34 AND S64 AND S65
S67.	TI gold standard* OR AB gold standard*
S68.	S34 AND S67
S69.	TI amber AND TI bundle
S70.	AB amber AND AB bundle
S71.	S69 OR S70
S72.	S66 OR S68 OR S71
S73.	(MH "Multidisciplinary Care Team+")

S74.	MDT OR IDT
S75.	((interdisciplin* or inter-disciplin* or interprofession* or inter-profession* or multidisciplin* or multi-disciplin* or multi-profession* or multiprofession* or transprofession* or trans-profession*) n2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or collaborat* or relat*))
S76.	((integrat* or network*) n2 (team* or staff* or meeting* or manag* or appointment* or system* or program* or practic* or advic* or advis* or caring or intervention* or ward* or round* or panel* or forum* or fora or communicat* or collaborat* or relat*))
S77.	TI (key n2 work*) OR AB (key n2 work*)
S78.	TI (((healthcare or care) n2 (lead or leader or leads or facilitat*))) OR AB (((healthcare or care) n2 (lead or leader or leads or facilitat*)))
S79.	TI (((healthcare or care) n1 profession*)) OR AB (((healthcare or care) n1 profession*))
S80.	MH Case Management
S81.	TI (case n2 manage*) OR AB (case n2 manage*)
S82.	TI ((co-ordinator* or coordinator* or coordinate* or co-ordinate*)*)) OR AB ((co-ordinator* or coordinator* or coordinate* or co-ordinate*))
S83.	S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82
S84.	TI advance* AND TI (plan* or decision* or directive*)
S85.	AB advance* AND AB (plan* or decision* or directive*)
S86.	S84 OR S85
S87.	MeSH descriptor: [Interdisciplinary Communication] explode all trees
S88.	MeSH descriptor: [Communication Barriers] explode all trees
S89.	(communicat* or discuss* or speak* or talk* or convers* or contact):ti,ab
S90.	((handover or hand over or share or shared or sharing or transfer*) near/3 information*):ti,ab
S91.	(followup or follow up):ti,ab
S92.	(palliativ* near/2 (care or caring)):ti,ab
S93.	S87 OR S88 OR S89 OR S90 OR S91 OR S92
S94.	S34 AND S83 AND S93
S95.	(MM "Social Welfare")
S96.	(MH "Charities")
S97.	(MM "Adult Day Center (Saba CCC)") OR (MM "Housing for the Elderly") OR (MM "Older Adult Care (Saba CCC)")
S98.	(MH "Community Health Nursing+") OR (MM "Community Health Centers")
S99.	(MH "Home Health Care+") OR (MM "Home Health Aides") OR (MM "Home Health Care Information Systems") OR (MM "Home Health Aide Service (Saba CCC)")
S100.	(MM "Housing for the Elderly") OR (MM "Rural Health Centers") OR (MM "Community Health Centers")
S101.	(MH "Telemedicine+") OR (MH "Telehealth+")
S102.	(MM "Remote Consultation") OR (MM "Telephone Consultation (Iowa NIC)") OR (MM "Services for Australian Rural and Remote Allied Health")
S103.	telehealth or tele health or virtual hospital* or helpline* or help line* or rapid response team* or senior center*
S104.	(MM "Rural Health Personnel") OR (MM "Mobile Health Units")
S105.	remote consultation
S106.	((community based or community dwelling home or rural) n3 (care or health care or healthcare))

S107.	hospital-based home care or HBHC or hospital-based hospice care or acute hospital care
S108.	((hospitali?ation* or admission* or readmission* or admit*) n3 (reduc* or avoid* or prevent* or inappropiate or increase* or risk*))
S109.	home based versus hospital based
S110.	(hospital n3 (domicil* or home))
S111.	home hospitali?ation
S112.	home care service*
S113.	(MM "Home Health Agencies") OR (MM "Nursing Home Personnel")
S114.	(MM "Homemaker Services") OR (MM "Health Services for the Aged")
S115.	(MH "Home Health Care+") OR (MM "Home Care Equipment and Supplies") OR (MH "Nursing Homes") OR (MM "National Association for Home Care & Hospice") OR (MM "Nursing Home Patients")
S116.	social care
S117.	(MM "Hospitals, Community")
S118.	(MM "Home Nursing") OR (MM "Home Nursing, Professional")
S119.	(nurs* n4 (home-visit* or home visit* or home-based or home based))
S120.	((district* or communit* or home or visit*) n nurs*)
S121.	S95 OR S96 OR S97 OR S98 OR S99 OR S100 OR S101 OR S102 OR S103 OR S104 OR S105 OR S106 OR S107 OR S108 OR S109 OR S110 OR S111 OR S112 OR S113 OR S114 OR S115 OR S116 OR S117 OR S118 OR S119 OR S120
S122.	(MH "Referral and Consultation+")
S123.	TI (referral* or referred or referring or refer or refers or consult*) OR AB (referral* or referred or referring or refer or refers or consult*)
S124.	TI (recommend* or direct*) OR AB (recommend* or direct*)
S125.	S122 OR S123 OR S124
S126.	TX service* AND TX (provision* or deliver* or addition* or method* or time* or timing or frequent* or frequenc* or review* or ident* or assess*)
S127.	AB service* AND AB (provision* or deliver* or addition* or method* or time* or timing or frequent* or frequenc* or review* or ident* or assess*)
S128.	S126 OR S127
S129.	S34 AND (S55 OR S83 OR S86 OR S121 OR S125 OR S128)
S130.	S44 OR S72 OR S94 OR S129

1 **PsycINFO (ProQuest) search terms**

1.	(ti,ab(commission* NEAR/2 (support* OR service* OR model*)) OR ((service* OR program* OR co-ordinat* OR coordinat*) NEAR/2 (model* OR deliver* OR strateg* OR support* OR access* OR method* OR system* OR policies OR policy OR availab*))) AND (SU.EXACT("Palliative Care") OR SU.EXACT("Terminally Ill Patients") OR SU.EXACT("Hospice") OR ti,ab(palliat*) OR ti,ab((terminal* OR long-term OR longterm) NEAR/2 (care* OR caring OR ill*)) OR ti,ab((dying OR terminal) NEAR/1 (phase* OR stage*)) OR ti,ab(life-limit*) OR SU.EXACT("Nursing Homes") OR ti,ab((care OR nursing) NEAR/2 (home OR homes)) OR SU.EXACT("Respite Care") OR ti,ab((respite OR day) NEAR/2 (care OR caring)) OR ti,ab(hospice*) OR MJSUB.EXACT("Treatment Planning") OR MJSUB.EXACT("Continuum of Care") OR ti,ab((advance* OR patient*) NEAR/3 (care OR caring) NEAR/3 (continu* OR plan*)) OR MJSUB.EXACT("Long Term Care") OR ti,ab(attitude* NEAR/3 (death* OR dying*)) OR ti,ab(end NEAR/2 life) OR ti,ab(EOLC) OR ti,ab((last OR final) NEAR/2 (year OR month*) NEAR/2 life) OR ti,ab((dying OR death) NEAR/2 (patient* OR person* OR people OR care OR caring)))
2.	Adolescence (13-17 Yrs), Adulthood (18 Yrs & Older), Aged (65 Yrs & Older), Middle Age (40-64 Yrs), Thirties (30-39 Yrs), Very Old (85 Yrs & Older), Young Adulthood (18-29 Yrs)

3.	1 and 2
4.	Conference Proceedings, Journal Article, Peer Reviewed Journal
5.	3 and 4

1 **HMIC (Ovid) search terms**

1.	exp End of life care/
2.	(terminal* adj ill*).ti,ab.
3.	((dying or terminal) adj (phase* or stage*)).ti,ab.
4.	life limit*.ti,ab.
5.	(end adj2 life).ti,ab.
6.	EOLC.ti,ab.
7.	((last or final) adj2 (year or month*) adj2 life).ti,ab.
8.	((dying or death) adj2 (patient* or person* or people or care or caring)).ti,ab.
9.	or/2-8
10.	(exp child/ or exp Paediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp older people/)
11.	9 not 10
12.	limit 11 to English
13.	limit 12 to (audiovis or book or chapter dh helmis or circular or microfiche dh helmis or multimedias or website)
14.	limit 12 to (audiocass or books or cdrom or chapter or dept pubs or diskettes or folio pamp or "map" or marc or microfiche or multimedia or pamphlet or parly or press or press rel or thesis or trustdoc or video or videos or website)
15.	13 or 14
16.	12 not 15
17.	euthanasia/
18.	euthanasia.ti,ab.
19.	17 or 18
20.	16 not 19

2 **SPP (Ovid) search terms**

1.	palliat*.ti,ab.
2.	((dying or terminal) adj (phase* or stage*)).ti,ab.
3.	life limit*.ti,ab.
4.	hospice*.ti,ab.
5.	(advance* adj2 (plan* or decision* or directive*)).ti,ab.
6.	living will*.ti,ab.
7.	((advance* or patient*) adj3 (care or caring) adj3 (continu* or plan*)).ti,ab.
8.	(attitude* adj3 (death* or dying*)).ti,ab.
9.	(end adj2 life).ti,ab.
10.	EOLC.ti,ab.
11.	((last or final) adj2 (year or month*) adj2 life).ti,ab.
12.	((dying or death) adj2 (patient* or person* or people or care or caring)).ti,ab.
13.	(nursing adj2 (home or homes)).ti,ab.
14.	(terminal* adj2 ill*).ti,ab.
15.	(respite adj2 (care or caring)).ti,ab.
16.	or/1-15

17.	(child* or infant*).ti,ab.
18.	(adult* or adolescent*).ti,ab.
19.	17 not 18
20.	16 not 19
21.	limit 20 to (journal or journal article or online resource or online report or report)

ASSIA (ProQuest) search terms

1.	palliat*.ti,ab. ((ti,ab(commission* N/2 (support* or service* or model*)) OR ti,ab((service* or program* or co-ordinat* or coordinat*) N/2 (model* or deliver* or strateg* or support* or access* or method* or system* or policies or policy or availab*))) AND ((SU.EXACT("Care" OR "Clinical nursing" OR "Community homes" OR "Community nursery nursing" OR "Community nursing" OR "Compassionate care" OR "Continuing care" OR "District nursing" OR "Family centred care" OR "Geriatric wards" OR "Group care" OR "Health visiting" OR "Home care" OR "Home from home care" OR "Home health aides" OR "Home helps" OR "Hospices" OR "Hostel wards" OR "Informal care" OR "Integrated care pathways" OR "Intentional care" OR "Intermediate care" OR "Intermediate care centres" OR "Lack of care" OR "Learning disability nursing" OR "Length of stay" OR "Liaison nursing" OR "Long stay wards" OR "Long term care" OR "Long term home care" OR "Long term residential care" OR "Nurse led care" OR "Nursing" OR "Occupational health nursing" OR "Ontological care" OR "Out of home care" OR "Outreach nursing" OR "Palliative care" OR "Paranursing" OR "Pastoral care" OR "Patient care" OR "Primary nursing" OR "Private residential care" OR "Process centred care" OR "Quality of care" OR "Radical health visiting" OR "Residential care" OR "Residential group care" OR "Respite care" OR "Shared care" OR "Social care" "Temporary care" OR "Terminal care" OR "Wards") OR (SU.EXACT("Terminally ill elderly people") OR SU.EXACT("Terminally ill fathers") OR SU.EXACT("Terminally ill elderly men") OR SU.EXACT("Terminally ill elderly women") OR SU.EXACT("Terminally ill young adults") OR SU.EXACT("Terminally ill parents") OR SU.EXACT("Terminally ill women") OR SU.EXACT("Terminally ill widowed sisters") OR SU.EXACT("Terminally ill colleagues") OR SU.EXACT("Terminally ill young girls") OR SU.EXACT("Terminally ill people") OR SU.EXACT("Terminally ill men")) OR SU.EXACT("Advance directives" OR "Do not resuscitate orders" OR "Durable power of attorney for health care" OR "Living wills" OR "Treatment preferences" OR "Treatment needs")) OR (ti,ab((advance* or patient*) N/3 (care or caring) N/3 (continu* or plan*)) or ti,ab(attitude* N/3 (death* or dying*)) or ti,ab(end N/2 life) or ti,ab(EOLC) or ti,ab((last or final) N/2 (year or month*) N/2 life) or ti,ab((dying or death) N/2 (patient* or person* or people or care or caring))))) OR SU.EXACT("End of life decisions")

B.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to end of life care in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase for health economics, economic modelling and quality of life studies.

Table 10: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 04 January 2019	Exclusions Health economics studies Health economics modelling studies Quality of life studies

Database	Dates searched	Search filter used
Embase	2014 – 04 January 2019	Exclusions Health economics studies Health economics modelling studies Quality of life studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 04 January 2019 NHSEED - Inception to March 2015	None

1 **Medline (Ovid) search terms**

1.	Palliative care/
2.	Terminal care/
3.	Hospice care/
4.	palliat*.ti,ab.
5.	Terminally Ill/
6.	((terminal* or long term or longterm) adj2 (care* or caring or ill*)).ti,ab.
7.	((dying or terminal) adj (phase* or stage*)).ti,ab.
8.	life limit*.ti,ab.
9.	Nursing Homes/
10.	((care or nursing) adj2 (home or homes)).ti,ab.
11.	Respite Care/
12.	((respite or day) adj2 (care or caring)).ti,ab.
13.	Hospices/
14.	hospice*.ti,ab.
15.	exp Advance Care Planning/
16.	(advance* adj2 (plan* or decision* or directive*)).ti,ab.
17.	living will*.ti,ab.
18.	*Patient care planning/
19.	*"Continuity of Patient Care"/
20.	((advance* or patient*) adj3 (care or caring) adj3 (continu* or plan*)).ti,ab.
21.	*Attitude to Death/
22.	(attitude* adj3 (death* or dying*)).ti,ab.
23.	*Physician-Patient Relations/
24.	*Long-Term Care/
25.	*"Delivery of Health Care"/
26.	(end adj2 life).ti,ab.
27.	EOLC.ti,ab.
28.	((last or final) adj2 (year or month*) adj2 life).ti,ab.
29.	((dying or death) adj2 (patient* or person* or people or care or caring)).ti,ab.
30.	or/1-29
31.	letter/
32.	editorial/
33.	news/

34.	exp historical article/
35.	Anecdotes as Topic/
36.	comment/
37.	case report/
38.	(letter or comment*).ti.
39.	or/31-38
40.	randomized controlled trial/ or random*.ti,ab.
41.	39 not 40
42.	animals/ not humans/
43.	exp Animals, Laboratory/
44.	exp Animal Experimentation/
45.	exp Models, Animal/
46.	exp Rodentia/
47.	(rat or rats or mouse or mice).ti.
48.	or/41-47
49.	30 not 48
50.	limit 49 to English language
51.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
52.	50 not 51
53.	economics/
54.	value of life/
55.	exp "costs and cost analysis"/
56.	exp Economics, Hospital/
57.	exp Economics, medical/
58.	Economics, nursing/
59.	economics, pharmaceutical/
60.	exp "Fees and Charges"/
61.	exp budgets/
62.	budget*.ti,ab.
63.	cost*.ti.
64.	(economic* or pharmaco?economic*).ti.
65.	(price* or pricing*).ti,ab.
66.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
67.	(financ* or fee or fees).ti,ab.
68.	(value adj2 (money or monetary)).ti,ab.
69.	or/53-68
70.	exp models, economic/
71.	*Models, Theoretical/
72.	*Models, Organizational/
73.	markov chains/
74.	monte carlo method/
75.	exp Decision Theory/
76.	(markov* or monte carlo).ti,ab.
77.	econom* model*.ti,ab.

78.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
79.	or/70-78
80.	quality-adjusted life years/
81.	sickness impact profile/
82.	(quality adj2 (wellbeing or well being)).ti,ab.
83.	sickness impact profile.ti,ab.
84.	disability adjusted life.ti,ab.
85.	(qal* or qtime* or qwb* or daly*).ti,ab.
86.	(euroqol* or eq5d* or eq 5*).ti,ab.
87.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
88.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
89.	(hui or hui1 or hui2 or hui3).ti,ab.
90.	(health* year* equivalent* or hye or hyes).ti,ab.
91.	discrete choice*.ti,ab.
92.	rosser.ti,ab.
93.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
94.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
95.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
96.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
97.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
98.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
99.	or/80-98
100.	52 and (69 or 79 or 99)

1 **Embase (Ovid) search terms**

1.	*Palliative therapy/
2.	*Terminal care/
3.	*Hospice care/
4.	palliat*.ti,ab.
5.	*Terminally ill patient/
6.	((terminal* or long term or longterm) adj2 (care* or caring or ill*)).ti,ab.
7.	((dying or terminal) adj (phase* or stage*)).ti,ab.
8.	life limit*.ti,ab.
9.	*Nursing home/
10.	((care or nursing) adj2 (home or homes)).ti,ab.
11.	*Respite Care/
12.	((respite or day) adj2 (care or caring)).ti,ab.
13.	*Hospice/
14.	hospice*.ti,ab.
15.	*Patient care planning/
16.	(advance* adj2 (plan* or decision* or directive*)).ti,ab.
17.	living will*.ti,ab.
18.	*Patient care/

19.	((advance* or patient*) adj3 (care or caring) adj3 (continu* or plan*)).ti,ab.
20.	*Attitude to Death/
21.	(attitude* adj3 (death* or dying*)).ti,ab.
22.	*Doctor patient relation/
23.	*Long term care/
24.	*Health care delivery/
25.	(end adj2 life).ti,ab.
26.	EOLC.ti,ab.
27.	((last or final) adj2 (year or month*) adj2 life).ti,ab.
28.	((dying or death) adj2 (patient* or person* or people or care or caring)).ti,ab.
29.	or/1-28
30.	letter.pt. or letter/
31.	note.pt.
32.	editorial.pt.
33.	case report/ or case study/
34.	(letter or comment*).ti.
35.	or/30-34
36.	randomized controlled trial/ or random*.ti,ab.
37.	35 not 36
38.	animal/ not human/
39.	nonhuman/
40.	exp Animal Experiment/
41.	exp Experimental Animal/
42.	animal model/
43.	exp Rodent/
44.	(rat or rats or mouse or mice).ti.
45.	or/37-44
46.	29 not 45
47.	limit 46 to English language
48.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
49.	47 not 48
50.	health economics/
51.	exp economic evaluation/
52.	exp health care cost/
53.	exp fee/
54.	budget/
55.	funding/
56.	budget*.ti,ab.
57.	cost*.ti.
58.	(economic* or pharmaco?economic*).ti.

59.	(price* or pricing*).ti,ab.
60.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
61.	(financ* or fee or fees).ti,ab.
62.	(value adj2 (money or monetary)).ti,ab.
63.	or/50-62
64.	statistical model/
65.	exp economic aspect/
66.	64 and 65
67.	*theoretical model/
68.	*nonbiological model/
69.	stochastic model/
70.	decision theory/
71.	decision tree/
72.	monte carlo method/
73.	(markov* or monte carlo).ti,ab.
74.	econom* model*.ti,ab.
75.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
76.	or/66-75
77.	quality-adjusted life years/
78.	"quality of life index"/
79.	short form 12/ or short form 20/ or short form 36/ or short form 8/
80.	sickness impact profile/
81.	(quality adj2 (wellbeing or well being)).ti,ab.
82.	sickness impact profile.ti,ab.
83.	disability adjusted life.ti,ab.
84.	(qal* or qtime* or qwb* or daly*).ti,ab.
85.	(euroqol* or eq5d* or eq 5*).ti,ab.
86.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
87.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
88.	(hui or hui1 or hui2 or hui3).ti,ab.
89.	(health* year* equivalent* or hye or hyes).ti,ab.
90.	discrete choice*.ti,ab.
91.	rosser.ti,ab.
92.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
93.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
94.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
95.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
96.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
97.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
98.	or/77-97

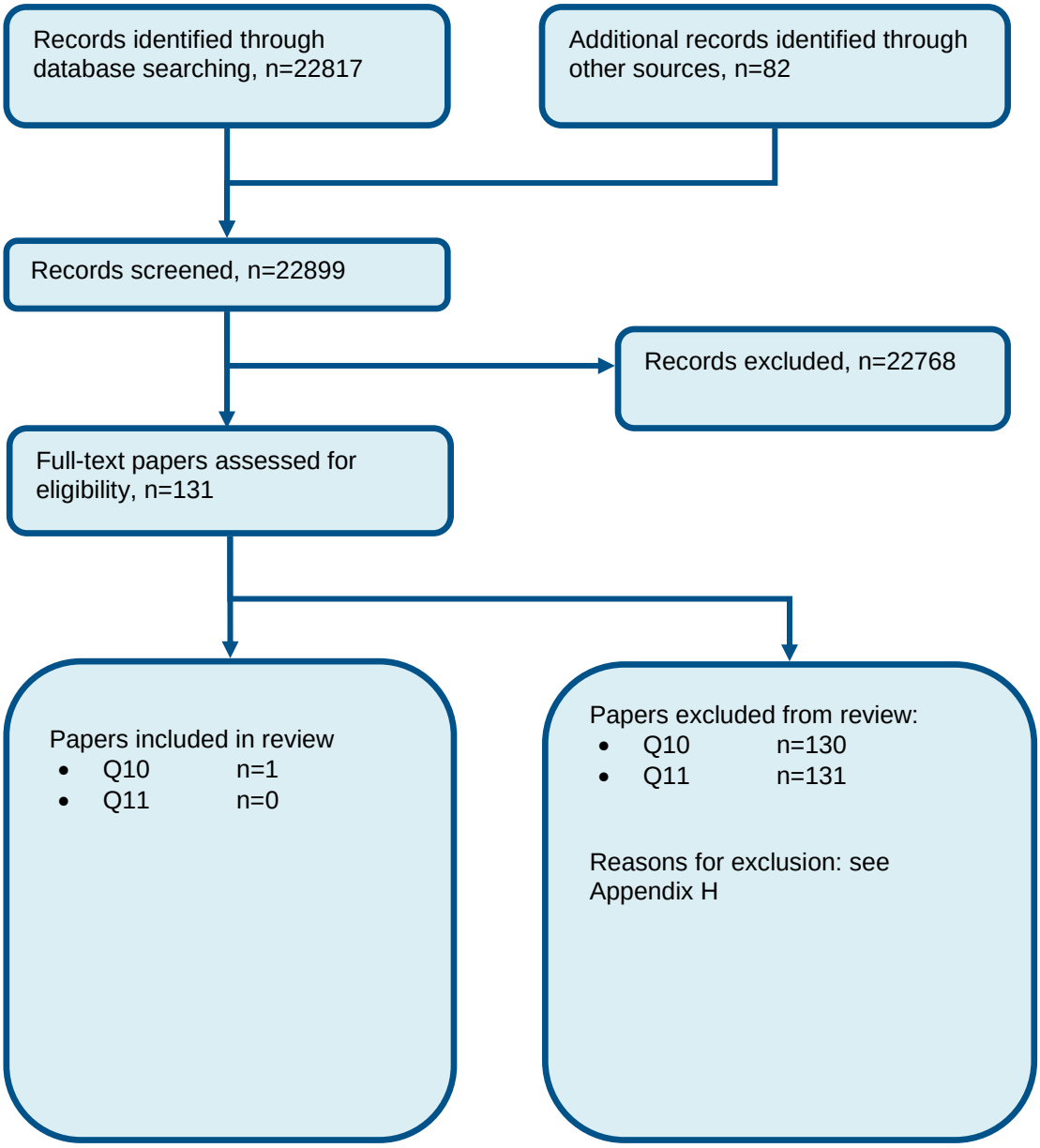
99.	49 and (63 or 76 or 98)

NHS EED and HTA (CRD) search terms

#1.	MeSH DESCRIPTOR Palliative Care IN NHSEED,HTA
#2.	MeSH DESCRIPTOR Terminal Care IN NHSEED,HTA
#3.	MeSH DESCRIPTOR Hospice Care IN NHSEED,HTA
#4.	(palliat*) IN NHSEED, HTA
#5.	MeSH DESCRIPTOR Terminally Ill IN NHSEED,HTA
#6.	(((terminal* or long term or longterm) adj2 (care* or caring or ill*))) IN NHSEED, HTA
#7.	(((dying or terminal) adj (phase* or stage*))) IN NHSEED, HTA
#8.	(life limit*) IN NHSEED, HTA
#9.	MeSH DESCRIPTOR Nursing Homes IN NHSEED,HTA
#10.	(((care or nursing) adj2 (home or homes))) IN NHSEED, HTA
#11.	MeSH DESCRIPTOR Respite Care IN NHSEED,HTA
#12.	(((respite or day) adj2 (care or caring))) IN NHSEED, HTA
#13.	MeSH DESCRIPTOR Hospices IN NHSEED,HTA
#14.	(hospice*) IN NHSEED, HTA
#15.	MeSH DESCRIPTOR Advance Care Planning EXPLODE ALL TREES IN NHSEED,HTA
#16.	((advance* adj2 (plan* or decision* or directive*))) IN NHSEED, HTA
#17.	(living will*) IN NHSEED, HTA
#18.	MeSH DESCRIPTOR Patient Care Planning IN NHSEED,HTA
#19.	MeSH DESCRIPTOR Continuity of Patient Care IN NHSEED,HTA
#20.	(((advance* or patient*) adj3 (care or caring) adj3 (continu* or plan*))) IN NHSEED, HTA
#21.	MeSH DESCRIPTOR Attitude to Death IN NHSEED,HTA
#22.	((attitude* adj3 (death* or dying*))) IN NHSEED, HTA
#23.	MeSH DESCRIPTOR Physician-Patient Relations IN NHSEED,HTA
#24.	MeSH DESCRIPTOR Long-Term Care IN NHSEED,HTA
#25.	MeSH DESCRIPTOR Delivery of Health Care IN NHSEED,HTA
#26.	((end adj2 life)) IN NHSEED, HTA
#27.	(EOLC) IN NHSEED, HTA
#28.	(((last or final) adj2 (year or month*) adj2 life)) IN NHSEED, HTA
#29.	(((dying or death) adj2 (patient* or person* or people or care or caring))) IN NHSEED, HTA
#30.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29
#31.	(#30) IN NHSEED
#32.	(#30) IN HTA

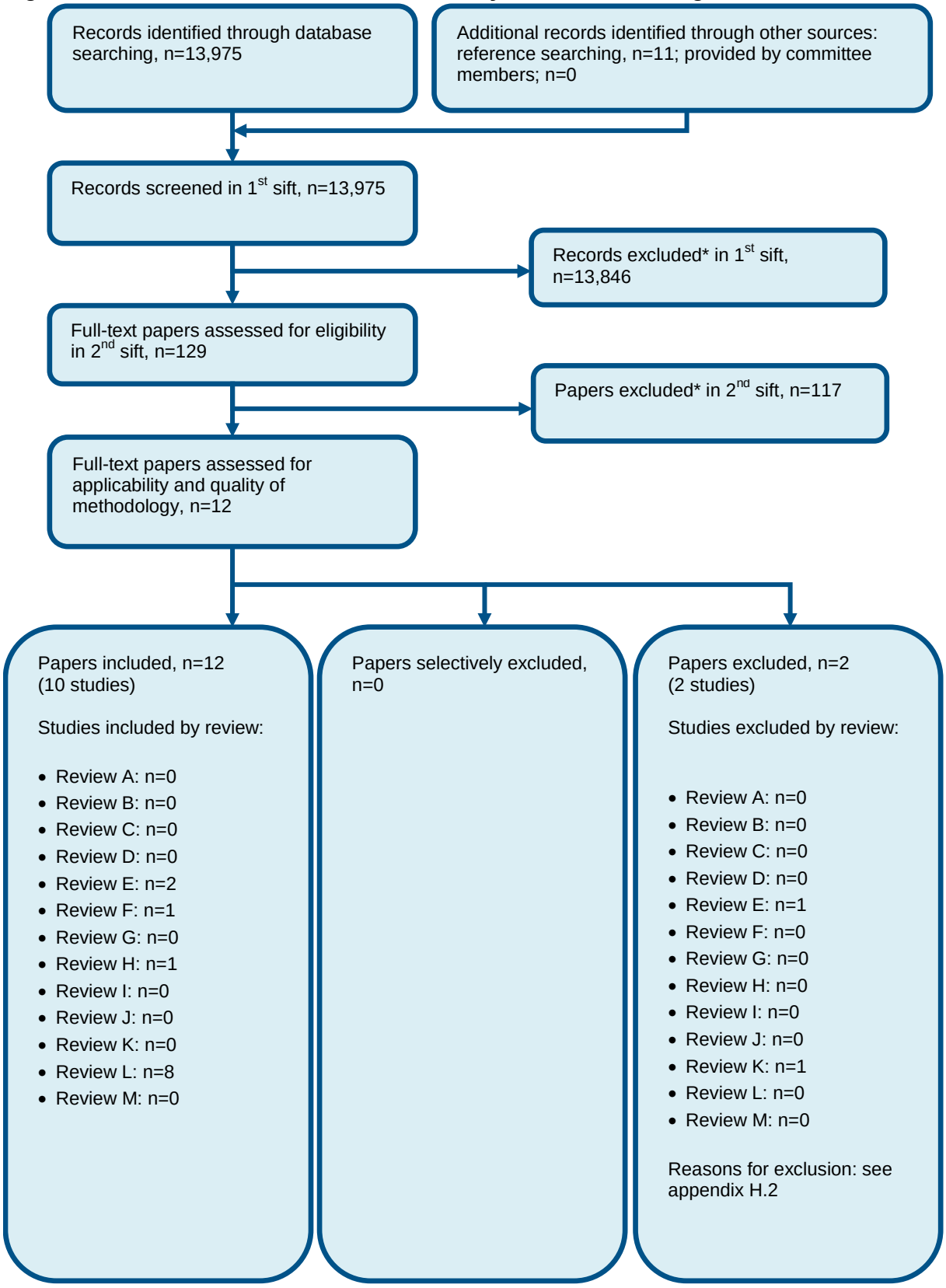
Appendix C: Clinical evidence selection

Figure 1: Flow chart of clinical study selection for the reviews of Discharge and Transition



Appendix D: Health economic study selection

Figure 2: Flow chart of health economic study selection for the guideline



* Non-relevant population, intervention, comparison, design or setting; non-English language

1

Appendix E: Clinical evidence tables

E.1 Optimal transition

Study	Wong 2016[131]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=84)
Countries and setting	Conducted in Hong Kong (China); Setting: 3 hospitals within the Hospital Authority, Hong Kong
Line of therapy	Not applicable
Duration of study	May 2013 and December 2014
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Adults (aged 18 years or over)
Subgroup analysis within study	Not applicable
Inclusion criteria	Subjects needed to fulfil the following criteria: a) they had to meet two of the following indicators identified as End Stage Heart Failure (ESHF) by the prognostic indicator guidance: i) CHF NYHA class stage III or IV, ii) patient thought to be in their last year of life by clinicians, iii) repeated hospital admissions (3 within 1 year)with symptoms of HF and iv) existence of physical or psychological symptoms despite optimal tolerated therapy; b) Cantonese speaking; c) living within the service area; d) contactable by phone; e) referral accepted by PC team
Exclusion criteria	a) discharged to institutions; b) inability to communicate; c) diagnosed with severe psychiatric disorders; d) recruited to other programmes.
Recruitment/selection of patients	Between May 2013 and December 2014. An advanced practice nurse helped to screen cases for eligibility and confirmed the recruitment with the physician.
Age, gender and ethnicity	Age - Mean (SD): Intervention 78.3(16.8), control 78.4(10). Gender (M:F): 43/41. Ethnicity: not stated
Further population details	1. Any specific population: Not applicable
Indirectness of population	No indirectness
Interventions	(n=43) Intervention 1: Service models or components enabling an optimal transition between care settings. Transitional Care Palliative - End Stage Heart Failure (TCP-ESHF): this group received home

Study	Wong 2016[131]
	visits/telephone calls every week for the first month and less frequently during the subsequent months for a total of 12 months. The design was based on two main conceptual guides: the recommended principles of palliative care for patients with HF (as per the composite guidelines drawn from Scotland, Europe and Canada) and the '4Cs' for transitional care models (tested and used by Wong et al with general medical patients: comprehensiveness, continuity, coordination, and collaboration, in alignment with the PC principles mentioned above in providing continuous and coordinated care with multiprofessional support). The TCP-ESHF was delivered by nurse case managers (NVMs) who were qualified PC home nurses with experience of caring for patients with HF. The NCMs were supported by the PC physician in service delivery. Before a patient's discharge, the nurse met the patient or patient's family to conduct a predischarge assessment. After discharge, the patient was followed up in the first 4 weeks as below: week 1 - the NCM and trained volunteers (TV) conducted a home visit together; week 2 - the NCM provided a telephone follow-up; week 3 - the TVs conducted a home visit in pairs; week 4-the NCM provided a telephone follow-up. After the first 4 weeks, the subjects in the intervention group received monthly home visits and telephone follow-up until the end of 12 weeks. The NCM assessed patients' needs in the environmental, psychosocial, psychological and health-related behaviour domains and intervened accordingly. At each encounter, the NCM would set goals and develop a mutually agreed care plan with the patients. Duration 1 year. Concurrent medication/care: Usual care as control group (n=41) Intervention 2: No specific facilitators of optimal transition between care settings (usual care). Usual care: PC medical clinic consultation, discharge advice on symptom management and medication and referrals if appropriate (for example home visits). Duration 1 year. Concurrent medication/care: NS
Funding	Academic or government funding (The work was fully supported by a grant from the Research grants council of the Hong Kong Special Administrative Region, China)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SERVICE MODELS OR COMPONENTS ENABLING A SMOOTH TRANSITION BETWEEN CARE SETTINGS versus NO SPECIFIC FACILITATORS OF SMOOTH TRANSITION BETWEEN CARE SETTINGS (USUAL CARE)

Protocol outcome 1: Quality of life
- Actual outcome for Adults (aged 18 years or over): McGill QoL total score at 4 weeks post discharge; Group 1: mean 7.57 (SD 1.38); n=43, Group 2: mean 6.46 (SD 2.3); n=41; Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness; Baseline details: demographic background of groups was comparable; Group 1 Number missing: 10; Group 2 Number missing: 6

Protocol outcome 2: Number of unscheduled admissions

Study	Wong 2016[131]
- Actual outcome for Adults (aged 18 years or over): Number of readmissions at 4 weeks; Group 1: mean 0.21 (SD 0.46); n=43, Group 2: mean 0.41 (SD 0.64); n=41; Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: Serious indirectness, Comments: No details on unscheduled; Baseline details: demographic background of groups was comparable; Group 1 Number missing: 10; Group 2 Number missing: 6 - Actual outcome for Adults (aged 18 years or over): Number of readmissions at 12 weeks; Group 1: mean 0.42 (SD 0.66); n=43, Group 2: mean 1.1 (SD 1.02); n=41; Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: Serious indirectness, Comments: No details on unscheduled; Baseline details: demographic background of groups was comparable; Group 1 Number missing: 10; Group 2 Number missing: 6- Actual outcome for Adults (aged 18 years or over): Number of people readmitted at 28 days; Group 1: 9/43, Group 2: 12/41; Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: Serious indirectness, Comments: No details on unscheduled; Baseline details: demographic background of groups was comparable; Group 1 Number missing: 10; Group 2 Number missing: 6 - Actual outcome for Adults (aged 18 years or over): Number of people readmitted at 84 days; Group 1: 14/43, Group 2: 25/41; Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: Serious indirectness, Comments: No details on unscheduled; Baseline details: demographic background of groups was comparable; Group 1 Number missing: 10; Group 2 Number missing: 6 Protocol outcome 3: Patient/carer reported outcomes (satisfaction) - Actual outcome for Adults (aged 18 years or over): Patients' satisfaction with care at 4 weeks post discharge; Group 1: mean 48.84 (SD 11.94); n=43, Group 2: mean 36.55 (SD 13.38); n=41; Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness; Baseline details: demographic background of groups was comparable; Group 1 Number missing: 10; Group 2 Number missing: 6	
Protocol outcomes not reported by the study	Hospitalisation; Number of hospital visits; Number of visits to accident and emergency Use of community services; Preferred and actual place of death; Length of survival; Staff satisfaction; Avoidable/inappropriate admissions to ICU; Inappropriate attempts at cardiopulmonary resuscitation; Preferred and actual place of care; Length of stay

E.2 Facilitating discharge

None.

Appendix F:Forest plots

F.1 Optimal transition

F.1.1 Service model enabling optimal transition (Transitional Care Palliative - End Stage Heart Failure) versus usual care (Wong 2016)

Figure 3: Quality of life (McGill total score) 4 weeks after discharge

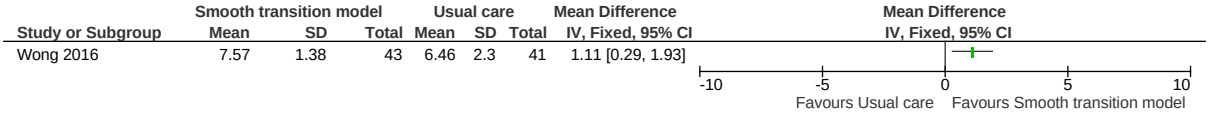


Figure 4: Number of unscheduled admissions (people readmitted) at 28 days

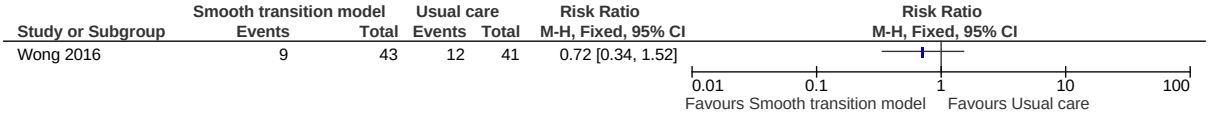


Figure 5: Number of unscheduled admissions (people readmitted) at 84 days

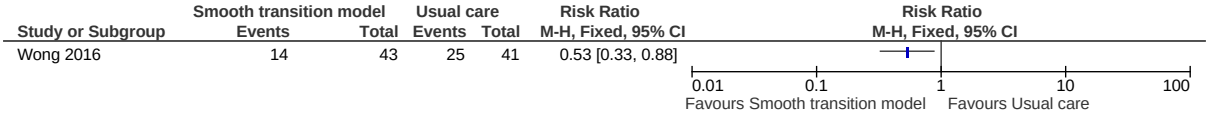


Figure 6: Number of unscheduled admissions (N of readmissions) at 4 weeks

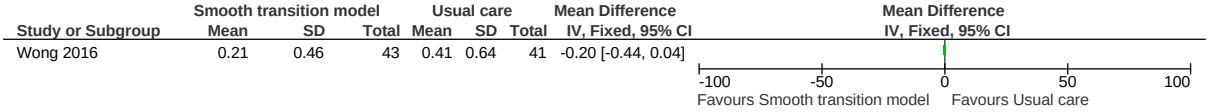


Figure 7: Number of unscheduled admissions (N of readmissions) at 12 weeks

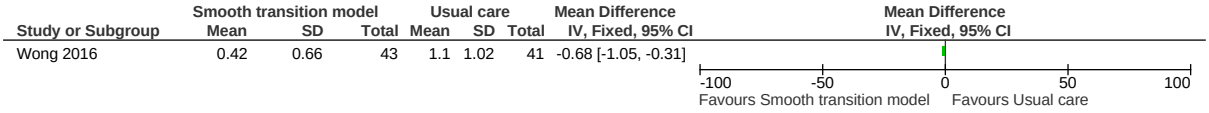
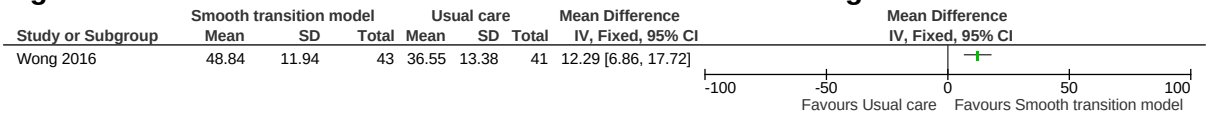


Figure 8: Patient satisfaction with care 4 weeks after discharge



F.2 Facilitating discharge

None.

Appendix G: GRADE tables

G.1 Optimal transition

Table 11: Clinical evidence profile: Service model enabling optimal transition (Transitional Care Palliative - End Stage Heart Failure) versus usual care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Model enabling smooth transition	Usual care (Wong 2016)	Relative (95% CI)	Absolute		
Quality of life (McGill total score) 4 weeks after discharge (follow-up mean 4 weeks; Better indicated by lower values)												
1	randomised trials	very serious[a]	no serious inconsistency	no serious indirectness	serious[b]	none	43	41	-	MD 1.11 higher (0.29 to 1.93 higher)	⊕OOO VERY LOW	CRITICAL
Number of unscheduled admissions (people readmitted) at 28 days (follow-up mean 4 weeks)												
1	randomised trials	very serious[a]	no serious inconsistency	serious[c]	very serious[b]	none	9/43 (20.9%)	12/41 (29.3%)	RR 0.72 (0.34 to 1.52)	82 fewer per 1000 (from 193 fewer to 152 more)	⊕OOO VERY LOW	IMPORTANT
Number of unscheduled admissions (people readmitted) at 84 days (follow-up mean 12 weeks)												
1	randomised trials	very serious[a]	no serious inconsistency	serious[c]	no serious imprecision	none	14/43 (32.6%)	25/41 (61%)	RR 0.53 (0.33 to 0.88)	287 fewer per 1000 (from 73 fewer to 409 fewer)	⊕OOO VERY LOW	IMPORTANT
Number of unscheduled admissions (N of readmissions) 4 weeks (follow-up mean 4 weeks; Better indicated by lower values)												
1	randomised trials	very serious[a]	no serious inconsistency	serious[c]	serious[b]	none	43	41	-	MD 0.2 lower (0.44 lower to 0.04 higher)	⊕OOO VERY LOW	IMPORTANT

Number of unscheduled admissions (N of readmissions) 12 weeks (follow-up mean 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[a]	no serious inconsistency	serious[c]	no serious imprecision	none	43	41	-	MD 0.68 lower (1.05 to 0.31 lower)	⊕OOO VERY LOW	IMPORTANT
Patients satisfaction 4 weeks after discharge (follow-up mean 4 weeks; Better indicated by higher values)												
1	randomised trials	very serious[a]	no serious inconsistency	no serious indirectness	no serious imprecision	none	43	41	-	MD 12.29 higher (6.86 to 17.72 higher)	⊕⊕OO LOW	IMPORTANT

[a] Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias
[b] Downgraded by 1 increment if the confidence interval crossed 1 MID or downgraded by 2 increments if the confidence interval crossed both MIDs
[c] Downgraded by 1 or 2 increments because the majority of the evidence had indirect outcomes

G.2 Facilitating discharge

None.

Appendix H: Excluded studies

H.1 Excluded clinical studies

Table 12: Studies excluded from the clinical reviews Optimal transition and Facilitating discharge

Reference	Reason for exclusion
Aaltonen 2014[1]	Inappropriate comparison
Abarshi 2010[2]	Inappropriate study design
Adam 2000[3]	Inappropriate study design
Allen 2014[4]	Systematic review is not relevant to review question or unclear PICO
Alonso-Babarro 2011[5]	Inappropriate comparison
Ang 2016[6]	Inappropriate study design
Anonymous 2017[7]	Inappropriate study design
Aparecida Partezani Rodrigues 2013[8]	Not in English
Arendts 2012[9]	Not review population
Arling 2010[10]	Inappropriate study design
Aziz 2013[11]	Inappropriate study design; not review population
Bone 2016[12]	Inappropriate comparison
Boockvar 2007[13]	Inappropriate comparison
Borrill 2017[14]	Inappropriate study design
Boyd 2010[15]	Inappropriate study design
Broadstock 2002[16]	Not review population
Burge 2005[17]	Inappropriate study design
Callahan 2015[18]	Not review population
Casotto 2017[19]	Paper not available
Centeno 2014[20]	Inappropriate study design
Chan 2015[21]	Not review population
Chipps 1997[22]	Inappropriate study design
Coombs 2016[24]	Inappropriate study design; not review population
Coombs 2017[23]	Inappropriate study design
Cortes 2004[25]	Inappropriate study design
Cummings 2012[26]	Inappropriate study design; not review population
D'Angelo 2013[28]	Inappropriate comparison
Darlington 2015[29]	Inappropriate study design; not review population
Davies 2011[30]	Systematic review is not relevant to review question or unclear PICO
Devi 2011[31]	Inappropriate study design
do Carmo 2015[32]	Inappropriate study design
Downar 2013[33]	Inappropriate comparison

Reference	Reason for exclusion
Drake 2016[34]	Inappropriate study design
Dumont 2005[35]	Inappropriate study design
Erickson 2002[36]	Inappropriate comparison
Escarrabill 2009[37]	Inappropriate study design
Espinosa 2008[38]	Systematic review is not relevant to review question or unclear PICO
Fainsinger 1997[39]	Incorrect intervention; Inappropriate comparison
Farkas 2011[40]	Inappropriate study design
Feitell 2014[41]	Inappropriate study design
Feltner 2014[42]	Systematic review is not relevant to review question or unclear PICO
Fried 1999[43]	Not review population
Fried 1999[44]	Not review population
Giuffrida 2015[45]	Inappropriate study design
Goelz 2010[46]	Inappropriate study design; inappropriate outcome
Gott 2010[47]	Inappropriate study design
Gott 2011[48]	Inappropriate study design
Gott 2013[49]	Inappropriate study design
Grainger 2010[50]	Inappropriate study design; inappropriate outcome
Gray 2012[51]	Not review population
Green 2011[52]	Inappropriate study design
Green 2016[53]	Systematic review is not relevant to review question or unclear PICO
Greysen 2014[54]	Inappropriate study design; not review population
Harrison 2002[55]	Not review population
Heidenreich 2015[56]	Not review population
Hendrix 2013[57]	Inappropriate study design
Hoover 2016[58]	Not review population
Hopkins 2016[59]	Inappropriate study design
Houghton 1996[60]	Not review population
Hui 2010[61]	Inappropriate comparison
Ingleton 2009[62]	Inappropriate study design
Jones 2013[63]	Systematic review is not relevant to review question or unclear PICO
Klinkenberg 2005[64]	Inappropriate comparison
Ko 2014[65]	Inappropriate comparison
Kotzsch 2015[66]	Incorrect intervention; Inappropriate comparison
Lainscak 2013[67]	Not review population
LaMantia 2010[68]	Systematic review is not relevant to review question or unclear PICO
Langhorne 2005[70]	Not review population

Reference	Reason for exclusion
Langhorne 2014[69]	Inappropriate study design
Le Berre 2017[71]	Not review population
Lin 2015[72]	Not review population
Lin 2017[73]	Systematic review is not relevant to review question or unclear PICO
Linden 2014[74]	Not review population
Manderson 2012[75]	Systematic review is not relevant to review question or unclear PICO
McBride 2014[76]	Inappropriate study design
McCauley 2006[77]	Incorrect intervention; Inappropriate comparison
Medical Emergency Team End-of-Life Care 2013[78]	Not review population; comparison
Meier 2008[79]	Inappropriate study design
Menec 2010[80]	Inappropriate comparison
Mesteig 2010[81]	Not review population
Miller 2016[82]	Incorrect intervention; Inappropriate comparison
Moback 2011[83]	Inappropriate study design
Money 2015[84]	Not review population
Morrison 2016[85]	Not review population
Naylor 1999[87]	Not review population
Naylor 2004[88]	Not review population
Nelson 2015[89]	Inappropriate study design
Ng 2016[90]	Inappropriate study design
Nielsen 2003[91]	Not review population
Noro 2011[92]	Not review population
Oliver 2000[93]	Inappropriate study design
Ornstein 2011[94]	Not review population
Parkes 1985[95]	Incorrect interventions
Penders 2015[96]	Incorrect intervention; Inappropriate comparison
Phillips 2004[97]	Systematic review is not relevant to review question or unclear PICO
Phongtankuel 2016[98]	Inappropriate study design
Ranganathan 2013[99]	Inappropriate comparison
Readding 2005[100]	Inappropriate study design
Reinke 2008[101]	Inappropriate study design
Robinson 2015[102]	Inappropriate study design
Rockers 1994[103]	Inappropriate study design
Rosenberg 2013[104]	Inappropriate study design
Rubenstein 1995[105]	Not review population
Sahlberg-Blom 1998[106]	Inappropriate comparison
Schweitzer 2016[107]	Inappropriate intervention

Reference	Reason for exclusion
Sharma 2009[108]	Inappropriate study design
Smeenk 1998[109]	Inappropriate comparison
Stauffer 2011[110]	Not review population
Summerton 1998[111]	Inappropriate study design
Tam 2014[112]	Inappropriate study design; inappropriate comparison
Tan 2015[113]	Inappropriate study design
Tang 2013[114]	Inappropriate comparison
Tangeman 2014[115]	Inappropriate comparison
Tena-Nelson 2012[116]	Incorrect intervention; Inappropriate comparison
Thomas 2010[117]	Inappropriate study design
Tibaldi 2013[118]	Not in English
Toles 2012[119]	Not review population
Turley 2016[120]	Inappropriate study design
Utens 2012[121]	Not review population
Van den Block 2015[122]	Inappropriate comparison
Verhaegh 2014[123]	Systematic review is not relevant to review question or unclear PICO
Walsh 1988[124]	Inappropriate study design
Wang 2016[125]	Inappropriate comparison
Watkins 2012[126]	Not review population
Watkins 2012[127]	Inappropriate study design; not review population
Weaver 2001[128]	Not review population
Wills 1978[129]	Inappropriate study design
Wilson 1997[130]	Inappropriate study design
Wood 2013[132]	Inappropriate study design
Yung Ying 2016[133]	No relevant outcome
Zhao 2004[134]	Not review population

Appendix I: Research recommendations

I.1 RR4: What is the optimal way of discharging people in the last year of life from hospitals back to their usual place of residence?

PICO question	What is the optimal way of discharging people in the last year of life from hospitals back to their usual place of residence? Population: Ideally this research would focus on a specific population, for example, those with organ failure such as end-stage heart or lung disease, or frail elderly people who have been admitted to hospital with an acute illness. The research could also be conducted in a cancer population, for example, patients with advanced cancer in hospital with complex medical complications such as subacute bowel obstruction, which could nevertheless be managed in the community. Intervention(s): This would be a 'complex medical intervention', including (a) holistic needs assessment; (b) agreement on ceiling of care and advance care planning; (c) activation of community-based services including hospice-at-home if available; (d) engagement with a dedicated discharge transport service, for example, end of life care ambulance; (e) early pick-up and monitoring once at home by community generalist and specialist health and social care staff. Comparison: The complex intervention, or more likely specific elements of it, would be compared with usual care in both hospital and community settings. Outcome(s): Subjective – including symptoms, functioning, quality of life, other PROMs, patient and carer satisfaction with care. Objective – including dependency, readmission within 1 week and 1 month, survival, death in preferred place of care, health and social care resource utilisation in the hospital and community.
Importance to patients or the population	This topic is important because lack of formal assessment of holistic needs prior to discharge can lead to failure to recognise risk factors for readmission. Lack of careful planning and liaison between hospital and community can also lead to inefficient use of resources and risk of readmission. Poor communication with ambulance services of patients' needs and abilities can lead to inappropriate and undignified means of transfer.
Relevance to NICE guidance	This research would strengthen the recommendations in this guidance and in other disease-specific guidelines.
Relevance to the NHS	The research could potentially reduce patient stays in acute hospitals by preventing delayed discharge. It could lead to improved cooperation between acute and community sectors, and with ambulance services. Results could be fed into future guidelines and disease-specific national service frameworks.
National priorities	It could inform the commissioning guidance for Local Authorities on delayed discharges [this is stated but needs citation]. It also feeds into delivery of National End of Life Care Strategy 2014.

Current evidence base	The committee found few data on what patients might need to facilitate effective discharge, for example, on equipment needs.
Equality	The committee was aware of disparity in the ability for cancer patients to be discharged home to die, for example, with hospice support, compared to people at the end of life with non-cancer conditions.
Study design	This topic requires primary research, which may be qualitative, quantitative or likely have a mixed methodology. It should follow the MRC complex intervention approach. The design could be observational, using parallel case-matched cohorts of patients with different elements being activated of the complex intervention and leaving all other factors unchanged. A randomised study could be attempted if an embedded feasibility study passed strict criteria for acceptability and recruitment. Follow-up should be for at least three months after discharge or death, whichever comes first.
Feasibility	Because of the complexity of the 'intervention', it is anticipated that this would be a lengthy study to undertake. Associated NHS research support costs would need to be carefully factored in, especially if the intervention involved a new service or significant enlargement of an existing service, for example, a dedicated ambulance. Ethical issues include obtaining consent from people with reduced or variable levels of mental capacity.
Other comments	Funding could be from one of the NIHR routes or, if the study is done in a specific disease group, from a charity such as BHF, BLF, and MNDA.
Importance	High: This research is essential to inform future updates of many key recommendations in the guideline. It also has significant implications for future service (re)configuration and carries potential for health and social care savings.

1

2