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Integrated palliative care in oncology: a protocol for a realist synthesis

Joanne Reid [iD],[1] Elspeth Banks,[2] Carolyn Blair,[3] Natasha Bradley [iD],[3] Fiona A Lynn [iD],[3] Peter OHalloran [iD],[1] Gillian Prue,[4] Nia Roberts,[5] Geoff Wong,[6] Tracey McConnell[1]

¹School of Nursing and Midwifery, Queen's University Belfast, Belfast, UK
²Patient Representative, National Cancer Research Institute, London, UK
³Queen's University Belfast School of Nursing and Midwifery, Belfast, UK
⁴Medical Biology Centre, Queens University Belfast School of Nursing and Midwifery, Belfast, UK
⁵Bodleian Health Care Libraries, University of Oxford, Oxford, UK
⁶Nuffield Department of Primary Care Health Sciences, Oxford University, Oxford, UK

Correspondence to
Dr Joanne Reid;
j.reid@qub.ac.uk

ABSTRACT

Introduction Emerging evidence suggests improved quality of life, reduced symptom burden and lower health services costs when integrated palliative care and cancer care are implemented. Integrated palliative care aims to achieve care continuity by integrating organisational, administrative and clinical services involved in patient care networks. However, integrated palliative care for cancer is not common practice. This project, therefore, aims to understand how integrated palliative care and cancer care works in different healthcare settings (inpatient/outpatient), and for which groups of people (at what stage of the cancer journey), so we can develop guidance for optimal delivery.

Methods and analysis We will conduct a realist synthesis to develop a programme theory of how integrated palliative care in cancer works, for whom and in what contexts to achieve improved symptom management and quality of life for patients and their families.

This realist synthesis will follow the five stages outlined by Pawson: (1) locating existing theories, (2) searching for evidence, (3) article selection, (4) extracting and organising data and (5) synthesising the evidence and drawing conclusions. We will work closely with our expert stakeholder group, which includes health and social care professionals providing palliative care and oncology; management and policy groups and members of the public and patients. We will adhere to RAMESES quality standards for undertaking a realist synthesis.

Ethics and dissemination Ethics approval for this project is not required.

The realist synthesis will develop a programme theory that provides clarity on the optimal delivery of palliative care for adults with cancer. We will use the programme theory to coproduce guidance and user-friendly outputs, working with stakeholders to inform delivery of best practice. Findings will inform further research in integrated palliative care and cancer. Stakeholder engagement will assist in the dissemination of our findings.

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STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Realist methods explain how and why different contexts lead to outcomes observed, which is useful to inform interventions. This project will synthesise available evidence and involve an expert stakeholder group to ensure conclusions are relevant to real-world practice.

⇒ The strength of evidence and the interpretations of the research team will influence the findings of this project—a different research team might draw different conclusions.

⇒ Our stakeholder group is varied, but there will always be limits on how many different perspectives can be reasonably included.

BACKGROUND

Internationally, cancer is a major public health and economic issue, with over 18 million cases in 2018. This figure is expected to rise to 29 million cases by 2040 due to the ageing and growth of the population.[1] It is over a decade since the first national strategy for end-of-life care in England, 2008, closely followed by other nation-specific strategies for Scotland, 2008, Northern Ireland, 2010 and Wales, 2013 emphasising an integrated approach to palliative care which is responsive to patients' needs. However, adopting such a model in cancer services remains unactualised and symptom burden continues to be a significant issue for persons with cancer, particularly near the end of life.[2] Additionally, the European Society for Medical Oncology (cancer) strongly endorse integrating oncology and palliative care. However, a consensus on what constitutes integration is currently lacking[3] and there is a requirement to better understand what integration entails.

Integration is vital, considering emerging evidence suggesting improved quality of life (QoL), reduced symptom burden, less exhaustive care and lower healthcare costs when integrated palliative care and cancer care interventions are implemented.[4] The WHO defines palliative care as a care approach that 'improves the QoL of patients and that of their families who are facing challenges associated with life-threatening illness, whether physical, psychological, social or spiritual. The QoL of caregivers improves as well'. Additionally, they define integrated health services as 'health services

that are managed and delivered so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services, coordinated across the different levels and sites of care within and beyond the health sector, and according to their needs throughout the life course.'[5]

Empirical studies have shown that access to palliative care for patients with cancer has significant benefits for patients,[6–11] healthcare systems[12] and informal family caregivers.[9] Integrated care aims to achieve improved patient care by optimal coordination of appropriate services. The need to incorporate palliative care and oncology has been well documented.[13] However, the complexity of integrating both palliative care and oncology is outlined within the literature[14] and, to date, there remains no integrative oncology palliative care model.[15] A recent Cochrane Review concluded that, compared with usual care, early access to palliative care within oncology may have beneficial effects on both QoL and intensity of symptom experiences in persons with advanced cancer, but also further raised the challenge of complexity in relation to integrating care.[11] Additionally, a recent Lancet Oncology Commission focusing on integration of oncology and palliative care[14] also highlighted the heterogeneity in published research focusing on integrating palliative care and oncology. There are variations across countries, systems (quality and access in relation to how countries care for persons with cancer) and settings (inpatient, outpatient and community), which limit the generalisability of findings. This Lancet Oncology Commission[14] confirmed palliative care integrated with oncology is in its infancy as there is no single model of palliative care integration that is tested in clinical studies or used in all healthcare systems. Furthermore, it highlighted the urgent need for models that fit different healthcare systems.

Empirical evidence has contributed to the evidence base in relation to understanding the gains of integrated palliative care in oncology. However, we still lack evidence to explain which intervention yields the best outcomes for patients and their family caregivers (what works) when is the optimal time to introduce palliative care (for whom), or the ideal delivery method (in what circumstances). To guide this, research is needed to synthesise a detailed understanding of how integrated palliative care and cancer care may work best, for whom and in what circumstances. Additionally, contextual factors and the impact that they may have has been outlined in the literature,[16] using a realist approach within this review, recognises that interventions are delivered within embedded contexts. This can reveal challenges when considering transferability to other settings as it is factors within particular contexts that enable mechanisms to trigger outcomes. Thus, it is not possible to simply transfer an intervention from one context to another and expect it to achieve the same results.[17] Using realist methods to focus on 'what works, for whom and in what circumstances' will make possible transferable, generalisable learning from this review.[18]

METHODS
Aim
To understand how integrated palliative care and cancer care works in different healthcare settings (inpatient/outpatient), and for which groups of people (at what stage of the cancer journey), so we can develop guidance for optimal delivery.

Objectives
► Conduct a realist synthesis to develop a programme theory of how integrated palliative care works, for whom and in what contexts to achieve improved symptom management and increased QoL for patients and their families.
► Use the programme theory to coproduce, with stakeholders (eg, patient/caregivers, local, national, international content experts and multidisciplinary practitioners) guidance to inform delivery of best practice and guide future research.

Objective 1: realist synthesis
The study is based on Pawson's[19] five iterative steps in conducting realist synthesis (see table 1 for an overview of the project). It will also be informed by the quality and publication standards and training materials for realist synthesis[20] (http://ramesesproject.org). Realist synthesis is a practical methodological approach designed to inform policy and practice. The realist synthesis approach is distinct from other types of literature reviews as it is based on an interpretive and theory-driven approach, synthesising evidence from qualitative, quantitative and mixed-methods research. The unique contribution of this approach is that it yields transferable findings that explain how and why context can affect outcomes. It does so by developing realist programme theories that explain how, why, in what contexts, for whom and to what extent interventions 'work'.[18]

Realist syntheses are particularly suited to research on integrated palliative care and cancer as they focus on making sense of the contextual factors that determine the outcomes of an intervention. Like other interventions that seek to propagate behavioural change, delivery of integrated palliative care and cancer care is highly context dependent, that is, delivery of the same intervention will vary in its success depending, for example, on who delivers it and how it is delivered, the characteristics of the health care professionals, the circumstances surrounding it, and the tools and techniques used. Research designs that seek to 'strip away' these contexts limit our understanding of 'how, when and for whom' the intervention will be effective.[18]

The explanation building will ultimately start with the development of an initial programme theory of 'how integrated palliative care and cancer care produce desired

Table 1 Plan of investigation and timeline

Months	Activities
Months 0–4	Brief, recruit and train (where requested) stakeholder group. Set up and run first stakeholder group meeting. Submit realist synthesis protocol for publication. Step 1 of realist synthesis—locate existing theories and build initial programme theory. Start step 2 of realist synthesis—searching for evidence and screen search results. Launch project website.
Months 5–7	Complete step 2 of realist synthesis. Start step 3 of realist synthesis—article selection. Start step 4 of realist synthesis—extracting and organising data. Start step 5 of realist synthesis—synthesising the evidence part only. Run second stakeholder group meeting—with updates on progress and findings.
Months 8–10	Complete step 3 of realist synthesis. Continue with steps 4 and 5 of realist synthesis. Iteratively refine initial programme theory—based on data from initial search. Undertake any additional searching as needed and informed by the programme theory. Run third stakeholder group meeting—gaining feedback on emerging findings and advice on their implications.
Months 11–13	Complete step 4 of realist synthesis. Continue with step 5 of realist synthesis. Iteratively refine initial programme theory. Begin to coproduce guidance at fourth stakeholder group meeting.
Months 14–18	Complete step 5 of realist synthesis. Finalise programme theory and implications. Finalise coproduced guidance at fifth and final stakeholder group meeting and disseminate outputs . Finalise and submit academic paper for publication. Write final report.

outcomes (or not)'. To achieve this, our initial realist programme theory will set out the necessary steps needed to accomplish the final intended outcome(s) from the implementation of integrated palliative care and cancer. As the synthesis progresses, how and why each step (or intermediate outcome) can then be caused to happen will be explained using a realist logic of analysis—that is, what relationship between context and mechanism(s) might lead to that outcome.[18] This initial programme theory is then challenged and shaped through an iterative process of testing—that is, parts of it are confirmed, refuted or refined against a range of relevant data from existing literature.

Patient and public involvement

We will consult with UK wide and international key stakeholders, including healthcare management and leadership; healthcare professionals involved in the delivery of palliative care and cancer management; patient public involvement (PPI) expertise; national and international research clinicians in palliative care and cancer; and policy and community groups (see figure 1).

During this realist synthesis, we will ask stakeholder group members:

► To help us develop our initial programme theory.
► For their advice and feedback on our programme theory as it evolves.
► To consider our findings and recommendations from their varied perspectives.

► Provide input and support into our dissemination strategy.
► Review and contribute to our materials, to ensure they meet the needs of patients and the wider public.

Step 1: locate existing theories

This step will locate existing theories that explain why, how, in what contexts, for whom and to what extent integrated palliative care and cancer care work. This will involve identifying theories that explain how integrated palliative care and cancer care is supposed to work to improve outcomes for persons with a diagnosis of cancer and their family caregivers. As the review progresses, we will share our emerging findings with our stakeholders (which includes our PPI coapplicant EB and PPI expert reference group members). It may be that as we learn more about the integration of palliative care with oncology, our stakeholders may be able to help us better understand which outcomes matter more to patients and carers—thus allowing us to focus our review on these.

While we have already established there is the limited theory underlying integrated palliative care and cancer care, the realist synthesis approach allows for the literature net to be cast wider to include literature from other fields and other professions where potentially shared mechanisms may be in operation. To identify these theories, we will iteratively: (a) consult with our stakeholder group; (b) informally search the literature to identify existing theories and (c) analyse key policy documents for
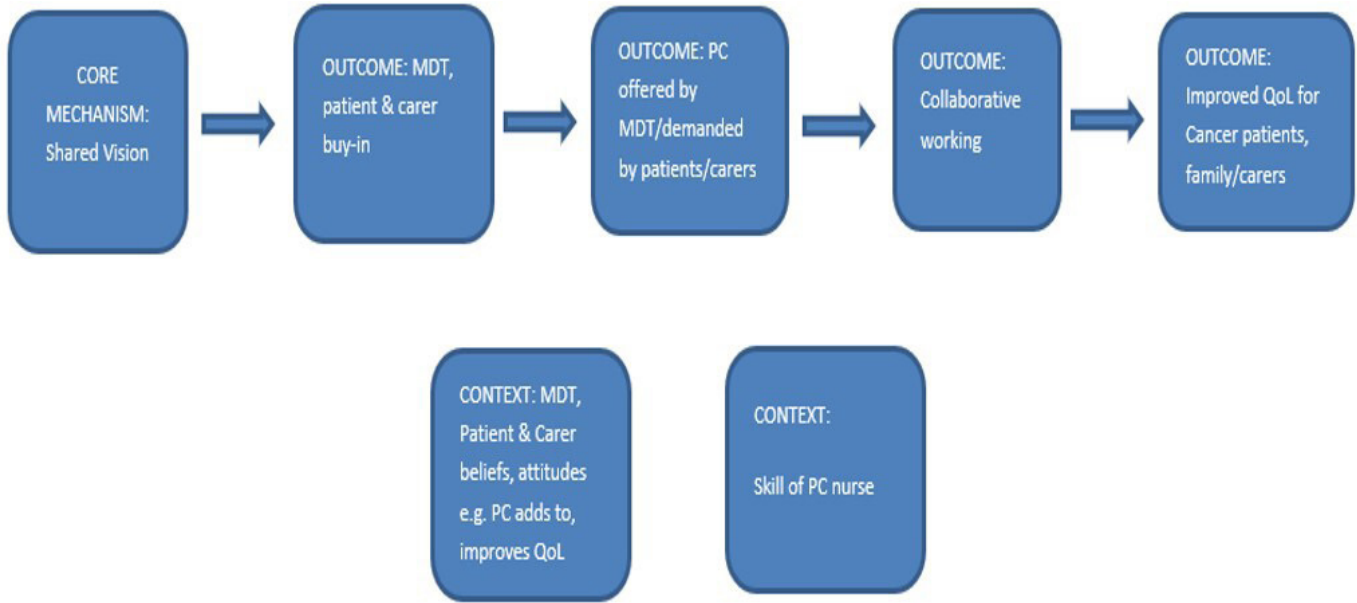
Figure 1 Stakeholder group involvement strategy. Additional premeetings with four PPI representatives are held 1 week before each of the five stakeholder meetings. All stakeholders have opportunity to comment between meetings and to feedback their reflections on meeting notes. MDT, multidisciplinary team; PC, palliative care; PPI, patient public involvement; QoL, quality of life.

assumptions made about how and why integrated palliative care and cancer care works. Once theories have been identified, we will build an initial programme theory,[21]

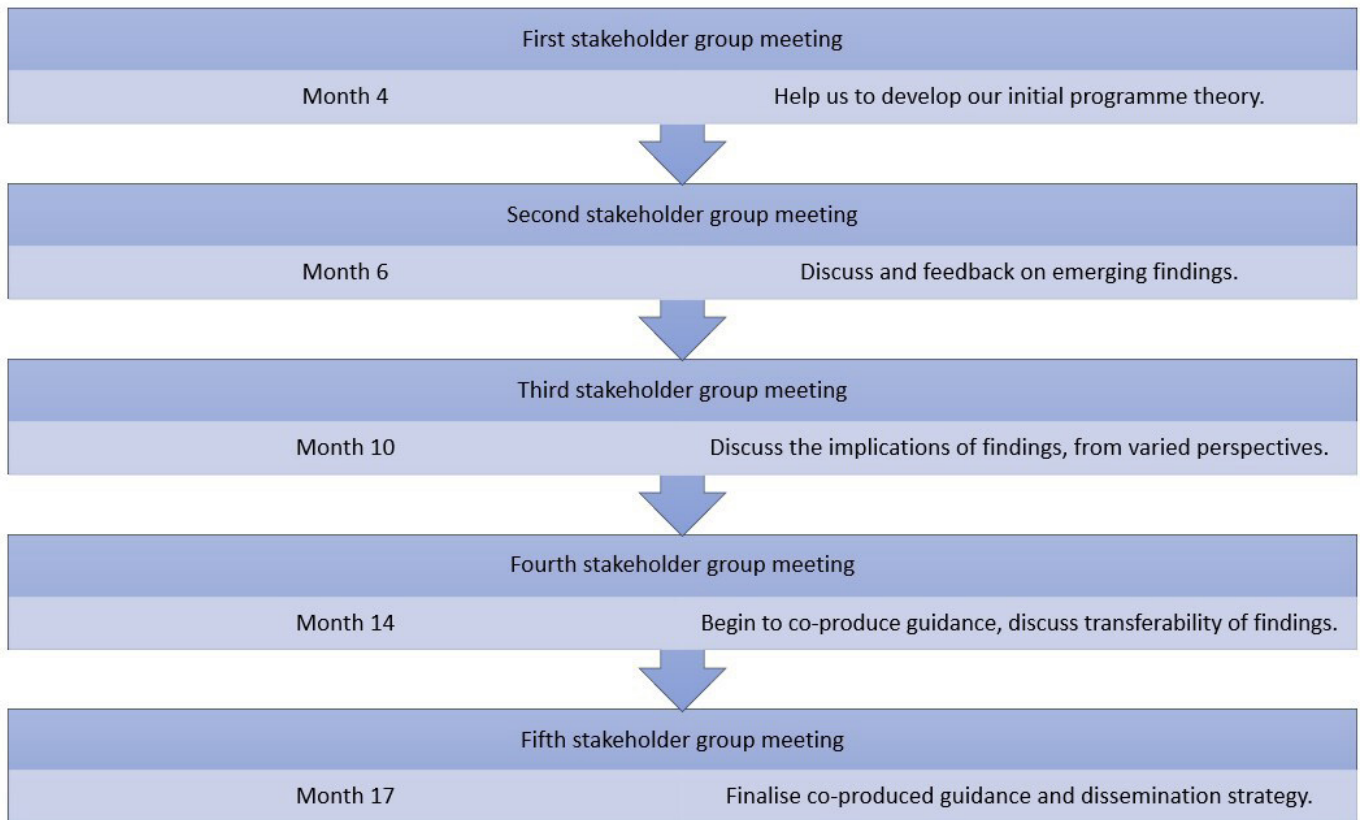drawing on the preliminary initial programme theory as detailed in figure 2.

Figure 2 Preliminary 'initial' programme theory.

Within step 1, the informal searches conducted differ from the more formal searching that will be carried out in step 2 as the rationale is to swiftly identify the kinds of theory that may be relevant. Once such theories are identified, we will develop an initial programme theory to test in the synthesis.[21]

Step 2: search strategy
Formal search

The aim of step 2 is to find a body of relevant literature in order to further develop and refine the initial programme theory developed in step 1.[21] The searches will be designed, piloted and carried out by an information specialist (NR). We will search academic databases including CINAHL, PsycINFO, MEDLINE, AMED and EMBASE. Citation searching will be undertaken including 'cited by' searches and searches of citations in the reference lists of relevant documents. Searching for grey literature will also be conducted using Google, Overton, National Institute for Health and Care Excellence (NICE) and Health Management Information Consortium. In addition, we will search for theses and dissertations via the British Library's EThoS service and Proquest Dissertations and Theses Global database, and conference materials via the Conference Proceedings Citation Index (via Web of Science). Additionally, we will ask our stakeholder group to identify any literature they think is relevant to this topic. Databases will be searched using free-text keywords and controlled vocabulary where appropriate, using terminology such as cancer AND palliative care AND integrated care. The search strategy will be informed by our informal scoping searches, search terms in published reviews and expertise from within the project team. Any document that is likely to provide conceptually rich data, including grey literature, will be considered for inclusion in the synthesis.[21]

We will initially sort all materials using criteria that we judge will help us identify those materials that are likely to contain the most relevant data for programme theory and context, mechanism, outcome configuration (CMOC) development. Examples of these criteria are data collection methods and date of publication. We will draw on content expertise of the project team and our stakeholder groups to help us identify which of the diverse materials we should analyse initially. This initial narrower focus on the materials will enable us to begin the process of programme theory and CMOC development. As the review progresses and we identify gaps in our programme theory of CMOCs, then we will look into the other documents that we had not initially prioritised for analysis—looking for additional relevant data. This gradual 'onioning out' or 'widening of the net' will help us effectively manage a large volume of diverse materials.

Screening

When screening all identified documents, our initial inclusion criteria will be intentionally broad, this is because we will be trying to identify all study designs as well as non-empirical documents. The following inclusion criteria will be applied:

- All documents focused on integrated palliative care for persons with a diagnosis of cancer.
- Study design—all study designs.
- Non-empirical data (eg, from opinion/commentary pieces) which help direct/shape theory development.
- Types of settings—all documents about inpatient or outpatient or home-based care settings.
- Types of participants—all adults (18 years and over) with a diagnosis of cancer; including underserved groups such as those over 75, different ethnic minority groups, minority sexuality or gender identity (LGBTQIA+), and people living in remote areas (please note this list is not exhaustive and will include all potentially underserved groups with a diagnosis of cancer).
- Types of intervention—any intervention for patients (and/or informal carers) where palliative care and oncology services are managed and delivered so that people with cancer receive a continuum of disease management, rehabilitation and palliative care services, coordinated across the different levels and sites of care within and beyond the health sector, and according to their needs from cancer diagnosis to end of life (extending to bereavement support for carers) (with/without family carer).
- Outcome measures—all integrated palliative care and cancer related outcome measures.

Our inclusion and exclusion criteria are likely to evolve as the review progresses in response to our initial and developing programme theory. Given the likelihood that our searches will retrieve a significant volume of potentially relevant literature, we may apply additional criteria to progressively focus the review and prioritise those aspects of the programme theory that are most important to stakeholders or likely to provide the most useful findings that can be readily actioned in healthcare settings.

We will pilot the screening process with small samples of documents to ensure agreement in relation to the application of the inclusion criteria. Two authors (JR/TM) will screen the title and abstract of all retrieved documents within RAYYAN to identify documents that meet the inclusion criteria. NB will independently screen a 10% random subsample to check for systematic errors. In the case of any disagreements, these will be resolved through discussion with the research team members. The full text of all included documents after title and abstract screening will then be screened against inclusion criteria. The same quality screening assurance process as described above will also be used.[21]

A crucial part of conducting a realist synthesis includes searching for additional data to explain specific parts of the evolving programme theory. Therefore, we will conduct additional searches if we need further data to develop and test specific areas of the programme theory.[21] The searches will be developed, piloted and refined by

the research team with the assistance and expertise of the information specialist (NR).

Step 3: article selection

We are aware that there will be evidence that is of variable quality. However, it is because of this potential challenge that we have chosen to use a realist review approach. Within realist reviews even 'low quality' evidence can provide important insights, but to ensure that our explanatory programme theory is sufficiently plausible and trustworthy, we will follow RAMESES quality standards for realist syntheses. For example, full-text document selection will be based on relevance (can data contribute to theory building and/or testing?) and rigour (are methods for relevant data generation credible and trustworthy?). Assessments will also be made of plausibility and rigour at the level of the programme theory.[18] NB will read the full text of all the included documents and only make a final decision to include them if they are judged to contain data that is relevant and will aid development of some part of the programme theory. To ensure consistency, team members will independently check a random 10% subsample of finally included documents for systematic errors. In the event of any uncertainty, the review team will discuss the relevance or rigour of the articles and any disagreements will be resolved through research team member discussions. A majority vote among the research team will be used to resolve any remaining disagreements.

Step 4: extracting and organising data

The realist synthesis approach synthesises information through notetaking and annotation. Full texts of the included articles will be imported into NVivo. NB will carry out data extraction. Relevant sections of texts relating to one or more parts of the programme theory will be coded in NVivo first by conceptual 'themes' and then as the synthesis progresses these will be developed into CMOCs.[18] Data containing characteristics of included documents will be extracted separately into an Excel spreadsheet. As a quality assurance process, a random 10% of the coding will be independently checked by members of the research team with any disagreement resolved by discussion within the team.

Step 5: synthesising evidence and drawing conclusions

A realist logic of analysis will be used to analyse the data from included documents. Interpretive cross-case comparison will be used to understand and explain how and why actual outcomes have happened, for example, by comparing integrated palliative care and cancer care that have been successful against those which have not, in order to understand how context has influenced reported findings.[21] The following reasoning processes are typically used in synthesising evidence in realist synthesis:

▶ Juxtaposition of sources of evidence, for example, where evidence about behaviour change in one source allows insights into evidence about outcomes in another source.

▶ Reconciling of sources of evidence—where results differ in similar situations, these will be further examined to find explanations for these differences.

▶ Adjudication of sources of evidence—centred on methodological strengths or weaknesses.

▶ Consolidation of sources of evidence—where different outcomes occur in similar contexts, a reason can be developed as to how and why these outcomes happen differently.

During the review, we will seek out data on costs and sustainability (led by FAL). This will include assessing full-text records for economic outcomes and extracting, managing, analysing and presenting findings from included studies. The focus will relate to evidence of costs and savings associated with the introduction and scaling up integrative palliative care in oncology from the perspective of the National Health Service (NHS) in the first instance. We will also synthesise any economic evidence on costs and savings from a patient/carer perspective and a societal perspective. The economic case for integrative palliative care in oncology will be explored in terms of the efficiency and equity of resource allocations to improve and enhance service delivery, presenting priorities for health service decision-makers. Where economic data are available, if possible and relevant, CMOCs for these aspects will be developed.

Throughout the synthesis, we shall move iteratively between the analysis of examples, refinement of programme theory and further iterative searching for data (where needed) to test specific parts of the programme theory. We will present the final realist programme theory in a diagram and via a narrative describing the CMOCs.

Objective 2: to provide recommendations for commissioners, practitioners, patients and the public

Our programme theory will provide guidance for the optimal configuration and implementation of integrated palliative care and cancer services across NHS organisations currently implementing or seeking to implement an integrated palliative care and cancer intervention. We will coproduce guidance with our multidisciplinary key stakeholders (local, national, international experts, policy and commissioners, patients and the public). Guidance will also (where possible and needed) be specific to local, national and international professional bodies which recommend an integrated palliative care and cancer approach. It will contain details on what works, for whom, how, why and in what contexts to bring about the desired outcomes.[21]

Ethics and dissemination

To ensure that the guidance from this project will be useful to key audiences, the Knowledge-To-Action Cycle Framework provided by the Knowledge Transfer Clearinghouse (http://ktclearinghouse.ca) will be used during coproduction of the guidance with key stakeholders. We will ensure findings are relevant to help inform decision

making for policy, practice and public audiences. Key outputs will include:

1. Coproducing user-friendly summaries of the synthesis findings with key stakeholders that are tailored to the needs of interested audiences.
2. The synthesis findings will be submitted for publication to a high-impact, open-access peer-reviewed journal.
3. Coproducing dissemination strategies to increase impact, for three key audiences.

► Policy-makers, decision-makers and commissioners of cancer services.
► NHS leaders, managers and practitioners involved in palliative care and cancer provision.
► Members of the public, including those impacted by cancer.

To ensure that the patient voice is heard, we will invite our PPI stakeholder group members to share their own stories of cancer management (both with and without the integration of palliative care if possible). These will be used to strengthen the review findings and may be incorporated into the practical user guides, user-friendly summaries, relevant websites and media in the form of anonymised quotes or vignettes in order to encourage uptake of the recommendations by commissioners and providers. By using effective PPI engagement throughout all stages of this project, we will ensure effective societal valorisation that goes well beyond academic dissemination for the outputs from this project.

Ethical approval is not required for this project because it is a literature review that does not involve the collection of primary data. This was confirmed with the institutional research governance team.

Strengths and limitations

There are some promising examples of integrated palliative care and cancer care,[6–12] developed in different countries (the majority in high-income countries), across a range of settings, delivered by different multidisciplinary staff, using diverse delivery modes and intervention components.[11 14] Hence, it is not currently known which model works best, for whom, or in what circumstances.

The majority of palliative care need arises in low-income and middle-income countries, whereas the majority of evidence available originates in high-income countries, with the USA dominant in the high-profile publications to date. Variation between medicolegal systems confers relevant contextual determinants of what works for integration. Realist methods are well suited to theories about how these contexts exert their influence, and how evolving programmes need to be adapted to work within different contexts. We retain an international perspective through our evidence inclusion criteria and the involvement of international stakeholders. Input from the stakeholders will assist in interpreting the relevance of our findings on the global scale.

Palliative care was historically associated with cancer and there is increasing recognition of the need to adapt palliative care provision to non-malignant disease. It could be expected that palliative care and oncology would have achieved integration, yet this is not consistently the case.[14] Previous research carried out by this research group investigated the integration of palliative care in heart failure.[21] The current review will build on the progress made in this earlier project by considering the similarities and differences in 'what works' between the two conditions. This comparison will contribute insight into the potential transferability of conclusions to other disease types (eg, respiratory, neurological, HIV/AIDS) and the growing significance of multimorbidity.

Existing systematic reviews in this topic have focused on outcomes and indicators of integration.[3 11] Use of a realist synthesis allows for the underpinning resources and mechanisms to be understood, explaining key aspects necessary to achieve integration and indicating why it has been challenging to achieve in practice to date.[19]

We will use a broad and systematic search strategy to identify a large volume of published evidence. However, the findings are to some extent reliant on the quality of identified evidence and the interpretations made by the research team. Involving a diverse range of perspectives via our stakeholder group (including local, national and international expertise) allows for their real-world experience to be incorporated into our interpretation of the evidence base, strengthening the conclusions drawn.

The stakeholder group has been thoughtfully constructed to include a number of different professional disciplines and policy-makers, as well as four patient public representatives. Many of the stakeholders will be working in clinical practice alongside their involvement in this research. Their varied perspectives will be valuable in ensuring our conclusions are relevant to the current context. It is not feasible for all possible perspectives to be included in the group which means there remains the possibility of 'blindspots'.

This project will run for 18 months (table 1). Due to resource and time constraints, we have not embedded data collection within the review (eg, realist interviews to validate our findings). However, we consider that the high volume of material identified through initial searches and the iterative process of theory development alongside an extensive stakeholder involvement strategy will deliver satisfactory insight into complexity, leading to robust findings. Our findings may inform future realist evaluations of integrated palliative care.

The 2022 revised recommendations on standards and norms for palliative care from the European Association of Palliative Care highlight the need for advocacy in relation to better integration of palliative care.[22] This realist synthesis will significantly contribute to the evidence base in this area.

ORCID iDs
Joanne Reid http://orcid.org/0000-0001-5820-862X
Natasha Bradley http://orcid.org/0000-0003-0768-9819
Fiona A Lynn http://orcid.org/0000-0002-0216-643X
Peter OHalloran http://orcid.org/0000-0002-0022-7331

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