



Work Package 8 - Executive Summary

Developing and Implementing a System of Structured, Network-Wide Dissemination and Knowledge Transfer Activities

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1. Introduction

This report provides an overview of a research project, supported by the AIHPC Palliative Care Research Network (PCRN), which aimed to develop resources to support knowledge transfer and exchange (KTE) of findings from research on palliative care in Ireland. All parts of the study involved researchers and participants in the Republic of Ireland and Northern Ireland.

The optimal linkage between research and practice has challenged health researchers for a generation and terms such as evidence-based practice, implementation science, knowledge transfer and knowledge translation are all used in discussing and dissecting the need for and extent to which practice and policy in health sciences are influenced by research.

Baumbusch and colleagues (2008) capture the nature of KTE based upon Lavis' (2006) definition of knowledge translation as "interactions between potential users of knowledge for clinical application, such as policy makers, decision makers and researchers, with timely responses by researchers to acknowledge needs identified by the users (Baumbusch *et al.*, 2008, p.133). They go on to discuss some of the key features of KTE including the complex interactive nature of the process (as distinct from a one-way research to practice pathway) and the need to recognise KTE as an ongoing process and not one that is addressed only at the end of the research process. We adopted Kiefer *et al.*'s (2005) definition of KTE, which is captured by Mitton *et al.* (2007, p.729) as

"an interactive interchange of knowledge between research users and researcher producers (Kiefer et al. 2005). The primary purposes of KTE are to increase the likelihood that research evidence will be used in policy and practice decisions and to enable researchers to identify practice and policy-relevant research questions"

Given the variety of terminology evident in the literature the term knowledge transfer and exchange (KTE) is used in this report.

2. Overview

The original proposal; *Developing and Implementing a 'System' of Structured Network-Wide Dissemination and Knowledge Transfer Activities*, was addressed in two stages: 1. Assessing existing KTE models and practice of relevance to healthcare and proposing a model for use in palliative care, 2. Feasibility testing of the implementation of the new model in palliative care research. These stages informed and guided the development and implementation of KTE activities using a partnership approach across the two jurisdictions of Northern Ireland and the Republic of Ireland. This work was funded by AIHPC. This report provides an overview of the two stages of the project and summarises outputs and key findings.

2.1. Stage 1: Assessing existing KTE models and practice of relevance to healthcare and proposing a model of for use in palliative care

The first stage focused on reviewing and adapting a model of KTE for healthcare that was grounded in international and national research and best practice, while also being sensitive to the nature and content of palliative care. There are many existing frameworks for KTE, including *Promoting Action on Research Implementation in Health Services* (Rycroft-Malone, 2004) and the *Consolidated Framework for Implementation Research* (CFIR, Damschroder *et al.*, 2009). Key commonalities

include recognising the nature of the knowledge or evidence involved, the context to which this knowledge is to be applied (including the audience) and the process/facilitation by which the transfer takes place. An important consideration of this project was the extent to which these different frameworks were suitable for use in a palliative care context. The framework for palliative care recognises the physical, psychological, social, spiritual and financial aspects of palliative care needs and support (Sepilveda *et al.*, 2002). Many models for KTE have developed in different clinical settings and as a result they may reflect aspects of palliative care but not necessarily all elements of the palliative care framework.

2.1.1. *Aim and Objectives*

The aim of this stage was to propose, adapt or produce a KTE model for use in palliative care, drawing on existing information. This was followed by consideration of the key elements of KTE examined through the lens of palliative care. The objectives were:

- To identify the key elements of KTE as incorporated in existing models
- To consider the relevance of these elements to palliative care
- To identify existing tools for KTE that could be applied or adapted for use within the palliative care setting

2.1.2. *Methodology*

Firstly, a systematic review was undertaken of published research, policy and practice relating to KTE. Given that there was little literature in this area on palliative care itself, the main source of information was health services and policy literature (see for example the Institute for Work and Health, nd). Over 7000 records were identified by the search, resulting in over 4000 research abstracts for initial screening. Of these 298 papers were selected for full review, with 79 papers finally selected for analysis. The analysis focused on the extraction and thematic review of aspects of KTE practice. This review enabled the team to identify the key components of KTE (including both the elements of the models and the existing tools for KTE).

Secondly, a workshop was convened, at which the preliminary findings of the review were presented to key stakeholders in order to explore its relevance to or fit with the palliative care framework. Some 35 stakeholders, representing the producers and users of evidence in palliative care, were asked to review and comment upon the products of the systematic review in the context of palliative care, using criteria including relevance to palliative care, feasibility in the palliative care context, and resource implications. These stakeholders included members with expertise in KTE, researchers working in palliative care (selected from those contributing to the Institute's Palliative Care Research Network and other projects) and specialist practitioners who together had an expert knowledge of the physical, psychological, social, spiritual and financial aspects of the palliative care framework. This workshop became one of the case studies which formed part of Stage 2, which is described below.

2.1.3. Deliverables

The key deliverables for this stage were (1) a model of KTE that captured the key principles of successful knowledge transfer that applied most readily to palliative care, termed “EMTRek” and (2) a menu of existing strategies and tools relating to KTE that could be delivered in palliative care settings. These deliverables formed the basis for the next phase of the project.

2.2. Stage 2: Feasibility Testing of an Evidence-based Model for the Transfer & Exchange of Research Knowledge in palliative care

Feasibility testing of the new model in palliative care research built upon the first stage by implementing the newly developed model Evidence-based Model for the Transfer & Exchange of Research Knowledge (EMTRek, see Figure 1) using case studies from specific AIHPC projects, including the findings of this KTE project. This involved developing specific dissemination plans and activities to support knowledge transfer to audiences involved in policy and practice in palliative care.

Figure 1: The EMTRek model as proposed by Stage 1 shows fundamental components of knowledge transfer and exchange



The evaluation of findings from these case studies allowed for the revision of the framework in advance of it being provided as a resource and guide to the AIHPC, the PCRN and the wider community of palliative care practitioners in Northern Ireland, the Republic of Ireland, and with implications for International groups.

2.2.1. Stage 2 Aim and Objectives

The aim of Stage 2 was to exploit KTE for palliative care in Ireland. The focus was to examine the

actual exchange of information from the case studies guided by a facilitated use of EMTReK.

2.2.2. Methodology

Drawing on the Modelling process and outcomes component of the MRC Guidance for Developing and Evaluating complex interventions (Craig et al., 2008), the study used a realist evaluation of multiple perspectives arising from cases studies that made use of EMTReK. A realist evaluation is a theoretical approach that provides a framework to explain how interventions work, by exploring contextual factors as well as mechanisms of action to deliver specific outcomes

Step 1: Researchers within the AIHPC PCRN were invited to apply to be case studies, evaluating and piloting EMTReK in their KTE initiatives.

Step 2: Four research projects were chosen based on pre-determined selection criteria and with variety with regard to target audience, context and knowledge available to provide a wide range of data for testing EMTReK. These criteria were:

- I. Feasibility of applying EMTReK within the time and resources of this project.
- II. Willingness of case Principle Investigators (PIs) to adapt knowledge transfer plans to reflect the EMTReK model.
- III. Capacity to allow for testing of EMTReK.
- IV. Strength of the case study findings and its potential to incite meaningful change in clinical, research and/or academic practice.
- V. Accessibility of case study findings to target audiences.

The research team used the model for their own KTE and reflected on this process as a fifth case study. The intention was that the range of cases allowed for testing of all the dimensions and assumptions of the KTE model, with the exception of evaluation which was undertaken by the EMTRek team.

Step 3: PIs reviewed and revised knowledge transfer plans based on key concepts of the EMTReK model. This process was facilitated by members of the EMTReK study team. A nominal fund was available to support outputs arising from the activities planned. As part of this process one or more one-to-one semi-structured discussions took place, which were audio recorded with consent, each taking up to one hour to complete. KTE plans were scrutinised to ensure feasibility and appropriateness in relation to the EMTReK model and resources available e.g. time/cost/acceptability.

Step 4: At the end of the specified knowledge transfer process, PIs were invited to participate in a final interview to reflect on the KTE process undertaken, what went well/not so well and suggestions for improvement of the EMTReK model and the supporting infrastructure.

Step 5: We revisited the components of EMTReK using qualitative methods to refine it in terms of the findings of the realistic evaluation. This involved verification of model components through both member-checking with potential users and consistency checking by members of the research team.

2.2.3. Deliverables

The main deliverable was the revised EMTReK knowledge transfer and exchange model, with a focus on implementation strategies relevant within palliative care settings and with potential application for other areas of healthcare KTE.

2.3 Timeframe

A staggered but overlapping timeframe was employed, which allowed the Stage 1 to begin and be completed in parallel with the activities of the Structured Research Network, allowing for Stage 2 to examine the dissemination activities of their projects.

2.4 Agreed Funding Structure

Given the structure of two distinct stages outlined above, each co-lead (SG and GK) led on one stage, with appropriate experienced and skilled staff members being appointed to work alongside them.

The co-principle-investigators were jointly responsible for the whole research project (meeting monthly), with each taking a lead role for operational purposes on one stage (SG on stage 1, GK on stage 2). By the end of the project a total of three research staff had been appointed. The research team were also assisted by members of the PCRN and key staff in AIHPC who contributed to the project and continue to support knowledge transfer and exchange work.

2.5 Dissemination and Collaborative Activities

Sections 3 and 4 provide details of the four papers prepared for publication in peer review journals, two from each stage of the research. However, the project was marked by ongoing knowledge transfer activities in the form of conference presentations, workshops and invited presentations. In addition, the Co-Leads' work on this project resulted in a number of invitations to contribute their expertise on KTE, jointly and as individuals to a number of additional projects. These activities are presented in the lists below.

2.5.1 Dissemination Activities (in chronological order)

- Prihodova, L., Guerin, S. & Kernohan, W.G. (2015). Development of a model of knowledge transfer for use in applied health settings. Paper presented at the 45th Annual Conference of the Psychological Society of Ireland. Galway, Ireland, 11-14 November 2015.
- Guerin, S., Prihodova, L., & Kernohan, W.G. (2016). Applying knowledge transfer in palliative care settings: Findings from a systematic review. 9th World Research Congress of the European Association for Palliative Care, Dublin, Ireland, 9-11 June 2016. *Palliat Med* 30 (6) NP116-NP117.
- Brown, M.J., Kernohan, W.G. & Guerin, S. (2016). The transfer of new knowledge into practice: Exploration of implementation plans in palliative care research. To the 9th European Association for Palliative Care Research Congress, Dublin, Ireland, 9-11 June 2016. *Palliat Med* 30 (6) NP286-NP287.
- Guerin, S. (2016). Maximising Knowledge Transfer & Exchange Using an Evidence-based Model. Presentation as part of the UCD School of Psychology Lunchtime Seminar Series

2016-2017, Dublin, Ireland, 8 November 2016.

https://www.youtube.com/watch?v=z4z3_3xGkgo

- Guerin, S., Prihodova, L., & Kernohan, W.G. (2016). Applying an evidence-based model of knowledge transfer & exchange to psychological research. Workshop delivered at the 46th Annual Conference of the Psychological Society of Ireland. Athlone, Ireland 9-12 November 2016.
- Guerin, S. (2017). Presenting EMTReK: An Evidence-based Model for the Transfer & Exchange of Research Knowledge in Palliative Care. Paper presented at the IAPC Annual Education and Research Seminar 2017. <https://vimeo.com/212618561>
- Kernohan, W.G., Brown, M.J., Payne, C. & Guerin, S (2017). Exploring Palliative Care Researchers' Experience of using an Evidence-based Model for the Transfer & Exchange of Research Knowledge. Poster presented at the EAPC World Congress, Madrid, Spain.
- Kernohan, W.G. (2017). Presentation to Palliative Care Research Forum Northern Ireland Committee, Belfast, Northern Ireland
- Kernohan W.G. (2017). Presentation to Ulster Institute of Nursing and Health Research, Chronic Illness Group, Palliative Care Strand, Ulster University, Northern Ireland

2.5.2 Collaborations/Applications

- Nicholson, S. et al. (2015). Synthesising and Disseminating Key Lessons from AIHPC Palliative Care Research Network - The KINDLE Project. Funded by the HRB Knowledge Exchange and Dissemination Programme.
- Guerin, S., Doyle, F. & Kernohan, W.G. (2016). Exploring the relevance and contribution of an evidence-based model of knowledge transfer and exchange in health services research. UCD Seed-funding Grant.
- Timmons et al. (2016). A mixed methods research study to develop an acceptable, evidence- and practice-based model for palliative care for people with dementia in the community. Application to HRB Investigator Led Projects
- Ryan et al. (2016). Early palliative care integrated with oncologic care for non-small-cell lung cancer in Ireland. Application to HRB Investigator Led Projects
- Deliens, L. et al (2016). Evaluation of Dyadic psychosocial Interventions for people with Advanced cancer and their Informal Carers (DIAdIC): an international randomized controlled trial. H2020 Funding Application
- Universitat Internacional de Catalunya et al. (2016). A novel proactive and preventive healthcare intervention on the desire to die to improve quality of life in patients with advanced chronic illness - AIDDA (proActive Intervention on the Desire to Die in Advanced patients) H2020 Funding Application
- Guerin, S. & Guerin, J. (2017). Promoting effective knowledge transfer and exchange of findings from clinical trials in health services research. Funded as part of the TMRN HRB Student Scholarships.

- Development of a workshop in collaboration with AIHPC for engagement of researchers in the processes of knowledge transfer and exchange, using the EMTReK model as a framework to identify the core dimensions and share ideas for good practice.

3. Stage 1 Outputs

- Systematic Review Protocol¹ - Knowledge Transfer and Exchange Frameworks in Health and their applicability to Palliative Care: Scoping Review Protocol
- Systematic review paper- An Evidence-based Model for the Transfer & Exchange of Research Knowledge (EMTReK) in Health Services Research: Findings from a Systematic Scoping Review²

4. Stage 2 Outputs

- Exploration of barriers and facilitators to knowledge transfer and exchange in palliative care³
- Initial Exploration of an Evidence-based Model for the Transfer & Exchange of Research Knowledge (EMTReK) within Palliative Care Research Settings⁴

5. General Discussion and Reflections

The project set out to identify a system of activities for knowledge transfer and dissemination in palliative care. This broad aim was achieved through the development of a two-stage project, which first identified the core components of knowledge transfer and exchange in health services research (operationalised as the EMTReK model) and then examined the application of this model in palliative care research.

5.1 Operationalising Core Components

The EMTReK core components are the *message*, the *process* and the *stakeholders*. These operate in *contextual layers* which must be taken into account as these are unique in palliative care. To achieve effective knowledge transfer, the activities *should always be evaluated*. Some of the elements are well-known in knowledge transfer work: *getting the message across* is very familiar in marketing circles, while the need to engage with multiple stakeholders is also common. What is new here and we argue innovative, is the focus on operationalising all the aspects of these core components. For example, identification of *the message* is clearly a key feature of effective knowledge transfer, but the model highlights the ways in which researchers should operationalise the message as being accessible and needs driven. We feel that it is the operations identified for each component that will support researchers to use the model in practice. The model is constructed in a way to maximise its use as a framework for the use of activities that will lead to more effective dissemination, through dynamic knowledge transfer and exchange.

¹ This paper was published by the Journal of Advanced Nursing (Prihodova et al., 2015), reporting the methodology of the planned systematic review.

² This article has been submitted for review to BMJ Open

³ This is the first paper planned from Stage 2 and has been submitted to Evidence-Based Medicine

⁴ This is the second and main paper planned from Stage 2 and has been prepared for publication in Palliative Medicine

5.2 Relevance of Core Components

The initial assessment of the model through the case studies highlights the key strengths of the model in terms of its credibility, its accessibility and most importantly its applicability to palliative care. Despite being generated from a systematic review of health services research, the components of the EMTReK model were all seen as relevant to palliative care. However, a key finding from Stage 2 was again operational, the model required support in the form of facilitation and resourcing in order to maximise effective use. Indeed, in considering the possible limitations of the model the issue of practical use of the model and the potential for researchers to find the process challenging was highlighted.

5.3 Wide interest in EMTReK expressed

Additional evidence for the value of the model comes from the significant interest that has been generated by the work. As detailed in Section 2.5 the PIs have been invited to contribute to a number of funded projects in palliative care, working specifically on aspects of knowledge transfer and exchange using the EMTReK model on projects competing for national and international funding

5.4 Conclusions and future directions

Recognising the lessons learned, the main conclusion from this research is that the model as outlined in Stage 1 has shown itself to be relevant and applicable to palliative care. We do not recommend any changes to the model at present, though further research is needed to test its impact for researchers more objectively whilst applying the learning to knowledge transfer of the model itself. However, the immediate focus for the research team is on developing resources for researchers interested in using the model. As part of this process a HRB-funded student scholar is working to identify resources for KTE from the systematic review database, with additional resources gathered through a review of web-based resources. In addition, the PIs are working with the research staff in AllHPC to develop a workshop to support researchers working in palliative care to implement the model in their own practice. Focusing on raising awareness of the model will allow the PIs to identify further opportunities to test the impact of the model in the future, further contributing to the refinement of EMTReK as a resource for researchers to ensure their new knowledge is effectively transferred and exchanged.

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7. References

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