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ASSESSING THE ECONOMICS OF COMPLEX INTERVENTIONS IN COMPLEX SETTINGS

THE REINFORCED HOME-BASED PALLIATIVE CARE (rHBPC) CASE STUDY

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Overview

INTEGRATE-HTA Guidance on economic assessment of complex interventions

Case study - Economic assessment of reinforced carer support in home based palliative care

Conclusions

Economics guidance conclusions Methodology research

Complexity => Paradigm shift from optimisation to system improvement.

Methods for assessing whether complexity matters for economic evaluation.

Computational modelling techniques for understanding adaptive behaviour and intervention/setting co-evolution.

Methods for measuring and valuing non–health benefits.

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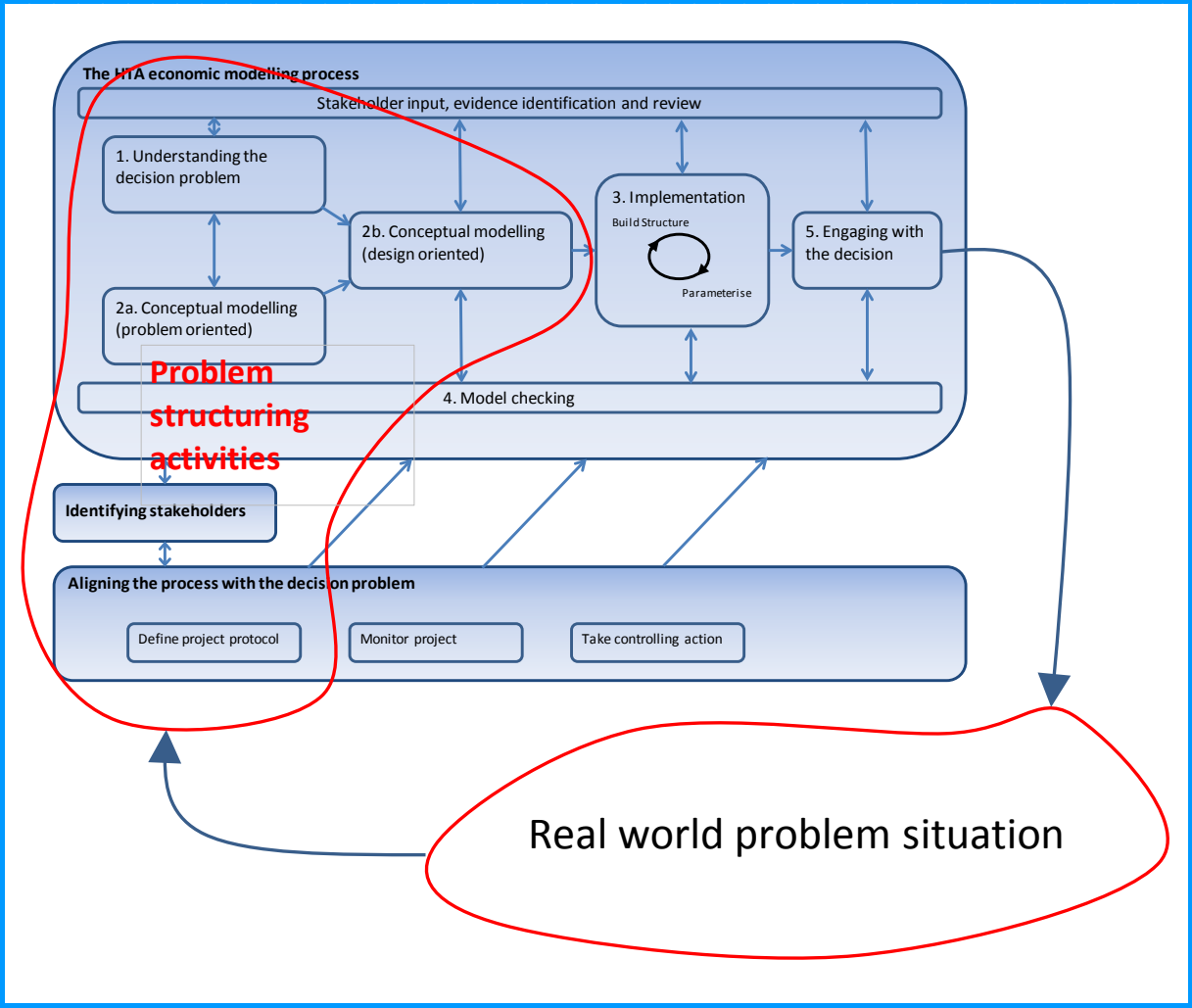
Economics guidance conclusions Recommendations for practice

Systems approach for working with stakeholders to achieve health system improvement

Cost consequence analysis to address multiple perspectives



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Case study - Economic assessment of reinforced home based palliative care

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Reinforced home based palliative care

Modelling activities

Economic evidence review rHBPC

Stakeholder workshops

Conceptual modelling

Elicitation of expert judgement

Model Implementation

Engaging with decision problem

Key documents

Briefing document

Scope

Aspects of complexity

Health and wellbeing model

Resource pathway model

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Scope and design of economic modelling

- No trial evidence on economics of rHBPC:
  - Expert elicitation - Very simple model !!
- Focus – the COPE intervention
- Effectiveness based upon analysis previously reported
- Marginal resource use/cost impacts in the system ie not cost effectiveness
  - e.g. cost shifting between hospital, GPs and PC agencies.

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Aspects of complexity Palliative Care

Multiple perspectives ------

Indeterminacy

Uncertain causality

Unpredictable outcomes

Time / path dependency

- Hospitals / GPs / Community
- Social care
- Hospices
- Charitable groups
- Patients & Families
- Carers

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Aspects of complexity Palliative Care

Multiple perspectives

Indeterminacy ----------

Uncertain causality

Unpredictable outcomes

Time / path dependency

Definition of the intervention / comparator

Reinforced home based PC – Formal element of carer support

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Aspects of complexity Palliative Care

Multiple perspectives

Indeterminacy

Uncertain causality -----

Unpredictable outcomes

Time / path dependency

Interaction between context and intervention effectiveness

Effectiveness of carer support relies on communication between PC agencies

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Aspects of complexity Palliative Care

Multiple perspectives

Indeterminacy

Uncertain causality

Unpredictable outcomes

Time / path dependency --

Evolutionary systems

UK GP contract 2004
Removal of 24 hr responsibility

Liverpool care pathway:
‘More care, less pathway’

Context/driver of change

Impact on generalisability

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Conceptual modelling

- Health and wellbeing logic model

  Possible causal chain between reinforcement interventions, their immediate impact and the overall goals and outcomes of the different stakeholders (patients, carers, health professionals and decision makers)

- Resource pathway model

  Descriptive model of activities, services and resources in the system & intervention impact.

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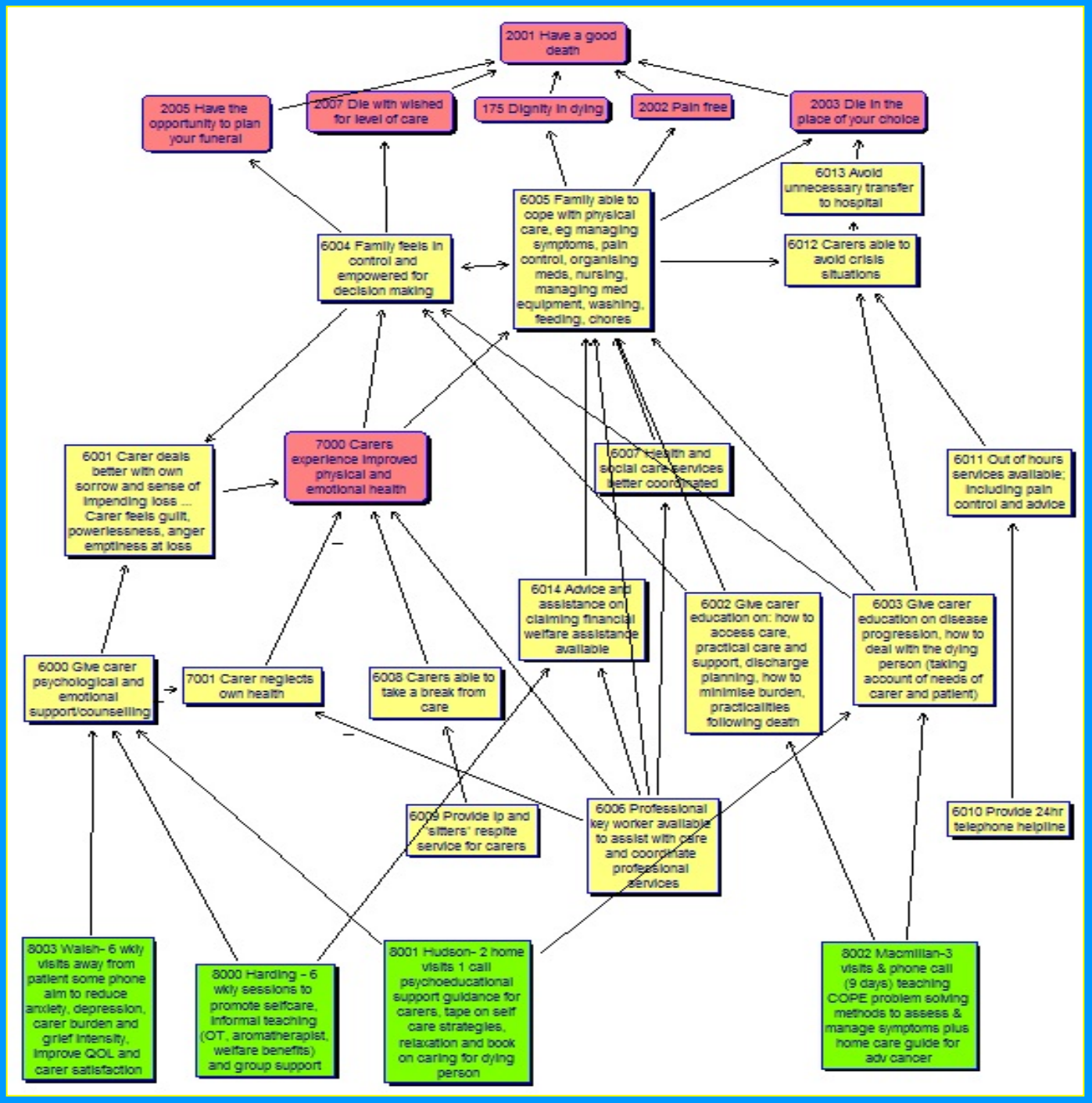
Health and wellbeing model



Effectiveness results rHBPC

- Evidence of effectiveness for patients or carers neutral or positive – suggestion of positive outcomes for patient symptom control and psychological outcomes for patient and carer

Resource & cost results for rHBPC

New palliative home care patients per month	Carers receiving the intervention	SPC nurse Intervention workload (hrs/month)	Change in SPC nurse operational workload (hrs/month)	Change in SPC nurse hours	Marginal SPC nurse FTE	Marginal GP consultations	Marginal care home weeks
100	28 (8,56)	92 (28,168)	-132 (-408,-16)	-40 (-280,76)	-0.24 (-1.72,0.48)	-4.4 (-10.8,1.6)	0.08 (0.04,0.24)

New palliative home care patients per month	Cost of the intervention (95%CI)	Change in SPC service cost	Change in hospital costs (95%CI)	Change in GP costs (95%CI)	Total monthly marginal cost (95%CI)
100	£8,040 (2440,14560)	£2,480 (-7160,9800)	-£15,080 (-49840,4240)	-£3,600 (-9960,280)	-£16,640 (-53880,3320)

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Economics of rHBPC

Quality, quantity of economic evidence poor, reliance on elicitation

Complexity => lack of generalisability

No off the shelf intervention

Effectiveness – Some potential for positive impact

Economics - Potential to recoup investment

Need to design carer support in context of wider PC system, Eg communication, out of hours, access to patient records.

Interventions require integral mechanisms for continuous evaluation and system adaptation:

Eg Outcomes and levers to achieve cost and outcome goals.

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Conclusions

Guidance seeks to provide a systemic approach to understand economic decision problems, to design and develop models that generate credible economic evidence for decision making.

Intervention includes evaluation

Guidance is a starting point for further development.

Needs validation in different complex settings.

Substantial further methodological research -

complexity science methods in health economic modelling

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Appropriate outcome ?

- Many inconsistent outcomes and outcome measures.
- Quality adjusted life year (QALY) rarely used &
- Measures eg EQ5D, SF36 insufficient for PC.
- Outcomes of both the carer & the patient are important.
- Further research in:
  - Domains of wellbeing and
  - incorporating multiple perspectives.