

# Economics in social care – An introductory presentation on aspects of the economic work for the NCCSC team

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# Overview

1. About the economic work for the NCCSC
2. What is an economic evaluation?
3. What kind of evidence?
4. What kind of outcome-(measure)s?
5. The process/ our experience so far.

# 1. About the economic work for the NCCSC

## Three elements

### 1. Economic plan

- Initial priorities, proposed methods
- Revision
- Final plan with identified areas for economic analysis and method

### 2. Economic reviews

- Published economic evidence studies
- Assessment of applicability & methodological quality  
'Evidence statements'

### 3. Economic analysis

- Modelling costs, consequences
- Qualitative considerations
- Subgroup analysis

**All steps carried out in support of the GDG by the Economist and will involve the rest of NCCSC and NICE**

# 1. About the economic work for the NCCSC

## **Steps involved**

- Analysing scoping literature
- General layout of economic work
- Derive economic questions from review questions
- Assessing the economic questions for suitability for economic analysis
- Appraising quality of economic studies found in review searches
- Information extraction from economic studies and summary in evidence statements

## Steps involved ... **Continued**

- Developing model structure
- Pragmatic searches for model parameters where not available from review searches
- Populating model
- Carrying out subgroup and sensitivity analysis
- Qualitative analysis
- Preparing model description and evidence statements

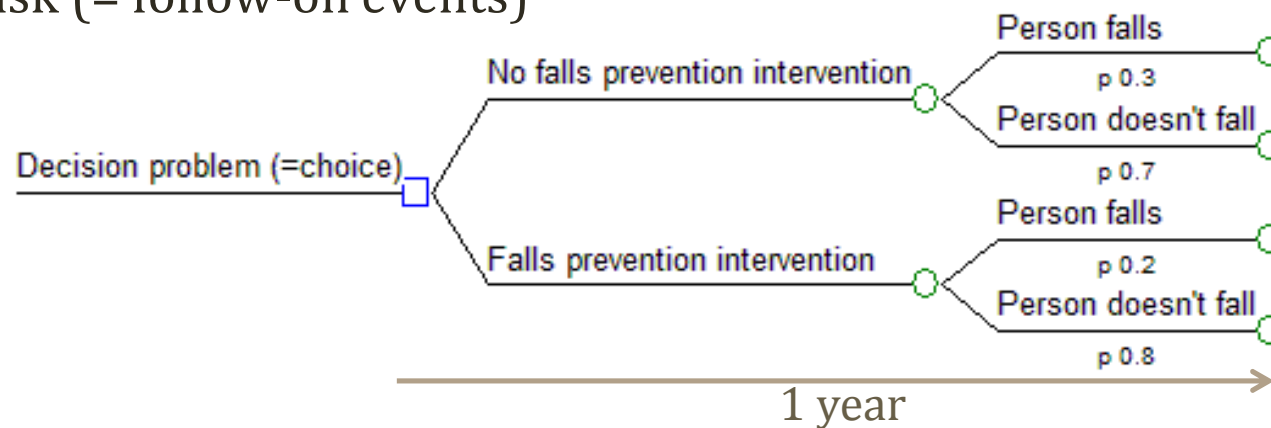
## 2. What is an economic evaluation?

- A comparison of the cost and consequences for two (or more) courses of actions.
- Courses of actions: intervention vs. alternative.
- 'Intervention' in social care: Set or components of interventions, programmes, approaches or models of service delivery, care packages.
- Full EE alongside randomised controlled trials or other experimental studies (marginal approach to analysis); in addition to outcomes, information about resource use are collected.
- Different types of EE: cost-benefit, cost-effectiveness, cost-utility, cost-consequences.
- 'Decision modelling' - A particular technique that allows to use synthesised data, to combine different sets of evidence, to link intermediate to final outcomes and to extrapolate beyond the observed time period.

## 2. What is an economic evaluation?

### Decision modelling

**Simple decision tree:** suitable to model a limited number of events which happen in a short time period with no continuous risk (= follow-on events)



#### Parameters:

- Probability of fall for an 'average' person who received/ did not receive falls prevention
- Cost of the falls prevention intervention
- Consequences: Quality-of-life, resource implications of a fall (e.g. average cost of treating a fall)

# Decision modelling

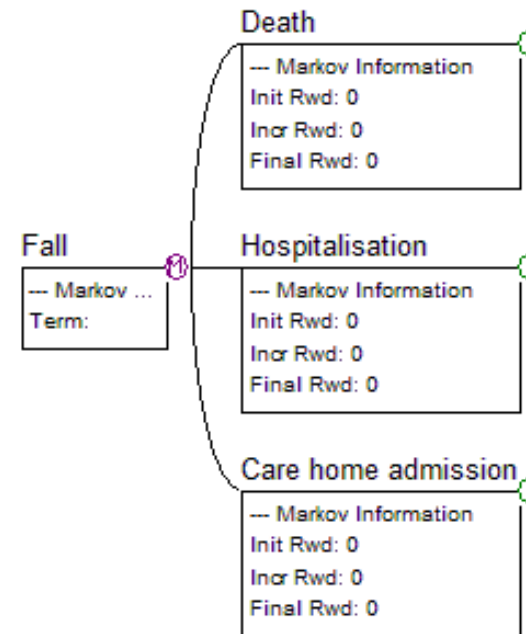
## ...Continued

### State transition model (>Markov):

- Represent continuous risk in the form of repeating events over a long time horizon
- Events are modelled as transitions from one state to another

### Parameters:

- Transition probabilities
- Cost of the intervention
- Consequences: e.g. quality-of-life associated with death, hospitalisation, care home admission; resource implications linked to these events





## Limitations of EE in social care

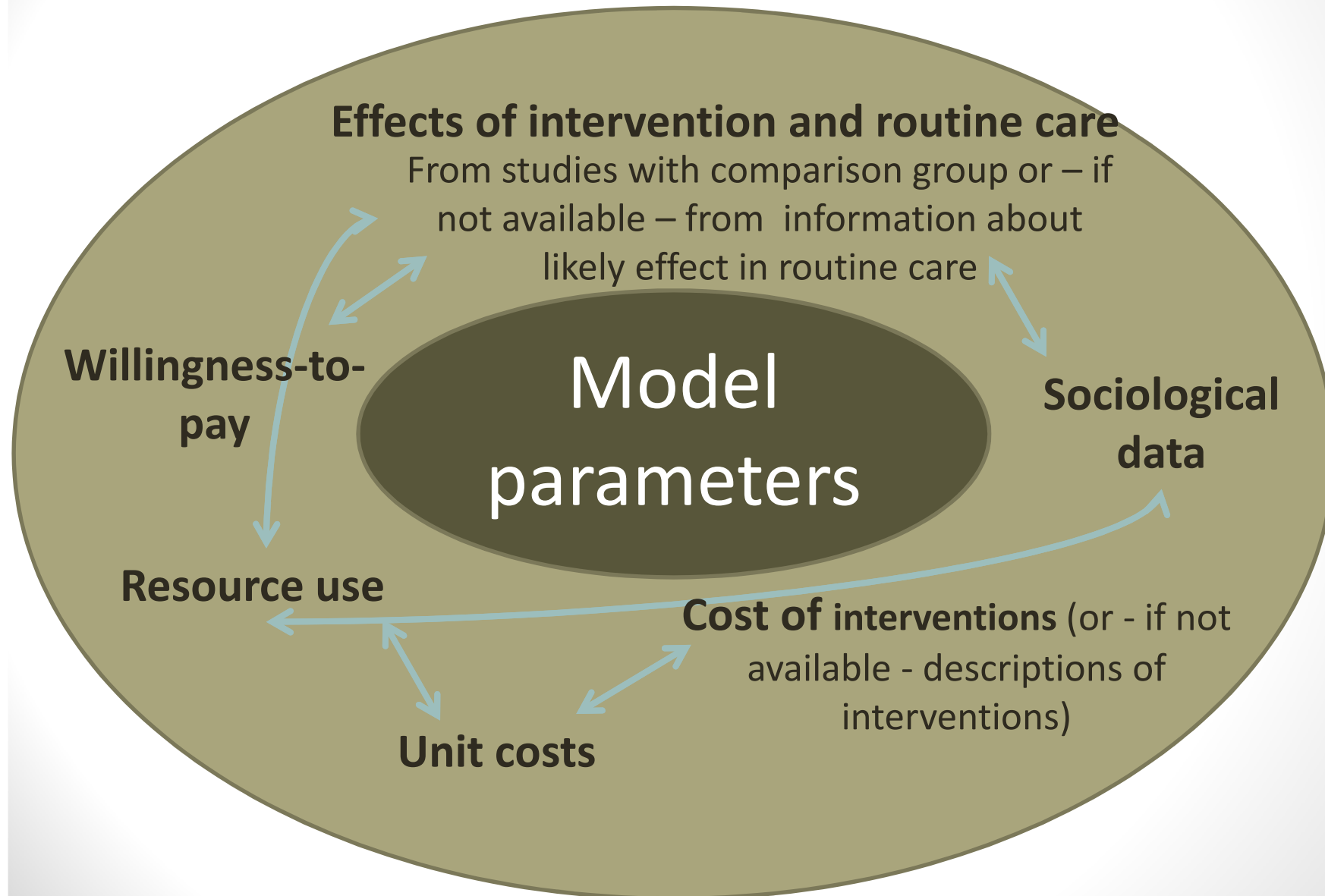
- A wide range of perspectives
- Multiple outcomes, some long-term ones and those difficult to quantify or express in monetary form
- Difficulty to define routine care
- Most studies in this area cannot establish causalities
- Resource implications for other parts in the system, often savings for other public services such as health, education or criminal justice
- Knock-on effects are typical for social care interventions but difficult to capture
- Methods still underdeveloped
- Information from a diverse range of studies need to be utilised to populate the model

### 3. What kind of evidence?

1. Full economic evaluations, BUT not many of them in the social care area, and for some topics unlikely to be any;
2. Partial economic evaluations e.g. cost analysis, cost-outcome descriptions;
3. Systematic reviews of the effects of 'interventions' and (if this is not available) single effectiveness studies.

### 3. What kind of evidence?

#### **...Continued**



## 4. What kind of outcome/measure-s?

### *Generally...*

- Multiple outcomes (e.g. dignity, safety, mental wellbeing, physical health, choice and control);
- Not always set out at beginning of an intervention what the outcome should be (personalised, process oriented);
- Different groups of individuals who may benefit (e.g. service user, carer, family, wider community);
- Long-term outcomes and knock-on effects which will not be observed in the study period.

## 4. What kind of outcome/measure-s?

1. Adult Social Care Outcomes Framework (ASCOT): Measures social care related quality-of-life; comprehensive but not always available from study data;
2. Quality-adjusted life years (QALY): Measures quality and quantity of life; has advantage that NICE threshold exists to make decision about cost-effectiveness; limited usefulness in social care;
3. Mortality; often not observed in study period; but extrapolation possible with decision modelling;
4. Independent living at home; measured through period of additional time lived at home and delay into residential care;
5. Reduction in hospital (re-)admission; more a 'cost' than an outcome but in some areas studies use it as primary outcomes;
6. Intermediate outcomes that can be linked to final outcomes (e.g. social isolation, satisfaction, breakdown in carer's relationship, educational achievement).

## 4. What kind of outcome/measure-s?

Consider if study measures/uses:

- Outcomes (rather than outputs)?
- Quantified or quantifiable (versus qualitative) outcomes ?
- Standardised outcome measures?
- Outcomes at baseline?
- Adverse outcomes?

To address the issue of multiple outcomes in evidence synthesis:

- Consider summarizing single outcome measures to areas of outcomes
- Selecting outcomes (possibly only one) for use in the economic analysis

## 5. The process, our experience so far.

Review questions from *home care* topic:

**What are users' and family carers' experiences of home care and what do they think should change?**

This could have economic relevance if experiences included outcomes achieved; the question would then be how cost-effective are changes in practice. We could not formulate an economic question (suitable for decision modelling) until later in the process when the analysis of this review question has happened.

## 5. The process so far, our experience so far.

**What is the relationship between the employment terms, conditions and organisation of the homecare workforce and the quality of homecare they deliver?**

=> The economic question would relate to relationship between cost and quality. Decision modelling could be used to compare the costs and effects of models of home care which exceed the level of current provision in regards to work conditions etc. The relationship will influence economic analysis in this area. Pay and conditions for home care workers will influence the unit costs of home care and will need to be taken into account in sensitivity analyses; we need to ensure that the relationship between pay (or work conditions) and quality of care is appropriately reflected. It is unlikely that there are economic evaluations which look at this question directly. There will be different sets of evidence that we would need to draw on.



## 5. The process so far, our experience so far.

**What is the current evidence on the activities and roles that homecare practitioners are taking on, and the support or training they have to equip them for these roles?**

=> This question as it stands does not have a component that would be suitable for economic analysis. The cost-effectiveness of the provision of interventions provided by specialised staff may, however, be subject to economic analysis. Examples could be physio- or occupational therapists providing incontinence assessment and interventions as part of home care packages. It is likely that there will be relevant evidence from economic evaluations and trials, and that decision modelling will be able to answer the question.

## 5. The process so far, our experience so far.

**What are the effects of different models of care planning and delivery-on outcomes valued by service users and carers (e.g. ASCOT outcomes; see section 4.4 of scope)?**

=> The economic question could refer to case management and care coordination approaches towards home care compared with home care that is not case managed or coordinated. Decision modeling is likely to help answer cost-effectiveness questions in this area, using evidence from trials.