



# Evaluation in adult social care

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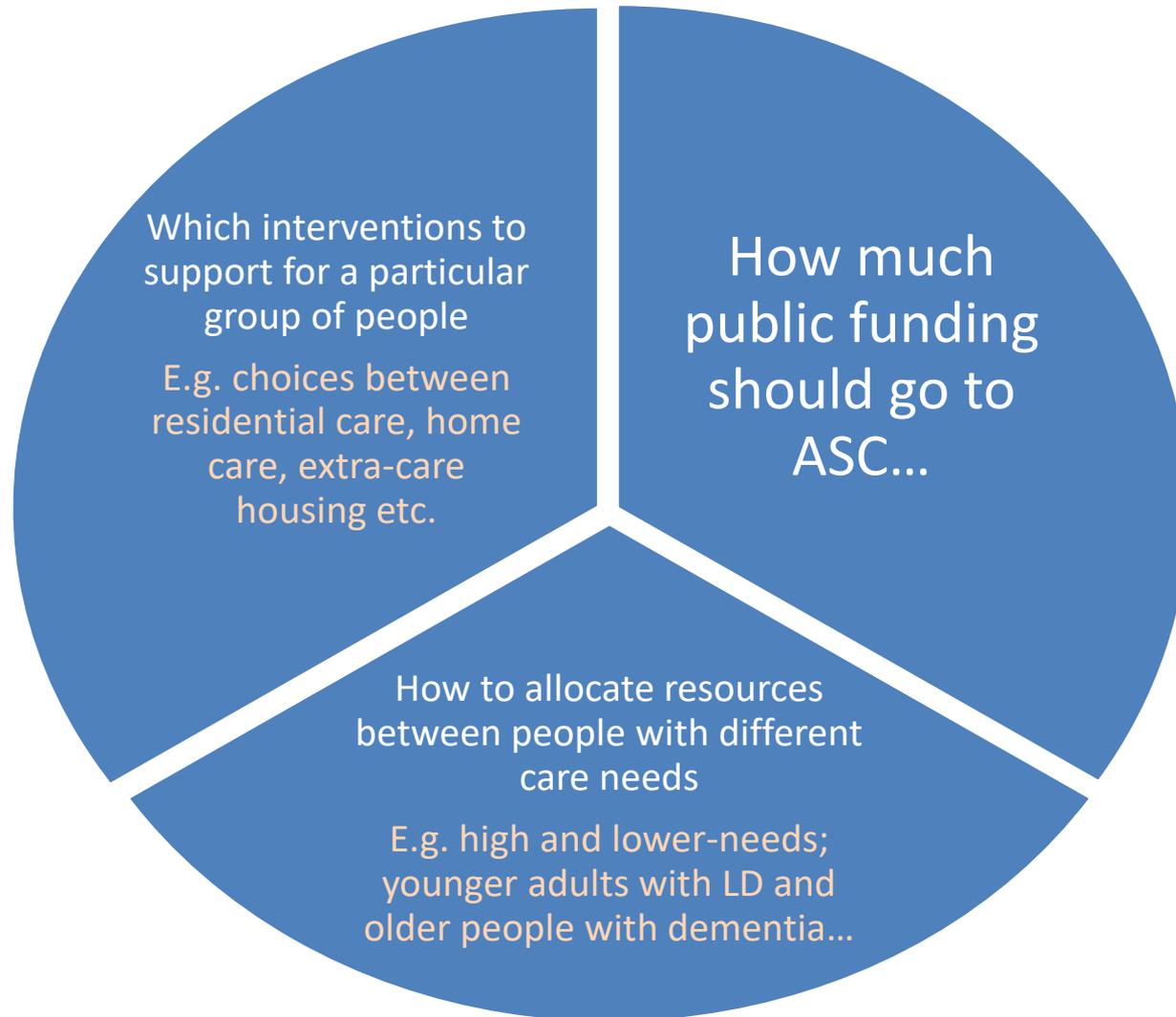
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# Introduction

- Growing recognition of the need to determine whether ASC care is effective and good value for money
- Studies of effectiveness and cost-effectiveness = ***economic evaluation (EE)***
  - well-established in mainstream health care
  - ... but less so in ASC
- Key questions
  1. Why do effectiveness studies and EE in ASC?
  2. How might EE be done in ASC?
  3. Where are we with ASC evaluation evidence?
  4. What are the implications for further evaluation research in ASC?

# 1. Economic evaluation (EE) in ASC- Why do it?



## 2: How - what to consider for evaluations?

Consideration	What it means for EE in social care?
<p>What is being evaluated? Whose perspective</p>	<ul style="list-style-type: none"> <li>• What is the intervention/unit of analysis: e.g. a service, a 'package' or programme of support</li> <li>• Whose and what decisions are to be informed?               <ul style="list-style-type: none"> <li>• Society, system level, service level, need group</li> </ul> </li> </ul>
<p>Measurement of Outcomes</p>	<p>What indicators to use... potentially wide range in ASC, but few...</p> <p>(a) fully reflect the goals of the care system</p> <p>(b) are generic – to allow comparisons between different potential users and uses of ASC (and beyond)</p> <p>Whose outcomes e.g. individual, household etc.</p>
<p>Comparators and attribution</p>	<p>Evaluation should robustly compare possible courses of action (interventions), <i>attributing</i> outcome changes to the new intervention</p> <p>The comparator should be the best current option in cost-effectiveness terms for the condition (e.g. don't compare to an intervention that is less cost-effective than an existing alternative) – needed to establish the opportunity cost</p>

Adapted from Weatherly et al, 2017, based on Drummond et al 2015

[Cont.]

# What to consider when doing EEs?

Consideration	What it means for EE in social care?
Uncertainty	<ul style="list-style-type: none"><li>• Evaluation studies are usually based on samples and so subject to statistical error</li><li>• More fundamentally there may be consequences we have not anticipated</li></ul>
Equity	Different subgroups of users may have quite different experiences of the same intervention... need to account for the distribution as well as the average/mean effects

Adapted from Weatherly et al, 2017, based on Drummond et al 2015

Weatherly, Helen, Rita Faria, Bernard Van Den Berg, Mark Sculpher, Peter O'Neill, Kay Nolan, Julie Glanville, Jaana Isojarvi, Erin Baragula, and Mary Edwards (2017) "Scoping Review on Social Care Economic Evaluation Methods." CHE Research Paper 150, University of York

Drummond, M. F., Sculpher, M. J., Claxton, K. P., Stoddart, G. L. & Torrance, G. W. 2015. *Methods For The Economic Evaluation Of Health Care Programmes. Fourth Edition*, Oxford: Oxford University Press.

# i. Measurement: Outcome indicators for ASC evaluations

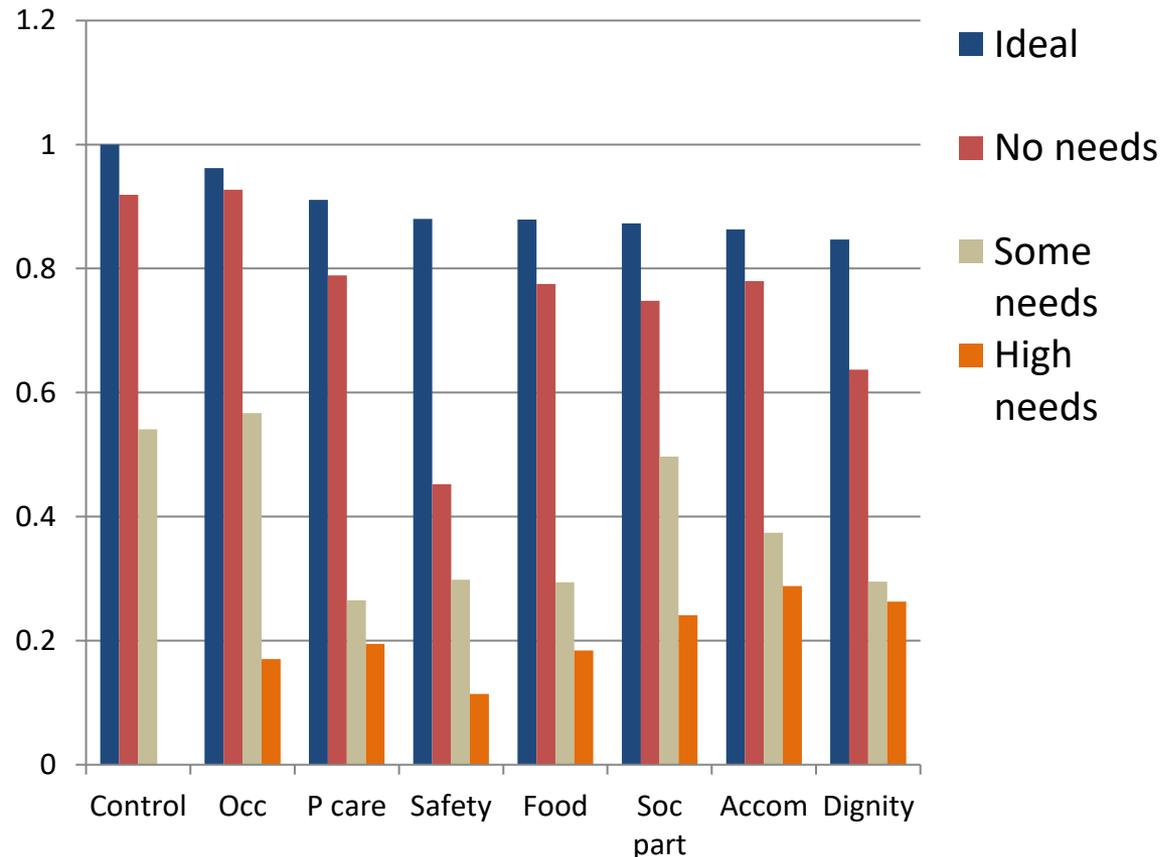
- Principles:
  - Condition-specific Vs generic measures... wellbeing
    - Can be used to compare effectiveness of different forms of care
  - Measures that can be used to assess trade-offs between QoL and length of life (mortality) - QALYs
  - Are sufficiently sensitive to detect the aspects of wellbeing that ASC aims to improve...
- Measuring outcomes in economic evaluations of ASC
  - ASCOT and ICECAP-O
    - Most commonly applied generic preference-based instruments (along with Euroqol EQ-5D) in literature (Bulamu, Kaambwa, & Ratcliffe, 2015)
    - Recommended measures (Makai et al., 2014)

Bulamu, N B, B Kaambwa, and J Ratcliffe. 2015. "A Systematic Review of Instruments for Measuring Outcomes in Economic Evaluation within Aged Care." *Health Qual Life Outcomes* 13: 179. <https://doi.org/10.1186/s12955-015-0372-8> 10.1186/s12955-015-0372-8 [pii].

Makai, Peter, Werner B F Brouwer, Marc A Koopmanschap, Elly A Stolk, and Anna P Nieboer. 2014. "Quality of Life Instruments for Economic Evaluations in Health and Social Care for Older People: A Systematic Review." *Social Science & Medicine* 102 (0): 83–93. <https://doi.org/http://dx.doi.org/10.1016/j.socscimed.2013.11.050>.

# Measurement: ASCOT utilities - General population preferences

- Accommodation cleanliness and comfort
- Safety
- Food and drink
- Personal care
- Control over daily life
- Social participation and involvement
- Dignity
- Employment and occupation



Source: Netten, A, P Burge, J Malley, D Potoglou, A M Towers, J Brazier, T Flynn, J Forder, and B Wall. 2012. "Outcomes of Social Care for Adults: Developing a Preference-Weighted Measure." *Health Technology Assessment* 16 (16): 1–166. <https://doi.org/Doi.10.3310/Hta16160>.

## ii. Attribution

- Evaluation: ensuring we are measuring the effect that is *attributable* (i.e. caused by) the change in service/intervention/activity we are evaluating
  - ‘Association is not causation’
- Paradox of evaluation:
  - Ideally compare a person’s experiences both with and without a new intervention ...
  - ... but a person cannot have two alternatives at the same time
- Instead, evaluation studies establish the *counterfactual* in three broad ways...

# Attribution [cont.]

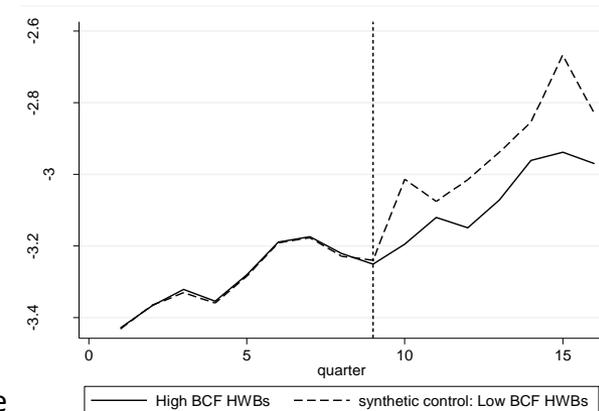
- (1) Randomised controlled trials (RCTs)
  - Use a control group of people *not* using the new intervention to establish the counterfactual
  - Random allocation of people between the intervention and control group
    - only difference between the groups, on average, is the new intervention
  - Difference in outcome between the two groups on average must be due only to the new intervention
- But some challenges for RCTs in ASC?
  - Acceptability of this design in ASC?
  - Limited options for ‘blind’ trials ASC?
- Strong (internal) validity (‘gold standard’) but experimental settings may not reflect practical application



# Attribution [cont.]

- (2) Quasi-experimental
  - Control group but not randomised
  - Instead try to ‘match’ the groups as closely as possible
    - a range of ways of doing this
  - May allow some ‘attribution bias’ but easier/cheaper to conduct study
- (3) Non-experimental/observational methods
  - No control group – observe sample of people using intervention
  - Relies on ‘natural variation’ in the characteristics of service users and the type/amount of the service they use
    - Measure differences in characteristics and use statistical methods to remove their effect on outcomes
  - Developing range of statistical methods for this e.g. instrumental variables, diff-in-diff, synthetic control...
  - Low cost (no trial) and more reflective of the ‘real world’
  - but ‘attribution bias’ can be a problem

Delayed transfers of care



Source: Forder et al. (2018) A system-level evaluation of the Better Care Fund: Final Report, QORU

# 3. EE LTC – the evidence

- Recognition of the benefits of a good EE evidence base... but...
- Limited evidence base – systematic reviews:
  - Wealtherly et al. 2017: 30 ‘social care’ economic evaluations found
    - 14 RCTs
  - Bulamu et al. 2018: Economic evaluations in community aged care – 11 studies
- Most evidence uses health-related quality of life, HRQoL (EQ5D), as outcome indicator
- Different methods and approaches used
  - Few studies regarded as ‘robust’ in standard systematic reviewing e.g. good measurement (generic validated indicators) and attribution methods (controlled studies, RCT or non-RCT)

Bulamu, N B, B Kaambwa, and J Ratcliffe. 2018. “Economic Evaluations in Community Aged Care: A Systematic Review.” *Bmc Health Services Research* 18 (1): 967. <https://doi.org/10.1186/s12913-018-3785-3> 10.1186/s12913-018-3785-3 [pii].

# ASC evaluation studies – examples (i) RCTs

## 1. Participant randomisation

### **START - promoting the mental health of family carers of people with dementia (Knapp et al., 2013)**

- Coping intervention added to usual treatment Vs with usual treatment alone
- 260 participants recruited: 173 were randomised to START, 87 usual treatment
- Outcomes and costs
  - Hospital Anxiety and Depression Scale total score (HADS-T) of affective symptoms
  - Quality adjusted life years (QALYs) (EQ5D) over 8 months from baseline
  - Costs measured from a health and social care perspective
- Results:
  - 99% chance of START intervention being cost effective (at a willingness to pay threshold of £30 000 per QALY gained)

Knapp, Martin, Derek King, Renee Romeo, Barbara Schehl, Julie Barber, Mark Griffin, Penny Rapaport, et al. 2013. "Cost Effectiveness of a Manual Based Coping Strategy Programme in Promoting the Mental Health of Family Carers of People with Dementia (the START (STrategies for RelaTives) Study): A Pragmatic Randomised Controlled Trial." *BMJ* 347 (October): f6342. <https://doi.org/10.1136/BMJ.F6342>.

# ASC evaluation studies – examples (i) RCTs

## 2. Cluster randomisation

### **Telecare for people with social care needs: the Whole Systems Demonstrator study (Henderson et al., 2014)**

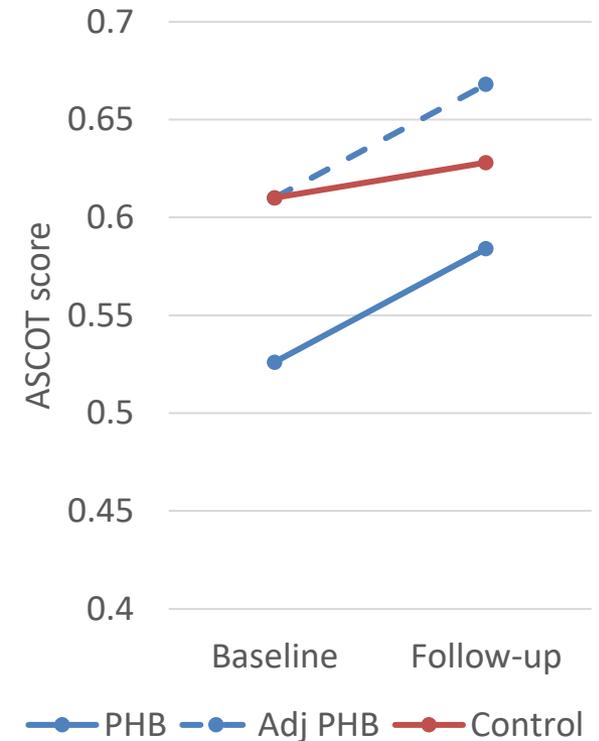
- Telecare e.g. monitoring person's ADLs, home security, home environment
- Three study sites, randomised by GP practice in study sites
  - Eligible patients in intervention practices: TC
  - Patients in the control group GPs - received usual health and social care (for the 12 month follow-up)
- Outcomes
  - PROMs e.g. EQ5D QALY, carer outcomes
  - Service use (e.g. hospitalisation) and costs
- Results:
  - Higher costs, no sig diff in QALYs; 16% to be CE at £30k

C, Henderson, Knapp M, Fernández JL, Beecham J, Hirani SP, Beynon M, Cartwright M, et al. 2014. "Cost-Effectiveness of Telecare for People with Social Care Needs: The Whole Systems Demonstrator Cluster Randomised Trial." *Age and Ageing* 43 (6): 794–800. <https://doi.org/10.1093/AGEING/AFU067>.

# Examples – (ii) controlled (non-randomised) longitudinal

## Personal health budgets (Jones et al. 2013)

- PHBs Vs conventional ‘offered’ services
- Participants recruited in two ways:
  - (A) Individuals randomised (25% participants)
  - (B) Non-randomly:
    - PHB participants recruited by those HC professionals offering budgets
    - Control group was recruited by non-participating health care professionals in the same site
- Compared change outcomes/costs over time between intervention and control groups – control for baseline differences
- Outcomes:
  - EQ5D and ASCOT; other indicators GHQ12 (psych. wellbeing)
- Results
  - PBs associated with an improvement in CRQoL (ASCOT), and were likely to be *cost-effective*
  - PBs not associated with health improvements, including health-related QoL



Jones, K, J Forder, J Caiels, E Welch, C Glendinning, and K Windle. 2013. "Personalization in the Health Care System: Do Personal Health Budgets Have an Impact on Outcomes and Cost?" *Journal of Health Services Research & Policy* 18: 59–67. <https://doi.org/Doi.10.1177/1355819613503152>.

# Examples – (iii) observational study

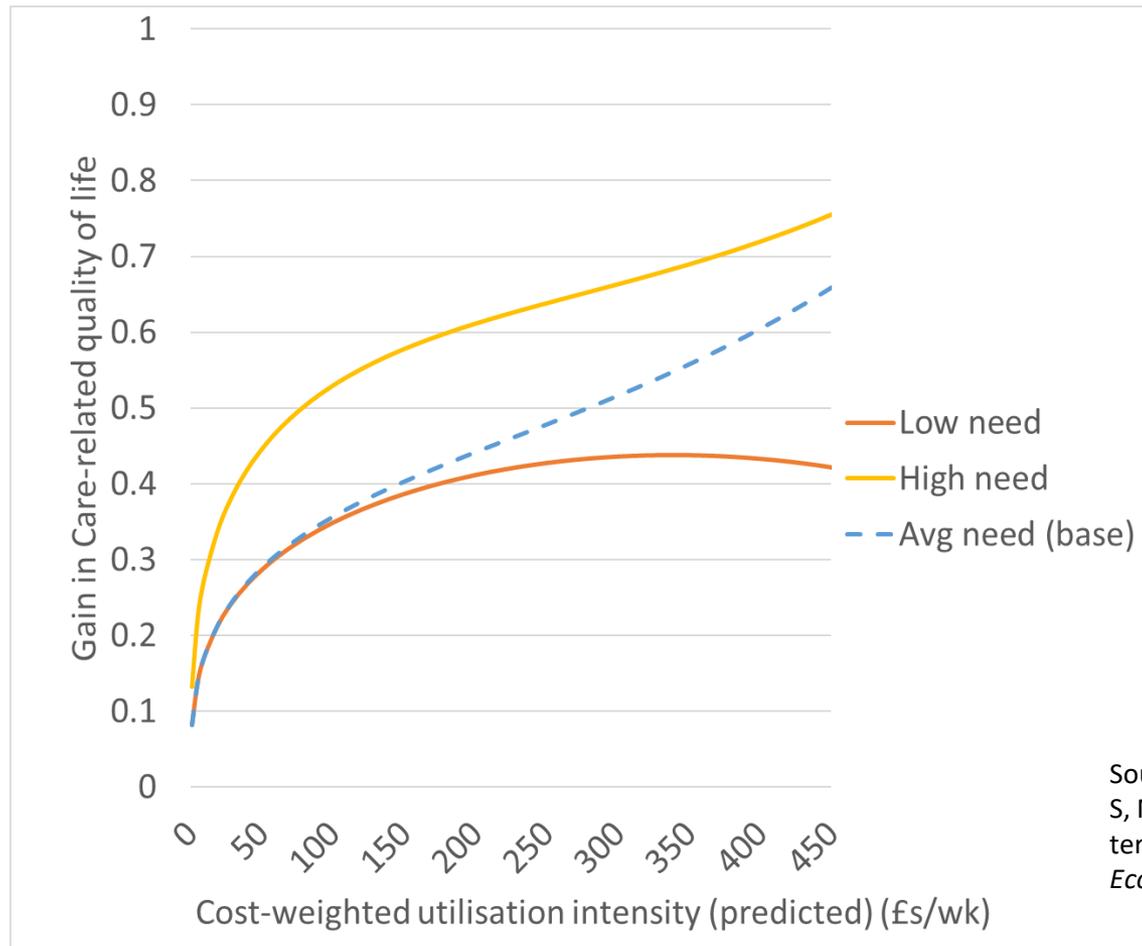
## Identifying the impact of Adult Social Care (IIASC)

(Forder et al, 2018)

- Effectiveness of community-based long-term social care
  - Home care, day care, meals services, equipment, professional support (e.g. social worker visit) = care support package
- Study design:
  - Survey & interview c. 1000 people using publicly-funded care in England
  - Non-experimental
    - Compared CRQoL of people with different care support packages
    - Statistical methods to ‘factor out’ differences between people in the survey except their service use
    - Estimate how a (statistically) typical person in the sample would have different QoL if the level of their care support was changed

Forder, Julien, Florin Vadean, Stacey Rand, and Juliette Malley. 2018. “The Impact of Long-Term Care on Quality of Life.” *Health Economics* 27 (3): e43–58. <https://doi.org/10.1002/hec.3612>.

# IIASC: Relationship between CRQoL and care package used – by need group



Source: Forder J, Vadean F, Rand S, Malley J. The impact of long-term care on quality of life. *Health Economics*. 2018;27:e43–e58.

# 4. Implications for ASC (evaluation) research

- Methodological issues
  - Unit of analysis
  - Outcome measures
  - Complex interventions
- Capacity
  - Developing research culture
  - Developing infrastructure
    - E.g. ethics, research governance
- Facilitators
  - Significant enthusiasm from the sector
  - New funding opportunities for research
  - New infrastructure developments
  - Higher profile of social care

# Some concluding thoughts

- Evaluation evidence about ASC has significant potential to improve decision-making
- Evidence base still under-developed
- More research on ASC supported by:
  - Promoting a research/evaluation culture in ASC
  - Increasing the evaluation skills/capacity of people working in care
  - Working out what is important in ASC evaluation
    - e.g. which outcome measures, what kinds of studies, what 'values' to consider (equality issues, informal care roles etc.)