



A Review of the Economic Evidence of Asset Based Approaches for Health Improvement

Emma McIntosh, PhD

Reader in Health Economics

Health Economics and Health Technology Assessment





- Definitions
- Economic theory
- Economic evaluation methods
- Economic evidence of asset based approaches for health improvement
- Evaluative approach: Identify, measure and value
- Recent developments in outcome measurements
- Suggestions for the way forward
- Questions for Discussion



- Health Assets are described as the collective **resources** which individuals and communities have – internally, externally and collectively – which help protect against poor health.
- Assets can be **social, financial, physical and environmental**; they are more than just the things you can put a price on. Assets are also about people, skills and opportunities.
- Central to assets approaches is the idea of people in **control** of their lives through the development of their capacities and capabilities
- It is *thought* that such **control** enables people to be better connected with each other and encourages a spirit of cooperation, mutual support and caring.

- **Economic evaluation in health care is required due to extensive ‘market failure’ in health care (typical market conditions often do not exist in health care, i.e. we have asymmetry of information between consumer and provider)**
- **Much of health economics is concerned with designing policies to correct market failure**
- **In summary, we need to reconstruct our ‘missing market’ to identify the optimal allocation of our scarce health care resources**
- **Economic evaluation is the comparative analysis of costs and outcomes**



What are good resource allocation decisions?

- **Good resource allocation decisions are those that best meet agreed social objectives using currently available resources.**
- **In health, a good decision involves comparing the additional health benefits of an intervention with the health likely to be lost (or other health benefits foregone) elsewhere as a consequence of any additional costs.**
- **It is because of this, the health opportunity cost, that decision-makers should consider the additional costs of an intervention as well as the health consequences of those additional costs.**

(Although health benefits are not the only socially valued objectives, they are the primary objective of most health care interventions)



- **A review of the economic evidence for asset-based approaches for health improvement: findings and recommendations**

Kenny Lawson and Emma McIntosh

July 2013

**Report commissioned by the Glasgow Centre for
Population Health (GCPH)**

**Acknowledgements: Cam Donaldson and Helen Mason, Yunus
Centre for Social Business and Health at the Glasgow
Caledonian University**



Aim of the Economic Review

- The report was commissioned to investigate the economic evidence regarding whether asset-based approaches offer value for money as an approach to improving health and wellbeing, and to reduce health inequalities.
- Method: Literature Review of academic and grey literature
- Main Databases: EconLit, SocINDEX, Sociological Abstracts, Web of Knowledge,
- Grey Literature: RePec and idocs



Search Terms

Asset-based approaches

Economic evaluation

Asset-based approaches
Asset mapping
Co-production
Community development
Community engagement
Community empowerment
Self-care
Social capital
Capabilities
Communitarian claims

Costs
Cost consequence analysis
Cost effectiveness
Cost utility analysis
Cost benefit analysis
Contingent valuation
Discrete choice experiment /stated preference
discrete choice experiment
Social Return on Investment (SROI)
Programme budgeting and marginal analysis (PBMA)

Health terms

Relevant economic theories

Health benefit
Outcomes
Measuring health
Mental health
Quality adjusted life years (QALYs)
Life expectancy
Self-esteem
Social isolation
Salutogenesis
Determinants of health

Co-production in health
Health production model
Grossman model
Health production function
Welfare economics



Literature Search results

- 108 articles were found using a combination of the search terms detailed above.
- Abstracts from all journal articles (88) were read and assessed
- Summaries of grey literature documents (20).
- In total, 18 articles were identified as relevant.



- Review the available evidence relating to the cost-effectiveness of asset based approaches for health improvement.

Five related objectives:

- (i) To make an assessment of the available literature
- (ii) To explore the spectrum of measurement tools and approaches available with which to assess the cost-effectiveness of asset based approaches
- (iii) To assess the viability of cost-effectiveness comparisons between asset-based approaches and traditional service delivery
- (iv) To reach a conclusion about the cost-effectiveness of asset based approaches for health improvement in the short, medium and long term
- (v) To develop a set of practical recommendations to support organisations / initiatives taking an asset based approach to demonstrate their worth in economic terms.



- There has been no formal economic evaluation of asset-based approaches to date.
- There is a lack of evidence regarding the outcomes generated from taking asset-based approaches
- Little attention has been paid to the cost impact such as appropriate units of analysis, treatment of capital costs, volunteering costs (e.g. opportunity cost of time) and the aggregation of potential multi-sectoral costs.
- There is little explicit consideration of the appropriate time period that outcomes and costs are intended to be realised
- Based on these findings, it is evident that there is a **real need to undertake economic evaluation to demonstrate the value for money for asset-based approaches.**



- It is important to point out that there was not only an absence of economic evidence, but an absence of outcome evaluation per se,
- ‘What makes us healthy?’ (Foot, 2012) reinforces the findings that:
- *“...there is a paucity of intervention research and evaluation of actions that aim at strengthening health assets as a way of producing health communities and individuals”*

Foot, J (2012) What makes us healthy? The Asset Approach in Practice: Evidence, action, evaluation. 2012.



- Knapp (2012) found that time banking has the potential to be excellent value for money, given low intervention costs and a potentially wide range of important outcomes, such as health and employment.
- It was estimated to be cost saving within the first year of operation.
- The authors state “Our empirical conclusions are very tentative indications of economic impact of typical community capital-building projects”.

Knapp M, Bauer A, Perkins M, Snell T. Building community capital in social care: is there an economic case? *Community Development Journal*. 2012 September 26, 2012.



Economic evidence (1)

- *"The evidence about the potential contribution of community involvement to improved service delivery in deprived areas and the costs involved is not well developed or articulated. This will not encourage service providers to challenge or change well-established ways of delivering their services".*

(Office of the Deputy Prime Minister)



Economic evidence (2)

- There have been several ‘think pieces’ with respect to the need for economic evaluation in assets-based projects and how such economic evaluation might be carried out.
- NICE conducted a rapid evidence review in 2007 and found no cost effectiveness evidence of the impact of community engagement.
- These NICE findings were corroborated by a 2008 study (Mason et al) which reviewed the economic evidence of community engagement activities over the past 30 years and found that no study was set-up to collect economic information and undertake economic evaluation.
- Reasons for a lack of evidence were not discussed in either paper.

• National Institute of Clinical Excellence (NICE). Community engagement initiatives addressing the wider social determinants of health: A rapid review of evidence on impact, experience and process. 2007.

• Mason AR, Hill RC, Myers LA, Street AD. Establishing the economics of engaging communities in health promotion: what is desirable, what is feasible? *Critical Public Health*. 2008;18(3):285-97.



Economic evidence (3)

- The University of York reviewed the evidence of ‘healthy cities’ and explored how economic evaluation may be undertaken. No economic evidence was found (Carr-Hill and Street, 2003).
- The review argued that standard approaches of cost effectiveness analysis may be limited. Potential funders of such interventions exist outside of the health sectors and are interested in non-health outcomes; and further there may be intersectoral costs savings from a successful community engagement programme.
- Carr-Hill R Street A. Economic analysis of cost effectiveness of community engagement to improve health: CHE Research Paper 33 University of York, Centre for Health Economics. 2003.



- The GCPH report 'Assets in Action' (McLean and McNeice, 2012) described 19 projects,
- Of these 19 projects none included a formal economic evaluation.
- One study, Routes out of Prison (RooP) had conducted a Social Return on Investment (SROI) analysis. This study collected some relevant economic information (e.g. intervention costs) which demonstrates that economic evaluation can be done.
- Another modelling study simulated the potential impact of certain interventions (e.g. time banking). This study showed that these interventions may have the potential to be cost saving.



- There is a need to conduct outcome evaluation of asset-based approaches to establish causality between asset-based approaches and health and wellbeing.
- To develop economic evidence it is recommended that standard methods of economic evaluation are used. This would provide consistency in comparing the effectiveness and cost-effectiveness of interventions developed through asset-based working with existing interventions that they either seek to work alongside with or replace.



- It is recommended that different forms of economic analysis are undertaken and reported to satisfy the requirement of different funders. Economic evidence can estimate the ‘cost effectiveness’ of delivery mechanisms (e.g. cost per participant engaged); and the cost effectiveness of interventions to improve health and (e.g. cost per quality adjusted life year (QALY)).
- Further, and notwithstanding documented methodological challenges, a gold standard ‘cost benefit analysis’ (CBA) approach is recommended to assess the overall impact of asset-based approaches on overall social welfare, including health and non-health outcomes, where all outcomes are converted into monetary units and net monetary benefit is reported.



- There is an urgent need to test whether asset-based approaches represent value for money in terms of leading to improvements in health and wellbeing as well as reducing health inequalities.



Reasons for lack of economic evaluation evidence

- There was virtually no discussion in the literature as to why economic evidence may be lacking.
- It is recommended that a survey of advocates, funders and practitioners of asset-based approaches is undertaken regarding why there has not been any economic evaluation.
- A telephone/e.mail survey of the 19 assets based projects from 'Assets in Action' was carried out to enquire about the extent to which an economic evaluation had been conducted. Of those who responded, reasons for lack of economic evidence included: not a requirement of funder; lack of data on costs; and insufficient funding.



An economists view: Inputs and Outputs

- Put simply, we need to identify, measure and value all inputs and outputs using whatever tools and frameworks are best suited to the context



Opportunity cost

- when we choose to take one course of action regarding resource allocation, we are implicitly choosing not to take another course of action.
- measures the 'true' cost of a choice in terms of the alternatives forgone
- the amount of the next best alternative that is not produced
- **But how do we 'measure' the forgone alternatives?**
- We have to be able to compare 'outcomes' gained between different alternatives.



How do we assess ‘value for ‘money’

- We use economic evaluation methodology

3 Main types of economic evaluation

- Cost-**effectiveness** analysis
- Cost-**utility** analysis
- Cost-**benefit** analysis

These 3 methods differ only by the **outcome** used

- Each of these methods provides a framework for the comparative analysis of costs and ‘**outcomes**’ to provide the decision maker with evidence on ‘value for money’.



Identify Measure Value

- Resources: 'Time' is a key feature in Assets Activities – is this a resource or an outcome? (process utility?)
- Soft Outcomes – How should we measure and value?
- Outcomes such as improved mental health, return to labour market, reduced offending, reduced homelessness, improved physical health can all be measured and valued using economic evaluation methods.
- Basic surveys in assets based projects to provide initial descriptive on outcomes
- Qualitative methods will provide insight to the outcomes that should be measured and valued



Process Utility and Assets based working

- Given the focus on ‘participation’ is there ‘utility’ to be gained by the process of ‘participating in assets based working’ for individuals?
- If so, this is a positive outcome which should be valued.



Complexities for economic evaluation

- Is volunteer time a transferable resource? How should it be handled within an evaluative framework?
- Altruism and positive externalities are reasons for market failure – are they important in Assets Approaches?
- How do we value the ‘productivity’ of those who are most vulnerable (unemployed, homeless, older) ?
- Distributional considerations will be highly prevalent given the target group of assets approaches



Evidence provides credibility

- Economic evaluation frameworks offer a robust structure for the identification, measurement and valuation of 'costs' and 'outcomes'
- There are a large (and growing) number of readily accessible instruments for measuring outcomes related to mental health and capabilities (EQ-5D Generic, Anxiety and Depression scales) in addition to methods for the valuation of harder outcomes such as offending, employment and homelessness.
- There is a database of resource use questionnaires which could be adapted to an assets evaluation context (Dirum)
- There are specialist methods for valuing 'time' as an asset (CTUR, Oxford)



Tools: Time Use Diaries (TUD):

- Establishing relationship between conventional National Product and non-monetary output
- Identifying the impact of labour market exclusion on leisure, voluntary, other unpaid work
- Identifying short duration trips (underestimated in the National Travel Survey)
- Measuring (changes in) the domestic division of labour
- Estimating extent of sociability, co-presence and care activities
- Estimating personal physical activity levels in relation to medical/public health objectives
- Registering exposure to environmental risk or strain from people's daily activity
- Measurement of subjective well being and instantaneous or "objective" utility



- In 1996 the Panel on Cost-effectiveness in Health and Medicine convened by the United States Public Health Service (the US Panel) recommended the use of a 'reference case' when conducting cost effectiveness analyses
- The US Panel had identified an outstanding need for comparability and quality improvement in the conduct and reporting of CEAs, and the use of a reference case was proposed to address this.
- Since then, many other entities including the World Health Organisation (WHO) and the National Institute for Health and Care Excellence (NICE) in the UK have introduced the concept of a 'reference case' to improve the use of economic evaluations in informing decisions.



If you cant beat them

... join them !

**The advantages of a
reference case for assets**

- A reference case can improve the quality of individual decisions through robust standards for the planning, conduct and reporting of economic evaluations
- Facilitates greater overall consistency in decision-making over time.
- Where the results of multiple studies are to be compared, the use of a reference case facilitates the meaningful and explicit comparison of the analysis and findings.



NICE International Methods for Economic Evaluation Project (MEEP) in Low and Middle Income Countries

- Reference case guidance may be a useful starting point for outlining a practical framework for **Assets Approaches** (see statement of principles Table 7, p.43)



- An economic evaluation should be **communicated clearly and transparently** to enable the decision-maker(s) to **interpret** the methods and results.
- The **comparator(s)** against which costs and effects are measured should accurately **reflect the decision problem**.
- An economic evaluation should consider **all available evidence relevant to the decision problem**.
- The **measure of health outcome** should be **appropriate to the decision problem**, should capture **positive and negative effects on length of life and quality of life**, and should be **generalisable** across disease states.
- All **differences** between the intervention and the comparator in **expected resource use and costs** of delivery to the target population(s) should be incorporated into the evaluation
- The **time horizon** used in an economic evaluation should be of **sufficient length** to capture all costs and effects **relevant to the decision problem**; an appropriate **discount rate** should be used to **discount cost and effects to present value**.
- **Non-health effects and costs associated with gaining or providing access to health interventions that don't accrue to the health budget** should be identified where **relevant to the decision problem**. All costs and effects should be **disaggregated**, either by sector of the economy or to whom they accrue.
- The **cost and effects of the intervention on sub-populations** within the decision problem should be **explored** and the **implications** appropriately **characterised**.
- The **impact** of implementing the intervention on the **health budget and on other constraints** should be **identified clearly and separately**.
- An economic evaluation should explore the **equity implications** of implementing the intervention.



Extract from the MEEP project (p.41 NICE International)

- When decisions about the availability of an intervention are to be made by other types of decision-makers (eg. a global funder making a decision to fund an HIV treatment program in a particular region) the decisions may impact multiple constituencies. These populations may express **different scientific judgements about how evidence should be applied and different social judgements about which values should be taken into account**. A decision that impacts multiple constituencies still requires context specific information, because an intervention applied at a national or supranational level is directly impacted by its value at the local level.
- That is not to say that separate economic evaluations must be undertaken in all constituencies in order to make a decision that effects multiple populations, but it does mean that there are common elements to the conduct of economic evaluations which should be informed by the needs of local constituencies, irrespective of the ultimate decision-maker.

Areas of recommendation	US Panel	WHO Guide to Cost Effectiveness Analysis	NICE Guide to Technology Appraisal
Defining the decision problem	✓		✓
Comparator(s)	✓	✓	✓
Perspective on effects / outcomes	✓	✓	✓
Measuring and valuing health effects	✓	✓	✓
Synthesis of evidence on health effects		✓	✓
Source of data for measurement of health-related quality of life		✓	✓
Source of preference data for valuation of changes in health-related quality of life	✓		✓
Perspective on costs	✓	✓	✓
Evidence on resource use and costs (+/- source of evidence)	✓	✓	✓
Type of economic evaluation	✓	✓	✓



- In addition to health outcomes and direct costs accruing to the health budget, other costs and consequences of interventions may also be relevant, depending on the context of the decision. They include wider impacts on families, communities, and other sectors of the economy (eg. on educational outcomes). They may also include other (direct and indirect) costs that are incurred in gaining access to an intervention or that result from associated health outcomes. For instance, these may include direct costs falling on individuals and families in accessing health interventions (eg. travel, out-of-pocket and care costs), indirect time costs (eg. relating to the productivity of individuals and informal carers), as well as costs falling on other sectors of the economy.
- Non-health effects and costs that fall outside the health budget may be important because alternative interventions may result in different non health effects that have social value. They should therefore be included in the analysis but reported separately, with a justification for the selection of the non-health effects and an explanation of how they may be valued



- Qualitative approaches: the seven-step analysis (as used in Miljeteig 2010)
- Quantitative approaches of distributive impact and expected trade-offs: the Atkinson index or Gini index.
- At the most basic level, an exploration of the equity impact may involve a description of particular groups within the population that may be disproportionately affected (positively or negatively) by a decision.
- Equity implications should be considered at all stages of an economic evaluation, including the design, analysis and reporting stages
(MEEP, NICE International, 2014)



Recent Developments in outcome measures that may be relevant for **Assets: Capabilities**

- Capability measures are conceptually linked to Amartya Sen's approach
 - Defines wellbeing in terms of an individual's ability to 'do' and 'be' the things that are important in life
- Approach focuses on wellbeing defined in a broader sense rather than health only
- ICECAP-A: Measure of capability for the adult population
- ICECAP-O: Measure of wellbeing including attributes found to be important to older people e.g. attachment & security



1. Feeling settled and secure

- I am able to feel settled and secure in **all areas of my life**
- I am able to feel settled and secure in **many areas of my life**
- I am able to feel settled and secure in **a few areas of my life**
- I am **unable to feel settled and secure** in any areas of my life

2. Love, friendship and support

- I can have a **lot of love, friendship and support**
- I can have **quite a lot of love, friendship and support**
- I can have a **little love, friendship and support**
- I **cannot have any love, friendship and support**

3. Being independent

- I am able to be **completely independent**
- I am able to be independent in **many things**
- I am able to be independent in **a few things**
- I am **unable to be at all independent**

4. Achievement and progress

- I can achieve and progress in **all aspects of my life**
- I can achieve and progress in **many aspects of my life**
- I can achieve and progress in **a few aspects of my life**
- I **cannot achieve and progress** in any aspects of my life

5. Enjoyment and pleasure

- I can have a **lot of enjoyment and pleasure**
- I can have **quite a lot of enjoyment and pleasure**
- I can have a **little enjoyment and pleasure**
- I **cannot have any enjoyment and pleasure**

Please ensure you have only ticked **ONE** box for each of the five groups.



Questions for first table discussion session

- From what you've heard so far, what do you feel are the key challenges in applying health economics evaluation methods to asset based approaches?
- Should asset based approaches be subject to traditional economic evaluation methods or do they require alternative evaluation frameworks?
- Can we borrow and adapt current economic evaluation methodologies to evaluate asset based approaches?
- How best can the 'soft' and /or 'intangible' outcomes of asset based approaches be measured and valued?



Questions for second table discussion

- Are asset based resources (time, people, capital, money) transferable (with equivalent value)?
- How do we deal with the fact causal pathways can be harder to unpick and less known at the outset in asset approaches?
- Are there any existing research designs which could be applied?
- Should funders of asset based approaches include resources for economic evaluation?
- Should demonstration of value in economic terms be a condition of funding?
- What ways forward can you see for health economists to support asset based services and vice versa?