# **Nurse Researcher**

# Developing a framework for undertaking an asset-informed approach to service mapping: a systematic integrative review and synthesis --Manuscript Draft--

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Research
Developing a framework for undertaking an asset-informed approach to service mapping: a systematic integrative review and synthesis
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Introduction: Increasingly, there is an emphasis on asset-informed approaches in public health, but transferring this approach to health services planning requires prospective and systematic methods. Asset-informed approaches to service mapping have started to develop, but there are no standardized guidelines on the process. As nurses engage in population health activities this method is of particular interest. We sought to identify methods of asset-informed mapping used to address health problems and develop a framework to support the methodological rigor of service mapping.  Methods: An integrative literature review using a systematic approach and narrative synthesis was undertaken. Electronic databases and the grey literature were searched in January 2016.  Results: Ten articles met inclusion criteria. Reported methods included: the formation of a core team to drive the process; and varying detail on data collection methods and map formation. Challenges and solutions included: the effectiveness of the core team depends on having a designated leader, frequent meetings, and previous partnerships; including community 'cultural brokers' is an important consideration; and the importance of determining aims and scope.  Discussion: Results of our review can be used to modify existing generic resources for asset-informed mapping to application for health service delivery. Four key stages seem especially applicable and important: (1) defining the parameters of the service mapping process; (2) identifying services; (3) mapping services; and (4) consultation and implementation.  Conclusions: The shift towards asset-informed approaches in community and public health is an important step in realizing the potential of existing assets within communities to influence health outcomes. The framework offered in this paper aims to assist in developing an evidence base through promoting the systematic and rigorous reporting of methods used in asset-informed approaches to service mapping.
asset-based; service mapping; health; reporting
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mapping: a systematic integrative review and synthesis

Abstract

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including community 'cultural brokers' is an important consideration; and the

importance of determining aims and scope.

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asset-informed mapping to application for health service delivery. Four key stages seem

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implementation.

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health is an important step in realizing the potential of existing assets within

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to assist in developing an evidence base through promoting the systematic and rigorous

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**Key words** 

asset-based; service mapping; health; reporting

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#### Introduction

Internationally, there is an increased emphasis on access and equity, and in parallel a recognition that an aid based model without community involvement is unlikely to leverage structural change (Taylor and Taylor 2016). Asset-Based Community Development (ABCD) has been used by the community development movement to address socio-economic disadvantage (Baker 2014). This has been a philosophical response to the deficit model of providing services, wherein institutionalized help is provided in the form of external resources to address an externally identified problem. Such an approach promotes passivity, disempowerment, stereotypes, and low expectations and fails to fuel aspirations, promote engagement or leverage existing strengths that can build success. Rather than resolving the problem, external resources can sometimes foster a crippling dependency and have unintended consequences (Kretzmann and McKnight 1996). ABCD advocates the use of assets that already exist within communities to develop solutions (Kretzmann and McKnight 1996, Lightfoot *et al.* 2014).

Recognition of the strengths of ABCD has contributed to a shift towards an asset-informed approach in public health, focussing on the ability of individuals and communities to develop and sustain positive health outcomes rather than the traditional focus on deficits and external support (Morgan and Ziglio 2007). The need to address social determinants of health to address health disparities is recognized globally and increasingly a focus of nurses (Commission on Social Determinants of Health 2008, Loppie Reading and Wien 2009, Reutter and Kushner 2010). Focusing on communities and developing existing assets is argued to be a central component of taking action (Campbell *et al.* 2007, Morgan and Ziglio 2007, Commission on Social Determinants of Health 2008, Marmot *et al.* 2010, Baker 2014). Health professionals are in a

particularly strong position to tackle health inequalities through community involvement, particularly when they are in respected service roles, have established relationships and partner with key stakeholders (Allen *et al.* 2013). A number of strengths of employing an asset-informed approach in public health are advocated in the literature (Whiting *et al.* 2012).

Mapping has been employed as a public health tool in different forms for more than a century (Gordon and Womersley 1997). This process identifies the relationships between services and potential deficits in service delivery and elucidates pathways to care (Luger *et al.* 2001). Focussing on a deficit approach is a two-edged sword. On the one hand it can drive initiatives to address health disparities, but on the other hand, it can label and stigmatise individuals, communities and populations and fail to build upon systems and processes that are actually working (Ammerman and Parks 1998). Such an approach reinforces a traditional Western, bio-medical approach to health inequalities. Community asset mapping, a key ABCD method, has begun to inform an alternate approach to service mapping in public health (Morgan and Ziglio 2007). Promoting assets in a community can enable production of an inventory or map to connect assets to harness their collective potential to address community identified issues (Kretzmann and McKnight 1993, Lightfoot *et al.* 2014).

Assets are generally described as falling within one of three groups: the skills of individual community members; informal citizen associations such as churches and clubs; and the resources of a community's formal institutions such as hospitals, businesses, schools, and social service agencies (Kretzmann and McKnight 1993). While recognizing the importance of the first two groups of assets in building the resilience and empowerment of individuals and communities, this paper focuses solely on service mapping of the third group of assets, formal institutions.

Although there is increasing use of asset-informed approaches in public health, there is a lack of published peer-reviewed research reporting on the methods used (Campbell *et al.* 2007, Friedli 2013). There are no universally accepted guidelines for how an asset-informed approach to service mapping should work (Whiting *et al.* 2012, Whiting *et al.* 2013), perhaps because the process requires tailoring to the specific needs of communities and identified issues (Crane and Mooney 2005). Evidence of effectiveness is also reported largely through case studies with a lack of commonality among measured outcomes impeding comparison and evaluation of effectiveness (Friedli 2013, Baker 2014). This may reflect the nature of asset-informed approaches in general, which pose substantial challenges to conventional research designs such as randomized controlled trials (Campbell *et al.* 2004, Commission on Social Determinants of Health 2008). Yet, failing to report prospective, systematic and reproducible methods limits the development of a critically needed evidence-base in community and global health.

### <u>Aims</u>

We set out to identify and describe methods used by previous studies for assetinformed mapping of formal institutions in health as well as challenges and solutions to this approach with the aim of informing methods for ensuring the rigor of service mapping reporting in future research.

#### **Methods**

A systematic integrative literature review was undertaken.

# Eligibility criteria

To be included, articles needed to: (1) address a health issue; (2) identify use of an asset-informed approach; and 3) report information on methods used to map formal institutions (as opposed to only mapping individual assets or informal citizen associations). Articles were required to be written in English. No limits were set on methodological design but articles were excluded if they provided no detail on the methods used.

# Information sources and search strategy

We included both peer-reviewed and grey literature. We conducted a search of the electronic databases CINAHL, EMBASE, MEDLINE, and PsychInfo using combinations of the search terms "asset-based approach" or "asset" and "service map" or "map". The absence of agreed methods for searching grey literature meant that this portion of the search was less systematic. The Google search engine and websites of key public health organizations were searched using the search terms listed above. A single reviewer (AG) assessed the articles against eligibility criteria. The reference lists of included articles were hand-searched for further relevant articles.

# Data collection

Data were extracted by a single researcher (AG) using a standardized data extraction tool. Data items included country and health issue, as well as methods of asset-informed approaches to service mapping.

## Risk of bias

Due to the variety of designs a standardized risk of bias assessment could not be applied; instead, the contribution of each article was evaluated using the Level of Evidence ranking system by Melnyk and Fineout-Overholt (2005). Evaluation was undertaken to provide an overview of quality but was not given weighting in the synthesis of data due to the lack of formal methods for this in integrative reviews.

## Synthesis

Synthesis used a narrative approach using textual summary and tabulation (Popay *et al.* 2006). Approaches to asset-informed mapping were grouped according to the description of process, main issues discussed about the process, and arguments for and against an asset-approach to service mapping.

#### **Results**

Results from the database search are summarized in Figure 1. Seven articles from the database search met inclusion criteria while the grey literature and hand-search identified another three articles for inclusion (Crane and Skinner 2003, Goldman and Schmalz 2005, Griffin and Farris 2010, Gwede *et al.* 2010, Burns *et al.* 2012, Baker 2014, Caron-Parker and Nichols 2014, Dieleman 2014, Robinson *et al.* 2014, Selamu *et al.* 2015).

## Article characteristics

The majority of articles were discussion papers with case studies (n=7) (Table 1). Publication dates ranged from 2003 to 2015 with over half (n=6) of the articles published in the last 5 years, possibly reflecting a shift towards asset-informed approaches in health. The majority of articles were from the United States (Crane and Skinner 2003, Goldman and Schmalz 2005, Griffin and Farris 2010, Gwede *et al.* 2010, Burns *et al.* 2012, Caron-Parker and Nichols 2014) (n=6) followed equally by Canada (Dieleman 2014) (n=1), England (Baker 2014) (n=1), Ireland (Robinson *et al.* 2014) (n=1), and Ethiopia (Selamu *et al.* 2015) (n=1). The articles addressed a range of issues including mental health, ageing, community health, cancer and disability. All articles ranked as level six according to Melnyk and Fineout-Overholt's Level of Evidence ranking (2005), the second lowest level of the seven level system.

#### *Synthesis*

The first stage of asset-informed service mapping reported by a number of the articles was the formation of a core team to drive the process (Crane and Skinner 2003, Griffin and Farris 2010, Caron-Parker and Nichols 2014, Dieleman 2014). These core teams generally decided what form the process took and were involved throughout the process. Details on methods taken to recruit the core team were scarce despite their importance to the process as identified in the articles. Recruitment was initiated by a coordinator in one article (Griffin and Farris 2010) while another reported recruitment initiated by key stakeholders through distribution of information packs and by word of mouth (Dieleman 2014). Only two articles reported in detail the steps they took at the beginning of the process to plan how it would be carried out (Gwede et al. 2010, Caron-Parker and Nichols 2014). These steps were identifying a team leader, the target population and geographical boundaries, developing a plan for data collection including who will gather the information and what assets will be collected, discussing human and financial resource issues and how the collected information will be used (Gwede et al. 2010, Caron-Parker and Nichols 2014). Google maps or driving around an area were used as tools for determining geographic boundaries in one of the articles (Caron-Parker and Nichols 2014).

The majority of articles reported in some level of detail on the process taken for data collection, with a number of different methods used. Some articles reported searching for services through examining existing service lists (local newspapers, service directories, websites etc.) and consulting with key stakeholders (Goldman and Schmalz 2005, Griffin and Farris 2010). Various forms of surveys were also reported to have been used including 'windshield' (Goldman and Schmalz 2005) or 'on street' (Robinson *et al.* 2014) surveys where people walk or drive around an area noting down

services they come across, as well as a cross-sectional survey administered by community health workers to key community informants (Selamu *et al.* 2015). Other articles reported holding community forums with structured mapping exercises to identify services (Burns *et al.* 2012, Dieleman 2014). The use of different electronic geocoding mapping tools to document the data collected was reported in three articles (Gwede *et al.* 2010, Burns *et al.* 2012, Robinson *et al.* 2014).

Service maps took both hardcopy and electronic forms with variation in the level of reported detail. Hardcopy service maps took the form of marking services on street maps (Goldman and Schmalz 2005), service inventory guides (Griffin and Farris 2010, Caron-Parker and Nichols 2014), and a conceptual capacity map (Dieleman 2014). Electronic service maps used computer programs to display categories of services and overlaps (Goldman and Schmalz 2005) and an online mapping tool (Baker 2014).

While involving the community is generally considered central to traditional community asset mapping, less than half of the literature on asset-informed approaches to service mapping in health reported that the community had identified the issue to be addressed by service mapping (Crane and Skinner 2003, Griffin and Farris 2010, Gwede *et al.* 2010, Robinson *et al.* 2014). Half of the articles referenced a conceptual framework/method informing the service mapping process (Griffin and Farris 2010, Baker 2014, Caron-Parker and Nichols 2014, Dieleman 2014, Selamu *et al.* 2015). Only one article reported evaluating the service mapping process and outcomes as part of their method (Gwede *et al.* 2010).

Challenges and solutions to asset-informed approaches to service mapping identified in the literature

Forming a core team to guide the service mapping process was identified as an important element of an asset-informed approach for some authors. Caron-Parker and Nichols (2014) argue that an unintended outcome of this stage is the promotion of interprofessional partnerships between team members which may contribute to more coordinated multidisciplinary service delivery in the future. Facilitators to the effectiveness and sustainability of the core team include having a designated leader, meeting frequently, and successful partnerships between team members from previously working with one another (Crane and Skinner 2003). Authors also discussed the importance of a number of cultural considerations related to forming the core team. Inclusion of 'cultural brokers' from the community in the core team was identified as key to identifying important culturally relevant services used by the community that may otherwise be overlooked, as well as gaining community trust and acceptance of the process (Griffin and Farris 2010, Selamu et al. 2015). Griffin and Farris (2010) argue that another cultural consideration important to the process is that where necessary inventories of services should ideally be translated into other languages to facilitate access to the service map. Determining the aims and scope of an assetinformed approach to service mapping is a particularly important step. Baker (2014) found that a focus on one particular outcome rather than aimlessly mapping services is essential to achieving the aims of the process.

The focus of an asset-informed approach on mapping existing services is also important in an environment where there is limited funding for new services (Griffin and Farris 2010). Asset-informed approaches to service mapping may not initially require large financial resources, however, a key consideration is how to keep the service map up to date with limited resources. Gwede *et al.* (2010) argue that as keeping the map up to date requires human resources, it is important that a systematic

approach to identifying and mapping services be taken to ensure sustainability so that anyone can update the map when required.

The majority of literature on asset-informed approaches to service mapping reports the process as beneficial. No articles reported negative outcomes. Four main benefits were reported. The asset-informed approach to service mapping is reported to raise community awareness of services (Crane and Skinner 2003, Griffin and Farris 2010, Caron-Parker and Nichols 2014), build partnerships and collaboration in service delivery (Crane and Skinner 2003, Griffin and Farris 2010), be an efficient way of using available financial and human resources (Crane and Skinner 2003), and facilitate discussion around policy (Gwede *et al.* 2010). All reported evidence for the approach being beneficial was anecdotal.

#### **Discussion**

This review is the first to identify and summarize methods for asset-informed approaches to service mapping of formal institutions in health. Findings support and extend existing generic tools for community asset mapping for the healthcare context, notably the community asset mapping stages developed by Berkowitz and Wadud (2015) in *The Community Tool Box*, an online resource. The review and synthesis reported in this paper suggests that four key stages may be especially applicable and important: (1) defining the parameters of the service mapping process; (2) identifying services; (3) mapping services; and (4) consultation and implementation.

# Stage 1 – Define the parameters of the service mapping process

The first stage is concerned with detailing the aims and considerations of the specific service mapping process to be undertaken. This involves answering a number of questions about the size and scope of the service mapping area, who will be

undertaking the work (for example an individual or an organisation with input from key stakeholders), the length of time that can be dedicated to service mapping, what resources are required (i.e. financial and/or human), and what will be done with the results (Berkowitz and Wadud 2015). In particular, this stage should focus on achieving a desired outcome, such as increased access to a particular service, and engage key stakeholders. It should also focus on assets in the communities. Both barriers and enablers should be carefully identified.

## *Stage 2 – Identify services*

The second stage involves identifying services in the community by conducting an inventory of the relevant formal institutions. Sources of information might include desktop review of websites and online resources, business directories, informal lists of organisations and community resources, and discussions with key community stakeholders (Berkowitz and Wadud 2015). It is important at this stage to keep a detailed record of where each source comes from, the date it was searched/accessed and the services identified through it. This will allow for someone else to build upon the service mapping process in the future, particularly important in fluid service landscapes.

# Stage 3 – Map services

The third stage involves mapping the collected information to desired demands, such as specific populations. The aim of this stage is to have a visual representation of the list of formal institutions that shows how they may interconnect or can be used to meet the needs of the community (Berkowitz and Wadud 2015). In some instances the use of geomapping techniques that help manage and analyse geographical data can augment this process (Gwede *et al.* 2010, Burns *et al.* 2012, Robinson *et al.* 2014).

#### *Stage 4 – Consultation and implementation*

The final stage involves using the formal institutions that have been identified in the mapping process by making the results available to community members. Implementation strategies could include disseminating the results of the mapping to community members (e.g. a directory of services) (Berkowitz and Wadud 2015) or stakeholders, or using the map to drive a solution based model to addressing a particular issue through further consultation. For example, strategies to increase rates of immunisation.

The framework aims to address a number of the key methodological issues raised in the literature and proposes a systematic framework. Despite the importance of determining aims and scope, the lack of reporting on steps taken to plan the service mapping process in the literature indicated the need to encourage detailed reporting in Stage 1. Reporting in detail on the parameters of the service mapping process is important to enable comparison and evaluation and increase the rigor of the process. The formation of a core team, with cultural brokers if required, should also be considered in Stage 1 with significant thought put into who should be included to best achieve the aims of the process. Members of the core team play a key role in enabling the process and overcoming barriers. Keeping the service map up to date was a significant issue raised in the literature. As emphasised in Stage 2, a detailed search record is essential to the sustainability of the service map and ensuring effective use of limited financial and human resources. As the focus of nursing embraces management of populations, as well as individuals, incorporating service mapping in health intervention planning is likely to have increased utility (Reutter and Kushner 2010, Steenkamer et al. 2016). As nurses are increasingly responsible for improving the value and decreasing the cost of health care, this method of assessment should be considered

in improving the coordinate of care and acceptability and access to individuals, families and populations.

Table 2 presents a summary of the above framework as applied to an example from the authors' own experience, a project concerned with mapping services for Aboriginal and Torres Strait Islander families of children with a disability.

#### Limitations

The results of systematic reviews are limited by the quality and depth of what research is available to be included: discussion papers of case studies and two descriptive research studies. The focus of this review may also mean that the findings are not necessarily generalizable to areas other than health. In addition, the review method was limited by the fact that a single researcher (AG) was involved in article selection and data extraction, albeit using standardized procedures. However through using an integrative review of what was available this article makes a start to building a necessary body of knowledge from which evaluation research can be designed to further investigate approaches and methods to undertaking asset-informed service mapping of formal institutions.

# Conclusion

The shift towards asset-informed approaches in community and public health is an important step in realizing the potential of existing assets within communities to influence health outcomes. The lack of peer-reviewed research detailing the methods of asset-informed approaches limits the rigor of reporting and attempts to compare studies and evaluate effectiveness. The framework in this paper aims to assist in developing an evidence base through promoting the systematic and rigorous reporting of methods used in asset-informed approaches to service mapping.

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Figure 1. PRISMA flowchart of database search

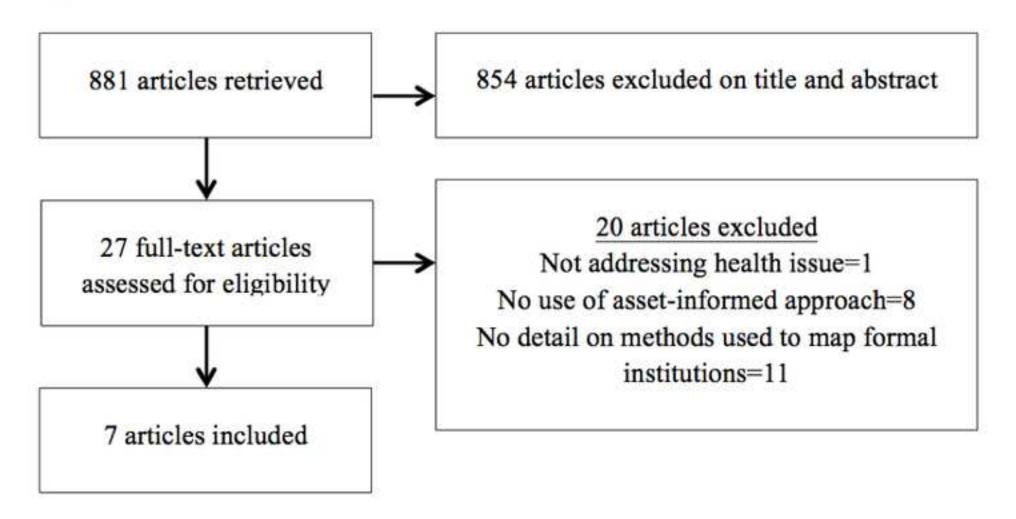


Table 1. Summary table of included articles

First Author (year)	Country	Design	Health issue	Peer- reviewed	Level of Evidence
Baker D (2014)	England	Discussion paper; case study	Not defined	/	V1
Burns JC (2012)	United States	Discussion paper; case study	Community health	х	V1
Caron-Parker L (2014)	United States	Discussion paper; case study	Ageing	1	VI
Crane K (2003)	United States	Discussion paper; case study	Disability	1	VI
Dieleman C (2014)	Canada	Qualitative; focus groups; case study	Mental health	1	VI
Goldman KD (2005)	United States	Discussion paper; case study	Community health	/	VI
Griffin D (2010)	United States	Discussion paper; case study	Mental health; disability	1	VI
Gwede CK (2010)	United States	Discussion paper; case study	Cancer	1	VI
Robinson D (2014)	Ireland	Published conference abstract	Ageing	1	V1
Selamu M (2015)	Ethiopia	Cross-sectional survey	Mental health	/	V1

Table 2. Reporting template for conducting an asset-informed approach to service mapping of formal institutions

Stage 1 – Define the parameters of the service mapping process	Stage 2 - Identify services	Stage 3 – Map services	Stage 4 – Consultation and implementation	
[Report defined outcome, size and scope of area to be mapped, what assets will be mapped, who will undertake the work, timeframe, required financial/human resources, what will be done with results etc.]	[Report data collection techniques, detailed record of information sources including date searched/accessed ect.]	[Report process used to map collected information to defined outcome]	[Report how results of the service map were made available to community members / key stakeholders]	
Example - Parents of Aboriginal and Torres Strait Islander children with a disability needed to understand what services were available and what these could offer. Relevant services were services from the health, education and social service sectors within a metropolitan region of a city. A researcher undertook the service map with the support of a core team of key stakeholders over a three-month period. No financial resources were required. The service map would form a directory of services to be provided to parents.	Example - Sources of information used to identify services included: a list of community resources; a continuous process of service identification by the key stakeholders including local government directories of services and agencies; a desktop review of websites and online resources; and discussions with community members. A detailed record was kept of where each source came from, the date it was searched and the services identified.	Example - Once the services had been identified, they were divided into groups based on their primary relevance for parents. The diagram was designed to present the list of services in the easiest way possible for families to understand. Groups were presented in table format with details under descriptive headings.	Example - The service map formed a directory of services provided to parents and a local community health service to use. Parents and health professionals were encouraged to use the map as a basis for discussion of different service needs and how they might be met.	

30<sup>th</sup> September 2016

Dr Elizabeth Halcomb Editor Nurse Researcher

#### Dear Dr Elizabeth Halcomb,

Thank you for sending the helpful referee comments on our paper titled 'Developing a framework for undertaking an asset-informed approach to service mapping: a systematic integrative review and synthesis'. Please see the table below for a record of how we have addressed each comment. All changes made to the revised manuscript have been written in red for your convenience. The identified referencing/typographical issues have also been addressed as requested. Please note that there has been a slight change in the author order, the order is now: AG, TL, PA, MD, JD, PD, PMD.

Referee 1 comments	Author revisions
Perhaps emphasise the limitations of the	1. Thankyou for your helpful suggestion. We
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literature with regards to quality. Although I	have added the paragraph suggested by
understand why the chosen method was	referee 2 emphasising the limitations of the
employed it may be worth some critical	literature in regards to quality.
discussion around the implications of this and	
future requirements.	
2. You may want to include more critical	2. Thankyou for your suggestion. We have
discussion of the limitations to this specific	noted that the review methods were limited by
project given the scope and resource.	the fact that a single researcher (AG) was
	involved in article selection and data
	extraction, albeit using standardized
	procedures.
3. Perhaps consider the 'ethical' considerations	3. Thankyou for your suggestion. We
of the systematic review (I think the ESRC has	appreciate the comment on the ethical
some information on this) and you may wish to	considerations of the systematic review and
include some consideration of the	feel that our 'risk of bias' and updated
generalizability/application of the work given	'limitations' sections fulfil the ethical
the limited number and quality of resources	consideration of fairly representing the data
reviewed.	without bias. We have added the paragraph
	suggested by referee 2 emphasising the
	limitations of the literature in regards to
	quality. We have also added the following
	sentence regarding generalizability to the
	limitations section:
	minutations section.

"The focus of this review may also mean that the findings are not necessarily generalizable to areas other than health."

#### **Referee 2 comments**

1. I have one piece of feedback to make regarding the limitations section of the paper.

In the methods section it is stated that 'The majority of articles were discussion papers with case studies (n=7)'(p7). Table 1 shows two of the remaining studies as qualitative research and cross sectional survey. All the articles have been classified as level 6 using a hierarchy of evidence model. The classification of level of evidence is not necessarily the same as addressing the quality of the articles that fall into a particular level of evidence. You need to use some other tool to appraise the quality of the 10 papers you used eg a critical appraisal tool for determining the quality of case studies which you presumably sourced from Melnyk and Fineout-Overholt (please check you spelling of Melnyk).

So in the limitations section it makes no sense to write that 'The articles included in the review are mostly discussion papers, and are ranked at the low end of Melnyk and Fineout-Overholt's Level of Evidence ranking' (p14) without a conditional statement. The ranking itself is not necessarily a limitation given the current body of knowledge available (which is already stated). What matters is that papers have sufficient quality at this level which you seem to allude to in the methods section.

I proffer you an alternative limitation section based on the paper.

The results of systematic reviews are limited by the quality and depth of what research is available to be included: discussion papers of case studies and two descriptive research studies. In addition, the review method was limited by the fact that a single researcher (AG)

#### **Author revisions**

1. Thankyou for your helpful suggestion. We have added this revised paragraph as suggested to the limitations section:

"The results of systematic reviews are limited by the quality and depth of research that was available to be included, namely discussion papers of case studies and two descriptive research studies. In addition, the review method was limited by the fact that a single researcher (AG) was involved in article selection and data extraction, albeit using standardized procedures. However through using an integrative review of what was available this article makes a start to building a necessary body of knowledge from which evaluation research can be designed to further investigate approaches and methods to undertaking asset-informed service mapping of formal institutions."

- Thankyou for bringing the spelling of 'Melnyk' to our attention. We have replaced the misspelled words in the 'methods' and 'reference' sections with the correct spelling of 'Melnyk'.

was involved in article selection and data
extraction, albeit using standardized
procedures. However through using an
integrative review of what was available this
article makes a start to building a necessary
body of knowledge from which evaluation
research can be designed to further investigate
approaches and methods to undertaking assetinformed service mapping of formal
institutions.

Thank you for considering this paper for publication.