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PRACTICE TO POLICY: ASSESSING EVIDENCE-BASED DECISION-MAKING IN HEALTH POLICY IN GREATER MANCHESTER

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Abstract

In the context of health policy, knowledge translation is a key to maintaining a robust decision-making process. Literature suggests that knowledge has different purposes in the policy process, and multiple actors have various preferences over which knowledge to use in influencing their decision-making. Through a knowledge translation framework embedded in the assumptions of rational actor models, this research evaluates the relationship between policy and evidence, the role that knowledge plays within this interaction, and the factors that influence the knowledge translation in the health and social care policy in Greater Manchester. A mixed methods approach is used to analyse the Greater Manchester Health and Social Care Partnership and the organisations within it (to be completed over the Summer), to determine if collaborative working exemplified by this partnership is consistent with the theory of co-production and rational decision-making. The overall contribution of this research is to provide a small picture of what decision-making is like in the local level, in the midst of budgetary pressures and political agenda to provide effective solutions in the health policy context in Greater Manchester.

Keywords

Evidence-based; Decision-making; Knowledge Utilisation; Public health

1. Introduction

There are many decisions being made by policy makers and practitioners in the provision of health and social care. Such decisions should be based on a systematic appraisal of high quality scientific and clinical evidence (Jacob, Allen, Ahrendt, & Brownson, 2017; Muir Gray, 2007); however, empirical literature suggests that different types of research knowledge are used as evidence by decision-makers, not only to influence or inform policy decisions, but also to measure effectiveness of interventions, and evaluate the organisation, implementation, and feasibility of programmes. This refers to a vague, but rather an aspirational term called *evidence-based policy making*, where policy and practice should be informed by best available evidence to help make well-informed decisions (Cairney, 2016; Davies, 2004; Nutley, Davies, & Walter, 2002).

Evidence-based policy making is exemplified in the United Kingdom governance, particularly by the New Labour government in 1997. As part of a movement to reform and modernise the way policy makers make decisions, the government pledges to improve effective policy making by delivering outcomes that matters (Davies & Nutley, 2002; Davies, 2004). By taking this approach, the government can identify what works, highlight the gaps where evidence is lacking, enable decision-makers to use evidence in budget and policy decisions, and use evidence from evaluation to improve program performance. This way, it reduces costs and wasteful spending, expand innovative programs, and strengthen accountability of decision-makers (Pew-MacArthur Results First Initiative, 2014).

In theory, evidence-based policy making sounds promising; however, in reality, policy making is a complex process. There are competing types of evidence that decision-makers use, and several contextual factors that could influence the use and translation of evidence from practice to policy. This raises challenges on the mechanisms of knowledge translation and highlights the existing gap between the two communities of researchers and policy makers.

2. Literature Review

2.1 The policy process and rationality in decision-making

Decision-making is a process in which choices are made at different series of points in time and space (Fischer, Miller, & Sidney, 2006; Parsons, 2001; P. Sabatier, 2007). It extends

throughout the policy cycle and occurs in different arenas at different levels, e.g. decisions about what to make into a problem; what information to choose; choices about strategies to influence the policy agenda; choices about what policy options to consider and select; choices about ends and means; choices in how policy is implemented; and choices in how policy is evaluated (Parsons, 2001, p. 245). It is a multi-faceted process, where a variety of normative frameworks that contain assumptions about how the decision process works. This shapes what the role of evidence has in the policy making process (Rich & Oh, 2000), ideally informed by beliefs about the rationality in decision-making.

In neoclassical economics, rationality is a model of human behaviour where individuals act to maximise their long-term best interest and utility (Cairney, 2012; Leoveanu, 2013; Matjasko, Cawley, Baker-Goering, & Yokum, 2016). Rationality in policy decision-making is about how decision-makers have 'nearly all information about a problem, its causes, and its solutions, whereupon a large number of alternatives can be weighted and the best one is selected' (Birkland, 2011, p. 254).

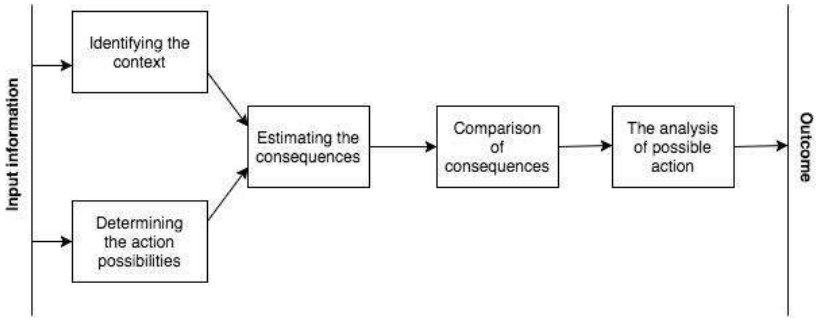

Figure 1: *Rationalist model* (Leoveanu, 2013)

This is derived from the concept of an 'economic man', where a self-interested individual makes choices based on the available information. A rational individual engages in a process of optimising his or her goals by choosing amongst all available alternatives to exhaustively solve a problem, and eventually yields to the best outcome or to the solution with the highest payoff (see Figure 1). Weiss (1979) refers to the rational choice as the *problem-solving model*, where a problem exists, and a decision has to be made using the information available to generate a solution to the problem, or to select among alternative solutions. Under these assumptions (Cairney, 2012; Rich & Oh, 2000), the decision-maker selects the best decision based on perfect information, ranked order of fixed preferences, and a perfect ability to make choices according to these preferences. These preferences therefore determine the decision-maker's behaviour by

engaging in a systematic analysis and evaluation of the consequences of all available alternatives.

However, these assumptions are unrealistic. The rational actor theory does not explicitly identify how an individual processes information, especially under circumstances of uncertainty and ambiguity. Moreover, it assumes that the acquisition of information leads to its use, without making a distinction between use and its impact and acknowledging the factors associated with the decisions (Rich & Oh, 2000).

To present a more realistic description of evidence-based decision-making, most policy theories draw on the themes of Simon's (1972) theory of *bounded rationality*. This assumes that individuals cannot maximise their utility, but rather, they satisfice to seek a course of action that is satisfactory or good enough. Cairney (2012, p. 97) explains that policy makers oftentimes have unclear and multiple objectives, making it difficult to optimally rank their preferences. Due to absence of perfect information, 'trial-and-error' methods are used to consider the most relevant and important information. Bounded rationality, therefore, recognises that policy makers behave rationally to achieve satisficing outcomes, as one can within certain limits on resources and abilities to process information. They have neither the ability nor the inclination to consider all facts, but instead use simple rules of thumb or 'shortcuts' to consider which factors are most relevant and important to decision-making (Birkland, 2011; Cairney, 2012).

Given the constraints in decision-making, the policy process involves multiple actors and different programmes on multi-levels of government occurring over long time periods. These elements and their interaction in the policy process could be used to explain the decision-making mind set in the evidence-based policy making process (Cairney, 2016; P. Sabatier, 2007).

- ***Actors.*** Almost all policies involve multiple-party decision makers that use evidence, make choices, and influence outcomes (Andrews, 2006; Cairney, 2016; Jann & Wegrich, 2006; P. Sabatier, 2007). They could come from different levels of organisations, such as interest groups, governmental agencies, researchers, journalists, etc. who are all involved in one or more aspects of the process. Each of these actors could potentially have different values, interests, perceptions, or preferences on information.
- ***Institutions.*** These are identified as the rules, norms, practices, and relationships that influence individual and collective behaviour. Institutions shape the activity, establish the venue where policy decisions are made, and the rules that allow actors or ideas to enter the policy process (Cairney, 2016; Ostrom, 2011).

- ***Networks.*** This refers to the relationship between actors responsible for policy decisions and the pressure participants (Cairney, 2016). The development of subsystems addresses the size of the responsibilities of the actors involved, therefore delegating responsibility from a senior policy maker to bureaucrats, who seek information and advice from groups. This 'bottom-up' approach argued by Lipsky (1980) implies that discretion is used to establish routines to satisfy government objectives but still maintain professional autonomy (Cairney, 2012, p. 37). In other words, they exchange information for potential influence within government.
- ***Ideas.*** It is a broad term to describe ways of thinking shared within groups, such as knowledge, world views, etc. The policy makers hold beliefs or values that could be changed or modified through persuasion or debates (Cairney, 2016; P. Sabatier, 2007). This could either prompt the actor to reframe the problem and solution, or ignore the new information altogether (i.e. knowledge utilisation (Rich, 1997)).
- ***Policy context and events.*** This refer to the policy maker's environment and how it influences his decisions. It could be conditions to be taken into account during agenda-setting, such as the social environment, demographic profile, economy, mass attitudes, etc. (Birkland, 2011). It may also refer to anticipated events, such as elections, or unanticipated events, which may produce new ideas for the actors (Cairney, 2016).

2.2 Knowledge Translation

This study uses the term *knowledge translation* (KT), to recognise its prominence in the fields of public health, medicine, and rehabilitation research. Health agencies in the United States and Canada embedded KT in their programmes to address perceived gaps in the application of the best health science to treatment of disease. One of the most well-known references for KT hails from Canadian Institute of Health Research (CIHR), a federal agency for funding of health research. CIHR formally defined KT as "a dynamic and iterative process that includes the synthesis, dissemination, exchange, and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system (Canadian Health Services Research Foundation, 2016)." Similarly, it was also adopted by the United States National Center for the Dissemination of Disability Research (NCDDR) in its long-range plans, which defined KT as "the effective use of science-based knowledge technologies, and applications to inform disability and rehabilitation policy, improve practice,

and enhance the life of individuals with disabilities (National Center for the Dissemination of Disability Research, 2005)."

While it appears to be similar with other terms such as diffusion, dissemination, utilisation, or implementation, KT is an active, coordinated, and manipulated process that involves all steps of knowledge management to yield beneficial health outcomes. Overall, KT encompasses the umbrella of terms that describe distinct but interrelated processes of i.) having and creating a body of evidence, information, knowledge, or research (knowledge creation), ii.) synthesising and communicating this to an audience (knowledge diffusion and dissemination), and iii.) moving it into practice, application, and/or use (knowledge implementation and utilisation).

Rogers and Martin (2009) identify two elements of KT that distinguishes it from other general notions of the use of knowledge: First, KT implies assessment of quality of knowledge, with respect to evidence or source. It is assumed that knowledge is research-generated, primarily scientific research, and may be used in conjunction with other types of knowledge (Sudsawad, 2007). Moreover, there is an emphasis on the flow of information and how it is accumulated, filtered for quality, rigor, and relevance, and recast in language that is easily understood by and accessible for the intended audience. Second, KT requires coordination and involvement from those who are participating in the process to influence change. The KT process is nonlinear, multidirectional process, which involves ongoing collaborations among relevant parties and stakeholders (Graham et al., 2006; Sudsawad, 2007). This is alternatively referred to as *knowledge transfer and exchange* (KTE).

CIHR adopted the *knowledge-to-action* (KTA) cycle developed by Graham et al. (2006) to promote research application for the process of knowledge translation (Lomas, 2000; Straus, Tetroe, & Graham, 2009). Using the KTA framework (see Figure 2), CIHR promotes an iterative, dynamic, and complex knowledge translation process that is divided into two concepts: *knowledge creation*; and *knowledge action*. The end-users of the knowledge are included to ensure that the knowledge used is relevant to their needs. At the first stage of knowledge creation, researchers can tailor their activities and research questions based on the problems and the needs identified by the users. It then leads to the action cycle where the implementation of knowledge is represented by activities needed for knowledge application.

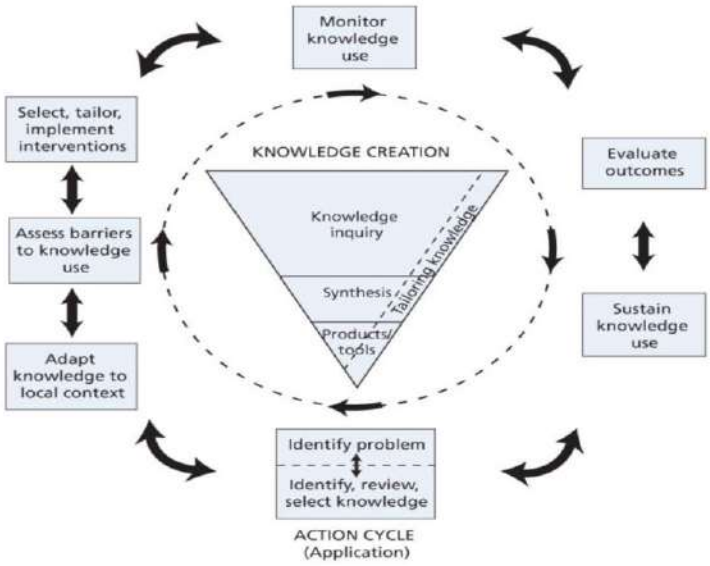

Figure 2: *The knowledge-to-action (KTA) framework* (Straus et al., 2009)

2.3 The collaborative model

Notions on the translation of knowledge are deeply rooted in traditional rational-linear models of research use, which mainly focuses on a one-way process between producers and users of knowledge (H. T. O. Davies, Nutley, & Walter, 2008; Wehrens, 2014). Majority of the advocates of public policy and knowledge translation conceptualise the relationship between the two domains through the *two-communities* theory. First outlined by Caplan (1979), the theory explains that researchers and users of research (such as policy makers, managers, practitioners, etc.) operate in two distinct worlds, with different cultures, values, goals, timelines, and rewards. As briefly mentioned in the previous section, social scientists or researchers are focused on narrow interests or specialised knowledge, while users of research such as government policy makers are practical individuals that deal with immediate issues. Since research is considered of little practical use in policy making, and policy questions are rendered too general to be accommodated into a scientific inquiry, there is oftentimes a mismatch on information (Kothari & Wathen, 2013; Wehrens, 2014) between the two communities. Policy makers are left isolated and are unaware of the work of researchers, therefore implying that there is a lack of direct contact with the producers of knowledge.

Such constraints impede the transfer and exchange of knowledge, which further explains the non-utilisation of research evidence that exists in the relationship of the researcher and the research system to the policy maker and the policy making system. Resulting from this is the

emergence of literature on how to bridge the alleged gap between research and policy. Caplan (1979) suggests that linking mechanisms should be in place to integrate the two communities, moving from rational-linear models to linkage-exchange models.

The integrated collaborative models promote active interaction between the two communities, where *co-production* of knowledge is encouraged. Originally coined by Ostrom and colleagues (Parks et al., 1981), co-production is 'a process in which contributions from individuals who are not in the same organisation are transformed into goods and services by users and providers' (p. 1001). It is also used to describe 'people who contribute to or collaborate in' (Parks et al., 1981, p. 1002) the production of the public services that they use. Jasanoff (2004) expands it into the view of science and policy relations, where co-production is seen as a perspective rather a concept with anti-deterministic stance. This means that it recognises the developments that science brings into social practices, therefore, mutually shaping and influencing each other's practices.

In health, co-production is described as a way to work together in order to improve health, creating a user-led, people-centred health care services (Filipe, Renedo, & Marston, 2017; Heaton, Day, & Britten, 2016). It is supported by elements such as: users as active agents (Ostrom, 1996); equality between the users and producers of knowledge; notion of increased capacity and 'achieving more by working together'; and organisations that facilitate and support the co-production of services (Heaton et al., 2016). In effect, collaborations and partnerships between academics and government agencies are encouraged to promote a new initiative to link research into policy.

2.4 Facilitators of knowledge translation

In health policy, practitioners apply principles of evidence-based practice on day-to-day decision-making tasks for a more effective use of scarce resources and improved outcomes. However, the quality of evidence used by the health policy makers remains unmonitored and insufficient (Anderson et al., 2005; Katikireddi et al., 2011). Moreover, there is little data on how policy makers use evidence or which evidence they prefer to use, ultimately leading to the lack of information regarding the influence of evidence in health decision-making (Oliver and de Vocht, 2015; Jacob et al., 2017). As a result, recent studies attempt to address this gap by exploring decision-makers' preference and use of evidence, and identifying potential recommendations.

Literature indicates that preference on evidence depends on frequency of use, and which types of information are most useful. Studies on health decision-making identify that it varies between settings, and are contextual to the individual user, including time, access, resources, organisational setting and culture, perceptions of relevance, and position or role within an agency (Coleman and Nicholl, 2001; Orton et al., 2011; Clarke et al., 2013; Oliver and de Vocht, 2015; Jacob et al., 2017; Kneale et al., 2017). There is also a breadth and variability of sources that decision-makers use, such as quantitative data (e.g. clinical trials, meta-analyses, systematic reviews), published sources of evidence-based guidance (e.g. NICE, Cochrane, etc.), academic journals, local and national government data, economic evaluation, health impact assessments, and webinars and workshops (Coleman and Nicholl, 2001; Brownson et al., 2009; Orton et al., 2011; Clarke et al., 2013; Oliver and de Vocht, 2015; Jacob et al., 2017).

It is prevalent that professional background and seniority of the role have significant impact on the choice of evidence used for decision-making. For example, those who are trained in public health are more likely to use empirical evidence, while those in senior roles are more likely to use local data (Coleman and Nicholl, 2001; Clarke et al., 2013; Jacob et al., 2017). Brownson and Jones (2009) show that those working in public health agencies are likely to use scientific evidence because of their ability to assess public health problems, develop appropriate programs, and ensure the effective delivery of policies. Policy makers, on the other hand, rely more on "real world stories" and constituents, influenced mainly by their own political party's agenda. On the other hand, Jacob et al. (2017) highlight that decision-makers in universities and health care facilities prefer to use academic journals, while local government or health agency staff prefer seminars or workshops. This is influenced by the lack of access to such academic sources, time constraints, and information overload.

Some studies have identified that one of the emerging sources of evidence that policy makers use in decision-making is the role of expert opinion (Orton et al., 2011; Oliver and de Vocht, 2015; Kneale et al., 2017). Due to the transition of the structural decision-making landscape in the UK's National Health Service (NHS), some organisations experience an increased presence of political elements that had implications with the type and format of evidence needed (Kneale et al., 2017). Orton et al. (2011) reveal that in the NHS, the influence of key personnel has a big impact in the decision-making process, either by making judgments based on expert opinion or by acting as a filter through which evidence is transferred. Research evidence is only seen as an effective tool if it is supported by those who have the position to

influence to change. Similarly, Oliver and de Vocht (2015) highlight that personal and political information are most influential on a day-to-day basis, and policy makers rely on colleagues with expert knowledge who may regularly use evidence-based guidance. Studies in Australia and Canada (Orton et al., 2011) also show that among public health decision makers, managers are more likely to connect with colleagues that determine the best practice, with some exclusively relying on a small group of trusted experts.

While it is clear that there is a discrepancy on when and how policy makers use evidence, this does not necessarily imply that academic evidence is not directly applied or used into decision-making.

Various disciplines identify numerous types of use of knowledge, majority of which comes from the literature on research utilisation and how it is used or applied in making decisions or policies. The most common collectively identified types of use are: instrumental, conceptual, and symbolic (Caplan, 1979; Weiss, 1979; Beyer and Trice, 1982; Rich, 1997; Amara et al., 2004). Firstly, instrumental use refers to the direct application of research into specific decisions. This closely follows the rational choice model of decision-making, where research is used to solve an existing problem, based on a set of possible solutions (Amara et al., 2004; Ness, 2010; Tseng, 2012). Secondly, conceptual use refers to the indirect impact of research into the decision-making process, where research plays a longer-term role in influencing how policy makers may think about new ideas or proposed solutions for a better understanding of a certain policy issue (Rich, 1977; Landry et al., 2001; Ness, 2010; Tseng, 2012). Thirdly, symbolic use refers to when research is used as a form of instrument of persuasion, to either bolster support for pre-determined positions or policy preferences, or to challenge political stance of others. Research can also be used to confirm the programs they wish to promote (Amara et al., 2004) or to push through a decision or a course of action (Nutley et al., 2007). Such types of research use explain the various types of evidence that has emerged over the years.

The conceptual use of research must not be viewed as a failure to translate research into policy (Rich, 1977), because there are many ways for research to contribute into action; however, its use is subtler and is difficult to trace. As early literature suggests, utilisation of research in the areas of public policy show that most policy makers do not effectively use or understand research findings. It is evident that the principal purpose served by research is not to provide information that can be directly applied to policy, but rather to reinforce any existing information that could potentially inform future decisions. This is exemplified by some empirical

studies; for example, Jacob et al.'s (2017) analysis show that research evidence is used by policy makers to select policies, programs, or other types of interventions, justify the selection of interventions to funders, evaluate interventions, write a grant application, or plan and conduct a needs assessment.

This leads to the ongoing discourse about the barriers on evidence-based decision-making and how various misuse of sources of information lead to a gap between research and policy. Overall, literature (Brownson and Jones, 2009; Orton et al., 2011; Jacobs et al., 2012; Taylor-Phillips et al., 2014; Jacob et al., 2017; Kneale et al., 2017) illustrates the following challenges to effective use of evidence: full-text access to academic sources; capacity and skills to analyse and interpret evidence; undue focus on randomised controlled trials; lack of focus on local context and applicability; incompatible time frames for research and policy making; and presentation of evidence targeted to the needs of decision-makers.

These factors only exacerbate the two-communities gap (Caplan, 1979), where policy makers and academics are living in separate worlds with conflicting values, and different languages. Brownson and Jones (2009) emphasise the importance of bridging the knowledge translation gap, by moving from ineffective dissemination and implementation approaches, to building a system that facilitates proper utilisation of scientific research.

There is an abundant literature on strategies and recommendations on how to increase and improve the uptake of evidence in health policy, such as: emphasis on local, routinely collected data (Oliver and de Vocht, 2015); collaborative model and co-production of knowledge (Taylor-Phillips et al., 2014; Kneale et al., 2017); capacity building (Orton et al., 2011; Jacobs et al., 2012); improve low-cost administrative practices and information systems (Coleman and Nicholl, 2001; Jacob et al., 2017); and enhance evidence base and evaluation methods (Brownson et al., 2009).

Given the complexity of evidence-based policy and decision-making, which is built in practice from epidemiologic and behavioural policy research, decisions in health policy often involves choosing from one alternative to another given a set of rational choices. This study, therefore, explores how collaboration of organisations is applied in the local context of Greater Manchester Health and Social Care partnership to improve knowledge translation.

3. Methodology

3.1 Greater Manchester context

Greater Manchester sits in the heart of the Devolution Revolution and Northern Powerhouse, an ambition by the Conservative government in 2015 to boost the economic growth in the north of England. As part of these agreements, in April 2016, the conurbation took charge of its health and social care budget amounting to a sum of £6 billion, which include the transfer of control on health care services from London to the local authorities. A year later, the conurbation elected a Mayor who will be accountable to and representing all 10 local authorities in Greater Manchester. The Mayor is responsible for transforming public services, including transport, police and fire services, and the economy, and makes decisions locally on behalf of the 2.8 million residents of Greater Manchester (Greater Manchester Combined Authority, 2018).

While Greater Manchester has been one of country's most successful city-regions, it is facing unprecedented challenges on health inequalities and outcomes. With more people suffering from illnesses like heart disease and cancer, Greater Manchester's health is poorer than that of the UK average with people dying younger than people in other parts of England (Greater Manchester Combined Authority, 2017). It also faces an ageing population, where people over the age of 70 are predicted to increase by 15.2% between 2016 and 2021 (Greater Manchester Combined Authority, 2017). This is accompanied by long-term health conditions and disabilities resulting to increased unemployment, therefore costing the NHS, taxpayers, and local authorities more money to fund urgent or long-term care. All of these predicaments would have been prevented if only health conditions are identified earlier or managed better.

Therefore, as a response to radically reform the delivery of public services and improve the health outcomes of the population, Greater Manchester Health and Social Care (GMHSC) Partnership was formed as the overseeing non-statutory body to a five-year strategic plan called *Taking Charge*, which aims to reduce inequalities and improve well-being of the 2.8 million residents in the city-region, from early age to their later years (Greater Manchester Combined Authority, 2015). *Taking Charge* involves a collaboration between health organisations and local authority partners to rebuild how health and social services are being delivered across individuals and communities.

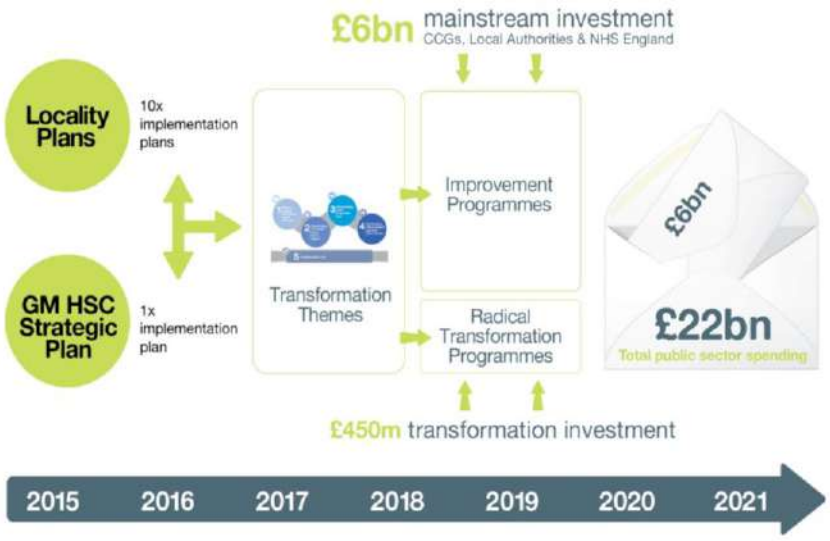

Figure 3: *Devolution of health and social care services: The vision* (Greater Manchester Combined Authority, 2018)

The GMHSC Partnership exemplifies collaboration and integration of organisations in order to deliver place-based approaches unique to the needs of the people living within the said localities. Rules and norms are established to shape where and how decisions are to be made in the GMHSC Partnership, given that there are multiple-party actors involved in the process of approving a locality pan and putting it into assessment for the Transformation Fund. With the Transformation Fund in place in accordance with the Taking Charge strategic plan, this makes a unique case study to examine how organisations within this governance interact with each other to deliver a common good (i.e. health services).

3.2 Research question

While most studies extract the explanatory factors, draw conclusions and provide suggestions on how to improve knowledge translation, there is little data on how collaborative partnerships could improve the uptake of evidence within a local decision-making context. Therefore, this study asks the research question "Could collaboration improve the acquisition, dissemination, utilisation, and implementation of evidence in the health policy and local decision-making context?" This will be addressed through the following research aims:

- To examine the relationship between evidence and policy, the role of knowledge within this interaction, and the factors facilitating knowledge translation in the health policy context

- To investigate the assumptions embedded in rational actor theories and its appropriateness to the current context of Devolution in Greater Manchester
- To evaluate if collaboration of organisations resulted into co-production of knowledge and improved uptake and utilisation of evidence

3.3 Framework

Putting into context, this research aims to evaluate whether the collaboration of organisations of the GMHSC Partnership result into an improved facilitation of knowledge translation between the producers and receivers of knowledge. It will unwrap the decision-making process under rationalistic-linear assumptions within the newly created Transformation Fund, where institutions are established, and multiple actors are involved to accommodate the targets of the GMHSC strategic plan. Following the knowledge-to-action (KTA) framework, the study examines the contextual factors influencing the knowledge translation process and how evidence is transformed into policy within the interaction between the collaborating organisations.

Figure 4 illustrates a modified framework of the research-policy relationship, which shows the interaction between evidence and policy as processes, and how it is being influenced by multiple factors beyond their interactions. Nutley et al. (2007) suggest that policy decisions are shaped by this exchange of information (i.e. research; other forms of evidence including experience and anecdote; contextual factors) and the institutional circumstances (i.e. political ideologies, interests, etc.) surrounding it. This model also recognises that the policy decision process involves multiple actors (i.e. decision-makers, researchers, funders, knowledge purveyors) that interact in order to provide solutions to problems. Between these interactions are the exchange of the supply (knowledge creation cycle) and demand (action cycle) of knowledge, which sits at the centre (knowledge translation) of the decision-making process.

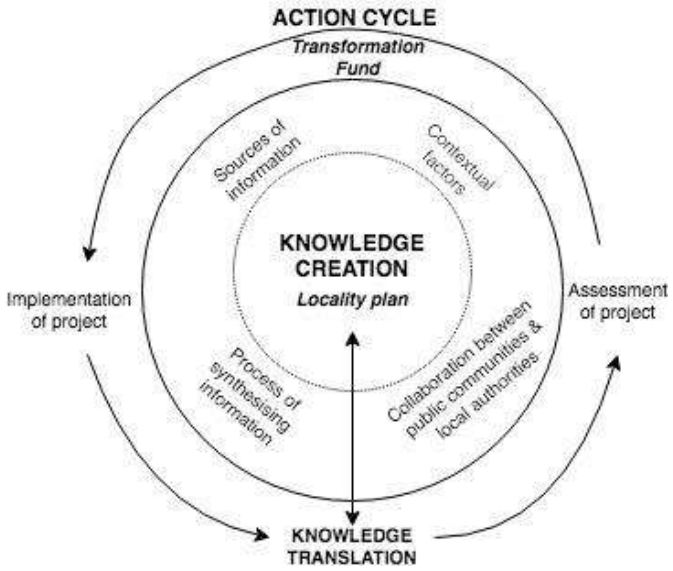

Figure 4: *Conceptual framework*

3.4 Methods and data collection

This study uses mixed methods approach to establish the extent and process of knowledge translation in the Greater Manchester health policy context. An exploratory sequential design is adopted, where the qualitative data collection and analysis builds to the quantitative strand of the study. Figure 5 illustrates the flow of data analysis from the results of interviews and survey.

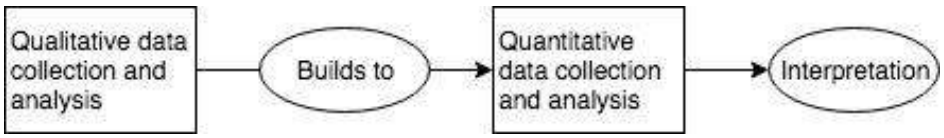

Figure 5: *Exploratory sequential design* (Creswell & Plano Clark, 2011)

First, a review and content analysis of relevant documents will be conducted, to establish a foundation to the local decision-making level in Greater Manchester. This may include, but is not limited to, policy papers, academic journals (i.e. empirical research, qualitative interviews, systematic reviews), meeting reports, etc. in lieu with the current Devolution agenda.

Second, semi-structured interviews will be conducted to selected stakeholders of the GMHSC Partnership, particularly those who are involved in the governance, evaluation, and implementation of the health strategic plan (i.e. members of the Transformation Fund). The selected sample could be holding a position in either the NHS or in the council that has a role in decision-making (i.e. councillor, public health director, policy associate, project lead,

commissioner, etc.), or directly affecting public policy, such as gathering data, analysing data, developing policy, implementing policy, commissioning or evaluating programmes. The aim of this is to set the scene and identify which potential explanatory factors influence the decision-making process in the GMHSC Partnership. For example, which sources of information are used by members of the Partnership (research, guidance, peers, etc.); what contextual factors influence decisions (position within the organisation; access to information; etc.); how is information processed (rational or interactive model?); and who are the actors involved (identifying if actor collaborated with another person or organisation).

Third, the thematic results from the interviews build the potential variables of the survey. Electronic surveys will be sent out to all the organisations involved in GMHSC Partnership to test whether the factors identified in the interviews lead to use and application of evidence based on the stages in the KTA framework. The aim of sending out the surveys is to confirm the initial findings from the interviews and to provide supporting information to the outcome of the interview.

4. Limitations and expected contribution to knowledge

Since the study involves collecting data from NHS staff, it is currently undergoing Health Research Authority (HRA) ethical approval sponsored by the university. Once approved, collection of data will immediately commence approximately from July to September 2018. It is anticipated that there will be a degree of difficulty in recruiting participants to the study, therefore, an initial contact was established with a board member of the GMHSC. This person will serve as the gatekeeper to the participants and he/she will be responsible to disseminating the invitation of participation to both interviews and electronic survey.

It is also anticipated that the results of this study will not assume generalisability due to the nature and size of the sample. For the interviews, a purposive sampling method based on the selected characteristics of a population will be used. Due to the potential inability of the researcher to reach all members of the GMHSC Partnership, purposive sampling and snowball techniques are advantageous because it draws on participants' own expertise in developing the sample as well as expanding the sample beyond contacts known to the researcher.

The results of this study expect to provide a new testable KTA framework, which can be applied in other public sectors under the Devolution agenda in Greater Manchester. The overall contribution of this research is to provide a small picture of what decision-making is like in the

local level, in the midst of budgetary pressures and political agenda to provide effective solutions in the health policy context in Greater Manchester.

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