Overcoming barriers to priority setting using interdisciplinary methods

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\textbf{A B S T R A C T}

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Ten years ago, Holm's highly influential paper "Goodbye to the simple solutions: the second phase of priority setting" was published [Holm S. Goodbye to the simple solutions: the second phase of priority setting in health care. British Medical Journal 1998; 317:1000–7]. Whilst attending the 2nd International Conference on Priorities in Health Care in London, Holm argued that the search for a rational set of decision-making rules was no longer adequate. Instead, the priority setting process itself was now thought to be more complex.

Ten years later, the Conference returns to the UK for the first time, and it is timely to describe some new tools intended to assist both researchers and decision-makers seeking to develop both rational and fair and legitimate priority setting processes. In this paper we argue that to do so, researchers and decision-makers need to adopt an interdisciplinary and collaborative approach to priority setting. We focus on program budgeting and marginal analysis (PBMA) and bring together three hitherto separate interdisciplinary strands of the PBMA literature. Our aim is to assist researchers and decision-makers seeking to effectively develop and implement PBMA in practice. Specifically, we focus on the use of multi-criteria decision analysis, participatory action research, and accountability for reasonableness, drawn from the disciplines of decision analysis, sociology, and ethics respectively.

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\textbf{1. Introduction}

Ten years ago, Holm's highly influential paper "Goodbye to the simple solutions: the second phase of priority setting" was published [1]. Whilst attending the 2nd International Conference on Priorities in Health Care in London, Holm argued that the search for a rational set of decision-making rules was no longer adequate. Instead, the priority setting process itself was now thought to be more complex.

Ten years later, the Conference returns to the UK for the first time, and it is timely to describe some new tools intended to assist both researchers and decision-makers seeking to develop rational and legitimate priority setting processes. In this paper we argue that to do so, researchers and decision-makers need to adopt an interdisciplinary and collaborative approach to priority setting.

We focus on program budgeting and marginal analysis (PBMA) and bring together three hitherto separate interdisciplinary strands of the PBMA literature. Our aim is to assist researchers and decision-makers seeking to effectively develop and implement PBMA in practice. We describe a new interdisciplinary framework for PBMA which is based on learning from real-world experience with health systems and a range of different academic disciplines.
Specifically, we focus on the use of multi-criteria decision analysis, participatory action research, and accountability for reasonableness, drawn from the disciplines of decision analysis, sociology, and ethics respectively. The framework outlines the main concepts and elements of the different interdisciplinary tools, how they should be used within PBMA, and the types of approaches researchers and decision-makers might take in order to effectively develop rational, fair and legitimate priority setting processes in practice.

2. Program budgeting and marginal analysis

PBMA is an economic framework specifically designed to aid local decision-makers in setting priorities [2]. The intent of PBMA is to provide assistance to decision-makers in directing resources to maximise benefits from health services. In doing so, PBMA uses the economic principles of opportunity cost and ‘marginal analysis’. Marginal analysis focuses on assessing the costs and benefits associated with incremental changes to services. Most importantly, the focus of PBMA is allocating resources at the local level. It is at this level where managers and clinicians – whether they are based in health authorities, health maintenance organizations, primary care trusts, or hospitals – have to bear the opportunity cost of resource allocation decisions elsewhere in their budgets.

A PBMA study can be broken down into the seven stages as shown in Table 1, which are designed to provide a systematic and explicit framework for priority setting [3,4]. PBMA asks decision-makers to construct a program budget (a map of how resources are currently spent) and then assists them in making recommendations for changing existing allocations of resources to services using marginal analysis. This type of priority setting activity can take place both within health programs at the micro-level or across programs at the macro-level. The advisory panel plays a central role in any PBMA study, and is typically made up of 8–30 stakeholders from relevant clinical and non-clinical disciplines [2]. Relevant stakeholders may include those directly involved in the programs being considered (e.g. clinicians, managers, and patient/consumer representatives) and those indirectly involved (collaborating/inter-related providers, policy-makers, finance/information personnel, ethicists, organizational behaviourists, health economists, health services researchers and community representatives) [2,4].

Community stakeholders can play an integral part in the process, including defining appropriate criteria for decision-making based on community values and ensuring the needs of specific groups within the community are addressed [4]. The advisory panel is responsible for determining locally relevant decision-making criteria; identifying service options for investment and disinvestment; evaluating those options by considering decision-making criteria, available evidence and local data; making recommendations for resource allocation.

3. An empirical model of barriers and facilitators to PBMA

An updated empirical model of the PBMA process is presented in Fig. 1. In order to provide a more complete description of a priority setting process, the model shows the PBMA process within the organizational context in which it is to be applied. Components of the model were chosen by a process of synthesizing evidence and experiences from (1) an earlier systematic review of the PBMA literature [5]; (2) our experiences of conducting and evaluating approximately 35 such studies in Australia, Canada, New Zealand and the UK (for examples see [6–8]); and (3) conducting over 100 priority setting workshops with decision-makers in the last 15 years.

The model includes inputs and outputs from the PBMA process, and barriers and facilitators to the uptake of PBMA.

Table 1 Stages in a PBMA priority setting exercise.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Determine the aim and scope of the priority setting exercise</td>
</tr>
<tr>
<td>2.</td>
<td>Compile a “program budget”</td>
</tr>
<tr>
<td>3.</td>
<td>Identify options for (a) service growth (b) resource release from gains in operational efficiencies (c) resource release from scaling back or ceasing some services</td>
</tr>
<tr>
<td>4.</td>
<td>Determine locally relevant decision-making criteria</td>
</tr>
<tr>
<td>5.</td>
<td>Evaluate in terms of costs and benefits and make recommendations for (a) funding growth areas with new resources (b) moving resources from 5(b) and 5(c) to 5(a)</td>
</tr>
<tr>
<td>6.</td>
<td>Validate results and reallocate resources</td>
</tr>
</tbody>
</table>

1 The various types of stakeholders involved in the process vary from context to context. A more comprehensive discussion of stakeholders and stakeholder engagement can be found in Mitton and Donaldson [2].

2 The barriers and facilitators model was first presented in Mitton and Donaldson [8]. This version has been revised to include other barriers and facilitators originally described by Peacock [7] in the first evaluation of the PBMA approach and updated with new findings from PBMA evaluations and decision-maker surveys published since 2003 [10–12].
and the implementation of advisory panel recommendations. Models of barriers and facilitators to change stem from the psychology literature [9]. The management literature also contains many references to decision-making processes, and barriers and facilitators to change [13–15], but, to our knowledge, the empirical model is a novel depiction of a priority setting process set within the context of a health care organization.

The model describes a number of 'inputs' or prerequisites which should be in place for the PBMA process to be conducted. Without any one of these, application of the framework may still proceed, but success is more likely if all are present for a given exercise. Under the 'PBMA process' box is a number of the key 'lessons learned' from previous applications. These points illustrate that sound methodology must be applied for a forward-moving process to occur. Numerous 'outputs' can result from any given PBMA process, including resource reallocation and improved patient outcomes, and among other items, such as the evaluation of historical services and improved knowledge of a given service area. The different types of outputs in Fig. 1 were generated from decision-makers who have used the PBMA approach, which help to move the understanding of PBMA from a purely economic technique (concerned with measuring marginal costs and benefits) to being part of a management process. This 'move' is deliberate on our part, and represents a unique attempt to improve the uptake of economics in practice by local decision-makers.

Barriers and facilitators to the PBMA process were also empirically observed from previous work and are included in the model. In some cases PBMA exercises will not even get off the ground. Thus an accurate depiction of the process requires that barriers and facilitators be highlighted after the input box but before the process commences. We term these ex ante barriers and facilitators to priority setting. Similarly, factors following the PBMA process may prevent recommendations from being reached or followed-through to the point of being put into practice, and other factors may serve as facilitators. We term these ex post barriers and facilitators to priority setting. Importantly, barriers may also occur during the PBMA process itself. If the priority setting exercise does not adequately address items in the PBMA process box, recommendations may not be implemented.

The evidence used to construct the empirical model can be used to identify a number of key factors for success in priority setting exercises. First, understanding organizational culture and determining procedures to work through barriers and facilitators to change [14–15], but, to our knowledge, the empirical model is a novel depiction of a priority setting process set within the context of a health care organization.

In relation to this model, we now describe three interdisciplinary tools that can be integrated within PBMA to overcome barriers to priority setting in practice. These tools are multi-criteria decision analysis (MCDA), participatory...
action research (PAR) and accountability for reasonableness (A4R). Taken together, these tools form the basis of a new interdisciplinary framework for PBMA. We will describe the main elements of these tools and how they should be used within PBMA in order to help researchers and decision-makers effectively develop and practice rational, fair and legitimate priority setting processes.

4. Multi-criteria decision analysis

A first step to overcoming barriers to priority setting is to develop scientific models in order to provide evidence to assist decision-makers in making complex judgements. Evidence has shown that barriers to priority setting may arise during the process if researchers fail to ‘listen to the bureaucrats’ and adequately capture all relevant decision-making objectives [4,16]. Following on from the barriers and facilitators model, relevant questions include what objectives would decision-makers choose to pursue (what are relevant decision-making criteria)? How important are different criteria? How should health care interventions be ‘scored’ against those criteria? And, how should scores be combined in a model to reflect the overall performance of different interventions? Progress can be made on these questions by researchers making greater use of MCDA techniques in PBMA.

The primary aim of MCDA is to develop models of decision-maker objectives and their value trade-offs so that alternatives under consideration can be compared with each other in a consistent and transparent manner. A key principle is that decisions between different interventions should be consistent with stakeholders’ objectives. MCDA is transparent in that it shows that decisions are the logical implications of those objectives. In MCDA, objectives are deemed to be within the discretion of the decision-makers. That is, they are not predetermined by some underlying theory from economics or ethics (such as utilitarianism). This complicates analysis because decision-makers may profess a number of different objectives without having any clear notion of how these might be made commensurable. In MCDA, objectives typically emerge out of dialogue between researchers and decision-makers. That is, preferences are not endowed, rather they are constructed as part of the decision-making process [17].

The MCDA process typically consists of two stages. First, problem structuring involves generating a set of alternatives and a set of criteria against which the alternatives are to be evaluated and compared. Second, model building entails constructing some form of model which represents decision-makers’ objectives and their value judgements. There are two key considerations to be addressed in this type of model [18]: the methods used to describe decision-makers’ preferences and elicit importance weights for decision-making criteria; and, the type of aggregation model used to combine criteria scores.

So how might MCDA be used in priority setting? In order to structure the problem, the first questions to ask are ‘what priority setting objectives do decision-makers wish to pursue?’ And, ‘what locally relevant criteria do decision-makers use when deciding between alternative interventions?’ Objectives are the principles that determine priority setting policies (e.g. improving population health) whereas criteria are the standards that alternative interventions are judged by (e.g. health outcomes from different treatments). In many instances, priority setting objectives and criteria will not be clearly defined at the start of this process, or they may be too broadly defined (e.g. statements like ‘improving equity’ or ‘improving population health’) to be of practical use in making decisions. Perhaps the most widely debated criteria are efficiency (maximising health outcomes from limited resources) and equity. However, there is a growing body of evidence showing that local decision-makers consider a wider range of criteria when setting priorities, such as empowerment, acceptability to different stakeholders, waiting times/lists, and sustainability [2,16,17,19].

Researchers should work with decision-makers to elicit and refine locally relevant criteria through semi-structured discussion and deliberation in order to gain a clear and shared understanding of their meaning. Criteria must be relevant to the organizational context and the objectives of decision-makers, and will typically be specific to the context of the study. Priority setting decisions typically involve consideration of a wide range of criteria and decision-makers must make trade-offs when choosing between alternative interventions. There may be conflicts between criteria (e.g. between reducing wait lists and improving geographical access), between national guidelines and local priorities, and between different stakeholder groups. MCDA is important because the degree of conflict between criteria, or conflict between different stakeholders regarding the importance of different criteria, is such that ‘intuitive’ decision-making is unsatisfactory.

Model building entails constructing a representation of decision-makers’ value trade-offs and preferences (consistent with a certain set of assumptions) in order to provide coherent guidance on the preferred solution to the priority setting problem. Key assumptions include that criteria should be mutually exclusive (orthogonal) to avoid double counting and collectively exhaustive to ensure all relevant criteria are included. The critical task is to construct a model that reflects the stated preferences of stakeholders, recognizing that different models may or may not be appropriate for (or generalizable to) different priority setting contexts. This is necessary to ensure that the entire priority setting process is relevant for local decision-makers and their organizational context.

The advisory panel should construct measurement scales for each criterion, against which interventions are to be evaluated. The panel will then evaluate each alternative intervention in terms of how well it performs with respect to each criterion by ‘scoring’ each service using the measurement scales. Scores should be based on available quantitative and qualitative evidence and technical judgements (where necessary) from the panel. The degree to which judgement should be employed will vary between contexts depending on the availability of relevant evidence and the quality of that evidence. Theoretically valid and reliable techniques such as swing weights [18] or discrete choice experiments [20] should be used to derive estimates of the relative importance of criteria.
The swing weights method has been reviewed in von Winterfeldt and Edwards [21] and Clemen [22]. This method overcomes many of the problems of using simple importance judgements, such as direct estimates of importance weights. The method is relatively simple, transparent and easy to use; is good at avoiding inconsistencies in preference elicitation; is applicable with practically any number of decision criteria; and produces weights which are practically indistinguishable from indifference methods [21–23]. Direct estimation of importance weights typically produces flatter weight distributions and may lead to systematic under-estimation of trade-offs between attributes [21,24]. The literature on the validity and reliability of discrete choice experiments has been reviewed in Ryan et al. [25] and Ryan and Gerard [26]. Few difficulties have been reported when answering discrete choice experiment questions and the technique has been well received by decision-makers. High levels of internal validity have been reported, along with convergent validity with respect to techniques such as willingness-to-pay and the standard gamble. The theoretical axioms of completeness, continuity and rationality that underpin discrete choice experiments have also been examined and results have proved to be positive.

Scores for each of the criteria are combined using an appropriate model in order to calculate a single ‘index of benefit’ for each intervention. Benefit should be measured on a scale that is easy to understand, intuitive and plausible (e.g. from 0 to 100). Services can then be ranked according to their combined benefit and the panel can validate results through discussion and deliberation. If the panel is dissatisfied with the ranking, each stage of the process may be re-evaluated until satisfaction and agreement are reached with the integrity of the results. This approach permits an explicit comparison of the benefits and costs of different services. In theory, services with the greatest benefits and lowest costs represent the most efficient use of resources, and so resources should be directed to these services first to maximise benefits for the community.

MCDA seeks to make the priority setting process more systematic, transparent and defensible in order to diminish the impact of barriers arising during the process. Decision-makers may use MCDA because they have difficulties in understanding what they really want to do, or what alternative courses of actions will best meet their priority setting objectives. Their preferences and value judgements are often poorly formed at the start of the decision process and are typically constructed as part of the process. Failure to adequately capture preferences is an important barrier to priority setting that may arise during the process. Decision-makers are unlikely to implement recommendations from a process which does not properly consider relevant decision-making criteria. This is perhaps the greatest strength of MCDA: it is a mechanism that allows decision-makers to learn about their priority setting preferences.

Consistency and transparency in the process should also improve the perceived credibility of decisions and help alleviate the effects of ex ante barriers which arise during the implementation of decision and the re-allocation of resources. One of the main aims of MCDA is to help decision-makers organize and distil the large amount of information required for effective and defensible decision-making. Priority setting inherently involves dealing with large amounts of complex information that may be difficult to interpret, and that is often used in different ways to represent different stakeholder interests. A well structured priority setting problem should mean that decision-makers are more confident about making the decision, their actions are more accountable, and that all relevant factors have been taken into account.

5. Participatory action research

A second step to overcoming many of the barriers identified above is to embark upon research specific to the context of priority setting in health care organizations. We would argue that progress can be made on these questions by researchers adopting a qualitative research paradigm. The key strength of qualitative research in this context lies in its focus on getting decision-makers and researchers to work together to develop better priority setting processes [27].

In recent years, PAR has become established as a methodology for intervention, development and change within groups, communities, or organizations. PAR is a form of social research in which all relevant stakeholders within a group, community or organization actively examine current actions in order to change and improve them. It seeks to merge knowledge generation with action and change by focussing on ‘knowledge for action’ rather than ‘knowledge for understanding’ [28]. In doing so, stakeholders examine political, institutional, economic, historic, and other contextual factors that shape and influence actions. The purpose of PAR is to research those actions, change/modify/broaden them, and re-research them. A distinctive feature of the approach is that research is conducted by and for those who are the end-users of the research (i.e. it adopts an ‘active co-research’ paradigm). Research into the actions of a group is carried out by that group in conjunction with researchers (i.e. PAR focuses on getting decision-makers and researchers to work together in order to improve processes and outcomes from those processes). PAR is also designed to be context specific, to address specific issues identified by stakeholders, and results are used to directly address those problems.

PAR is intended to be an iterative research tool, based on repeated study cycles. An example of a PAR process is presented in Fig. 2, which is comprised of “self-reflective cycles of: planning a change, acting and observing the process and consequence of the change, reflecting on these processes and consequences”, etc. [29]. In each cycle, researchers work with stakeholders to identify important problems and issues, initiate research, change actions, examine the implications of those changes, and generate the agenda for the next cycle. Stakeholders continuously reflect on the knowledge generated from researching and changing actions, which feed into future cycles. PAR methods therefore have to be reflexive, flexible and iterative, which means that study outcomes can be difficult to predict from the outset.

So how might PAR be used by researchers alongside within PBMA? The approach we now propose draws on the PAR headings in Fig. 2 and Patten et al. [27].
In planning change, it is important to examine current prioritisation processes and the organizational context in which the change is being introduced. Documentary and observational analysis are useful tools for documenting processes, as sources of evidence, in group dynamics, for review of roles and responsibilities, and for organizational culture. In addition, in-depth one-to-one qualitative interviews/surveys and focus groups with decision-makers may be used to gather their reflections on current processes in terms of their involvement, influence, need for greater understanding, concerns, and suggestions for improvement. One-to-one interviews can be used to gather personal thoughts on group dynamics, political and interpersonal influences, and the role of personal values in priority setting. Participant observation notes and interview and focus group transcripts should be transcribed verbatim and stored electronically for coding, text search and retrieval and theme mapping. Thematic analysis may then be used to identify and define recurring themes and concepts.

Enacting change in the prioritisation process may involve the staged introduction and development of PBMA. Several recent PBMA studies have shown that formal and informal training (through researcher-led and/or researcher-decision maker co-led workshops) can be used to raise decision-maker and stakeholder understanding of the proposed change, introduce economic concepts and principles, the PBMA framework, and examples of practical applications of PBMA [2,30]. Observational analysis of such workshops is a useful technique to highlight group dynamics, improvements in understanding, acquisition of new concepts and skills, mobilization for action (e.g. levels of motivation) and potential challenges to implementation. Recent studies have also focussed on developing prioritisation processes iteratively and interactively (with decision-makers, stakeholders and researchers) and refining them by repeated exercises, adapting elements of PBMA to suit the local context.

Reflections on the change should be elicited prior to refining the process. In-depth one-to-one interviews/surveys and focus groups can be used to review and verify the changes decided upon, and gather reflections and suggestions for refinement of the new process. Furthermore, analysis of observational data collected throughout the implementation of the process can be used to examine specific challenges encountered during framework implementation and the prospects for its longer term sustainability in the organization. Finally, it is often desirable to collect and analyze reflections on the PAR process itself, and its outcomes.

In this context, the intent of PAR is to foster change towards more systematic, evidence-based priority setting processes within health care organizations. It does this by trying to recognize the complexity of PBMA from the decision-maker’s perspective which can best be achieved by embedding researchers within the organization. What we are suggesting here is that PAR may be used as a vehicle to effectively translate economic knowledge and principles into practice by working closely with managers to demonstrate that such principles are entirely consistent with good practice in decision-making.

6. Accountability for reasonableness

A priority setting process such as PBMA inevitably raises a range of ethical questions. Barriers to priority setting may arise during the process if these questions are not adequately addressed. Ethical questions relate to the need for any priority setting process to be fair, accountable and transparent. That is, irrespective of the final resource allocation recommendations, importance may be placed on whether the process itself is fair. One approach to examining fairness in decision-making processes is the ethical framework of accountability for reasonableness or A4R [31].

Within the A4R framework, a priority setting process is considered to be fair if it satisfies four conditions. These conditions (see Table 2) relate to (1) publicity (whether decisions are publicly accessible); (2) relevance (whether rationales for decisions can be agreed upon); (3) appeals (whether there is a mechanism for dispute resolution); (4) enforcement (whether there is regulation to enforce the first three conditions).

In relation to our current discussion, the conditions of A4R could be used as an integral part of the design of a PBMA study. However, the A4R literature offers relatively little guidance on what a fair and legitimate process might look like in practice. A4R consists of a number of requirements for the organizational structure of the health care institution, but the process itself is largely a ‘black box’ [32]. That is, the approach gives an idea of the ‘outer features’ of the process (e.g. what is structurally required) but provides limited information on the ways in which the conditions of A4R should be used to make processes fair and legitimate in practice.

In our view, the conditions of A4R can be used to inform basically any priority setting approach. So, how might tools
from ethics be used alongside PBMA? We can gain insight from empirical studies of A4R [33] which we draw on for the approach we now propose.

In order to ensure publicity of priority setting processes, decisions and their rationales should be communicated to internal and external stakeholders (health service staff, patients, the general public and so on) in a transparent manner. Information exchange is a two-way process, focussing on building a shared understanding of the need for priority setting, goals of the process, decision-making criteria, how the process will work, and resulting decisions. Focus groups or individual meetings with stakeholders can be used to exchange ideas and information concerning values, needs and opportunities for service improvements. Newsletters to health service staff and ‘town hall’ meetings can also be effective mechanisms for communication.

Ensuring relevance of the processes involves developing a rationale for priority setting decisions and relevant decision-making criteria. Documents describing the organization’s mission, vision, and values provide a useful starting point, but as discussed below, eliciting criteria requires careful consideration of a wide range of potentially conflicting viewpoints. An advisory panel of key stakeholders should then review the best available evidence on the services being appraised, and evaluate their performance against chosen decision-making criteria. It is important to recognize that decision-making will typically be based on multiple criteria by stakeholders from multidisciplinary backgrounds. Stakeholders should understand the process, be allowed to present their views, express conflicts of interest, and be receptive to external advice when needed. Roles and responsibilities of stakeholders should be outlined clearly at the outset, by developing and discussing terms of reference.

Establishing a transparent appeals (or revision) mechanism entails developing a formal decision-review process based on explicit decision-review criteria. Decision review ensures that decisions are ‘reasonable’ based on available evidence and local circumstances. Decisions may be reviewed in order to improve quality for a number of reasons, for example if procedural rules are violated, if new trial data is published or other new evidence comes to light.

In establishing an enforcement mechanism, leadership by senior managers and executives is critical. Experience from both the PBMA and A4R literature suggests that senior management has considerable influence over whether other actors engage in fair play or not. Facilitating group and organizational learning can also reduce the extent to which actors seek to game the system. However, priority setting is iterative. Monitoring the process and enforcing rules should be an ongoing process which seeks to evaluate what has happened in the past, what is happening in the present, and then refines the process for the future.

The primary aim of A4R, in terms of overcoming barriers to priority setting, is to ensure the process is credible to relevant stakeholders and to reduce the impact of barriers arising during the process. This requires that the process is perceived to be fair and legitimate so that stakeholders commit to it, its rationale, and the resulting decisions. Fairness and transparency in the process may help to mitigate practical problems potentially arising due to resources being shifted from one service to another (ex ante barriers). In recent years, researchers have increasingly aligned the implementation of PBMA with the conditions of A4R. The added value of A4R lies in its explicit framework for pursuing fairness and legitimacy in the priority setting process, rather than leaving fairness considerations largely ‘to chance’.

7. Discussion

In this paper we have proposed a move towards a novel interdisciplinary framework for PBMA, which we would suggest is a more ‘holistic approach to priority setting’. PBMA requires multi-professional and interdisciplinary research, recognizing that the challenges that decision-makers face are ‘real-life’ challenges which transcend academic boundaries. In constructing the framework we have drawn together three hitherto separate interdisciplinary strands of the PBMA literature.

A significant point to take from this paper is that whilst a priority setting process, such as PBMA, can be conducted perfectly in a ‘technical’ sense, an understanding of the context in which the application of PBMA takes place is required in order for the exercise to have a chance at being successful. Further, as different contexts will require different strategies, it is often necessary to undertake background and historical research in order to identify and overcome barriers prior to embarking on a priority setting process. Patten et al. [27] offer some general principles for undertaking this type of research to assist the priority setting process. First, researchers should maintain prolonged contact with decision-makers within the organization’s work setting. Second, researchers should gain a holistic overview of the organizational context (i.e. the organization’s structure and culture, its history and procedures with respect to priority setting, its explicit and implicit rules, and its guiding principles). Third, researchers should capture data from the perspective of those individuals who would have to implement new processes. We would suggest that
many approaches to priority setting have overlooked these types of principles.

Instead, we would suggest that health researchers need to work with decision-makers by ‘embedding’ researchers within the organization if the economic principles of opportunity cost and marginal analysis are to be adopted as part of the management process. In this capacity, the researcher acts both as a participant—providing specific expertise in priority setting methods—and as an observer—researching the priority setting process. This would mean that researchers have to consider the steps that decision-makers have to go through in order to implement priority setting processes, drawing on procedural rather than instrumental models of rationality. We recognize that combining such roles may be challenging, and that there are obvious practical and theoretical tensions. However, in our experience both approaches can work well in practice. Whilst such approaches can be time intensive, they represent a practical and rigorous way forward for researchers seeking to translate knowledge into practice.

Relevant stakeholders can be interviewed and/or surveyed following completion of the process to evaluate its fairness. Recent work has demonstrated that PBMA can also be assessed against relevant ethical conditions, by evaluating the process using the accountability for reasonableness framework [34]. The insight gained could then be fed back to directly impact future processes in the organization. However, the focus on process fairness does not bypass the need to engage with core economic principles that underpin resource management decisions. A4R, like PAR, focuses on a procedural rather than an instrumental understanding of rationality [32]. Any process that meets the criteria for A4R will need to articulate the reasons why, and not just how particular decisions are made [35]. As alluded to above, transparency of both the process and rationale for change are critical to ensuring fair and legitimate process. This suggests the need for a process based on economic principles and which explicitly holds ethical conditions in mind. (That is, we need good processes and good decisions, not good processes and bad decisions or vice versa, or indeed bad processes and bad decisions!)

In proposing that researchers make greater use of MCDA, we are not suggesting that they should abandon the tools of economic evaluation or the principles of welfarism or extra-welfarism (or Sugden and Williams’ “Paretian School” of thought [36]). Rather we would suggest that practical priority setting tools should be grounded in Sugden and Williams’ “decision-maker school” of thought, our interpretation of this being that the objectives of decision-makers (clinicians and managers) ought to be based on synthesizing value judgements from the individuals who make up society. Thus, in many circumstances, clinicians and managers are responsible (at least implicitly through the political process) for making decisions in the public interest. That is, they are ‘social decision-makers’ pursuing ‘social objectives’. Recognizing these aspects, MCDA helps to quantify attributes of services that matter to the public and decision-makers, whilst recognizing that detailed surveys of the preferences of the public cannot be conducted for each decision to be made. The tools of economic evaluation are still needed but a different approach is required to address other decision-making objectives. Furthermore, in real-world settings, clinicians and managers cannot refuse to express judgements about the relative importance of different social objectives when setting priorities. Nor can they refuse to judge the relative merits of different interventions on the grounds of a lack of evidence. It is their job to make choices between alternative interventions.

It is important to recognize that we are not proposing an ‘all-encompassing’ economic, political, and social model of decision-making processes in health care. Constructing such a model would be intractable. Decision-making processes are complex, sometimes idiosyncratic, and subject to unpredictable influences. Instead, we have described three tools/methods drawn from different academic traditions that can be used to address some of the barriers to priority setting. We are proposing a move towards an interdisciplinary and pragmatic framework for PBMA, recognizing that economists’ methods provide only one of several sets of tools needed to inform priority setting decisions.

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