Developing a Clinical Priority Setting Framework
This workbook was developed by:

Dr Sandra G. Leggat
La Trobe University
School of Public Health

in conjunction with staff from the
South Australian Department of Health
and members of the South Australian Clinical Senate.

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Introduction

This workbook was created to assist the South Australian Clinical Senate and their Priority Setting Task Group to consider the evidence on priority setting to progress to the development of a Clinical Priority Setting Framework for use in South Australia. The workbook is designed to assist the reader to work through the decisions required to structure a useful Clinical Priority Setting Framework. Each section provides information on potential components of a Priority Setting Framework, with identified options, and where possible provides a brief summary of some of the key evaluative points from the literature. It is suggested that after considering each workbook section, the reader should answer the questions provided in the Discussion Point boxes at the end of the section. The appendices provide examples of priority setting methods and criteria that may be useful to review as you work your way through the workbook.

The key components and decision points of the workbook were confirmed by group members at a Priority Setting Framework Workshop in October 2004.

The Clinical Senate considered that the workbook may be a useful tool for other groups considering priority setting principles and have requested that this more generic version of the original Clinical Senate Workbook be published for the potential use of other groups.

Definition

Priority is defined as ‘a preferential rating; especially: one that allocates rights to goods and services usually in limited supply’. It has been suggested that priority setting is a method of imposing people’s values and judgements onto the available data to translate identified need to real programs (Spiegel and Hyman, 1978). Although the literature suggested that the most common approach to priority setting and subsequent resource allocation in health was to continue to fund what had been previously funded, that is, implicit rationing (Mitton and Donaldson, 2003), various jurisdictions have been considering better ways to define priorities that identify the greatest benefit for the available resources. The following figure highlights the considerations for the design of a Priority Setting Framework in the context of health care services.
Purposes

In general the purposes of priority setting relate to rationing and resource allocation, such that the benefit is maximised and the costs (including opportunity costs) are minimised. In the literature the following purposes were identified for priority setting processes:

- Setting priorities for investment, including prioritisation to assist in the allocation of time and energy to developmental proposals, as well as the ultimate selection among proposals

- Ranking the importance of identified needs (e.g. determining who should receive health care, when there are insufficient resources to meet all needs)

- Developing clinical guidelines

- Ranking identified health care solutions
• Decisions about whether to fund/purchase ‘expensive’ treatments

• Determining what should be excluded (e.g. from the basic publicly-funded health care package) to reduce health care costs

• Establishing budgets of health service providers

Levels

• Health system (macro) – considers the level of resources allocated to health services or health improvement relative to other sectors of the economy.

• Region or State – considers the broad distribution of resources among geographical areas, populations/communities, health services, and may also consider choices between centralising or decentralising services. At this level priority setting among health services can be horizontal (that is, setting priorities between clinical areas, such as determining the relative resource allocation to orthopaedic versus oncology services) or vertical (that is, setting priorities within specific clinical areas, such as allocation among prevention/promotion through smoking cessation programs or surgery for patients with cardiovascular disease)

• Institution (meso) – considers the allocation of resources to various programs and services within a provider institution or identified grouping of institutions. The vertical and horizontal considerations are also applicable at this level. For example, a hospital needs to allocate among the various clinical departments and services (horizontal) as well as among levels of care with a clinical stream (such as prevention, community services, acute inpatient, subacute services, etc.) (vertical).

• Treatment - considers the more specific allocation of resources to particular forms of treatment or health gain programs.

• Patient (micro) – considers the choice of which patient should receive treatment as well as decisions related to how much should be spent on individual patients.
DISCUSSION POINT:
At what levels will The Priority Setting Framework be applied?

Will the Priority Setting Framework be applied horizontally, vertically or both?

Framework Component Considerations
The first sections of the workbook assist in developing the Framework components for priority setting. The choice of components has been based on the literature review and requires participants to consider various options.

The Underlying Concept of Health
The first consideration is the incorporation of national and/or state priorities, or if these do not exist in a manner appropriate for the priority setting process, the underlying concept of health. Two broad conceptualisations of health have been proposed:

- Holistic definition of health: for example the WHO definition ‘health is a complete state of physical, mental and social well-being’ (World Health Organisation, 1982)
- Reductive definition of health: for example, health is not complete physical and mental well-being, but is related only to the organic (biological) system (Boorse, 1977).

The 1993 World Development Report of the World Bank, designed to suggest health priorities for developing countries, was criticised for taking a limited view of health that resulted in the report choosing only among health interventions, with no consideration of known effective interventions from other sectors, such as water supply, sanitation etc (Paalman et al., 1998).

This aspect may not require discussion if the Priority Setting Framework will be based on previously defined and acceptable priorities or health strategies.
DISCUSSION POINT:
Are there existing health targets or goals that will underpin the Priority Setting Framework? These are:

If health targets and goals are not defined, do you support a broader, holistic (biopsychosocial) definition of health, or a more narrowly focused biological definition of health as the basis for clinical priority setting?

Values and criteria

Should the prioritisation process be single or multi-staged?

The literature identified two approaches to prioritisation: a single staged approach where the competing options are evaluated in one step, and a multi-stage approach where the criteria are first defined and possibly valued or weighted, and then the options are evaluated using the defined criteria (Mullen, 2004).

In an early study the majority of the projects used only a single stage method to elicit the criteria (Mullen, 1999), but more recently multi-staged approaches have been more common. Conjoint analysis is an example of a single stage process, where the values/criteria are implied from the choices made by the participants (Mullen, 1999). Most commonly in health, conjoint analysis participants are asked to consider trade-offs between characteristics of service provision (for example, the trade-off between location of treatment and waiting time for treatment).

Analytical Hierarchy Process (AHP) is an example of a multi-stage process, where the criteria are identified and then values are attached to each of the criteria. Following this
stage, the options are evaluated against these weighted criteria. This provides a hierarchy of analysis.

**DISCUSSION POINT:**

Should the options be evaluated in one step (single-staged) or should the process involve the establishment of evaluation criteria first (multi-staged)?

The next sections assume a multi-staged approach, if you have chosen a single-staged approach you may want to consider the following sections in case there is discussion on these areas at the Workshop, or move on to the section on Procedural Considerations.

**Whose values should inform the criteria?**

In many places central governments are devolving priority setting responsibility to district healthy authorities, clinicians, and citizens (Kleinert, 2000). The options for involvement in the establishment of criteria include:

- Health care professionals: considered to represent informed choice, but have a tendency to base macro level priorities on individual clinical experiences and may overlook broader efficiency and distributive justice (Hasman, 2003).
- Health care managers: there is negligible research that specifically reviewed health care managers in this role.
- Representatives of the general public: although the benefits of consulting the public have been well documented, it is difficult to ensure a representative sample (Hasman, 2003). The ‘public’ appears to be strongly supportive of ensuring their preferences inform health care priority setting decisions (Cookson and Dolan, 2000), particularly decisions about how to prioritise across broad health care programs and to allocate funds to different population groups (Wiseman et al., 2003).
However, others have suggested the opportunity costs of estimating public preferences outweigh the benefits (Torgerson and Gosden, 2000), perhaps supported by the finding that changing largely irrelevant words in the prioritisation questions asked can result in very different preferences. This suggested that people do not have well-developed preferences (Fischhoff, 1991), and that it is difficult to find ‘perfect’ societal decision makers (Maiwenn et al., 2004). It was suggested that this uncertainty could be addressed by triangulation of results from focus groups, semi-structured interviews and structured questionnaires (Fischhoff, 1991), but this does not address the opportunity cost issues.

- Patients: patients have been found to take a narrow view (Hasman, 2003), with limited consideration of social values or constraints such as resource availability.

While the literature suggested that expert opinion does not necessarily reflect the views of non-expert members of society, using expert opinion enabled the methodology to be applied consistently (Paalman et al., 1998). While it has been suggested that community priorities should be given the highest consideration in decision making, it is also recognised that the institutional priorities of health departments may override other priorities (Spiegel and Hyman, 1978). It was also suggested that community participants may actually represent professional (dominant), managerial or repressed (marginalised) interests and not fully reflect ‘community’ interests (Hogg and Williamson, 2001). Overall, there has been substantial debate about whether it is possible to find truly reflective community views and a study of the priority setting processes in the U.K. found that lay people were more often involved in the scoring or rating of the options against the criteria and not in the selection or weighting of the criteria (Mullen, 2004). It has been suggested that a mix of public and expert opinion is required (Resnick, 2001).

DISCUSSION POINT:
Who would you involve in defining the priority setting criteria?
How should the criteria be established?

- Individual-based approaches
- Group-based approaches

Appendix 1 provides examples and brief commentary on the individual and group-based qualitative approaches. Individually-focused methods (such as surveys or interviews) were found to encourage the respondents to focus on their own private interests, while group-based (such as focus groups or citizens’ jury) techniques encouraged respondents to think in terms of the common good and their interests as members of society (Hasman, 2003). Individuals can be accessed in two ways. In some cases advertisements in local newspapers, telephone hot-lines or letter-box leaflets are used, leaving the response largely up to the initiative of the public. The second method, using door to door or telephone surveys, takes a more active approach to encouraging involvement. In a comparison of mail, telephone and face to face group processes to prioritise health concerns, greater deliberation was found to assist in consensus building, particularly with more concrete and tangible issues (Abelson et al., 2003).

Recently, proxy approaches have been gaining popularity. These involve targeted interviews of key people, such as teachers, shop owners and others thought to be representative of local opinion (Mullen, 1999).

**DISCUSSION POINT:**
Should the criteria be established using individual, group-based, proxy or a combination of all approaches?

The literature identified two approaches to criteria development:

- Constrained choices: involved some form of trade-off between different alternatives. Constrained choices were usually indicated where the process is meant to convey the need for competition or sacrifice in the choices (Mullen, 1999). These techniques include voting, ranking, comparison and trade-offs.
• Unconstrained choices: characterised by rating, scaling or scoring methods, and were the preferred method if the options were independent (Mullen, 1999). In unconstrained choices, each criterion is valued independently of the others. It was suggested that unconstrained choices cause problems for aggregation (Mullen, 1999).

**DISCUSSION POINT:**
Should the criteria be sought using constrained choice, unconstrained choice or a combination of both approaches?

**What types of criteria?**

Substantive criteria

• Medical: attempts allocation based on medical need. An example was developed by the National Health and Medical Research Council (NHMRC):
  - First in first served
  - Medical emergency
  - Tests for inappropriate treatment (unnecessary, unsuccessful, unsafe, unkind and unwise)
  - Effectiveness and efficiency of interventions
  - Cost utility analysis (Reported in Eagar et al., 2001).

• Political: concerned with the distribution of power and social or economic costs. May include considerations such as who stands to gain from the proposed interventions?

• Ethical: criteria in this area are focused on identifying those who may be ‘deserving’, those who may be ‘undeserving’, establishing relative need and contrasting social versus individual benefit.

• Economic: estimates the costs and benefits and considers the trade-offs. The Institute of Medicine Panel on Cost Effectiveness in Health and Medicine recommended that decision makers evaluate the information provided by economic evaluation (e.g. cost-effectiveness analysis) in relation to other values
(besides the value of efficiency implied by economic analysis) (Martin et al., 2002, Russel et al., 1996).

Process criteria outline the requirements of the priority setting process. These often include aspects such as fairness, community participation, and capacity to link evaluative data with community values.

The literature suggested the potential for well-defined criteria to result in premature closure of problem definition (Bots and Hulsoff, 2000). This suggested that there needed to be a balance between encouraging full discussion of the criteria and presenting fully-developed criteria for review by the participants.

Appendix 3 provides some examples of criteria used in different priority setting exercises.

**DISCUSSION POINT:**
Should certain types of criteria be required in the Priority Setting Framework? If so, what types should be included?

The alternative option for consideration is to not prescribe any types of criteria and let the criteria development process totally drive the establishment of criteria.

**How many criteria?**
Recent study of priority setting among 11 NHS Authorities found the number of criteria ranged between 3 and 14 (average 7.7 criteria) (Mullen, 2004). It was also noticed that in many cases were there were a relatively small number of criteria (e.g. 3 to 5 criteria), each criterion contained a number of elements (Mullen, 2004, Central West Health Planning Information Network).

**DISCUSSION POINT:**
How many criteria are reasonable to include?
Should the criteria be weighted?

Once the criteria have been defined, they may be weighted to stress the relative importance of each of the criteria to the decision maker(s). Most often the participants identifying the values and criteria further participate in the weighting process. In the UK, of 11 NHS Authorities studied, 6 used weighted criteria (Mullen, 2004).

DISCUSSION POINT:
Should the criteria be weighted?

Procedural Considerations

As illustrated in Figure 1, the priority setting literature stressed the importance of attention to the procedure, especially the ‘politics’ of involvement, as well as the technical discourse. Any priority setting exercise should ensure that due process has been followed in using the technical evidence to make the decisions (Wirtz et al., 2003). Correct priority setting process is characterised by transparency and accountability (Holm, 1998, pg. 1001) and is explicit (Breen, 1991). Experts have advised that it is important to ensure priority setting is not so technical in nature that the relevance is lost, while also ensuring that the methodologies are not too general, thereby preventing real decisions from being made (Ham and Coulter, 2001).

Who should be involved in evaluating the options?

Much of the discussion on participation in defining the criteria from above is equally relevant to this discussion.

DISCUSSION POINT:
Who would you involve in evaluating the options?
What process should be used in evaluating the options?

The literature suggested that relatively little information was available on the methods actually used to score options against the identified criteria. In most cases the implication was that a rating scale was used and participants were simply asked to provide a score, such as 0 to 5 points (Mullen, 2004). In other cases there was guidance with the participants informed to score as follows (Mullen, 2004):

- meets criteria well - allocate 7 to 9 points
- meets criteria average - allocate 4 to 6 points
- meets criteria poorly - allocate 1 to 3 points
- do not wish to score - 0 points

In other cases, the participants were allocated a finite number of points that they allocated to each of the criteria (Mullen, 2004).

DISCUSSION POINT:
What type of scoring process should be used to evaluate the options?

Should the option scores assigned by the participants be aggregated?

The scores of the various options are often aggregated to enable comparison across the alternatives. There are two methods of aggregation:

- Additive: which was most common among NHS Authorities, with some suggesting that this approach enabled greater transparency (Mullen, 2004)
Multiplicative: much more complex, with few examples readily available. It was suggested that health gain should be calculated by a multiplicative model (Mullen, 2004).

There has been substantial debate about the validity of aggregating scores. On one hand, it has been suggested that it is not legitimate to combine one person’s rating of 10, with another’s rating of 0 and conclude that the group rating is 5 (Mullen, 1999). On the other hand, mechanisms such as elections aggregate people’s preferences to enable societal choices to be made and therefore aggregation is legitimate (Mullen, 1999).

The greatest concern is the fact that using different aggregation methods often yields different collective conclusions on the same set of preferences, with the suggestion that it is often better to avoid aggregated scores and present the full distribution of results graphically (Mullen, 1999). In addition, there was little evidence in the literature that appropriate testing had been completed to ensure the validity of the aggregated scores.

Some planners have responded to the issues of aggregation by developing a more informal approach, using only checklists not scored, to inform the discussion (Mullen, 2004).

**DISCUSSION POINT:**
Should the Priority Setting Framework provide for aggregation of the criteria to achieve comparable scores?

**How much information should be given to the participants evaluating the options?**

There was no agreement in the literature about the amount of background information that should be provided. It was suggested that more information about a topic resulted in greater preferences; for example it was suggested that Oregonians gave vasectomies a higher priority because family planning services were frequently discussed at community meetings (Daniels, 1994). On the other hand, too detailed information was
found to distract from generalist discussions to particular issues associated with the information provided (Cookson and Dolan, 1999).

It may be that the prime consideration is whether the priority setting exercise requires involvement of the public at large - ‘uncontaminated’ by information, or a more informed choice (Mullen, 1999).

**DISCUSSION POINT:**
How much and what type of information should be given to the participants?

## Technical Considerations

Figure 1 identified two important technical considerations: equity and efficiency. Equity has been considered in a variety of ways, including maximising health effects, minimising differences in health status and ‘fair innings’ where people are perceived to be entitled to certain quality and quantity of life (Maiwenn et al., 2004). Generally, equity tends to be addressed within the criteria used in the process. Appendix 3 provides examples of priority setting criteria.

Efficiency is usually defined in relation to health economic analysis, such as cost-effectiveness and cost-utility analysis (which tends to be used most in the health sector (Paalman et al., 1998). Economic analysis is defined as the comparative analysis of alternative courses of action in terms of costs (measured in dollars) and consequences (often measured as DALYs or QALYs in health care) (Drummond et al., 1987). A variety of authors have suggested that this type of analysis should not be used as the sole basis for priority setting as:

- cost-utility analysis cannot establish whether an intervention is worth undertaking absolutely – it only provides relative comparisons (Drummond et al., 1987)
• the implicit values, objectives or constraints underpinning the analyses may not reflect the actual situation for which the policy advice is made (Maiwenn et al., 2004)
• there is often inconsistent use of cost-effectiveness criteria (Hoedemaekers and Oortwijn, 2003)
• the possibility of unacceptable discrimination against elderly, the infirm and other vulnerable groups when quality adjusted life years (QALYs) are used as the benefit measure (Dolan and Shaw, 2003).

The technical considerations relate to the tools that will be used for analysis to provide the background or supporting information for the priority setting process. The literature identified clinical research, health economics analysis and medical technology assessment as providing information for analysis (Danish Council of Ethics, 2003). In all cases, it is important to consider the level of evidence, quality of the evidence, relevance of the evidence and the strength of the evidence (Lin and Gibson, 2003). Many of the priority setting processes were hampered by the lack of comparable data on cost-effectiveness. There is no consistent approach to the research, with completion of studies at different times, in different contexts, for different purposes, providing different perspectives, such that it is difficult to use the results in comparative methodologies (Paalman et al., 1998). To overcome this issue and ensure the cost-effectiveness analysis is not influenced by political, social and legal aspects, it was suggested that a public agency be given responsibility for cost-effectiveness advice (Terry, 2004). Above all, it was recommended that those involved in priority setting recognise that ‘results must be … open to revision on the basis of further evidence of public preference as well as medical technology and experience’ (Dworkin, 2000).

**DISCUSSION POINT:**
Is there sufficient data (e.g. health economic analysis, evidence of effectiveness, etc) available to the priority setting process?

How will data gaps be addressed?
Evaluation

The ‘Accountability for Reasonableness’ framework (A4R) was developed in the US to evaluate priority setting processes at the institutional level – an institution’s priority setting process is fair to the degree it meets four conditions (Daniels and Sabin, 1997):

- Relevance: based on reasons that ‘fair-minded’ people can agree are relevant in the context
- Publicity: decisions and their rationales are publicly accessible
- Appeals: there is mechanism for challenge, including the opportunity for revising decisions
- Enforcement: Voluntary or public regulation of the process to ensure the first three conditions are met.

This framework has been used in a variety of settings to evaluate existing and new priority setting processes (REF) and will be useful to evaluate the Priority Setting Framework.

DISCUSSION POINT:
What is important to include in the evaluation of the Priority setting Framework?
References


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Central West Health Planning Information Network (b) A Population Health Framework for Monitoring Health System Performance. CWHPIN


Danish Council of Ethics (2003) *Priority-setting in the Health Service*


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Heale, J. D., Abernathy, T. J. and Kittle, D. C. (1999) *Using Healthy Life years (HeaLYs) to Assess Programming Needs in a Public Health Unit*. CWHPIN


Metropolitan Toronto District Health Council (1994) *Needs/Impact-Based Planning Model*


Appendices

1. Methods of priority setting

The literature focused on normative approaches used to inform decision makers regarding how to achieve specific objectives and empirical approaches that focus on how priority setting decisions are actually made, with a recommendation to ensure both approaches were included in any priority setting methodology (Martin and Singer, 2003).

Methods to Gather Stakeholder Views/Ratings

Individual-based approaches:
- Preference surveys
- Preference Interviews

Group-based approaches:
- Priority-setting forums
- Citizens’ jury and panels: A citizens’ jury is a ‘representative’ group of citizens has several meetings, where ‘evidence’ is presented on a particular issue and then the group is asked to provide views or the ‘verdict’. Standing panels Range from ongoing focus groups with continuing membership to very large groups of identified participants who complete regular questionnaires (Mullen, 1999).
- Focus groups:
  - with clinical cases
  - without clinical cases
- Delphi method: group consensus method where pooled consensus is reached by participants establishing priorities anonymously, without any direct contact with each other (Dalkey, 1969). Used to gain consensus by clinical managers in Hong Kong on fee categories for procedures in public hospitals (Yuen et al., 2002)
- Simplex method: structured questions are used to assist groups in decision making. This method requires the group members to have a good understanding of the quantitative/economic analysis to be able to respond to the questions.
- Nominal Group Planning Model: This method requires a diverse decision-making body and compared to the other approaches has less emphasis on
quantitative/economic analysis, with greater emphasis on group discussion and information exchange.

Methods to Provide Comparative Data for Analysis

- Resource allocation formulae: determine ex-ante allocations from a global budget based on defined criteria (e.g. socio-economic status). Suggested that these are not economically sound as they are not consistent with the economic principle of decision making on the margin (Jan et al., 2003).
- Multi-stage models, including Analytical hierarchy process (AHP), Multi-attribute utility theory and Measure of value-plan evaluation matrix
- Economic evaluation including cost-benefit, cost-effectiveness and cost-utility analysis: these analyses tend to use QALYs as the comparable measure of benefit. Quality adjusted life year (QALY) league tables which rank different procedures in terms of their marginal costs per QALY gained, but these have had little demonstrated success in practice (Mitton et al., 2003).
- Needs assessment and size of need gap analysis: difficult to define needs and determine whether interventions assist in reducing need (Mooney, 1998).
- Health Life Years (HeaLYs): incorporates duration and severity of ill-health along with incidence and mortality to compare the impact of various conditions (Heale et al., 1999).
- Definition of core services: lack of demonstrated success in practice (Mitton et al., 2003)

Framework models

Diamond model: an empirical model comprising institutions, factors, reasons, appeals, processes, and people at each point of a diamond shape (Gibson et al., 2002).

Needs/Impact-Based Planning Model: Developed by a working group of the Metropolitan Toronto District Health Council this model became the recommended framework for priority setting in the province of Ontario (Metropolitan Toronto District Health Council, 1994). The recent experience is that the framework is comprehensive and it still represents best practice, but requires time and resources that are not always sufficiently available to ensure effective implementation. In particular, the lack of comparable health economic data made use of the model difficult.
Population Health Framework: developed by the Central West Health Planning Information Network in Canada, this framework includes a comprehensive set of indicators supported by the literature in the categories of: determinants of health, health care needs, access to health services, health services utilisation and cost, health outcomes and health of the population (Central West Health Planning Information Network, b).

While this framework was initially established to address health system evaluation, it is being used as a planning and priority setting tool and a table outlining how this is being used in planning for the cancer is presented below. This framework assumes (Abernathy, 2004):

- The health care needs and ultimately the health of the population are determined by a complex relationship among factors that include social/environmental factors and the health care system

- To be effective, the health care system must respond to the health care needs of the population served.

- To be effective, the people who need the system must access the appropriate health care services

- In order to address these appropriate services, these services must be available to those who need them (capacity) and the people need to utilise them.

- The effectiveness of the overall health care system should consider the effect not only on the health of the individuals who received the service but also on the overall health of the population.
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<th>Determinants of Health (excluding healthcare system)</th>
<th>Continuum of Care</th>
<th>Health Care Needs/Targets/Benchmarks (Evidence-based; comparative; expressed)</th>
<th>Cancer Care System</th>
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<tr>
<td>% of schools in compliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HEALTH UNITS</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>HEALTH UNITS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Heart Health Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCS / OTHER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- # of (and characteristics of) teens attending smoking avoidance programs (MPIQ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- # of (and characteristics of) teens using various “quit smoking” programs (MPIQ-4b)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>- % of teen smokers who successfully quit smoking with “quit smoking” programs (CCHS; DM)</td>
<td></td>
<td></td>
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<tr>
<td>- lung, bladder, kidney, larynx, esophagus cancer incidence (OCR) (changes in incidence resulting from changes in risk behaviour takes at least 5 years)</td>
<td></td>
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<td></td>
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<tr>
<td>- standardized mortality rate from all causes of death</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>- self-reported health</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- disability free days</td>
<td></td>
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</tbody>
</table>
Prioritisation Scoring Index (PSI): developed in a Scottish Health Authority, with nine utility criteria (potential health gain, prevention of ill health, quality of life, equity of access, addressing health status inequalities, expressed demand and appropriateness and two additional indicators scored by experts – strength of evidence and known priorities) that were applied by different groups of stakeholders to assist the Health Authority in making different resource allocation decisions. The cost of an additional person receiving the intervention and the PSI scores were used to achieve a ranked position for all competing priorities (Scott and Lees, 2001). The PSI scores provided the first rank position and the cost per person provided the second rank position, with the average of the two positions giving the overall rank (Mullen, 2004).

Program budgeting and marginal analysis (PBMA): extends the analyses to include consideration of whether reallocating program costs would result in increased benefits overall. In terms of its practical application, PBMA has been used over 80 times in approximately 60 health regions internationally, and continues to be used in about half of the regions where the approach was initiated (Mitton and Donaldson, 2003). Consists of 5 questions pertaining to the use of resources:

1. What resources are available in total?
2. In what ways are these resources currently spent?
3. What are the main candidates for more resources and what would be their level of effectiveness?
4. Are there any areas of care which could be provided to the same level of effectiveness but with fewer resources, so releasing those resources to fund candidates from (3) (i.e. addressing technical efficiency)?
5. Are there areas of care which, despite being effective, should receive fewer resources because a proposal from (3) is more effective (per dollar spent) (i.e. addressing allocative efficiency)?

It is suggested that this approach suffers from the difficulties associated with defining and measuring utility (Eagar et al., 2001) and is perhaps more suited to prioritising with programs, rather than among programs that require transferring resources (Scott and Lees, 2001).
Macro-marginal analysis (MMA): based on PBMA, this approach was developed for use at the regional level. This approach requires senior managers to complete lists of disinvestments (efficiencies to be gained and service reductions) and necessary investments which are ranked according to 5 criteria developed through community consultation. It has only been assessed after use by one regional authority in Canada. Potential problems related to the notion of ‘winners and losers’, with losers not wanting to participate in future. Also identified the need to involve doctors and include the processes in routine planning (Mitton et al., 2003).

Transdisciplinary model: combining the Diamond Model and the Accountability for Reasonableness this model focuses on 4 operational goals for priority setting – reasonableness, transparency, responsiveness and accountability. This requires a committee of fair-minded people focusing on the reasonableness of each decision made, processes that ensure the transparency of the decision making process, methods to hear appeals and respond to further evidence or arguments, and mechanisms of accountability to ensure that the first 3 steps are followed (Gibson et al., 2002).

2. Methods for agreeing on values/criteria (Mullen and Spurgeon, 2000):

- Single vote
- Multiple vote
- Ranking
- Budget pie
- Scoring/rating
- Scaling: Likert-type, visual analogue
- Delphi-related methods
- Paired comparison: simple, weighted, constant sum, scaled
- Analytical hierarchy process
- Conjoint analysis
- Measure of value
- Time trade-off
- Standard gamble
- Willing ness to pay
3. **Examples of priority setting criteria**

There is little agreement on the best suite of criteria for priority setting. The wide variety of designs has made it difficult to draw valid comparisons. For example, 23 members of the general public and 29 undergraduate students rated expected benefits from treatment (health gain) and the consequences for health without treatment (the no-treatment profile) as the two most important factors for setting health priorities. The participants were provided with the 7 factors found to be important in the literature (health gain, the no-treatment profile, previous health choice, lifestyle choices, the impact on others, claims based on compensation or reward and time spent waiting for treatment) and asked to rate their importance (Dolan and Shaw, 2003). A much larger study (n=3,801) found the participants rated being a child and being poor as the most important of a list of potential criteria for defining publicly funded services (age, cost of treatment, severe disease, financial status of patient, prognosis, demented patient, negligent behaviour, self-inflicted) (Myllykangas et al., 2003). Focus group participants setting priorities for allocation of donor kidneys identified capacity to benefit from treatment, age, family responsibilities, waiting time, the cause of ill health and re-transplantation (Dolan and Shaw, 2004).
A number of examples of criteria used in priority setting exercises are outlined below.

**CLEAR (Central West Health Planning Information Network)**

<table>
<thead>
<tr>
<th><strong>C = Community Capacity:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there presence/absence of public intention to address the issue?</td>
<td></td>
</tr>
<tr>
<td>Is there community capacity to identify issues, to have access to the system, and to mount/respond to potential interventions?</td>
<td></td>
</tr>
<tr>
<td>Is there community resilience or ability to accommodate and respond to changes in the environment?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>L = Legality:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Whose mandate is it to deal with the issue?</td>
<td></td>
</tr>
<tr>
<td>Is there legal liability associated with not addressing the issue?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>E = Efficiency:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Can the strategy be implemented in a cost-effective manner?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>A = Acceptability:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the strategy be accepted by the target population?</td>
<td></td>
</tr>
<tr>
<td>Will other health care services be dropped or restricted on the basis of reallocation of funding?</td>
<td></td>
</tr>
<tr>
<td>Will the withdrawal of service(s) be accepted by providers and the target population?</td>
<td></td>
</tr>
<tr>
<td>Will the public, providers and/or government, support discontinuing or not starting a strategy or group of strategies if research evidence shows they do not work?</td>
<td></td>
</tr>
<tr>
<td>Is there presence or absence of government intention to address the issue?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>R = Resource Availability:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it practical to provide the strategy in the catchment area?</td>
<td></td>
</tr>
<tr>
<td>Are appropriate human and fiscal resources and facilities available?</td>
<td></td>
</tr>
<tr>
<td>Are costs associated with the discontinuation of a strategy accounted for?</td>
<td></td>
</tr>
</tbody>
</table>

Council on Ethical and Judicial Affairs of the American Medical Association (Council on Ethical and Judicial Affairs American Medical Association, 1995):

| **Likelihood of benefit to the patient** |  |
| **Impact of treatment on the patient’s quality of life** |  |
| **Duration of the benefit** |  |
| **Urgency of the patient’s need** |  |
| All else being equal: the amount of resources required for successful treatment |  |
Prioritising use of additional resources (Mullen, 2004):

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of effectiveness</td>
<td>6</td>
</tr>
<tr>
<td>Value for money</td>
<td>4</td>
</tr>
<tr>
<td>Health gain or maintenance</td>
<td>4</td>
</tr>
<tr>
<td>Equity</td>
<td>2</td>
</tr>
<tr>
<td>Risk management</td>
<td>1</td>
</tr>
<tr>
<td>National or Board priority</td>
<td>1</td>
</tr>
<tr>
<td>Public preference</td>
<td>1</td>
</tr>
</tbody>
</table>

Macro-marginal analysis in one regional health authority for resource allocation (Mitton et al., 2003):

<table>
<thead>
<tr>
<th>Access/capacity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Improve access for pressure areas</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appropriateness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Enables shift of services to more appropriate, lower cost settings</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustainability/cost effectiveness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Supports short and long term sustainability</td>
<td></td>
</tr>
<tr>
<td>• Assist in avoiding tangible costs</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>System integration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reduces service fragmentation</td>
<td></td>
</tr>
<tr>
<td>• Supports best use of elements of the health system</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical/population health effectiveness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Supports focused care for service population</td>
<td></td>
</tr>
<tr>
<td>• Improves clinical effectiveness</td>
<td></td>
</tr>
</tbody>
</table>

Resource allocation in a hospital division (Astley and Wake-Dyster, 2001):

<table>
<thead>
<tr>
<th>Improve equity in relation to health outcomes in South Australia</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• The service is designed to treat or prevent the major health problems for groups most disadvantaged according to health outcomes statistics available.</td>
<td></td>
</tr>
<tr>
<td>• The service is designed to improve access to those groups who experience barriers to health care</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Prevent future health problems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• There is sufficient evidence that the service will prevent long term health problems.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ensure the hospital’s efficiency</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• There is no unnecessary duplication of services.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>There is evidence that the service is effective in improving health outcomes and/or quality of life.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• There is evidence that the hospital can provide a high quality service.</td>
<td></td>
</tr>
</tbody>
</table>
Site selection (Mullen, 2004):

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>100</td>
</tr>
<tr>
<td>Integration into local community</td>
<td>85</td>
</tr>
<tr>
<td>Physical environment</td>
<td>100</td>
</tr>
<tr>
<td>Links to other services</td>
<td>60</td>
</tr>
<tr>
<td>Cost</td>
<td>40</td>
</tr>
<tr>
<td>Recruitment and retention of staff</td>
<td>50</td>
</tr>
</tbody>
</table>

PEARL (Spiegel and Hyman, 1978)

<table>
<thead>
<tr>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propriety</td>
</tr>
<tr>
<td>Economic feasibility</td>
</tr>
<tr>
<td>Acceptability</td>
</tr>
<tr>
<td>Resource availability</td>
</tr>
<tr>
<td>Legality</td>
</tr>
</tbody>
</table>

Prioritisation Scoring Index (PSI) (Scott and Lees, 2001)

<table>
<thead>
<tr>
<th>Scored by individual panel members:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential health gain (to an individual)</td>
</tr>
<tr>
<td>Prevention of ill health</td>
</tr>
<tr>
<td>Quality of Life</td>
</tr>
<tr>
<td>Equity of access</td>
</tr>
<tr>
<td>Addressing health status inequalities (at population level)</td>
</tr>
<tr>
<td>Expressed demand</td>
</tr>
<tr>
<td>Appropriateness:</td>
</tr>
<tr>
<td>Consideration of public preference</td>
</tr>
<tr>
<td>Core function or innovative development</td>
</tr>
<tr>
<td>Implementation/continuation plan evaluation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scored by central panel:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength of evidence</td>
</tr>
<tr>
<td>Known priorities</td>
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</tbody>
</table>
4. Jurisdictions with Experience in Priority Setting

Danish County of Funen – has established a priority list for medical treatment:

- Treatment of possibly fatal illnesses and illnesses in need of acute treatment
- Treatment of illnesses that may have serious consequences later on if not treated
- Treatment of diseases for which the applicability of the treatment is documented, and which may have serious consequences later on if not treated
- Treatment for diseases whenever this implies an improvement of the quality of life and health, but where the consequences of not treating them are less grave for treatments that are given higher priority

National Health Service (NHS), UK – substantial experience in priority setting at the health authority level. Different approaches have been used by different health authorities. The NHS has been making a strong effort to ensure adequate, reliable information is available to assist with these processes.

Netherlands – the Dunning Commission introduced the concept of ‘necessary care’ as an explicit criterion for priority setting in health care (Government Committee Choices in Health Care, 1992). The framework to guide decision making included:

1st Criterion: Necessary care
2nd Criterion: Effectiveness
3rd Criterion: Efficiency
4th Criterion: Individual responsibility

Filters: Broad solidarity and limits to rights

Decision: Basic benefits package

In 1997 the Scientific Council for Government policy introduced a new classification system distinguishing among prevention, care and cure and applying efficiency thresholds to the previous model (Hoedemaekers and Oortwijn, 2003).

Oregon – the debate has been strong about the activities of the State of Oregon in priority setting. In the 1980s the state aimed to achieve budget control through explicit rationing of services provided to Oregon’s low-income Medicare population. The process
involved cost-benefit analysis, medical outcomes research and public participation in priority setting (Jacobs et al., 1999). The ensuing debate has focused on whether the appropriate ‘publics’ were involved (e.g. there was some concern that the ‘elites’ were prioritising the services for the marginalised population), the lack of cost savings achieved and the political aspects of the process.

**Sweden** – the Swedish Parliamentary Priorities Commission established 3 principles: human dignity, needs and solidarity and cost-efficiency. The National Board of Health and Welfare communicated national disease guidelines. A study on priority setting for coronary artery bypass surgery found that the lack of training and clear support of the underlying ethical principles hampered the country’s attempts at rational priority setting (Ridderstolpe et al., 2003).

**5. Resources**

International Society on Priorities in Health Care
[http://www.healthpriorities.org/isociety/isoc_home.htm](http://www.healthpriorities.org/isociety/isoc_home.htm)

The purpose of the society is to strengthen the theory and practice of priority setting in health care. It provides a forum in which researchers, practitioners and others involved in priority setting can come together to exchange ideas and experience. The society places particular importance on getting the results of research into practice and encouraging practitioners to learn about different approaches to priority setting.

Software for eliciting values:

- Expert Choice
- HIPRE
- HIVIEW