PRIORITIZATION OF INVESTMENTS IN REPRODUCTIVE, WOMEN’S AND CHILDREN’S HEALTH

EVIDENCE-BASED RECOMMENDATIONS FOR LOW AND MIDDLE INCOME COUNTRIES IN ASIA AND THE PACIFIC – A SUBNATIONAL FOCUS

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Abbreviations

A4R- Accountability for Reasonableness
BC- Business Case
CEA-Cost Effectiveness Analysis
DHS- Demographic and Health Survey
HTA- Health Technology Assessment
IC- Investment Case
LiST-Lives Saved Tool
LMIC – Low and Middle Income Countries
MBB- Marginal Budgeting for Bottlenecks
MCDA- Multi Criteria Decision Analysis
MMR- Maternal Mortality Ratio
MNCH- Maternal, Neonatal and Child Health
NMR- Neonatal Mortality Rate
PAR-Participatory Action Research
PBMA- Programme Budgeting and Marginal Analysis
PMNCH- The Partnership for Maternal, Newborn & Child Health
PSP- Priority Setting Process
RMNCH- Reproductive, Maternal, Neonatal and Child Health
U5MR- Under Five Mortality Rate
WASH-Water Sanitation and Hygiene
List of definitions/terms

Criteria: Considerations that will be used to make decisions in priority-setting and that are closely related to objectives. Examples include ‘health outcomes’, ‘cost’ and ‘cultural acceptability’.

Intervention: A practice that is known to reduce deaths due to specific causes. Examples include antenatal care, antibiotics for U5 pneumonia and immunisation

Investment scenario (or, investment option): Costed packages of strategies to scale up interventions to reduce deaths and improve health in mothers and children

Macro-level priority setting: Priority-setting exercises focused on selecting which health interventions are to be financed with public monies and included in the benefits package provided to the population. In decentralised systems, these decisions are usually made by national authorities, so we use the terms macro-level and national priority setting interchangeably in this report.

Meso-level priority setting: Priority setting exercises focused on the delivery of health services, that is on how to deliver the benefits package, which involves making decisions on the actual mix of providers (public and private), resources and delivery strategies. In decentralised systems these decisions are usually devolved to state, provincial or even district (i.e. subnational) authorities. We thus use the terms meso-level and subnational priority setting interchangeably in this report.

Objectives: The purpose of the priority-setting exercise. Examples include ‘To select for scale up women’s and children’s health interventions addressing the largest burden of mortality’ or ‘To develop evidence-based options for investment in women’s and children’s health’

Priority-setting approaches: Approaches outlined in the health literature that can be used for priority-setting for reproductive, maternal, newborn and child health (RMNCH)

Strategy: An activity intended to help scale-up and delivery of RMNCH interventions

Target: The coverage thought to be possible when scaling up RMNCH interventions. For example, target coverage of skilled birth attendance of 80%.
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Executive Summary

In the pursuit to take forward the Global Strategy for Women’s and Children’s Health and accelerate progress toward Millennium Development Goals 4 and 5 in Asia and the Pacific, there is ample evidence on what should be done and why investments in Reproductive, Maternal, Neonatal and Child Health (RMNCH) are, or should be, national priorities. However, there is scant evidence on best practice approaches to prioritizing the investment in RMNCH, and implementation of health system strategies to improve the health of women and children, which remains a challenge for many countries in the region.

In decentralized systems, which make up the vast majority in the region, prioritization usually takes place at different levels. Decision-making on the content of the benefits package, that is, which health interventions may be financed with public monies are usually taken by national authorities (macro-level or national priority setting). The difficult task of deciding how to deliver the benefits package, that is, the actual mix of providers (public and private), programs, resources, and strategies, usually rests on the shoulders of state, provincial and even district authorities (meso-level or subnational priority setting). Evidence-based recommendations were recently made for low and middle income countries (LMICs) to improve the process of prioritizing health interventions at national level (Glassman et al., 2012). However, scarce evidence exists to guide subnational authorities in their prioritization exercises.

The primary aim of this exercise is therefore to provide evidence-based recommendations to inform decisions by subnational authorities on how to prioritize service delivery investments in RMNCH in Asia and the Pacific. For this purpose we undertook a review of the available evidence on priority setting for health in both the published and the grey literature during the last 10 years. Although our primary focus was on priority setting at the subnational level, we also examined the more extensive literature on macro-level priority setting to identify lessons learned.

The literature review revealed the following:

- **Available evidence for how to effectively conduct priority setting for women’s and children’s health and health in general is scarce.** Very few priority setting approaches have been documented and even less formally evaluated in either high- middle-, or low-income countries.

- **Purely technical approaches have limited impact on actual budget allocation or policy implementation.** Priority setting is a political issue and highly context specific and evidence is only one of the factors that policy-makers need to consider in this process.

- **The challenges posed for priority setting at the subnational-level are common to all approaches.** They include systemic issues such as funding constraints, low capacity for planning and budgeting at the subnational level and low quality information systems. Unless these issues are rectified, evidence-based health priorities will fail to get adequately funded and implemented.
From our review we conclude that we cannot recommend any single evidence-based approach to priority setting. However, we should not abandon efforts to bridge the gap between evidence and the process of making decisions for allocation in health. Good priority-setting is even more important now with an increasing focus on achieving value for money, or more health for the money. This is particularly the case for many lower and middle income countries negotiating the epidemiologic transition and the so-called double burden of disease (Abegunde et al., 2007), and for subnational authorities determining whether and how to implement new solutions for a new constellation of issues.

Therefore we propose a roadmap to help governments interested in improving their priority setting process. This roadmap takes into consideration the various issues identified in the literature, acknowledging the importance of political and contextual issues. The roadmap is adapted from Martin and Singer (2003) but has been re-designed into the following categories: A) Assess current health priority setting process (situation analysis); B) Decide whether improvement in the current health priority setting process is needed and/or viable; C) Improve current health priority setting process; D) Evaluate health priority setting process.

The roadmap does not assume that improving priority setting is feasible in every location. It is not possible to implement programs, however strongly prioritised, unless known problems with the health system are rectified. In some instances, the prioritisation exercise itself would be useful in examining those systemic issues (i.e. human resources) and the strategies and associated investments required to effectively address them. However, in other cases, barriers to successful priority setting will be interlinked with barriers to implementing new programs. For example delays in funding flows not only prevent implementation, but also discourage efforts to improve budgets. The decision to improve priority-setting processes linked to planning and budgeting should thus follow a pragmatic consideration about the extent to which such process has the potential to accelerate the scale-up of health services in the given context.

For governments who have made a decision to improve their priority setting processes for RMNCH (C above), in Chapter 3 we also present ten elements to consider in the process. The recommended elements are drawn from the approaches in the reviewed literature. They aim to illustrate the scope of activities involved in adopting a systematic approach to prioritize investments in RMNCH. Although our focus is on the type of decisions usually made by sub-national authorities in decentralised systems, they are also applicable to national level exercises aimed to informing such decisions on how to deliver health services. They are not intended to be prescriptive and should be adapted to the individual country situation and the specific approach adopted.

1. Setting up a multi-stakeholder advisory group
   - to help advise on all aspects of the priority-setting process
2. Choosing a direction - deciding on the objectives
   - to identify the objectives for priority-setting in relation to women’s and children’s health for instance selecting low-cost strategies for scale up or identify under-invested RMNCH programmes
3. Choosing a priority setting approach
Using and adapting an approach from the literature that fits in with the identified objectives for priority-setting

4. Deciding on criteria to inform the selection of priorities
   - Criteria will be closely related to the objectives and approach that is chosen for priority-setting and may include both quantitative (e.g. costs) and qualitative (e.g. cultural acceptability of interventions).

5. Organizing, collecting and validating information
   - A number of frameworks exist to help in organising data. Some approaches to priority-setting use particular frameworks

6. Choosing WHICH health services to scale-up
   - From a list of 56 interventions known to be cost-effective and feasible to implement in low income settings, choose the interventions most likely to reduce deaths in mothers and children in a particular location

7. Choosing HOW to scale-up health services
   - Identifying the problems to health service delivery and developing locally relevant strategies/investment scenarios to address these problems and increase coverage of critical RMNCH interventions

8. Costing the investment scenarios
   - Costing the different strategies that have been identified to increase service delivery

9. Deciding between investment scenarios
   - Which package of strategies/investment scenarios best meets the identified criteria for priority-setting?

10. Evaluating and feeding back into priority-setting
    - Involves continuous improvement for priority-setting and evidence needed on what works and does not work

One of the major constraints to priority-setting in resource-poor settings is the lack of evidence on what has worked and not worked. Once a process for priority-setting has been implemented in a particular setting, financial and human resources should be allocated to monitoring of both the process (to see whether it is actually being implemented in the way envisaged) and outcomes (whether it is shifting allocation of resources towards identified priorities and in the longer term whether these changes are translating into better health outcomes for women and children). It is important that the results of the monitoring and evaluation process are documented. Such information can be used in the location where the priority-setting is being implemented, to continually hone and improve the methods. It should also be widely disseminated in the Asia-Pacific region so it can contribute to the scarce literature on the use of different priority-setting approaches in Low and Middle Income Country settings.
Introduction

Investing available resources into the most cost-effective and equitable Reproductive, Maternal, Neonatal and Child Health (RMNCH) programmes is a necessity to take forward the Global Strategy for Women’s and Children’s Health and accelerate progress toward Millennium Development Goals 4 and 5 in Asia and the Pacific region. Despite persistently high levels of mortality, particularly maternal mortality, in the Asia-Pacific, expenditure on RMNCH has not been prioritised and remains at very low levels (UNICEF, 2008). There is ample evidence on what should be done and why investments in RMNCH should be public priorities. However, prioritizing such investments remains a challenge for many countries in the region.

The primary aim of this exercise was therefore to provide evidence-based recommendations on how to prioritize investments in women’s and children’s health in the Asia-Pacific region. In decentralized systems, which are the vast majority in the region, prioritization usually takes place at different levels. Decision-making on the content of the benefits package, that is, which health interventions may be financed with public monies are usually taken by national authorities (macro-level or national priority setting). The difficult task of deciding ‘how’ to deliver the benefits package, that is, the actual mix of providers (public and private), programs, resources, and strategies, usually rests on the shoulders of state, provincial and even district authorities (meso-level or subnational priority setting).

International consensus on an evidence-based list of the most cost-effective and feasible RMNCH interventions, which should be included in the benefits package provided to the population has recently been reached and documented (PMNCH, 2011a). Other recent global efforts have also reviewed and made recommendations to improve macro-level priority setting for health in low and middle income countries (LMICs) (Glassman et al., 2012). However, to the best of our knowledge, this study is the first comprehensive review of the evidence available on subnational priority setting processes.

We undertook a review of the available evidence in both the published and the grey literature during the last 10 years. This was an iterative process that revealed the scarcity of information available on “best practice” for how to effectively prioritize health investments in order to deliver the best package of interventions for the population.

It is important also to note the assumptions and limitations of this exercise. Firstly, our focus is on informing decisions about priorities and resource allocation made by governments during their planning and budgeting processes. Secondly, our focus is on priority setting for plans and budgets, which by necessity involves resource allocation. We have thus not attempted to review the vast literature on decision-making or health planning in general.

Chapter 1 summarizes the main findings of our review. Systematic approaches to meso-level priority setting in health are examined with a view to identifying common elements of the process and their success in informing actual decision-making. We also discuss the main lessons learned from the more extensive literature on macro-level priority setting that are applicable. Details of the methodology used
in the literature review and the different priority-setting approaches reviewed can be found in Annex A and B respectively.

Chapter 2 draws on the findings from Chapter 1. Using a roadmap, we aim to provide realistic recommendations on how to improve the process of prioritizing investments in women’s and children’s health. It would be naïve to assume that decisions on how to invest financial and other resources can be made in isolation of the political and the health system context in which health authorities operate. Here, we thus emphasize the systemic and contextual issues that need to be considered before embarking upon the task of adopting a more systematic and evidence-based approach to resource allocation.

For those countries that have made a decision on improving their resource allocation to RMNCH, Chapter 3 draws from the reviewed approaches to priority setting and illustrates the scope of activities involved in such undertaking. They focus on the ‘tangible’ elements of the priority setting process and must be accompanied by a strong policy dialogue. This is required to leverage political factors and address systemic issues affecting the funding and implementation of prioritized programmes. Annex C provides some broad questions to ask when looking at the data quality for such an exercise.

References reviewed for this work are listed in Annex D.
Chapter 1. Literature review– Health Priority Setting

In decentralized systems the focus of national or macro-level priority-setting in health is usually on which interventions may be financed with public money, while the difficult task of deciding the mix of programs, resources and strategies for delivering those interventions is usually undertaken by subnational level authorities (e.g. provinces, states or districts). Ideally, the priority setting processes at each level are linked, and allocations reflect the needs and preferences of all stakeholders in a well-described, cascading and participatory process. However, in both high as well as low- and middle-income countries (LMICs) the process of setting priority for public spending in health has been perennially difficult, and the subject of considerable debate.

For this study, we undertook a comprehensive literature review, including published and grey literature mostly from the last 10 years. Since our aim is to provide guidance on how to prioritize investments in service delivery for women’s and children’s health. This review was restricted to evidence for resource allocation and priority setting. We thus excluded studies related to broader areas such as evidence-based planning or policy-setting not specifically related to resource allocation. Additionally, our focus is on the type of decisions usually made by subnational authorities in decentralised systems (i.e. how to deliver services). We thus excluded individual studies of macro-level priority setting, such as those examining the use of health technology assessments to identify which interventions to include in a health benefits package. However, reviews of macro-level priority setting were identified and examined with a view to examine lessons learned that might be applicable. For more details of the methodology for this review, see Annex A.

As illustrated by the various reviews identified, an extensive literature examines the methods and policy implications of macro-level priority setting. However, far less has been written on priority setting at the meso-level, particularly in LMICs. The setting of the majority of reports that have appraised health sector priority-setting at meso-level were high income countries with advanced health systems, reliable (albeit constrained) financing and established communication among stakeholders (whether adequate and appropriate, or not). A smaller number assessed meso-level priority-setting in LMICs, usually in the context of one of several defined approaches.

i. Priority setting at macro-level - Lessons learned

The literature on macro-level priority-setting for health mostly focuses on processes undertaken in high-income countries, and several reviews of such activities have been published (Kenny and Joffres, 2008, Sabik and Lie, 2008, Stafinski et al., 2011, Vuorenkoski et al., 2008). The overarching conclusion was that even in high-income settings where participatory, accountable and rational approaches to priority-setting in healthcare are achievable, the process and outcomes of such exercises have been unsatisfactory. For example, reviews of priority-setting for the introduction of health technology in 20 high-income countries (Stafinski et al., 2011) and of drugs in four high-income countries (Vuorenkoski et al., 2008) revealed many problems with the processes used. This was echoed by other reviews that called for three sets of values to govern health-sector priority-setting: procedural values (clarity of process to limit the influence of contextual issues like public perception and political influence),
substantive values (the priority-setting criteria and principles to be followed), and terminal values (the goals of the process)(Kenny and Joffres, 2008, Sabik and Lie, 2008).

Priority-setting in resource-poor settings is arguably even more difficult, and the subject of much less reporting. One review assessed priority-setting in 12 LMICs, again mostly at national level, over 1999-2008 (Youngkong et al., 2009). The review concluded that fair and legitimate priority-setting in LMICs should use a range of criteria (health and non-health) to account for context, involve multiple stakeholders and use quantitative and qualitative techniques to account for contextual variables (ethical and cultural considerations, approaches to complex interventions etc.) that cannot easily be measured. Contextualisation, while reducing the generalizability of conclusions, was also acknowledged by experts involved in Mexico’s successful healthcare reform (González-Pier et al., 2006), and has been recommended to augment cost-effectiveness analysis (Smith et al., 2009, Hoedemaekers and Dekkers, 2003), including in a low-resource setting (Yothasamut et al., 2009). To provide clarity, it was also concluded that priority-setting processes should aim to rank or at least rule-in or rule-out interventions (Youngkong et al., 2009).

A recent extensive review of national-level priority-setting for health service packages and health technologies in LMICs (Glassman et al., 2012) noted that designing a framework for priority-setting in such countries is particularly difficult. While suggesting principles and process elements, the authors acknowledged that most LMICs lack institutional mechanisms, valid health statistics and costings to compare the various “priorities”, evaluate politico-economic constraints and engage a broad range of stakeholders. Many are also heavily influenced by donors on what should be publicly funded and political influences that outweigh the claims of other stakeholders.

From these reviews of macro-level priority-setting in many high-, middle- and low-income countries, one may conclude that context and politics are more important than process, and none of the processes reported could easily be replicated across contexts or for different purposes in the health sector. Indeed, the problems identified in priority-setting at macro-level are most likely accentuated at meso-level, especially in LMICs where the limitations noted earlier (Glassman et al., 2012) are likely to be greater. Priority-setting at meso-level may be especially problematic in decentralised LMICs, as capacity at sub-national level is likely to be weaker.

ii. Priority setting at the meso-level

We have identified two major priority setting processes (Accountability for Reasonableness (A4R) and Program Budgeting and Marginal Analysis (PBMA)), which have been introduced and prospectively assessed in high- as well as low- and middle-income countries. A third major approach, Multi Criteria Decision Analysis (MCDA) has also been extensively used in the priority setting literature, but there is limited documentation of its linkages to policymaking, resource allocation and processes in-country. In addition, we have identified several other approaches which have been proposed in the literature to guide evidence-based priority setting for health, including Business Case (BC), Investment Case (IC), Lives Saved Tool (LiST) and the Child Health Nutritional Research Initiative (CHNRI). These approaches are summarized below. More detailed information on these approaches is provided in Annex B.
Other named and unnamed approaches to priority-setting have been developed and reviewed (Makundi et al., 2007, Smith et al., 2009, Nelson et al., 2005, Lu et al., 2011), but are not currently applied widely or were ad-hoc and have not been replicated, so they are not reviewed here.

To the best of our knowledge this is the first comprehensive review of approaches to health priority setting and their impact on resource allocation at the meso-level. It complements a recent review by (Rudan et al., 2010) which examined the various priority-setting tools available for health care and research in Africa. Their work assesses the available tools at global and national level (some of which are applicable at the meso-level), but does not discuss their actual use by health authorities to inform policy processes.

a. Accountability for Reasonableness (A4R)

A4R emerged in the early 2000s to provide an ethical foundation for priority-setting, making it acceptable to all stakeholders (Peacock et al., 2009). A4R assumes that fairness is a key and agreed goal in priority setting and prescribes a set of conditions for priority setting: 1. Relevance to the local setting according to agreed criteria; 2. The publicizing of decisions and the reasons behind them; 3. An appeals/revision mechanism, and 4. An enforcement process guaranteeing that the first three conditions are met. A fifth condition is occasionally applied, namely public understanding that by definition priority-setting involves limit-setting due to resource constraints.

At meso-level A4R has only been formally introduced and evaluated in one project in three districts in Kenya, Zambia and Tanzania (Byskov, 2009, Mshana et al., 2007). The evaluation suggests that A4R could not be implemented according to its four key conditions. It was also found to be conceptually abstract, difficult to implement and susceptible to contextual limitations (Jansson, 2007, Hasman and Holm, 2005, Maluka et al., 2011b). Other studies emphasise the importance of adapting A4R-driven priority setting processes according to the key actors and their interpersonal relationships; the institutional setting (culture, informal rules, routines) and the wider context (Sinclair et al., 2008, Maluka et al., 2011a). These limitations are highly relevant to priority setting at meso-level in LMICs. In summary, A4R provides a set of standards against which to measure fairness and equity in priority-setting, but does not seem to provide a practical approach for implementing priority-setting in LMICs.

b. Program budgeting and marginal analysis (PBMA)

PBMA is one of the few approaches whose use to influence policymaking has been extensively documented and evaluated (Dionne et al., 2009, Mitton and Donaldson, 2002, Mitton and Donaldson, 2003c, Mitton and Donaldson, 2003a, Mitton and Donaldson, 2003b, Mitton and Donaldson, 2004, Tsourapas and Frew, 2011, Mitton et al., 2011). In high-income countries (such as UK, Canada, Australia and New Zealand) PBMA has been used extensively over the last two decades to guide priority setting at the micro, macro- and meso- level.

PBMA provides a systematic and explicit priority-setting toolkit aimed at helping health care managers to identify options for increased resource allocation and options for disinvestment (i.e decreased
resource allocation). It assesses the cost and benefits of proposed budget changes, using a clear and replicable method and structured involvement of stakeholders.

Evaluation studies showed that using PBMA in priority setting has the potential to impact both the process and outcomes of the priority setting in terms of influencing plans, budgets and resource allocation. For instance Tsourapas and Frew (2011) showed that using PBMA in priority setting resulted in better understanding of the priority setting process among stakeholders (52% cases) and implementation of the recommendations made by the advisory panel (65% cases), actual disinvestment, or resource allocation (48% cases) and authorities adopting the PBMA approach for further use (22% cases). Lessons learned from using PBMA and PBMA extensions to guide resource allocation are summarized in the abstraction sheets included in Annex A. They stress the importance of assessing how priority setting usually takes place, organizing data collection, providing incentives for decision-makers to reallocate resources and a decision-making culture that places importance on evidence.

It is however important to note that PBMA and extensions of the approach have been applied and evaluated primarily in high-income countries. Their application to a low-resource setting has yet to be documented. In these settings an additional number of systemic, political and otherwise context-specific issues exist. These issues will impact on the extent to which an evidence-based process as proposed by PBMA is needed, feasible and likely to achieve actual improvements to resource allocation.

c. Multi-criteria decision analysis (MCDA)

The objective of MCDA is to develop a rational, transparent and systematic approach to priority setting that uses multiple criteria to rank options for investment. With a long history of usage in other disciplines, its application in health was a response to traditional economic approaches focused on one single criterion, such as cost effectiveness analysis (Baltussen and Niessen, 2006). MCDA can only rank interventions according to quantifiable criteria and therefore a secondary, more discursive process may be required to address the non-quantifiable issues in priority setting, such as special interests and local context. The outputs produced using MCDA include the explicit criteria against which to rate options, the levels or quantitative scores that can be given to the options, and ranking of options according to these scores.

MCDA has been applied, primarily at macro-level to rate and rank health interventions, in countries like the UK, Ghana, Brazil, India, Cuba, Nepal and China (Airoldi and Morton, 2011, Baltussen et al., 2006, Baltussen et al., 2007, Baltussen et al., 2010, Jehu-Appiah et al., 2008). It was also used to complement PBMA at meso-level in the UK (Airoldi and Morton, 2011). Although the approach has been reported to be well received by those government authorities involved, there is little documented evidence that MCDA has routinely influenced resource allocation. In theory, MCDA provides a replicable, transparent process that could aid decision-making in LMICs. However, it is important to assess the level of complexity that is feasible given local capacity. More experience is needed on whether MCDA can adequately account for context, and how easily it can be applied, especially at sub-national level.
d. Business Cases (BC)

The well-established private sector practice of developing a Business Case (BC) has been used by governments in high-income countries like the UK and Australia (Western Australian Department Of Health). It has also been recently suggested by the UK Department for International Development (Department for Foreign International Development, 2010, Department for Foreign International Development, 2011) to assist decisions on intervention funding in the context of LMICs. The BC approach requires a consistent and transparent appraisal of the costs and benefits of alternative options for investment. Like A4R, the BC approach assumes that fairness and transparency are agreed goals in priority setting, but unlike A4R, it implies a clear process and standards through the development of five “cases” that verify the existence of a problem, examine alternative solutions and support the proposed intervention. The BC approach seems to provide a gold standard for documentation and appraisal, and is extensively used to inform resource allocation decisions in countries like the UK. It has also been incorporated for example as one important element of PBMA to identify and evaluate alternative options for increased and decreased funding. There are as yet no documented examples or evaluations of the BC approach in priority setting for health in LMICs. Taking into consideration the requirements of a sound BC, its use in LMICs, particularly at sub-national level might require initial high levels of technical support and collaborations between academics and policymakers. This is indeed reflected by the experience of another approach described below, the Investment Case.

e. Investment Case for Scaling up Equitable Progress towards MDGs 4 & 5 (IC)

The IC has been used to aid evidence-based priority setting specific to RMNCH in several countries in Asia and the Pacific. The approach combines engagement of local policymakers with problem-solving and quantitative techniques to identify the best available evidence to scale-up priority interventions to reduce maternal, newborn and child mortality in an equitable way. The approach helps to identify locally specific needs and constraints relevant to RMNCH service delivery (‘bottlenecks’), feasible and cost-effective strategies to address them, and ranks investment scenarios based on their estimated costs and impacts on RMNCH. A regional IC to focus attention on RMNCH issues in Asia and the Pacific, stimulate dialogue and advocate for country-specific ICs was developed by development partners in the region (PMNCH, 2009). Several applications of the IC in the region (i.e. Bangladesh and Sri Lanka) have used the Marginal Budgeting for Bottlenecks (MBB) tool developed by UNICEF and the World Bank. The tool has also been recently used to examine the cost-effectiveness of an equity-focused approach to child survival, health and nutrition (Carrera et al., 2012). The use of the IC in the Asia-Pacific region has been documented for select districts of India (State of Orissa), Indonesia, Nepal and the Philippines (Jimenez Soto et al., 2012).

In all settings where the use of the IC has been documented, a high level of technical and policy support to sub-national authorities has been required with varied impact on plans and budgets in each country in the short to medium-term. In Orissa, specific implementation constraints and basic strategies at district level were identified which related to policies already prioritized by the State government. The IC in Indonesia provides evidence of the systemic issues constraining the use of evidence for priority setting. A large number of the IC recommendations that fall under the responsibility of District Health
Offices were included in plans and budgets but transaction costs involved in coordination of relevant agencies and problems with funding flows from the national level prevented the inclusion of the most critical strategies for scale up. In the Philippines out of the recommendations arising from the IC included in the 2011 plans and budgets some were explicitly reversed in the following budget year. A proposed evaluation of the IC processes and outcomes would allow the capture of the range of factors, including those internal (related to the IC framework) and external (for example political issues), which may have influenced the extent of its impact on sub-national plans and budgets.

f. **Lives Saved Tool (LiST)**

LiST is a decision-making software program designed to produce model derived estimates of the impact of increased coverage of effective health interventions on infant and child mortality (Winfrey et al., 2011, Fox et al., 2011, USAID). Different scenarios are generated in which final coverage of given interventions vary. Estimates of mortality are then used to determine the most effective investment scenario. Results are presented to government stakeholders to stimulate discussion. LiST has been used to inform priority-setting at national level in Africa (Bryce et al., 2010). Although it stimulated discussion between parties, none of the three countries changed formal targets or plans based on its application.

g. **The Child Health and Nutrition Research Initiative (CHNRI) methodology**

CHNRI approach discussed by Rudan and colleagues (2010) provides policy makers with an overview of the strengths and weaknesses of competing investment options against many criteria, based on expert technical input and adjustable according to stakeholder perspectives. The output produced is a comprehensive list with competing priorities ranked according to the combined score they receive in the process. The principles established could be applied at macro- and meso-level. However, there are no reports of its use to inform resource allocation decisions by health authorities.

iii. **Challenges in priority-setting**

Several reports in decentralised contexts stress the challenges and frustrations involved in setting priorities at the meso-level (Maluka et al., 2011a, O'Meara et al., 2011). A good example of these challenges is presented by a case study in Pakistan, which describes an attempt to establish a system of needs-based resource allocation and budgeting in one province (Green et al., 2000). After listing the perceived health needs and practical issues involved in the priority setting process and implementing resource allocation accordingly, problems typical to such settings appeared. These included central government refusal to acknowledge districts’ priorities; inconsistent and unpredictable financial flows; a rigid and complex budget process with multiple and restricted funding sources; absence of budgeting experience among staff; weak supply and logistic systems; unreliable information systems; political and medical profession/special-interest groups demonstrating vested interest in the status quo or particular priorities; low salaries leading to low commitment to the public sector etc. The Pakistan process yielded deeply inequitable allocations and an inefficient priority setting process, and eventually an alternative to needs-based priority-setting was required. The authors noted that unanticipated resistance to change at central and local levels along with other contextual influences far outweighed concerns about local health needs.
Public Participation

Another issue also commonly noted in the literature of high-, middle and low-income countries alike, is that of effective public participation. Public participation is almost universally acknowledged as a key element of all the priority-setting processes described (Kenny and Joffres, 2008, Werntoft and Edberg, 2009, Vuorenkoski et al., 2008, Roth et al., 2003, Abelson et al., 2003, Youngkong et al., 2010, Mitton et al., 2009a, McKie et al., 2008, Madi et al., 2007, Sibbald et al., 2009, Stafinski et al., 2011, Mitton and Donaldson, 2004, Mitton and Donaldson, 2002, Peacock et al., 2009, Gibson et al., 2006, Urquhart et al., 2008, Martin et al., 2002, Maluka et al., 2010, Kapiriri and Martin, 2010, Abelson et al., 2007, Hoedemaekers and Dekkers, 2003). This is also reflected by central government mandating to involve local communities in priority setting at the meso-level. For example, the 2012-13 Program Implementation Plans issued by the National Rural Health Mission in India advocate for increased stakeholder and public engagement in priority setting at the village, sub-centre, block, state and district levels. A recent ordinance in the Philippines also requests bottom up planning for poverty alleviation to incorporate the community and grassroots organizations’ perspectives at the local government unit-level (The Department of Budget and Management Philippines, 2012).

In no high income country where priority-setting has been documented (Kenny and Joffres, 2008, Sabik and Lie, 2008) was public participation as effective as intended. While many priority setting processes incorporate public engagement and an appeals process, most rely more on expert opinion. Nor is much attention paid to the costs (in time and money) of such engagement (Madi et al., 2007). Public participation was the subject of a major recent review (Mitton et al., 2009a), but again this focused only on activities in high-income countries. It found that the authors of reviewed articles were fairly positive on the process used to engage the public in priority setting, but circumspect on the outcomes and feasibility of public engagement in priority setting. It is worth noting that only 32% of the 175 articles reviewed reported evaluation of the process of public engagement.

Many more barriers to appropriately elicit and integrate public input in healthcare priority-setting decisions exist in decentralized LMICs as compared to high-income, democratic nations. In resource-poor and less open societies, none of the reviewed attempts at public engagement in priority-setting at meso-level were successful, either practically or from the perspective of public participants (Maluka et al., 2011b, Maluka et al., 2010, O’Meara et al., 2011, Kapiriri et al., 2003a, Kapiriri et al., 2003b, Kapiriri and Martin, 2006). Unsurprisingly, the main issues identified were a mix of economic, practical and cultural obstacles that stymied participation itself, or negated any impact (both more commonly than in high-income countries). It appears that while public participation may enhance the transparency and the legitimacy of government decision making, the process of seeking and incorporating public input is not always objective or appropriate, and can be highly political.
iv. Evaluation of priority setting

The development process abounds with innovative initiatives and even fads that directly affect the lives of the world’s poor, yet suffers from a lack of robust monitoring, evaluation and impact assessment (Victora et al., 2011, The Lancet Editorial, 2010). Priority-setting in health is not an exception. Our review has shown that very few approaches for evidence-based priority setting process have been evaluated in either high or LMICs, and that “there is no clear guidance from the literature on how to evaluate the success of a priority-setting exercise” (Tsourapas and Frew, 2011) p.178. The complex reality within which priority setting decisions for health are made and implemented (where many factors are outside of policymakers’ control) calls for a careful consideration of how to conduct these evaluations.

A review of methodologies which can be used to evaluate priority setting in health is outside the scope of this study. However, we should acknowledge the competing views in this regard. In terms of program evaluation, traditionally versions of intervention-comparison designs, including randomized controlled trials, have been used. For instance Duflo (2004) advocates that many health programs targeted to individuals or local communities as well as local government reforms could be best evaluated using a randomized impact evaluation. She argues that the progressive roll out of programs over many districts provides an opportunity for an ethical randomization of interventions. On the other hand the limitations of these approaches in the context of evaluating large-scale, complex and inherently difficult to control health programs are being recognized. Such limitations include the inability to control for many of the factors (as opposed to the program itself) which may be responsible for observed differences and lack thereof (Victora et al., 2011). Authors advocate using instead an observational approach combining continuous monitoring of different levels of indicators and contextual factors with interim and outcome evaluation (Victora et al., 2011).

In our work we have identified two evaluation frameworks for priority-setting that have been piloted and documented, and which combine the assessment of both processes and outcomes: A4R and the framework developed by Sibbald and colleagues (2009). The former is more established both in practice and in the literature; however, the latter incorporates some of the A4R elements, while also providing a more concrete definition of outcomes that encompasses resource allocation. In addition, we have identified an evaluation framework proposed and used to assess the success of PBMA (Tsourapas and Frew, 2011). Since one of the main drivers behind the growing interest in evidence-based health priority setting at sub-national-level is to improve the allocation of resources in health, Sibbald’s framework seems a useful starting point to evaluate the process and outcomes of such priority setting process (main elements outlined in Table 1.1). Sibbald’s framework also encompasses select categories proposed by others (Tsourapas and Frew, 2011) such as: 1) a greater understanding of the area under interest 2) evidence of either full or part implementation of the recommendations made by the panel 3) reallocation or disinvesting of resources 4) adoption of the framework for future use. It is important to note, however, that all these frameworks (A4R, Sibbald’s, PBMA) have been developed in Western countries and some of their elements may be unfeasible in the LMICs.
Table 1.1. The main elements in the (Sibbald et al., 2009) evaluation conceptual framework

<table>
<thead>
<tr>
<th>Elements of the Process</th>
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<tbody>
<tr>
<td>• Stakeholder engagement: The organization’s efforts to identify and effectively engage internal and external stakeholders</td>
<td>• Explicit process: A transparent process in which it is clear who is making the decisions, how the decisions will be made and why they were made</td>
<td>• Clear and transparent information management: The process by which the information is collected, collated and made available to decision makers</td>
</tr>
<tr>
<td>• Consideration of values and context: The extent to which both the strategic context and the values of the organization, the staff and other stakeholders are being considered</td>
<td>• Revision or appeals mechanism: A formal mechanism for reviewing decisions and addressing disagreements</td>
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<thead>
<tr>
<th>Elements of the Outcomes</th>
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<tbody>
<tr>
<td>• Stakeholder understanding: Includes improved insights into the rationale for making decisions and the organization’s strategy</td>
<td>• Shifted priorities and/or reallocated resources: A successful prioritization setting exercise results in changes in strategic directions, changes in uses of resources (e.g. human resources or facilities) or reallocation of resources</td>
<td>• Decision-making quality: Refers to issues such as appropriate use of evidence and institutionalization of an evidence-based approach for prioritization setting</td>
</tr>
<tr>
<td>• Stakeholder acceptance and satisfaction: Relates to stakeholders’ buy-in of and contentment with the process.</td>
<td>• Positive externalities: Peer emulation, or health sector recognition or changes in policies as a result of the priority-setting process.</td>
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Chapter 2. Proposed roadmap for priority setting at the subnational level in LMICs

Priority setting is a difficult component of the decision-making process, and one which countries have struggled with for decades. The approaches assessed in the previous chapter cannot fully capture context specific factors such as politics and the decision-making culture that might render the priority setting process ineffective. However, health needs always exceed the available resources, making priority-setting—either explicit or implicit—a reality. Good priority-setting is even more important now for many LMICs negotiating the epidemiologic transition and the so-called double burden of disease (Abegunde et al., 2007), and for subnational authorities determining whether and how to implement new solutions for a new constellation of issues.

With this perspective in mind we suggest a roadmap for guiding the process of setting priorities for health spending in LMICs (Figure 2.1) that acknowledges the importance of political and contextual issues stressed in the review. The proposed roadmap is drawn from the literature (Martin and Singer, 2003). In our proposed roadmap, the original “describe, evaluate and improve” has been re-ordered into: assessing the context, deciding on whether it is feasible to proceed with a priority-setting process or instead focus on improving the systems elements (if improvement is possible), improving health priority setting, and finally piloting, monitoring and evaluating the process and outcome, if indeed a systematic approach to priority-setting is undertaken.

Since decisions on how to prioritize investments in RMNCH do not happen in isolation, our roadmap focuses on health and not only RMNCH. On the other hand, notwithstanding our focus on sub-national processes for priority setting, the roadmap explicitly acknowledges the complex linkages between various levels of government. As it can be seen below, we have stressed those contextual issues relating to decentralisation and the sometimes blurry boundaries between the decision space of national and subnational authorities.
Figure 2.1 A roadmap for addressing health priority setting at meso-level

A. **Assess** current health priority setting process

   **Situation Analysis** - How health priority setting is done in practice? Include:
   - Roles of various stakeholders and overview of their own perceptions
   - The actual practice and the details of the process
   - Contextual issues that prevent health authorities—usually at sub-national level—from making informed decisions about how to prioritize or facilitate their resource allocation. See Box 2.1

B. **Decide** on whether improvement in the current health priority setting is needed and/or viable

   **Scenario 3.** If improving current priority setting process is considered feasible (no major systemic issues) and useful, or if policy changes require policymakers to set-up priority setting process at particular levels in the system—consider moving forward with improving

   **Scenario 2.** If it is perceived that current priority setting process should be improved but there are many systemic issues, improving priority setting process may be unfeasible/irrelevant, and the focus should be instead on improving the systemic issues

   **Scenario 1.** If current priority setting process perceived as adequate, no need to change the current approach, although there might be scope to improve some elements in the process

C. **Improve health priority setting**

   **NOTE:** See Chapter 3 for detailed guidance for how to improve priority setting for women’s and children’s at meso-level

D. **Evaluate**

   Consider both the process monitoring and evaluation, and outcome evaluation

**PROCESS MONITORING AND EVALUATION**

**ENGAGEMENT WITH PARTNERS**
Key stages and elements of the roadmap for addressing health priority setting at meso-level:

A. Assess current health priority setting process (Situation Analysis)

The reviewed evidence suggests that improvements in priority setting may not be realized unless they are preceded by a sound analysis of how priority setting decisions are actually made (Kapiriri et al., 2007). This should cover the following domains: key contextual issues; people or institutions involved, including the private sector; criteria or factors considered in the decision-making; information or evidence used; the process for decision-making and outcomes (Kapiriri et al., 2007, Martin and Singer, 2003, Gibson et al., 2004).

The emphasis of the situation analysis should be placed on the actual practice of setting priorities, which in many instances deviate from the written policy. For example, in Balochistan, Pakistan, despite decentralisation and implementation of a local priority setting process, when it came to allocating funds the central government ignored the district plans (Green et al., 2000). In Kenya, community-based priority-setting was heavily restricted by the need to prioritise and report on specific health service indicators chosen at national level (O’Meara et al., 2011). “The end result was a work plan that was more reflective of national priorities than local priorities” (p.241). Therefore, those systemic issues that prevent sub-national authorities from making informed decisions about how to prioritize their investments should be thoroughly explored.

A mix of partners from public and non-state sectors, civil society, private providers, and development agencies should be engaged in policy work like the one discussed here. Their own perceptions of what is and is not needed to improve resource allocation will indicate the extent to which there is appetite for change. For example, interviewed provincial and city officials in the Philippines expressed their fatigue with ‘new templates’ for planning and budgeting. There was a perceptible sense that continuous change and introduction of new approaches to health priority setting, especially if donor driven, was not helpful (Anderson, 2012).

B. Decide whether improvement in the current health priority setting process is needed and/or viable

There is no simple guideline for how to decide on whether the improvement to the existing health priority setting process is necessary and viable. The documented experiences of priority setting in a variety of settings have, however, identified some systemic factors that act as barriers to the adoption of a systematic and evidence-based approach to priority setting (Box 2.1). Unless those problems are rectified, it is not possible to implement health programs, however strongly prioritized they are. Barriers to successful priority setting may often be interlinked with barriers to implementing new programs. For example, provincial and city authorities in the Philippines noted that the late release of funds seriously impaired the implementation of those activities identified as priorities and made redundant their efforts to produce evidence-based plans and budget (Anderson, 2012). Where such major systemic issues are
evident, countries should work on those prior, or at least in parallel, to implementing costly or complex initiatives, including priority-setting itself (Travis and Klingen, 2009). On the other hand, there might be instances in which the priority setting exercise itself can be used to systematically examine barriers to implementation (i.e. human resources) and to decide on the health system strategies and associated investments required to address such barriers.

Box 2.1. Barriers to priority setting process (Peacock et al., 2009, Teng et al., 2007, Mitton and Donaldson, 2003b, Mitton and Donaldson, 2004) examples from Pakistan (Green et al., 2000, Husain et al., 2007).

- Politics prevail over evidence
  Example from priority setting process in Pakistan (Green et al., 2000, Husain et al., 2007)
  - Frequent changes in government
  - Role of the military in politics
  - Even if the decisions made during prioritization exercise influence planners, these decisions may not influence politicians who may be resistant to change (current system as a means of maintaining a political base) (Green et al., 2000)
  - Provincial decision-makers felt that although there was an established system of information-based priority setting with well described responsibilities, authorities and a separation of power at each level of decisions making, political influences tended to “spoil the system” (Husain et al., 2007)

- Lack of trust between stakeholders
  Example from priority setting process in Pakistan (Green et al., 2000)
  - Resistance from bureaucrats and health service managers: the project might have underestimated the need for greater internal ownership

- Discontinuity of personnel
- Decision-making culture not interested in evidence
- Mis-alignment of incentives
- No real or perceived authority to change (including, senior executives having non-negotiable ‘must-dos’ which undermine the transparency of the progress)
- Gaming of the system, vested interests
- No genuine buy-in
- Too many other demands on policymakers’ time
- Some key data are not there and there is no adequate time for data collection/validation to fill the data gaps
  Example from priority setting process in Pakistan (Green et al., 2000)
  - Any budget system needs to be based on robust information that includes health needs, service patterns and costs
  - Information systems may not exist to provide the right information required for resource allocation

On these grounds, we have identified three scenarios, described below and suggest that policymakers consider improvements to the health priority setting process only in Scenario 3.
**Scenario 1.** If, based on the description of the current health priority setting process policymakers regard it as adequate, there will be no appetite to change the current approach, although there might be scope to improve some elements in the process.

**Scenario 2.** At the other extreme, if the systemic issues are considered by in-country policymakers to be substantial, improvements in health service delivery cannot be expected simply from changes to the health priority setting process. Rather, they will require progress in those systemic issues. This is likely to be the case, even when there is a recognized need for improving the current health priority setting process.

**Scenario 3.** A third possibility is that assessment of the current situation suggests there are no (or, there is a manageable number of) systemic issues and substantial improvements to the health priority setting process has the potential to accelerate the scale-up of health services delivery and improve health outcomes. On the other hand, policy changes such as devolution might require policymakers to set-up health priority setting process at particular levels in the system. For example, recent reforms in Papua New Guinea have introduced new integrated provincial health governance structures, which might leave ample room for an evidence-based approach to priority setting at provincial level.

**C. Improve current health priority setting process**

The reviewed experience with systematic approaches to priority setting in health suggests that any improvements to the ‘tangible’ components of the process (i.e. how evidence is assessed) need to be preceded or accompanied by a supporting policy dialogue that helps overcome systemic barriers. With a view to providing some practical guidance to those countries who have made the decision to improve the current priority setting process for women’s and children’s health, we have identified those ‘tangible’ elements of the priority setting process at the meso-level that illustrate the scope of activities involved. They are the focus of Chapter 3.

**D. Evaluate health priority setting process**

As discussed in the previous chapter, evaluation is an important yet often forgotten part of priority setting. Evaluating the process of health priority setting and its outcomes is instrumental in learning whether and how the strategy used achieved strategic changes and/or reallocation of resources, and at what cost, compared to alternative strategies (including the ‘do nothing’ alternative). Whereas evaluating the process allows capturing the how of health priority setting (what criteria were actually used, how decisions were made, who was engaged at what stage and which elements of the process worked and did not work in the given context), the evaluation of impact will help determine whether the expected outcomes, such as allocation of resources for health have improved as a result of the process (Sibbald et al., 2009). Together they allow identification of institutional good practices and opportunities for improvements (Gibson et al., 2004) and help improve the transparency and quality of the health priority setting process.
The evaluation framework for priority setting proposed by Sibbald and colleagues (2009), and discussed in the previous chapter, encompasses both process and outcomes. Although specific elements of the framework would need to be adjusted to country contexts in Asia and the Pacific, it provides a good starting point for examining what to include in the evaluation.
Chapter 3. Improving priority setting for women’s and children’s health

As stressed in the previous chapters, priority-setting is intimately linked to health systems. It is not possible to implement programs, however strongly prioritised, unless known problems with the health system are rectified. The decision to improve priority-setting should follow an informed decision about the extent to which such process has the potential to accelerate the scale-up of health services in the given context. Figure 3.1 outlines the broad elements necessary to improve the priority setting process, described in this chapter. The recommended elements are drawn from the reviewed literature and aim to illustrate the scope of activities involved in adopting a systematic approach to prioritize investments in women’s and children’s health with a focus on sub-national decision-making. They are not intended to be prescriptive and should be adapted to the individual country situation and the specific approach adopted. In addition, whilst this chapter focuses on priority-setting for RMNCH it should be acknowledged that the elements aim towards strengthening the health system as a whole, rather than on the vertical delivery of interventions.
Figure 3.1 Elements for improving priority setting for women’s and children’s health

1: Setting up a multi-stakeholder advisory group
   - to help advise on all aspects of the priority-setting process

2: Choosing a direction - deciding on the objectives
   - to identify the objectives for priority-setting in relation to mother’s and children’s health

3: Choosing a priority setting approach
   - Using and adapting an approach from the literature that fits in with the identified objectives for priority-setting

4: Deciding on criteria to inform the selection of priorities
   - Criteria will be closely related to the objectives and approach that is chosen for priority-setting

5: Organizing, collecting and validating information
   - A number of frameworks exist to help in organising data. Some approaches to priority-setting use particular frameworks

6: Choosing WHICH health services to scale-up
   - From a list of 56 interventions known to be cost-effective and feasible to implement in low income settings, choose the interventions most likely to reduce deaths in mothers and children in a particular location

7: Choosing HOW to scale-up health services
   - Identifying the problems to health service delivery and developing locally relevant strategies to address these problems and increase coverage of critical interventions for mothers and children

8: Costing the investment scenarios
   - Costing the different strategies that have been identified to increase service delivery

9: Deciding between investment scenarios
   - Which package of strategies/investment scenarios best meets the identified criteria for priority-setting?

10: Evaluating and feeding back into priority-setting
    - Involves continuous improvement for priority-setting and evidence needed on what works and does not work
1: Setting up a multi-stakeholder advisory group

Consultation with various stakeholders should be built into the entire process of priority setting for women’s and children’s health. Invitation of and consultation with relevant stakeholders is an important component of the situation analysis (described in Chapter 2).

When the decision is made to proceed with improving priority setting for women’s and children’s health, you may want to formalize the advisory group, discuss the roles and responsibilities of all members and outline the mechanisms for ongoing consultation. Table 3.1 provides examples of the size and composition of advisory panels found in different approaches to priority setting identified in the literature. However it should be noted that there may be variations in make-up and function of these groups, even between countries using the same approach (see Country example below).

Table 3.1. Size and composition of advisory panels used in different approaches to priority setting

| Programme Budgeting and Marginal Analysis: | An advisory panel, 8-30 people, made up of key stakeholders who are directly involved in the programs being considered (i.e. managers, consumer representatives) and those indirectly involved (i.e. collaborating/inter-related providers, policymakers, financier personnel, health economists) |
| Health Technology Assessment: | A multidisciplinary advisory committee; 7-25 members, all experts/academics, some involved public representatives |
| Accountability for Reasonableness: | No set size of consultative group. Managers, clinicians, patients and the public should be consulted |
| Investment Case: | Stakeholders representing in-country policymakers at different levels should always be consulted. Depending on the context, private sector providers, development partners and NGOs are also included. Focus group discussions with up to 8 people are usually followed by one-to-one meetings to validate results |

Box 3.1. Stakeholders involved in the Investment Case in Indonesia

The advisory panel and stakeholders represented in the implementation of the Investment Case in Indonesia served a number of functions. At the national level, a Steering and Technical Committee was formed to broadly guide the Investment Case implementation, to advise on the scope and location, give feedback on major findings and support dissemination and generalisation of results. At a district level, where the priority-setting activity was taking place, health officers and front line workers as well as representatives from professional organisations, such as the Midwifes association, were our key informants for the problem solving workshops. These local experts helped to validate data for analysis, define the local health systems constraints to service delivery and come up with solutions to address these locally-specific constraints. These experts were called on several times in the process to review findings and hone the results. Local level planning and budgeting staff were also involved in order for identified strategies to be incorporated into the district planning and budgeting documents.

It is important to remember that successful engagement with the public has not been demonstrated in any of the documented literature (see Chapter 1) and if you intend to include the public as part of your stakeholder advisory group, this should be undertaken with caution.
2: Choosing a direction – deciding on the objectives

The ultimate aim of the priority setting process for women’s and children’s health is to improve the health of these populations through ensuring equitable access to essential, high quality health interventions. However the methods by which you want to achieve this aim and the approach/es you choose to follow will depend on some more specific objectives for priority-setting. These objectives should be defined with your multi-stakeholder advisory group.

Examples of objectives of priority setting for women’s and children’s health:

- To select for scale up women’s and children’s health interventions addressing the largest burden of mortality
- To develop evidence-based options for improving women’s and children’s health in disadvantaged populations
- To identify under-invested women and children’s health programmes to advocate for increased funding from central level authorities
- To select low-cost strategies for scale-up of women and children’s health

As part of the monitoring and evaluation of the improvement of priority setting process for women’s and children’s health you may want to assess how well you are achieving the objectives set out for this exercise. Under element 10 we briefly discuss the content areas for such evaluation.

3: Choosing a priority setting approach

Various systematic approaches to priority setting have been found in the literature (Table 3.2)\(^5\). Each approach addresses different objectives although there can be substantial overlap between the approaches. For instance, the Lives Saved Tool analyses and selects the RMNCH interventions addressing the main causes of mortality. The Investment Case also does this, before developing evidence-based options for investment.

Some approaches described below are not specifically aimed at improving priority-setting for the health of mothers and children but can be applied to any priority-setting decision. In this chapter each approach is discussed in terms of its application in priority setting for RMNCH.

Table 3.2 may help you select the priority setting approach that is most appropriate to address the objective(s) you identified for your priority setting. For more details on each approach see Annex B.

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\(^5\) Whereas a number of approaches to priority setting have been found in the literature (and described in greater detail in Chapter 1 (literature review) and Annex B (summary of reviewed approaches), only a few of them have been used to guide actual in-country resource allocation. Elements of the documented approaches to priority setting should therefore be used with caution and should be adapted to country’s context.
<table>
<thead>
<tr>
<th>Priority Setting Approaches</th>
<th>Objective</th>
<th>How this Priority Setting Approach intends to reach its objective</th>
<th>Example of criteria used to develop and choose scenarios</th>
</tr>
</thead>
</table>
| **Lives Saved Tool**       | To select RMNCH interventions addressing the largest burden of mortality | Uses different scenarios (in which final coverage of given intervention, and thus estimates of mortality vary) to guide discussions with policymakers | • **Health outcomes** as measured by numbers of women, newborn and children saved, decreases in selected conditions such as malnutrition, and movements toward desired levels of fertility.  
• **Equity** (optional – if above outcomes are specifically applied to disadvantaged population) |
| **Investment Case**         | To develop evidence-based options for investment in RMNCH | Combines engagement of local policymakers with problem-solving and quantitative techniques to identify the best available evidence to scale-up priority interventions that will address the burden of RMNC mortality in equitable way | • **Expected health outcomes/impact** as measured by numbers of women, newborn and children saved, decreases in selected conditions such as malnutrition, and movements toward desired levels of fertility  
• **Equity (optional)**  
• **Costs**  
• **Technical and programmatic feasibility** (i.e. required HR, facilities can be made available and will improve delivery of RMNCH services)  
• **Community preferences** and cultural acceptability of scaling-up strategies  
• **Affordability** as measured by available funding for RMNCH |
| **Business Case**           | To develop evidence-based options for investment (as applied to RMNCH interventions) | Uses a ‘Five Case Model’ (strategic, economic, commercial case, financial and management case) to set out the need and justification for and the feasibility and affordability of the intervention—making a sounds case for the commitment of public funds | • **Expected outcome/impact** (i.e. strategic case); Equity (focus on poverty reduction on the DFID’s framework); Costs, optimal value for money of the scenario (i.e. appraisal case); Best practice on procurement and commercially viable (i.e. commercial case); Affordability and sound public financial management (i.e. Financial case); Arrangements necessary for the successful delivery (i.e. management case) |
| **Programme Budgeting and Marginal Analysis** | To increase or cut resources in health (as applied to resources allocated to RMNCH) | A systematic, explicit priority-setting toolkit that helps health care managers identify options for increased resource allocation and | • Same as Business Case (Note: Programme Budgeting and Marginal Analysis uses Business Case to inform decisions) |
### Accountability for Reasonableness

**Options for disinvestment**

| Accountability for Reasonableness | To have an inclusive, legitimate priority-setting process | Provides a framework which is meant to help engage all echelons of stakeholders and build their understanding of and confidence in decisions made | No pre-established criteria for the analysis, except for community preferences and cultural acceptability |

### Multiple-Criteria Decision Analysis

**To rank different alternatives (e.g. interventions or investment options)**

Uses deliberative process to rate and rank options based on a set of predefined criteria, with the aim to develop a rational, transparent and systematic approach to identification of priorities

- No pre-defined criteria for the analysis.
- Explicitly allows for multiple criteria*, including quantifiable (i.e. cost) and non-quantifiable (i.e. ethical, political, cultural)

* see example of multiple criteria used in Table 3.4 (Element 9)

### 4: Deciding on criteria to inform the selection of priorities

In line with the objectives and the approach to priority setting you selected, and in consultation with your advisory group develop a clear list of criteria. Table 3.2 provides a list of approaches with corresponding objectives for priority setting, and criteria often used with these objectives.

Having a clear and as complete as possible list of criteria is very important. The criteria you choose will be used not only at this stage to develop your investment scenarios, but also later to rank them and to choose one of them to recommend for inclusion in the budget. Objectives and criteria are very closely related; for instance if the objective of your priority setting is to improve select women’s and children’s health outcomes in an efficient way, the criteria will include health outcomes and costs.

Criteria can be quantitative, e.g. costs, or qualitative, e.g. cultural acceptability of interventions. At a minimum the objective of your priority setting should include women’s and children’s mortality reduction, in which case your main criterion will be the number of lives saved (as seen in Lives Saved Tool, Table 3.2). Most priority-setting exercises require more than one criterion. If your objective is to develop and implement an investment scenario that is cost-effective as well as feasible in the current political and health systems environment, approaches like the Business Case or the Investment Case recommend a wide range of criteria; including health outcomes and the cost involved.
Box 3.2. Deciding on criteria to inform the selection of priorities

The reality all policymakers face is complex and one size does not fit all. Various priority setting approaches can have different objectives and use different criteria. For instance in Nepal Multiple Criteria Decision Making approach was used to guide decision on whether to scale-up a lung health programme versus other priority health programmes (such as HIV/AIDS prevention and control, MCH programmes) (Baltussen et al., 2007). Two group discussions were organized to identify the relevant criteria to be included in decision-making. A wide range of criteria were mentioned, and summarized in a number of categories. Finally six criteria for priority setting were identified that reflected local values and judgments. These criteria included: severity of disease, number of potential beneficiaries, age of target group, individual health benefits, poverty reduction and cost-effectiveness.

5: Organizing, collecting and validating information

Now that you have selected the objectives and criteria for your priority-setting process, choose a framework which will allow you to organize data collection and analyse it in a systematic way. This will help you focus your data collection and analysis, saving you time and resources later on.

Different approaches to priority setting use different criteria (Table 3.2) and offer different systematic frameworks for organizing data. While some frameworks may use specific tools to organize data, others do not.

- For example the Lives Saved Tool can be used to organize the epidemiological and demographic information required to identify the priority health interventions addressing the burden of women’s and children’s mortality. Or, Investment Case uses the Investment Case Matrix or the Marginal Budgeting for Bottlenecks tool. If these tools are being used, the analyst should become familiar with the requirements before collecting the data.
- In contrast, Business Case does not use a specific tool as such, but organizes the information along very specific areas in line with the criteria proposed (see Table 3.2 and Annex B). So the analyst using Business Case needs to be aware of the data required to present strategic, appraisal, commercial, financial and management cases for the investment options under consideration.

A list of potential key indicators and sources of data for specific criteria often used in setting priorities for women’s and children’s health are presented in Table 3.3. Some common issues faced in examining the data are also noted.

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6 If you are interested in learning more about different systematic frameworks for organizing data, tools and models that can be used to help you estimate outcomes for women’s and children’s health and the associated costs see the review of costing tools completed by The Partnership for Maternal, Newborn & Child Health, available here [http://www.who.int/pmnch/topics/economics/costing_tools/en/index.html](http://www.who.int/pmnch/topics/economics/costing_tools/en/index.html)

7 This list is indicative only. Additional parameters are usually required to calculate the indicators required by each criterion.
### Table 3.3 Criteria & data sources to consider in your priority setting for women’s and children’s health

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Potential indicators to measure each criterion</th>
<th>Potential Sources of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Outcomes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mortality</strong></td>
<td>Reducing maternal, neonatal and child mortality is one of the primary goals of any RMNCH priority setting exercise. If one of your selected criteria is improvement of RMNC health outcomes, then the key indicators might include:</td>
<td>Civil registration, Demographic and Health Survey (DHS), Census, Local studies (if available), facility records.</td>
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<td></td>
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<tr>
<td></td>
<td>• Reductions in the MMR, NMR and U5MR</td>
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<tr>
<td></td>
<td>• Reductions in levels of specific cause of MNCH mortality</td>
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<tr>
<td></td>
<td>(For mortality indicators, estimates are not usually available at district level. State or provincial data may be used instead after validation with local experts. Causes of death data are even more difficult to obtain at sub-national level, so adjusted national estimates might be required.)</td>
<td></td>
</tr>
<tr>
<td><strong>Nutrition</strong></td>
<td>Nutritional status has a large impact on overall health of a population, affecting both mortality and morbidity due to other causes. If one of your selected criteria is to improve nutritional status of mothers and children, then indicators may include:</td>
<td>DHS, prevalence studies, facility records, disease registries</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prevalence of underweight, stunting and wasting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prevalence of anaemia (particularly in pregnancy)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prevalence of Vitamin A, Iodine and Zinc Deficiency</td>
<td></td>
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<tr>
<td><strong>Sexual and Reproductive Health</strong></td>
<td>The use of family planning and prevalence of sexually transmitted diseases can have a considerable impact on maternal and child health. If one of your selected criteria is to improve sexual and reproductive health, then important indicators to consider include:</td>
<td>DHS, prevalence studies, facility records, disease registries</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Demand and met need for family planning (both qualitative and quantitative)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Usage of modern methods of contraception</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prevalence of STIs such as HIV, syphilis, gonorrhoea and chlamydia</td>
<td></td>
</tr>
<tr>
<td><strong>Intervention Coverage</strong></td>
<td>Reductions in mortality and morbidity will be achieved if cost-effective RMNCH interventions of good quality are scaled up.</td>
<td>DHS, facility records, Local studies may be used to source data on coverage and quality of key RMNCH interventions</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>A good starting point to identify those RMNCH interventions that are cost-effective, feasible and addressing the burden of MNCH mortality in low-income countries is the “Essential Interventions, Commodities and Guidelines for Reproductive, Maternal, Newborn and Child Health” recently produced by (PMNCH, 2011b)</td>
<td></td>
</tr>
</tbody>
</table>
| If one of your selected criteria is to improve RMNC intervention coverage, indicators will include coverage of relevant interventions, such as:  
- Number and quality of antenatal Visits  
- Type and quality of birth attendance  
- Incidence of pregnancy complications, particularly those requiring emergency obstetric care, both basic and comprehensive  
- Number and quality of postnatal visits  
Examples of indicators for interventions related to childhood health include:  
- Incidence of, and quality of treatment for  
  - Diarrhoea  
  - Pneumonia  
  - Malaria  
  - Other major infectious diseases in area of interest  
- Coverage of improved Water Sanitation and Hygiene (WASH) |  
| Equity | If one of your selected criteria for the priority-setting process is equity, you will need to consider the impact that your investment scenarios may have on different groups of the population, particularly the poor and vulnerable.  
Indicators such as mortality, intervention coverage and out of pocket expenditure might then be examined by various equity markers.  
- Relevant equity markers might include: Wealth; Rural/Urban status; Geography and Ethnicity  
(In some instances - especially if you are looking for data beyond basic population information, i.e. wealth and ethic distribution - it might not be possible to disaggregate epidemiological data for disadvantaged groups. In addition, these data may only be available at national or state levels.) | DHS, census, population surveys, government records  
Costs | Most priority setting exercises would include ‘optimum value for money’ as one of the criterion, so information on the costs of the proposed implementation scenarios is required.  
- In some cases, such as when prioritizing a package of health interventions, Cost Effectiveness Analysis (CEA) and the associated indicators would be used.  
- However, in many instances standard CEA might not be feasible or required. Other traditional costing indicators such as total; per capita; recurrent and capital costs might suffice.  
(Very few countries have these data available, so it might be advisable to undertake a costing survey of health services) | Costing surveys, facility records, national/departmental standards. |
| Affordability | If one of your selected criteria for the priority-setting process is affordability and budgetary implications of the proposed investment, you will need to measure the cost of a scenario as the percentage of available funding for RMNCH.  
For rigid budget structures that do not allow easy reallocation of resources between different budget lines, it would be important to identify the corresponding budget lines and items that would be affected. | Budget documents can be used to source these data. |
| System Strengthening | As there is increasing emphasis on providing RMNCH services through integrated health systems rather than vertically managed programs, you may want to ensure that your investment scenario will also contribute to strengthening the functioning of health facilities as a whole.  
A consideration of which services are delivered through the private sector (and to what extent) is also necessary to understanding how to effectively scale up RMNCH services. | DHO, local studies, facility reports |
| Feasibility | In order to improve RMNCH outcomes, your investment scenarios need to be feasible, which means within the technical and programmatic capacity of the health system. Feasibility of investment scenario may be difficult to quantify.  
Points to consider include for example the organisational culture and capacity of available staff | DHO, Facility records, consultation with frontline staff |
| Community acceptability | A health system should address the needs of the community it serves in a culturally appropriate way, else the community will be reluctant to utilise services. If one of your selected criteria is community acceptability, consider the following:  
- Health knowledge  
- Religious beliefs, social norms and cultural practices  
- Method of service delivery, e.g. outreach versus fixed site, trained nurse versus doctor  
- Quality of services provided, both technical and interpersonal  
- Out of pocket expenditure  
(As with ethical outcomes, some data related to cultural aspects, such as religion, may be gained from epidemiological sources. If collecting community views ensure that the process is inclusive, and representative of a wide range of community views.) | Local studies, community consultation |
| Political economy | As discussed in the previous chapter, adequate political support is required. Whenever you develop investment scenarios you may then want to note political considerations that influence the support or lack of for the corresponding investment scenarios. | Government policy documents, decrees. |
In some instances and in order to reduce the needs for data collection, available mathematical models and tools for estimating outcomes for women’s and children’s health and the associated costs also provide some default data that can be used for the estimates. However, **default data are usually national or even global, and will need to be carefully reviewed and assessed** when taking sub-national analysis, which is usually the case in decentralized countries. **Remember, the data you collect will become the basis of your investment scenarios**, so it is important that as much as possible these data reflect the actual (local) situation.

In many low and middle income countries there are **significant problems with quality of the data**. It is a good idea to understand the quality issues of the data you will be using for your priority setting and include these issues as part of the analysis. No data are perfect, and in many cases flawed or incomplete data are better than none. Still, when poor quality data create a misleading interpretation of the situation you are analysing, it is better not to use these data. Annex C offers some very broad questions that will help you assess the quality of both survey and non-survey data. Another useful resource is the Health Metrics Network, which also provides guidance on how best to assess the quality of health data. ([http://www.who.int/healthmetrics/documents/framework/en/](http://www.who.int/healthmetrics/documents/framework/en/)).

Global evidence can be an important source of information (for instance see Element 6 below that describes a global list of women’s and children’s health interventions with proven cost-effectiveness and which are feasible to deliver in low-income settings). However for the best results **local evidence will be required to inform the development of your scenarios** (e.g. which strategies can be used to ensure good quality supervision of frontline workers). **An important activity is therefore to validate data with local experts**. Such validation will help to understand which sources of data are the most relevant and reliable.

**6: Choosing WHICH health services to scale-up**

In designing the alternative scenarios, **the first decision is to choose which health services are going to be scaled-up**. This selection should be made on the basis of the agreed criteria (e.g. mortality reduction) and the information already collected (e.g. current mortality rates, causes of death and current intervention coverage).

As mentioned before, at minimum the criteria used to select which health services to scale-up should include **number of lives saved**. Malnutrition is an important concern in the Asia-Pacific region (UNICEF, 2008) and a significant contributor to premature death in children (WHO, 2009) and should therefore also be taken into consideration when choosing priority interventions for scale-up. **A good investment scenario for RMNCH should, at minimum, include health interventions with proven cost-effectiveness to address major causes of death in the local setting**. The Partnership for Maternal, Newborn & Child Health (PMNCH), WHO and Aga Khan University have led a process to reach consensus among key stakeholders on a list of 56 MNCH interventions known to be both cost-effective and feasible to implement in low resource settings. This list can be used as the starting point to select those interventions for scale-up in each scenario. It can be found in “Essential Interventions, Commodities and
In choosing interventions for scale-up, national policy will need to be considered. For instance, whilst ‘Safe Home Delivery’ is considered globally to be an intervention that can save lives, particularly where availability of skilled birth attendants is lacking, in many countries it is not national policy and therefore might not be appropriate for scale up.

For the purposes of building the alternative scenarios, interventions can be ‘packaged’ along the health system level at which they are delivered, e.g. community, primary care and tertiary care. This can help to formulate strategies that strengthen the health system, rather than focusing on the vertical delivery of one intervention.

It is important to check that interventions chosen address major causes of death. Some tools are available at this stage (i.e. Lives Saved Tool, Investment Case Matrix, Marginal Budgeting for Bottlenecks Tool) to estimate the mortality impact of scaling-up identified interventions to verify that key interventions addressing the major causes of death in mothers and children in the local setting have been included in your scenarios.

7: Choosing HOW to scale-up health services

Under Element 6, you have identified ‘WHICH’ women’s and children’s services to scale-up. Now the focus is on ‘HOW’. To answer this question, it is important first to understand that there may be different reasons for a given problem. For example, low coverage of family planning might be due to providers not offering the preferred methods, or it may be due to men’s attitudes towards family planning. These two different problems require very different strategies to scale-up coverage of family planning; one focusing on supply side issues and the other on demand side issues relating to health service utilisation. To help understand the underlying problems for low coverage, problem-solving workshops might be required. For example, the Investment Case uses ‘bottlenecks analysis’. This analysis looks at the different aspects of the health system (supply side, such as available facilities and equipment; demand side, such as whether the population use the available services; and a measure of the quality of services) to understand the problems associated with poor health service coverage.

Once the root cause of the problem has been identified, propose strategies that could address the problem and facilitate the scale-up of women’s and children’s services. Some generic guidance about strategies that have been used in low-income countries (e.g. conditional cash transfers to increase delivery of particular services) can be found in the literature (see Box 3.3). However the evidence on strategies to increase coverage of critical interventions is not strong and policymakers need to consider the context in which the strategies are being considered very carefully before making an investment.
It is very important to understand the rationale behind proposed strategies. At this stage it is recommended to clearly document how the proposed strategies will address the problem and how they might interact with other services. For example if financial barriers have been identified as the root cause of low institutional delivery, it would be necessary to describe how conditional cash transfers might alleviate the problem. It might also be useful to consider whether the proposed cash transfers might provide perverse incentives for family planning. In addition, whilst this priority-setting exercise is primarily concerned with public sector services, you should also consider the private sector when analysing problems with health service delivery and proposing strategies to address these issues (see Systems Strengthening criteria in Table 3.3). This is particularly the case where interventions are delivered mainly through the private sector. For instance in a recent exercise in Papua (Indonesia) we found that promoting the use of artemisinin-combination therapies to combat malaria in places where chloroquine is no longer effective cannot focus entirely on the doctors prescribing these medicines.
Since much of the population will source drugs directly from private pharmacies, public education will be necessary to create demand for these new treatments.

Documenting how strategies address the problem will assist in understanding expectations and assumptions of proposed strategies. Once the main strategies have been identified and justified, best-practice in the Business Case approach recommends that an ‘Appraisal Case’ for the scenario is developed (see Annex B). This involves outlining the outputs of the recommended strategies, their criteria for success as well as the expectations and assumptions in regard to HOW the proposed strategies will be translated into increased coverage of RMNCH services for the target population.

As part of the analysis a decision on what intervention coverage target can be achieved with the proposed strategies is needed. Such decisions are based on an assessment of how much a proposed strategy will remove the identified health systems constraints. Since disadvantaged sub-national settings are usually starting from much lower baseline coverage, this sort of assessment might be more appropriate than the practice of applying national targets, which might not be feasible to reach in such locations.

Health intervention coverage targets should be used for monitoring purposes and to ensure that investment in proposed strategies is improving access to critical interventions.

8: Costing the investment scenarios

After you have identified the WHICH and HOW of the scaling-up scenarios, you will need to cost each scenario. Estimating costs from the perspective of the society is required in most economic evaluation exercises. Some of these exercises can be used to inform assessments of the cost-effectiveness of particular interventions. However for the purposes of informing allocation of government budgets, financial costs that can be directly translated into the budget format are required. When analysing the costs borne by the government, it is also important to consider the implications for households. Reducing the financial outlays for the government should not be achieved at the expense of increasing out of pocket expenditure for households.

It is important to take into account the various types of costs as cost may be an important criterion for priority-setting and whether or not a scenario is feasible may rely on whether sufficient funds can be sourced. Both capital expenditure and recurrent costs must therefore be considered.

Depending on the level of complexity of your analysis, simple or sophisticated costing models might be required. In some instances a simple spreadsheet containing basic information on the unit costs and quantities of the inputs required to implement your strategies would suffice. If more sophisticated costings are required, various costing tools are available (http://www.who.int/pmnch/topics/economics/costing_tools/en/index.html)

Other tools developed after this review include the Investment Case Matrix tool and the ONE Health Model, developed by the United Nations Interagency Group, and due for release in the next few months.
9: Deciding between investment scenarios

Once the alternative scenarios are developed and costed, they need to be put for consideration to the stakeholders. Programme Budgeting and Marginal Analysis, for example, recommends that the presentation of each scenario is organized along the lines recommended by the business case (see Table 3.4). This might be advisable if you are using this exercise to negotiate a substantial increase in allocation of resources to women’s and children’s health. However, you might opt for a simplified format that presents information on the costs and expected impact of each scenario along with a brief description of the strategies proposed for the scale-up.

With the scenarios information at hand it will be important to review again the criteria identified in Element 4, and select those criteria which will be used to guide the decision in regards to which investment scenario to follow-through. A number of different tools and approaches exist to guide this final decision-making; essentially all involve a deliberation among stakeholders, ranking of options (based on the agreed upon criteria) and choosing that option, which has the highest total score. A graphical display may aid in this process. Table 3.4 provides examples of different decision-making frameworks used by different approaches to priority setting that can be used at this stage.
Table 3.4. Examples of decision-making frameworks

<table>
<thead>
<tr>
<th>Tool/Approach</th>
<th>Details of method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet</td>
<td>• Series of 3-4hr focus groups with stepwise introduction of evidence and serial voting/ranking on options.</td>
</tr>
<tr>
<td></td>
<td>• The output consists of a ranking of priorities from a limited list.</td>
</tr>
<tr>
<td>Programme Budgeting and Marginal</td>
<td>• A panel holds a hearing brief presentation from each business case and scores them</td>
</tr>
<tr>
<td>Analysis</td>
<td>• Several rounds of reviews for the panel to be satisfied with final ranking of business cases.</td>
</tr>
<tr>
<td></td>
<td>• Validity checks with additional stakeholders and final decision reached</td>
</tr>
<tr>
<td></td>
<td>• The output consists of 3 disinvestments and top 3 investment proposals recommended by the advisory panel</td>
</tr>
<tr>
<td>Multiple-Criteria Decision Analysis</td>
<td>• Because you can only rank options according to quantifiable criteria, a secondary, more discursive process may be required to rank non-quantifiable</td>
</tr>
<tr>
<td></td>
<td>criteria (i.e. ethical, political, cultural etc). See table 3.4.1 for an example</td>
</tr>
<tr>
<td></td>
<td>• If multiple criteria are chosen you may want to reach an agreement on the relative importance of each. Multiple-Criteria Decision Analysis provides</td>
</tr>
<tr>
<td></td>
<td>guidelines on how to do that. Available techniques range from some basic weights to sophisticated mathematical models. A crude, but relatively easy way</td>
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<tr>
<td></td>
<td>to assign weights and rank options is illustrated in Baltussen &amp; Niessen 2006.</td>
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</tbody>
</table>

Table 3.4.1 Example graphical display of ranking of options (adapted from Baltussen and Niessen (2006)).

<table>
<thead>
<tr>
<th>Possible RMNCH interventions</th>
<th>Criteria:</th>
<th>Results of ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impact on Mortality</td>
<td>Affordability</td>
</tr>
<tr>
<td>Package of Community based activities</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Community activities + Strengthening of basic EMOC services</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Strengthening of basic EMOC services + upgrades to referral level facilities</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>
Box 3.4. Choosing between investment scenarios

The investment case proposes to examine the value for money of various investments for RMNCH that can be implemented in the short-to-medium term. For the resource-poor locations where the analysis was being undertaken, the investment scenarios focused on the different health outcomes that could be achieved at different costs.

For instance in the Investment Case in Indonesia, the government was interested in the expected costs and outcomes of strategies addressing the main causes of maternal and newborn mortality only, versus those that also included interventions addressing post-neonatal mortality. Under-five mortality was already considered to be reducing at a reasonable pace, whereas maternal and newborn mortality had stagnated in recent years. Therefore the investment scenarios to choose from included these two options. In addition, there was a need to assess the feasibility of implementing strategies in the short-to-medium term. Different agencies are responsible for different aspects of service delivery for RMNCH intervention in Indonesia. For instance family planning requires coordination between the District Health Office and the Family Planning Bureau.

The different investment scenarios for the Indonesia districts were therefore as follows:

- **Scenario 1**: Strategies to scale up interventions addressing maternal and newborn mortality only
- **Scenario 2**: Strategies to scale up a larger range of interventions also addressing post-neonatal mortality
- **Scenario 3**: Strategies that have high transaction costs due to the need to coordinate between different agencies (e.g. WASH, Family Planning)

In three out of the four sites in Indonesia, Investment Scenario 1 was deemed to be the best option. The additional impact on mortality was not considered to be significant enough to warrant the additional investment of Scenario 2. The exception was for Merauke in Papua Province. Since the under-five mortality rate is very high in this region, Scenario 2 offered a better investment than for the other sites, with an additional 12% expected reduction in under-five mortality. Whilst some sites opted for limited strategies from Scenario 3 (e.g. in relation to scaling up Family Planning), these were not favoured due to the difficulties with coordinating and implementing these strategies in the short-medium term.

10: Evaluating and feeding back into priority-setting

We advocate that in order to assess how well the improvement exercise met its objectives and to build the global evidence on approaches to health priority setting, it is important to conduct a robust evaluation of the improvement exercise. Recommendations in regards to the evaluation content areas in this context are provided in Chapter 2, where we also acknowledge (in Chapter 1) that there is no clear evidence on the best method to conduct these evaluations. Here we propose some questions

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which may be used to assess whether the improvement process met its objectives for priority-setting at a sub-national level.

- **Have a number of scenarios for investment been presented and discussed?** Have the benefits and costs of different scenario been assessed?
  - Inspection of the documentation from the priority-setting exercise will help you to see whether a number of scenarios have been investigated and the reasons why one scenario was chosen over another.
  - It should be understood that different scenarios might be selected for investment depending on objectives and contexts. However having a transparent process that clearly outlines both the scenarios and the reasons for selection is critical to current and future priority-setting.

- **Have plans and budgets changed to reflect the new priorities identified?** Are more resources now being directed towards priority interventions for mothers and children? (identified through the priority-setting process).
  - A comparison of local plans and budgets from previous years will help to assess this.
  - It should be clear, for instance, if policymakers have made substantial changes to their resource allocation towards the health of mothers and children and where they have reverted to historical planning and budgeting.

- **Is a process in place that provides inclusive, legitimate priority-setting for women and children’s health?**
  - Some key stakeholder interviews may help to assess whether the processes that have been put in place are truly capturing the expectations and needs of all stakeholders.
  - Such a process can help to highlight what improvements can be made to ensure inclusion of all stakeholders in the priority-setting process.

Feeding the results of the evaluation back into the priority-setting process is important. It may be that systemic barriers (not identified or fully considered in the situation analysis) prevented the priority-setting process from working the way it was intended. In this case it may not be a case of improving the approach used, but addressing the barriers, that is needed. In other instances, improving the priority-setting process should be iterative. Changing the culture of decision-making takes time and particularly at a sub-national level, where capacity is lowest and information on which to base decisions is scarce, realistic expectations of what can be achieved should be maintained.
Conclusions

Governments need to make informed decisions to prioritize their investments for RMNCH. In decentralized systems, which make up the vast majority in Asia and the Pacific, the decision space over delivery of health services has been traditionally devolved to provinces and even districts (the meso level).

Our extensive literature review found no substantial evidence for the success of one particular method for priority-setting in LMICs. Whilst many different approaches have been put forward, few have been evaluated and the evidence for success at the meso-level and in LMIC is even thinner. However, we cannot ignore the importance of efforts to improve priority-setting for RMNCH. This is especially true in resource-poor settings where many competing alternatives for funding exist. For instance, in India, reallocating resources to such interventions have the potential to reduce the total number of deaths by 28% for approximately half of current per capita public spending (Glassman et al., 2012). Adapting and testing one of these approaches to priority-setting within the country context appears to be a sensible tactic.

Technical approaches such as those found in the literature cannot fully capture the political and contextual dimensions of priority-setting. Evidence is just one of the many various factors influencing decision-making for implementation and funding of priorities. Context-specific factors ranging from low to high-level implementation issues, political environment and implications across other health system blocks (Bosch-Capblanch et al., 2012) and to whether the culture of evidence-based decision making is strong at the -level (Mitton and Donaldson, 2003d, Peacock et al., 2009, Teng et al., 2007, Mitton and Donaldson, 2003b) will ultimately influence the extent to which this evidence is used. Such influences have the ability to hamper any efforts to improve priority-setting. A thorough situation analysis is necessary to ensure that there are no insurmountable systemic or contextual issues preventing the adoption of an evidence-based approach to priority-setting.

One key constraint to improving priority-setting in resource-constrained settings is the lack of data on which to base decisions, particularly at the sub-national level (Bhutta, 2012). However, paucity of data, should not be a justification for maintaining the disconnect between decision-making and available evidence. The process of priority-setting can serve to strengthen knowledge of what data are required and promote efforts to improve health information systems in order to monitor progress (Jimenez Soto et al., 2012).

We have proposed some elements for governments interested in improving their priority-setting processes for RMNCH focusing at a sub-national level. These steps do not represent a ‘template’ or manual on how to conduct priority-setting. Instead they are intended to provide an overview of the scope of the different activities involved in any priority-setting exercise drawing on some essential elements from the reviewed literature. Those governments interested in actually undertaking priority-setting will need to review the documentation on the different approaches, decide which approach best
fits the objectives of the priority-setting exercise, and then use the available resources to implement the chosen approach. Not all aspects of any one approach will be appropriate for LMIC settings so whatever approach is chosen will need to be adapted to the country setting.

Once a process for priority-setting has been implemented in a particular setting, monitoring of both the process (to see whether it is actually being implemented in the way envisaged) and outcomes (whether it is changing the process for priority setting and in the longer term whether these changes are translating into better outcomes for mothers and children) is important. Additionally, unless policies are translated into appropriate programs, put into operation and evaluated, they only retain academic value (Siddiqi et al., 2004) and therefore the implementation issues cannot remain marginal to the priority-setting process. Such information can be used in the location where the priority-setting is being implemented, to continually hone and improve the methods. It should also be widely disseminated in Asia and the Pacific so it can contribute to the scarce literature on the use of different priority-setting approaches in LMIC settings.
ANNEX A. Approach to literature review and abstraction templates

The first step in our review of the evidence involved brainstorming among researchers on key resources to include and on the scope of the literature review. This yielded a list of resources, mostly grey literature, and was followed by a series of searches in formal literature. Since the focus was on investment scenarios, we agreed that this review should be restricted to evidence for resource allocation and priority setting processes, and thus excluded studies related to broader areas such as evidence-based planning or policy-setting not specifically related to resource allocation. This decision was reinforced by the fact that when we initially searched for recent literature using broad terms such as (“planning” OR “budgeting” AND “health care”) we found over 128,000 references. Even when narrowed down by relevant categories (e.g. healthcare sciences services), over 35,000 studies were found and very few of the first 300 appeared relevant. We accordingly restricted our search to articles published in the last decade using the following key words: “resource allocation” AND “health care” AND “policy” OR “priority-setting” AND “health care” AND “policy”. We did not restrict the search to LMICs. Web of Science and Econlit databases were searched for relevant peer-reviewed articles. The Web of Science search was narrowed down by categories (“health care sciences services” or “health policy services” or “economics” or “planning development” or “public administration”) and subject areas (“health care sciences services” or “public administration” or “mathematical methods in social sciences”). The search yielded 239 references, many of which were relevant. Upon further discussion the key word ‘policy’ was dropped to expand the search. The expanded search produced 874 references. The Econlit database search produced 351 references, most of which overlapped those from the Web of Science or were deemed irrelevant. The Cochrane database was searched for systematic reviews on the subject but none were found.

Finally the key search terms were also entered into Google search engine to complete the search; no relevant new articles were identified.

Selection of Papers for inclusion

All identified titles and/or abstracts were reviewed by two of the authors (KA and EJ) using predetermined inclusion criteria. Articles not specifically related to priority-setting and resource allocation in public health were excluded (e.g. those describing processes of planning/development of clinical services only) as well as individual country studies of macro-level priority setting (such as health technology assessments). In reviewing the abstracts it became apparent that in addition to articles describing individual approaches to priority-setting for health, there were other articles describing common elements of that process. The former “approaches” articles, were included if they described in detail a systematic approach to evidence-based priority-setting in health. We excluded those which focused only on the statistical techniques underlying some of the approaches such as the use of cost effectiveness analysis. The latter “background” articles were included only if their focus was on the policy implications of a particular element of priority-setting.
Using the above strategy a list of 75 “approaches” articles and 57 “background” articles was compiled. All 132 articles were read in full and abstracted using one of two templates prepared by the authors (copied below). The “approaches” abstraction template included categories such as its objectives; content areas; scientific method/methods of analysis; the process by which resources, data and claimed outputs are or should be used in decision-making on health investment; the context of the prioritization; documented impact on plans/budgets/resource allocation and action; outputs produced; location(s) where the approach was used and lessons learned. To draw a robust picture of an identified approach (such as program budgeting and marginal analysis (PBMA), multi-criteria decision analysis (MCDA) etc.), relevant information from a number of publications related to that approach was retrieved into a single abstraction sheet. The “background” abstraction template was much simpler and focused on lessons learned which could be used to develop roadmaps for approaches to priority-setting for health resource allocation. The abstraction process was preceded by a pilot stage after which the “approaches” template was revised. The articles were then divided among three of the authors (EJ, KA and DH) and abstracted. A sample of five was first abstracted by all three authors, subsequent to which authors’ notes on the process were compared and difficulties discussed. Based on this discussion a set of guidelines for abstraction was devised to guide the process.
Abstraction sheet used to document specific priority setting approaches

NOTE: This abstraction sheet was used to abstract information related to specific priority setting approaches. For those articles/documents identified that did not relate to specific approaches, but related directly to this exercise, abstraction sheet for background documents was used instead.

<table>
<thead>
<tr>
<th>Abstraction categories</th>
<th>Explanation, examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approach #</strong>&lt;br&gt;(Abstraction should be undertaken for approaches, not individual articles. If required, note the differences found in the application in different settings as reported by the articles. For example, in XX content areas were above but did not include costings)</td>
<td>From our quick review, not all this information is available for all Resources, so in many cases will be N/A.</td>
</tr>
<tr>
<td><strong>Objective of the approach</strong>&lt;br&gt;<em>For example:</em> Help policy makers identify priority RMNCH interventions</td>
<td></td>
</tr>
</tbody>
</table>
| **Content areas and data requirements. Content areas may be more than health sector specific.**<br>(classify them into quantitative and qualitative) | Purely quantitative: Costs and effectiveness of neonatal interventions. Requires detailed data on units costs, effectiveness of each interventions  
Mixed quantitative and qualitative:  
• Epidemiology: Requires large amount of data on basic epidemiological parameters of the population at district level, including prevalence of major diseases.  
• Health Systems: Data on number of health providers and location  
• Community’s views on providers: xxx |
| **Scientific method behind the approach/methods of analysis**<br>This section will focus on describing the main elements of the methods used.<br>It is outside the scope of this exercise to analyse/discuss the scientific rigour behind each method. However, detailed explanations will be provided if the method (e.g. Multi-Criteria Decision Analysis) is the cornerstone of the approach.<br>It is also outside the scope or this exercise to review the scientific method behind the tools used (e.g. LIST).<br>*For example:*  
• Standard cost-effectiveness analysis to identify the most cost-effective interventions.  
• Focus groups with community stakeholders to obtain their views on quality of services. | |
| **The process by which resources, data and claimed outputs are or should be used in decision making on health investments**<br>Here the emphasis is on how government is engaged and using data/outputs in decision making on health investments. *Note* that this is linked to the documented impact below** **It might be possible that in some cases the process that would lead to the uptake of the results was followed, but some circumstantial factors prevented this to happen.<br>*Note if:*  
• The exercise is at the outset (e.g. there was no formal engagement of key stakeholders and the exercise was a knowledge product)  
• The use of the approach is mandatory (for example in some instances central government/Ministries of Finance might request...)

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authorities to develop business cases prior to approval of funding.

- The exercise was supply or demand-driven, e.g. if there was a request from the government or other key stakeholders.

<table>
<thead>
<tr>
<th>Location</th>
<th>Where this approach was applied (countries, settings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The context in which decision making takes place</td>
<td>Note the socio-political and cultural context for making the investment decisions, such as formal structures of government and policy making, the health system structure, the informal culture and operation of these structures, as well as other issues (like: the approach was adopted in an environment of tightening government budgets, etc)</td>
</tr>
<tr>
<td>Key stakeholders</td>
<td>List government officials/community and other stakeholders who were or should be engaged</td>
</tr>
<tr>
<td>Outputs produced</td>
<td>For example: list of most cost-effective RMNCH interventions</td>
</tr>
<tr>
<td>Documented impact on plans/budgets/resource allocation and action in the location where it was used</td>
<td>This is somehow linked to the process (above)**</td>
</tr>
<tr>
<td>Lessons learned</td>
<td>For example, factors like internal politics were not taken into considerations, or the lack of process evaluation prevented identification of enabling and constraining factors for priority-setting. Policy implications of lessons learned with emphasis on the process and content areas.</td>
</tr>
</tbody>
</table>
Abstraction sheet used to document background information

NOTE: This abstraction sheet was used to abstract information from those articles/documents identified that did not relate to specific approaches, but were still directly relevant to this exercise.

<table>
<thead>
<tr>
<th>Abstraction categories</th>
<th>Explanations, examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location and context of the study</td>
<td>Note:</td>
</tr>
<tr>
<td></td>
<td>- Where this study took place (country, setting)</td>
</tr>
<tr>
<td></td>
<td>- The socio-political and cultural context for the study, if applicable</td>
</tr>
<tr>
<td>Lessons learned</td>
<td>Note the lessons learned in regard to the main elements for both process and content areas of prioritization exercises; what works/does not work to influence prioritization of plans and budgets; and enabling and constraining factors for prioritization.</td>
</tr>
</tbody>
</table>
Examples of completed abstraction sheets: 1) (approach) program budgeting and marginal analysis (PBMA) and 2) (background paper) Greener and Powell, 2003

1) Abstraction sheet (approach): PBMA

Includes Mitton and Donaldson 2003 Tools of the trade; Mitton and Donaldson 2003 resource allocation in health care; Mitton and Donaldson 2004 health care priority setting; Tsourapas and Few 2011 Evaluating success in PBMA, a lit review; Mitton and Donaldson 2002 setting priorities in Canadian regional health authorities; Dione et al 2009 evaluation of the impact of PBMA; Mitton et al 2011 difficult decisions in times of constraint; Mitton and Donaldson 2003 setting priorities and allocating resources. Excludes: Peacock et al 2009 (PPBMA, A44, PAR, participatory action research, MCDA); Patten et al 2006 (PBMA & PAR), Gibson et al 2006 (PBMA & A4R) & Urquhart et al 2008 (PBMA & A4R)

<table>
<thead>
<tr>
<th>Abstraction categories</th>
<th>Explanation, examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective of the approach</strong></td>
<td>A systematic and explicit priority-setting toolkit that helps health care managers to identify options for increased resource allocation and options for disinvestment. Focus on resource allocation</td>
</tr>
<tr>
<td><strong>Content areas and data requirements. Content areas may be more than health sector specific.</strong> (classify them into quantitative and qualitative)</td>
<td>Five generic questions pertaining to the use of resources (taken primarily from Mitton and Donaldson tools of the trade (Mitton and Donaldson, 2003c)):</td>
</tr>
<tr>
<td>1.</td>
<td>What resources are available in total?</td>
</tr>
<tr>
<td>2.</td>
<td>In what ways are these resources currently spent?</td>
</tr>
<tr>
<td>3.</td>
<td>What are the main candidates for more resources and what would be their level of effectiveness?</td>
</tr>
<tr>
<td>4.</td>
<td>Are there any areas that can be provided to the same level of effectiveness but with fewer resources?</td>
</tr>
<tr>
<td>5.</td>
<td>Are there areas of care which, despite being effective, should receive fewer resources because a proposal from 3 is more effective?</td>
</tr>
<tr>
<td><strong>Scientific method behind the approach/methods of analysis</strong></td>
<td>Programme Budgeting: represents the current activity and expenditure and it ensures allocation of resources is explicit. Marginal Analysis: Assess the cost of benefits of proposed changes</td>
</tr>
<tr>
<td><strong>The process by which resources, data and claimed outputs are or should be used in decision making on health investments</strong></td>
<td>Description of steps primarily taken from Mitton and Donaldson 2004 (Mitton and Donaldson, 2004)</td>
</tr>
<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 (ie. Map of current activity and expenditure)</td>
</tr>
<tr>
<td>3.</td>
<td>Form marginal analysis advisory panel</td>
</tr>
<tr>
<td>4.</td>
<td>Determine locally relevant decision making criteria</td>
</tr>
<tr>
<td>a.</td>
<td>To set the criteria, inputs from decision-makers; board of directors and public can be sought.</td>
</tr>
<tr>
<td>5.</td>
<td>Advisory panel to identify options in terms of:</td>
</tr>
<tr>
<td>a.</td>
<td>Areas for service growth</td>
</tr>
<tr>
<td>b.</td>
<td>Areas for resource release through producing same level of output but with less resources</td>
</tr>
<tr>
<td>c.</td>
<td>Areas for resource release through scaling back or stopping some services</td>
</tr>
<tr>
<td>6.</td>
<td>Advisory panel to make recommendations in terms of:</td>
</tr>
<tr>
<td>a.</td>
<td>Funding growth areas with new resources</td>
</tr>
<tr>
<td>b.</td>
<td>Decisions to move resources from disinvesting areas –b- into growing ones –a-</td>
</tr>
<tr>
<td>c.</td>
<td>Trade-off decisions to move resources from those</td>
</tr>
</tbody>
</table>
scaling-up –c- to those scaling-up –a-

7. Validity checks with additional stakeholders and final decisions to inform budget/planning processes

<table>
<thead>
<tr>
<th>Location</th>
<th>Used extensively in the UK, Canada, Australia and New Zealand over the last 25 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>The context in which decision making takes place</td>
<td>PBMA first developed for use in the US defense sector in the 1950s and 1960s and was first used in health care in the 1970s</td>
</tr>
<tr>
<td>Key stakeholders</td>
<td>Decision-makers at micro, meso or macro-level</td>
</tr>
<tr>
<td>Outputs produced</td>
<td>Document outlining options for increasing/decreasing investment and proposed resource allocation</td>
</tr>
<tr>
<td></td>
<td>New budget allocation</td>
</tr>
<tr>
<td>Documented impact on plans/budgets/resource allocation and action in the location where it was used</td>
<td>Primarily taken from Tsourapas and Frew (Tsourapas and Frew, 2011) In 52% of cases, participants had a better understanding of the area. In 65% of cases, the advisory panel’s recommendations were implemented. In 48% cases, disinvestment or resource allocation was achieved. In 22% authorities adopted the PBMA framework for future use</td>
</tr>
</tbody>
</table>

Lessons learned

Factors influencing success or failure:
- Level of understanding of the process: It is important first to understand how priority-setting is currently undertaken, identify the goals and needs of the health authority and assess whether and how PBMA should be implemented. The project can be conducted perfectly in a ‘technical’ sense, but an understanding of the context is required to have a chance of succeeding.
- Importance of high-level support: Lack of top-down support and discontinuity of staff may lead to the failure of PBMA. Having a high-level champion is critical.
- Advisory panel large enough to be representative, but not so large that it impinges on the ease in which decisions are made.
- Availability of data: participants faced difficulties in locating relevant data for costs and benefits, so the exercise is much easier if the infrastructure to collect data is already in place.

Resources to follow through with recommendations should be earmarked.

Enabling factors before the process starts:
- High level champion; strong leadership
- Culture to learn
- Consistent with managerial activity
- Faced with actual decision to be made
- Earmarked resources for processes

Barriers before the process starts:
- No genuine buy-in
- Too many other demands
- Politics prevents evaluation
- Discontinuity of personnel

Enabling factors to implement decisions:
- Real decision has to be made
- Culture open to change
- Integrated budgets
- Earmarked resources for follow-up

Barriers to implement decisions:
- Lack of trust between stakeholders
- Mis-alignment of incentives
- No REAL/PERCEIVED authority to change.
- Lack of allocation experience
- Vertical budget silos
- Politics trumps evidence-based medicine
- Specific program too small.

One of the articles (Dionne et al., 2009) notes that a barrier to implementation was the power of senior executive members to circumvent staff-determined priorities. They had ‘must-dos’ that could not be reviewed and undermined the transparency of the process. There was misalignment between final decisions and the results of the PBMA exercise. The same article notes that ‘if the organization has no real authority to adjust funding levels across programs (ie. The only possible such changes are ‘must-dos’), then priority-setting should not be done at this level.

2) Abstraction sheet (background paper): Greener and Powell, 2003


<table>
<thead>
<tr>
<th>Abstraction categories</th>
<th>Explanations, examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location and context of the study</td>
<td>This paper analyses the decision-making process of health authorities under New Labour in the NHS (UK) through a study of their qualitative responses to questionnaire. Various decision-makers were surveyed: CEOs, CFOs and public health directors</td>
</tr>
<tr>
<td>Application to our template scenarios and roadmaps</td>
<td>Qualitative results revealed that decision-makers were very cynical and frustrated with the process. Why?</td>
</tr>
<tr>
<td></td>
<td>- <strong>Because the decisions/priorities are made at a national level and so the priority-setting at local level is only superficial.</strong> Local managers have to comply with the resource allocation decided on the national level. One respondent noted “There is lip service nationally to the idea of local priorities which are not allowed to impede the increasing national list”</td>
</tr>
<tr>
<td></td>
<td>- <strong>National criteria often perceived to have become so overwhelming that health authorities spend their resources attempting to meet national needs and have few or no resources left for local projects or decisions.</strong> As a result, emphasis on local health priorities happen only if 1) authorities are paying less attention to national guidelines than other authorities and do what they believe “should” happen (but then, they risk losing funding the next budget year) 2) authorities have already met national guidelines and so perhaps are relatively resource-rich or more efficient in some way than the majority of other authorities 3) authorities are not portraying the “reality” within the service but are, instead, presenting the image they believe the gov or study group wishes to see</td>
</tr>
<tr>
<td></td>
<td>- <strong>Likely due to the above, priority-setting and allocation of health resources at the local level are path-dependent, “locked in” to past budget decisions.</strong> Health authorities do not change much of their budget from year to year, but are prepared to reallocate just enough resources to attempt to secure additional funds from government, or to demonstrate they are complying with the latest performance measurement regime</td>
</tr>
<tr>
<td></td>
<td>- <strong>Health professionals do not have the autonomy they need to run services for local people.</strong> At the time of the study in UK the government was increasingly making health managers responsible for meeting health performance criteria</td>
</tr>
</tbody>
</table>
(and, firing them if they don’t meet them), while not giving them the required autonomy and capacity to make those changes.

Another useful observation was that the terms used by many of the respondents were a mix of the colloquial and the technical; **many used terms from econ and finance in discussing their approach to priority-setting and resource allocation, but incorrectly.** Similar to Eddama et al. 2009 (a study w/ decision makers in the UK. Observed that local mngrs may be referring to select notions of econ eval but not using them correctly).

Misuse of management/finance and econ language can perhaps be attributed to:

- Decision-makers trying to demonstrate they are “talking the talk” or using the prevailing acceptable discourse
- They are using this language to further their point that there is discrepancy between the reality and the practice of decision-making process in health

To summarize, **managers and policy-makers must be careful in assuming that, because a department or organization appears to have adopted the appropriate language and discourse, they actually subscribe to it, and are not simply using it to demonstrate compliance to the mangers or central dept, when in fact practices “inside” the organization remain largely path-dependent**
### Annex B. Summary of reviewed approaches used for priority setting for health

<table>
<thead>
<tr>
<th>Approach</th>
<th>Content</th>
<th>Process</th>
<th>Supporting literature</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Case (BC)</strong>&lt;br&gt;A BC sets out the rationale for choosing a project, program or approach to funding. It aims to provide a consistent and well-documented approach to the choice and design of programme, and sets out the need and justification for, and the feasibility and affordability of the programme – making a sound case for the commitment of public funds (value for money) according to existing National, State or Department priorities.&lt;br&gt;Used in countries like the UK and Australia. Currently adopted by DfID</td>
<td>The content for the BC consists of five areas:&lt;br&gt;1. Strategic Case – establishes the case for the programme, linked to expected outcome and impact and linked to existing priorities;&lt;br&gt;2. Appraisal Case – identifies the option that will deliver the programme at optimal value for money, compared to others;&lt;br&gt;3. Commercial Case – ensures that the option is commercially viable and secures the best practice on procurement;&lt;br&gt;4. Financial Case – establishes that the option is affordable and follows principles of sound public financial management,&lt;br&gt;5. Management Case – that sets in place the arrangements necessary for the successful delivery of the programme (including monitoring and evaluation)</td>
<td>1. <strong>Establishment of need.</strong>&lt;br&gt;a. Defining the problem, focusing on the cause not the symptom, and the target beneficiaries;&lt;br&gt;b. Verifying the relationship with existing national, local or donor priorities;&lt;br&gt;c. Providing data on the situation of the programme with respect to the target population;&lt;br&gt;d. Substantiation of the unmet need or demand, preferably with quantitative data, and why it cannot be met now;&lt;br&gt;e. Preparing a framework describing the programme, outputs, outcome and impact level, and how the intervention interfaces with other services.&lt;br&gt;2. <strong>Preparation of an outline, including:</strong>&lt;br&gt;a. Appraisal, including at least two alternative options (their outputs, timing, critical success criteria, theory of change, related assumptions and evidence)&lt;br&gt;b. Costing&lt;br&gt;c. Benefit-cost and risk analyses&lt;br&gt;d. Setting out a design that maximizes results and benefits, minimizes costs, and optimizes value for money, including an estimate of the sustainability of the benefit&lt;br&gt;e. A commercial case, that describes options for related procurement&lt;br&gt;f. Financial case – describes the resources and their management and impact&lt;br&gt;3. <strong>Management case:</strong>&lt;br&gt;a. Describing the overarching governance arrangements relationships between stakeholders and their responsibilities; contracting and disbursement mechanisms etc,&lt;br&gt;b. Monitoring and Evaluation schedule, including a decision on independent evaluation&lt;br&gt;c. A logframe describing the delivery trajectory through milestones and outputs</td>
<td>(Department for Foreign International Development, 2011)&lt;br&gt;(Department for Foreign International Development, 2010, Department for Foreign International Development, 2011, Department for Foreign International Development, 2012, Reiter, 2007)&lt;br&gt;(Western Australian Department Of Health)&lt;br&gt;(Treasury)</td>
</tr>
<tr>
<td><strong>Accountability for Reasonableness (A4R)</strong>&lt;br&gt;A4R was developed to assure consultation and</td>
<td>There are no specific content requirements for A4R itself. Four conditions must be achieved for fair, legitimate priority-setting:</td>
<td>Work published in 2010 acknowledges there is little understanding of what implementing A4R actually entails. While A4R sets standards for evaluating a priority-setting process, it does not clearly define a</td>
<td>(Jansson, 2007)&lt;br&gt;(Martin et al., 2002)&lt;br&gt;(Mshana et al., 2007)&lt;br&gt;(Sinclair et al., 2008)</td>
</tr>
</tbody>
</table>
### Multi-criteria decision analysis (MCDA)

In the context of priority-setting this approach aims to help develop a rational, transparent and systematic approach to the identification of priorities using a deliberative process to rate and rank options.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relevance to the local setting according to agreed criteria;</td>
<td>There are no specific content requirements for MCDA but depending on the area of focus/objective of the exercise may include quantitative and qualitative information.</td>
</tr>
<tr>
<td>2. Publicising of decisions and the reasons behind them;</td>
<td>MCDA assumes a process where consensus is reached in decision making, and therefore where the power to make decisions on program priorities and allocate budget is at least somewhat shared within government or health authorities. The process involves the following steps:</td>
</tr>
<tr>
<td>3. An appeals mechanism, and</td>
<td>1. Determination of mutually exclusive criteria against which health intervention options can be rated by a group of eminent experts. For each criterion, a set of scores (e.g. disease severity 1 – 5; poverty impact yes-no etc.) is determined.</td>
</tr>
<tr>
<td>4. Authority to ensure that the first three conditions are met</td>
<td>2. Gathering of related data to assist the subsequent rating and ranking exercise by health technical experts. MCDA can only rank interventions according to quantifiable criteria, but acknowledging that priority setting often involves non-quantifiable or qualitative issues (ethical, political, cultural etc), a secondary,</td>
</tr>
</tbody>
</table>

- The only prospectively described process based on A4R (in three countries in Africa) appears to have had major limitations in the one country in which it has been evaluated (Tanzania)

- This approach assumes the availability of sufficient, relevant quantitative and qualitative information to enable decision-makers to fully consider the options in the decision area and assure stakeholders that such information was considered. Many difficult contextual issues must also be dealt with for the process to be considered fair.

- We assume a mixture of the steps described in various other options, most comprehensively in a mix of the BC, MCDA and participatory approaches, i.e.

1. Selecting the criteria against which options will be assessed
2. Selecting and consulting with various stakeholders, including the public and an agreed enforcement authority
3. Describing the epidemiologic, systems and other relevant contexts
4. Appraising, rating and ranking the options and incorporating an appeals process
5. Describing the commercial, financial and management cases
6. Describing and publicizing the process etc.

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(Maluka et al., 2011a, Maluka et al., 2011b, Maluka et al., 2010) (Kapiriri et al., 2007, Kapiriri and Martin, 2006, Kapiriri and Martin, 2010) (Daniels N, 2005) (Hasman and Holm, 2005) (Waldau et al., 2010)

(Baltussen, 2006, Baltussen et al., 2006, Baltussen et al., 2007, Baltussen et al., 2010) (Airoldi and Morton, 2011) (Jehu-Appiah et al., 2008)
the UK, Ghana, Brazil, India, Cuba, Nepal and China.

more discursive process may be required. This maybe more context specific and takes away from the ability to generalize the outcome beyond the context of the exercise, but again adds to the accountability and transparency of the process.

3. Statistical or mathematical weighting methods may be used to prevent excessive weighting for a particular criterion or for a particular intervention, or to take into account societal perspectives or ethical considerations.

4. MCDA yields ranking of options according to sets of quantitative scores allocated against the criteria and sometimes includes consideration of qualitative components that cannot be scored numerically but are important in the local context.

<table>
<thead>
<tr>
<th>Participatory approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>This approach is supposed to firmly engage communities in the planning of health services. Mitton et al. (Mitton et al., 2009b) scoping review included 175 published examples, mostly from developed setting: US, UK, Europe, Canada, ANZ. Others described the participatory approach used in Kenya and Uganda.</td>
</tr>
</tbody>
</table>

Content varies, depending on the prioritization exercise for which participation is sought.

In Uganda and Kenya communities were asked to identify disease priorities and service barriers on the demand and supply side across five life stages, using questions to guide the discussion. The process involved:

1. Selection of community or stakeholder representatives to participate at various levels; recruitment is usually purposive, but occasionally random or through self-selection.

2. Engagement in joint macro- or meso-level priority setting exercises or in lower level, community-specific exercises.

3. May involve use of tools or facilitated exercises

From the scoping review (Mitton et al., 2009a), the following observations were made regarding the process:

1. The scope of the engagement varied. Most of the reports described engagement at the highest levels (broad system design or system planning) rather than meso-level (clinical service allocations) where individuals’ receipt of services is threatened.

2. Public engagement was more often voluntary than mandated, but the choice of approach was usually left

(O’Meara et al., 2011) (Kapuriri et al., 2003a) (Maluka et al., 2011a, Maluka et al., 2011b) (Mitton et al., 2009b)
3. The “public” selected varied according to the selection method and often involved multiple groups (38%). Purposive recruitment was most common. Special needs groups were often included.

4. The means of engagement varied between communication, consultation and participation. Within each, there are several options detailed in the article, and often multiple methods were used. Around half were one-off events, and the others on-going, with a median of 3 years. On-going engagement was more common for deliberative processes.

5. Face-to-face engagement occurred in 40% of cases, but was more common in deliberative processes than one-off.

6. Costs were not usually identified.

7. Few (32%) of the engagement processes were evaluated, and this was more often process than outcome evaluation. Unsurprisingly, deliberative and face-to-face methods were better rated. However, where a decision was the intent of the process, 60% said it had been achieved, 30% did not state it, and 10% said it had not.

8. Integration of public and other input in the priority-setting process was not discussed in more than half the papers.

**Programme budgeting and marginal analysis (PBMA)**

A systematic and explicit priority-setting toolkit that helps health care managers identify options for increased resource allocation and options for disinvestment. Focus on resource allocation.

<table>
<thead>
<tr>
<th>Programme budgeting and marginal analysis (PBMA)</th>
<th>Uses the content of BC (see above) for content. Total amount of available resources and existing allocation of resources is also used.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of steps primarily taken from Mitton and Donaldson (Mitton and Donaldson, 2004): 1. Determine the aim and scope of the priority setting exercise 2. Compile a program budget (ie. Map of current activity and expenditure) 3. Form marginal analysis advisory panel 4. Determine locally relevant decision making criteria a. To set the criteria, inputs from decision-makers; board of directors and public can be sought. 5. Advisory panel to identify options in terms of: a. Areas for service growth</td>
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</tbody>
</table>

Used extensively in the UK, Canada, Australia and New Zealand over the last 25 years. One of the few approaches that has been extensively documented and formally evaluated in terms of the influence on policymaking.

| Multidisciplinary approach building on PBMA | See PBMA and BC above. | For PBMA see generic list below:
• Determine aim and scope of priority setting exercise (PBMA used for a single program or across programmes).
• Compile a program budget, e.g. resources and costs
• Form a marginal analysis advisory panel
• Determine locally relevant decision making criteria elicited from the panel, e.g. efficiency and equity with reference to the specific objectives of the area, health system and community. This should be established at the outset of any prioritization exercise. **MCDA can be used at this stage** to decide the criteria and construct measurement scales
• Identify options for service growth; resource release from gains in operational efficiencies and resource release from scaling-back/ceasing programmes
• Evaluate investments and disinvestments in terms of costs and benefits and make recommendations for growth/disinvestment
• Validate results, reallocate resources

**PAR** is used as a vehicle to effectively translate economic knowledge and principles into practice by working closely with managers to demonstrate that

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| b. Areas for resource release through producing same level of output but with less resources |
| c. Areas for resource release through scaling back or stopping some services |
| 6. Advisory panel to make recommendations in terms of:
  a. Funding growth areas with new resources
  b. Decisions to mover resources from disinvesting areas into growing ones
  c. Trade-off decisions to move resources from those scaling-down to those scaling-up |
| 7. Validity checks with additional stakeholders and final decisions to inform budget/planning processes |

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*An extension from PBMA. Examples mostly from developed countries.*

The use of Participatory Action Research (PAR) for PBMA took place in a Canadian Regional Health authority in Alberta. PBMA with A4R in two of Canada’s regions (Alberta and British Columbia).  

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*For PBMA see generic list below:*

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(PPBMA, A4R, PAR, participatory action research, MCDA): (Peacock et al., 2009)

(PBMA & PAR): (Patten et al., 2006)

(PBMA & A4R) (Gibson et al., 2006)

(Urquhart et al., 2008)
such principles are entirely consistent with good practice in decision-making. Elements of this process:

- Examination of recent and current priority setting practices.
- Reflections gathered from senior managers and other stakeholders involved in priority setting about their current practices and processes, through participation in focus groups. Provides information about their involvement, influences, needs for greater understanding, concerns and suggestions for improvements.
- Introduction of priority setting principles (e.g. opportunity costs)
- Development and implementation of the priority setting model with researchers and stakeholders collectively developing and refining a priority setting approach within the organization in an iterative manner
- Framework refinement
- Independent application of priority setting model by the organization
- PAR follow up

A4R is used to align the PBMA process with this framework as it explicitly pursues fairness and legitimacy. However from the documentation it is not clear how it is undertaken in practice.

| Health Technology Assessment (HTA) | Content for HTA relates to specifics of the new health technology in terms of 1) Efficacy; 2) Effectiveness 3) Costs involved in introducing and delivering the new technology and 4) Analysis of the impact on the budget from introducing the new technology. | 1. Form a multidisciplinary advisory committee which is tasked with making technology funding recommendations or decisions. 7 -25 members, all experts/academics, some involved public representatives. Committees were advisory bodies making recommendations to a higher authority rather than decisions.
2. Identify technology for review
3. Review materials and undertake evaluation of submission
4. Committee deliberates and communicates |
| Health Technology Assessment (HTA) | This is an approach designed to guide decision making on adoption of new health technologies (pharmaceuticals, devices, diagnostic tests, procedures) Various systematic | (Stafinski et al., 2011)
(Sabik and Lie, 2008)
(Morland et al., 2010, Shepherd et al., 2007)
(Golan et al., 2011)
reviews available show limited impact of evidence on policies, though incremental progress made in countries like the UK.

Widely used in Western countries, and increasingly being used in developing economies.

<table>
<thead>
<tr>
<th>The Lives Saved Tool (LiST)</th>
<th>The specific content requirements for LiST are as follows:</th>
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</thead>
<tbody>
<tr>
<td>LiST uses modelled estimates of mortality reduction resulting from increasing coverage of cost-effective interventions to guide policymakers on where to invest. Only documented experience of using LiST in country to inform planning is published in Bryce et al, 2010. While LiST stimulated discussion between parties, none of the three countries changed formal targets or plans based on the outcomes of the LiST application. LiST as a tool has been extensively used for research purposes, which similar to other</td>
<td></td>
</tr>
<tr>
<td>5. Feedback received on recommendations; reviewed and submitted to stakeholders for their approval</td>
<td></td>
</tr>
<tr>
<td>Different scenarios are generated in which final coverage of given interventions vary. Estimates of mortality are then used to determine the most effective pattern of investment. Results are presented to government stakeholders to stimulate discussion. No explicit process for engaging policymakers noted.</td>
<td></td>
</tr>
</tbody>
</table>

(Winfrey et al., 2011) (Bryce et al., 2010) (Hazel et al., 2010) (Ricca et al., 2011) (Larsen et al., 2011) (Acuin et al., 2011) (Rudan et al., 2010)
published studies might have indirectly affected policymaking decisions.

| A combined normative-empirical approach (Describe-Evaluate-Improve) | No pre-defined content as the departure point is the reality of the context, e.g. what is being done in terms of prioritization | 1. Describe the actual priority setting, including institutional context; people making decisions; factors considered in priority setting; reasons for their decisions, process for decision-making and the appeals mechanism for challenging the decisions. This takes into account changes in priority due to changing budgets, changing costs and clusters of factors not contained in theoretical accounts.
2. Evaluate the process using inter-disciplinary methods and A4R, with points of agreement considered good and gaps as opportunities for improvement (i.e. to make the process fairer).
3. Improving the process using PAR action research based on the evaluation. The research should be devised with the involvement of beneficiaries, and should improve each of the four A4R conditions.

These steps are said to make the process evidence-based and ethically grounded, and merge process criteria as well as those developed by “muddling through”. |

| Investment Case for Scaling up Equitable Progress towards Millennium Development Goals 4&5 | Content requirements cover the following areas:
- Demographic/epidemiological: who is dying and from what causes; which interventions would be the most effective at addressing the burden of mortality and what is their current coverage
- Implementation science/health systems: what are the health system constraints and which are the most effective strategies
- Economic and financial: what resources are available and how much it would cost. | 1. Consult key stakeholders to determine the need for prioritization and decide the focus of the exercise (e.g. national, district, etc.)
2. Mapping/Review of key related evidence, including data availability, relevant studies and policy documents and problems with planning/budgeting
3. Identify the planning/budgeting milestones targeted and the individual units (e.g. districts)
4. Meetings with stakeholders to explain the process
5. Collect data
6. Choose packages of interventions for which analysis is undertaken in more detail
7. Validate data with key stakeholders
8. Conduct workshops to analyse root cause of problems and define strategies |

(Martin and Singer, 2003)
(Jimenez Soto et al., 2012)
(Trisnantoro et al., 2011)
(Varghese et al., 2011)
(Aldaba et al., 2011)
(Morgan et al., 2011)
burden of MNC mortality in an equitable way.

A regional IC that did not involve policymakers was developed for the Asia-Pacific region by Development Partners. United Nations Children’s Fund has used Marginal Budgeting for Bottlenecks to develop ICs in Africa and selected countries in the Asia-Pacific region. Other institutions have developed ICs using the IC Matrix tool in India, Nepal, Philippines and Indonesia.

Documentation available for those IC supported with funding from the Bill and Melinda Gates Foundation and AusAID in India (State of Orissa, State of Uttar Pradesh), Indonesia, Nepal and the Philippines (equity analysis also conducted in PNG). Varied impact of on plans and budgets in each country.

9. Model the costs and impact of alternative strategies
10. Validate results
11. Work with policymakers to incorporate results into plans and budgets
Annex C. A list of questions guiding assessment of quality of both survey and non-survey data

For Survey Data:

Sources of data such as Censuses, Demographic and Health Surveys, disease prevalence studies and costing surveys have well established parameters for establishing quality. While a review of the methods for measuring quality of survey data is beyond the scope of this report, the following provides a basic guide to determine the reliability of survey data.

- **Examine the manner in which the data were collected**
  - If available, check the questionnaire and survey design documentation. This information will provide information about whether the survey sample is representative of the broader population and if there are likely to be biases in the way the sample was selected or the information collected.
    - For example if a sample was based on a list of registered addresses it may exclude mobile populations or residents of urban slums.
    - Data based on health system records exclude people who do not access health services.
  - Check the manner in which questions were asked. The phrasing of questions may affect the interpretation of results, as will the sensitivity of the question.
    - People usually underreport on sensitive or taboo topics, such as abortion or drug use and that will affect the estimated prevalence of the issue under investigation
    - The issues may also be underreported (and thus, low estimated prevalence) if data collection methods are difficult to use (i.e. filling in diaries or using vaccination cards)

- **Look at the way in which the data are reported**
  - Examine the response rate (which is a number of complete surveys divided by number of people contacted). If the response rate is low the sample may no longer be representative of the population you are studying. Also, look at the number of missing responses for individual questions. The higher the number of missing variables the less reliable the result.
  - Check to see if confidence intervals are reported and that results are reported in a clear manner. If data are transformed, ensure that the method of calculation has been reported, and that it is used appropriately.

For Non-Survey Data:

There are fewer guidelines for determining the quality of sources such as budget documents, government reports, administrative data, focus group studies, key informant interviews and record reviews. Experience, knowledge of the local context and group discussions will help evaluate the quality of non-survey data. The following criteria will help:

- **Completeness**
- Ideally, a source should be inclusive, and should not exclude relevant entities. For example, a report on the private sector should cover non-governmental organizations as well as formal and informal for-profit institutions. Similarly a report on community opinions should source information on as many relevant segments of the population as possible.

- Often the nature of the data source prevents it from being fully inclusive. In such cases it is necessary to not only determine what is being missed, but also the reason for and potential impact of its exclusion.

**- Rigour**

- Data that are collected and assembled in a systematic and rigorous way are less prone to bias. Ideally the source should also provide a critical assessment of the information gathered in a comprehensive and thorough manner.

**- Applicability**

- Care should be taken to understand the context of the study. For example, it may be important to determine if results from a focus group study on health managers in a particular district are applicable to other settings.

- It is also important to examine the homogeneity of the sample to determine if it is a valid representation of a particular group. For example, if records at a selection of hospitals are being audited the hospitals in question should not represent only the best or worst performers.

- It is also important to understand if results are based on past experiences or future expectations. For example, financial records may be measuring anticipated spending, executed spending or audited spending. These may have different implications depending on what is being represented.

**For All Data:**

- Check that the data aligns with existing labels and definitions.
  - Standard terminology should be used. For example, disease definitions should be based on a standard set of diagnostic criteria used elsewhere. Similarly terms such as “Skilled Birth Attendant” should represent individuals with a set range of skills.
  - Also check if geopolitical boundaries have changed between the time of analysis and the time of data collection. If changes have occurred, care should be taken to account for the impact this will have on results.

- Ensure that the data is not too old.
  - Much can change in the period between data collection and analysis. Changes in roles and responsibilities, administrative boundaries, and national policies may result in data becoming out of date very quickly. Before using a data source make sure that it is still representative of the current situation.

Annex D. List of References


