Strengthening Health Services in Low Income Countries: Guidance for decision-makers

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1 One page summary

Little is reliably known about which strategies for strengthening a health service or system are most appropriate in which settings, other than in the settings where they were implemented. Few researchers state the results which they think are likely in settings with similar aspects to the one they studied.

These strengthening approaches or methods are effective in some situations:

- Some approaches used for “scaling-up” or spreading interventions to strengthen disease or other specific programmes especially those which have been successfully piloted. (strength of evidence for this statement: S2)
- Some approaches which identify constraints to health service delivery and develop and implement constraint reduction actions, with the active involvement of communities and each level of the government system (often supported by action researchers)(evidence strength S3)
- Carefully managed and facilitated quality projects of certain types.( evidence strength S2)

Some strengthening changes are likely to have some success (ie they can be implemented and the results lead to improved services in amount and quality) in most LICs, such as:

1) Removing financial disincentives and/or providing extra pay in general or for specific items, using carefully designed and implement strategies to do so. Financial interventions usually have a big impact, but can be unpredictable in results.

2) Interventions to maintain and increase the number of well trained health workers are likely to make a big difference to strengthening health care delivery in LICs especially in rural areas or unpopular areas with population concentrations. (There is mixed evidence of the effectiveness of training programmes to increase the skills of existing workers)

3) At the level of changing physician behaviour in some respects (eg to follow guidelines) we know for sure written materials and didactic education is not effective. It is thought that multiple interventions using local analysis of constraints and financial incentives can be effective, but much depends on what type of behaviour change is the aim.

4) Some changes to drug logistics systems

The success of all these strengthening strategies depends on the approach used to design and implement them. The section 3.3.1 “general approach” presents the evidence about which general approaches are likely to be effective for implementing most of the specific interventions above (eg constraints analysis, consultation, skilful adaptation, attention to political and power aspects of the change).

In addition there is some evidence about the necessity of certain context factors (which are different from the items in “approach”), namely:

- Leadership and implementation structure are required: “the right” leadership support and champions are important, as well as a strategy implementation team, and other support teams including facilitators, experts, and strategy-progress information providers (who could be researchers).

- Already organised and functioning representation, social networks and community organisation which can be used to develop support for the change, consult about details of implementation, and may also help with implementation.
2 Introduction

Health systems in lower income countries are often not able to provide for the basic health needs of their populations. The progress of recent initiatives such as the WHO millennium development goals and new funds for disease programmes is slowed by the limitations of these health service and systems. Strengthening these health systems has become a priority, but this cannot be achieved immediately – the causes of these limitations are many, complex and with deep historical origins.

It is important to ensure that the new resources are used in ways which effectively strengthen these services and systems in both the short and long term. There is some experience and research which has found effective ways to strengthen service delivery and system functioning. However this research is largely unknown or unused by policy makers and decision makers in ministries, local government, aid agencies and work bank advisors. Although evidence from elsewhere will need to be adapted to the local situation, this research can help avoid expensive mistakes and save time and money in choosing and implementing effective health service strengthening strategies.

The purpose of this report is to present some of the first guidance and materials from the world bank “improving health service programme” (WB IHSP). It gives interim guidance based on the best available evidence which was identified in a rapid review of actions for strengthening health services and systems.

The full review of research is available as separate appendices to this report, which also drew on a seminar on the subject at the world bank in July 2006. This interim guidance will be updated as a result of three more systematic reviews of research and a number of country case studies which will be completed in 2007. Further information about the IHSP and these other studies is available from the HDNHE section of the world bank website.

3 Methods for the review of research

The rapid review of research concentrated on studies and reports which described how strategies for strengthening health services and systems were implemented, rather than on the impact of strengthening strategies. Other reviews for the WB IHSP which are in progress concentrate on evidence of which strategies are most effective. The questions the review aimed to answer were:

- What are the different strategies which are used to improve health services in lower income countries (LICs)?
- How were changes actually made in the many different countries and regions?
- What helps and hinders implementing the changes?
- What best “evidence guidance” can be provided to decision-makers to help them strengthen health care more quickly in more cost effective ways?
- Which extra data is most needed and how can world bank field studies best contribute to the missing information?

3.1 Definitions of implementation, strategy and key terms

The first methodological issue addressed in the review was which of the many different meanings of “implementation”, “strengthening strategy” and other terms to use for searching and discussing the studies found in the review. The following definitions were used and additional concepts are defined in the full review report 2 Appendix 1.

**Intervention**: the idea, concept or plan which lies behind the real actions actually taken. (The “conceptual content” of the change) (eg extra payment for finding and immunising every eligible child)

**Strategy for implementation/implement**: the actual actions taken in the name of the idea or plan to carry through into reality the idea, concept or plan. (These actions were not carried out before implementation) (eg birth registers were used to identify eligible children, clinics were offered and mothers after delivery were followed up, immunisation was given in clinics only, payments of 10c per immunisation were provided to each worker after confirming treatments by…)

**Approach for planning and implementing the intervention**: methods used to design the intervention, plan and implement it (eg whether an initial assessment of service limitations and challenges is made, use of constraints analysis, degree of consultation, degree of participation in adapting the intervention etc)

**Environment**: the immediate and wider conditions under which the strategy is carried out which are likely to influence whether or how it is implemented.

**Environmental factors**: identifiable influences which help or hinder implementation but which are not part of the implementation strategy (ie facilitators, enablers, drivers, determinants, obstacles, barriers, constraints). (eg health worker motivation and morale, security situation (war or peace), government effectiveness, willingness or ability of community to play a part)

**Change coping capacity**: the number and complexity of changes which managers and employees can make at the same time as they continue to provide services. (eg whether there are frequent changes in staff, finance amounts, demand for service, place of work)

“**Strength” of service delivery**: the amount, accessibility and quality, in most situations over a defined period of time. The strength of an health system was defined as consistent performance over period of time in providing the health and illness
prevention services most needed by those most in need. Actions to strengthen a particular service or a health system were assessed in terms of their ability to achieve sustained improvements in services and systems in the above respects.

3.2 Search and assessment of evidence

The review examined published research and studies and reviews already undertaken, as well as unpublished reports and reports of experience and “lessons learned”.

The search was made using the methods described in the WHO HEN reviews for policy makers (Øvretveit 2003 & 2005) and described in the full review Report 2 Appendix 1. The search used Pubmed and a variety of sources to identify relevant studies and reports, including World Bank materials. Studies were selected for review according to the following criteria: relevance to strengthening a service or a system and the quality of the evidence.

Selected studies were summarised by noting:

- Intervention and implementation: The type of intervention and the implementation strategy used to improve or strengthen health services or systems.
- Environment: The macro context and the health systems environment of the strategy/change.
- Impact on health services: How it changed provider behaviour and the organization of health services (or any other positive or negative consequences)
- Process: The process of implementation and what helped and hindered.
- Validity of findings: The quality of the data and the study.

The quality of specific studies was simply classified as:

- “eA”: Empirical research strong evidence (intervention study, or rigorous interview or survey study where data was gathered systematically, methods were described and reproducible, and conclusions followed from the data)
- “eB”: Empirical research, weak evidence (small interview study, survey with bias, or based on personal experience)
- “eC”: Conceptual discussion, not based on systematic empirical research

A more detailed assessment of evidence was also carried out using these criteria:

S1. Strong evidence of results: consistent findings of results in two or more “type 1” design studies D1 (RCT – see appendix 1 for description of designs)
S2. Moderate evidence: consistent findings of results in two or more scientific studies of acceptable quality (D2 and D3)

S3. Limited evidence: only one study giving results, or inconsistent findings of results of several studies. Studies of results showing perceptions are graded S3 if they were collected and analyzed according to accepted scientific methods using an appropriate design (e.g. D2-D4)

S4. Evidence of implementation only: description of implementation collected and analyzed according to accepted methods using a reasonable design (e.g. D4 or D5)

S5. Descriptive studies only: no studies demonstrating scientific evidence (D5 only)

S6. No evidence of any type.

4 Findings from the review of research

4.1 Limitations of the evidence and research

There is little strong evidence about either the results, the details of implementation or about factors and conditions which help implementation of strategies for strengthening health services.

There is some systematic knowledge which provides decision makers and researchers with a more informed starting point than they would otherwise have.

No comprehensive reviews have already been carried out of research into a range of strategies for strengthening health services, either of implementation, or of effects on health services, or of other consequences..

Three overlapping groups of literature contain most of the relevant evidence:

- studies of specific disease programme- strengthening strategies or of constraints to these programmes
- studies of scaling up or spread programmes which take an intervention which strengthened a health service or programme in one place and try to reproduce it elsewhere or nationally (often pilots for a specific disease strengthening strategy).
- studies of changes or reforms to improve a range of health services (e.g. to develop primary care or hospital services, and often involving a number of strengthening actions)

Specific strategies: some studies of have been undertaken of these: a few unsystematic overviews, and some studies of single strategies such as actions to strengthen reproductive health. Most of this is research into scale-up of successful pilots.
**Attribution:** There are methodological challenges to designing research which will allow valid attribution of any changes to the strategy studied, rather than to other changes. These challenges increase with more complex strategies which involves multiple actions at different times, such as health reforms. It is also more difficult to identify helping and hindering factors for multiple action strategies – some factors may help some actions and hinder others.

**Level of research sophistication:** The methodological challenges are well known. However, most of the studies reviewed failed to use simple methods to increase scientific validity and use-value: by giving an adequate description of the strategy, context and helping and hindering factors, and by assessing other explanations for any effects on organisation which were documented.

**Same label, different strategy:** Conclusions from overviews (and some reviews) about one type of strategy may be invalid because the studies in the review considered different interventions which had been given the same name or label.

**Factors outside the programme:** Many overviews which note constraints to health system delivery (e.g. Travis 2004) do not provide any more in-depth analysis of possible causes of the barrier or constraint, or note constraints outside the programme itself.

**Systemised knowledge:** There is a considerable amount of systemised knowledge in the form of evaluation reports, case studies, lessons learned/good practice documentation, and pooled expert opinions from conferences or other methods for combining expert opinion. This has not been reviewed but may be more useful and more valid that some of the scientific research.

**4.2 General findings from the studies reviewed**

Little is reliably known about which strategies are most appropriate in which settings, other than in the settings where they were implemented (Few researchers summarise key aspects of the settings and develop their conclusions to state the results which they think are likely in settings with similar aspects)

There is some indication that the following strengthening approaches (general methods used for different types of strategies) are effective in some situations:

- Some approaches used for “scaling-up” or spreading interventions to strengthen disease or other specific programmes especially those which have been successfully piloted. (strength of evidence for this statement: S2)
- Some approaches which identify constraints to health service delivery and develop and implement constraint reduction actions, with the active involvement of communities and each level of the government system (often supported by action researchers)(S3)
- Carefully managed and facilitated quality projects of certain types.(S2)
A strategy to strengthen one disease programme or a health service, which could be implemented and which was successful in one situation, is unlikely to be implementable or have the same results, even in the same country or region unless it is adapted to the new situation (S3).

Adaptation is a skilful, continuous and time-consuming task if it is to be successful, and probably cannot be undertaken only by service managers (S4), especially if stakeholder and community input is used.

There are a number of conditions which are necessary for full implementation and will themselves change during implementation (S2).

These helping and hindering conditions appear to be different for different strategies. However, some are repeatedly found in different studies of different strategies (S2).

These critical conditions need to be understood by decision makers and their local strategy tailored to overcome local barriers when planning and implementing the strategy. Some indications of which conditions are necessary is provided by some research, but this needs to be supplemented by local research about what informed observers think may prevent, hinder and help implementation of the strategy described to them.

Whist the evidence about necessary conditions for large scale strengthening strategies is limited, much more is known about the conditions necessary for smaller successful quality projects and physician behaviour change in western health systems and in some developing countries (Øvretveit 2003, Grol & Wensing 2004). This research suggests possible barriers and facilitators to strengthening actions in certain situations in lower income countries.

At the level of changing physician behaviour in certain respects (eg to follow guidelines) there is good evidence written materials and didactic education is not effective. There is some evidence that multiple interventions using local analysis of constraints and financial incentives can be effective, but much depends on what type of behaviour change is the aim.

4.3 Findings useful for decision-makers in choosing and implementing a health service strengthening strategy

It is possible to formulate some “best available evidence” guidance for decision-makers which is not misleading and which provides a sound foundation for developing and implementing a strengthening strategy. The guidance below will be modified through findings from forthcoming work bank systematic reviews of research and detailed field studies. The best evidence guidance to date can be summarized in the following points:
4.3.1 General approach (methods used in different types of strategies)

1) Some strengthening changes are likely to have some success in most LICs, but all changes will need to be adapted by national and local leaders to the specific situation to have the maximum effect in strengthening health services (S2).

Example: scaling-up a child and maternal health service strengthening pilot in Ghana was by peer demonstration, diffusion, and teamwork. In the multi-cultural context of Ghana, adapting strategies to local conditions was more important than in Bangladesh, where national models are likely to have more relevance due to a more common cultural context (Phillips et al 2006).

2) Implementation will be more effective if the guidance below is considered and modified for a particular area or country, using consensus building and consultation.

3) Effective consultation and consensus building requires a planning and implementation process and structure with key stakeholders at each level. They and local communities will need support to participate in an informed way through the provision of information, education and facilitation. Separate funding may be required and may be available for this.

4) There is some evidence that appropriate action research can increase the effectiveness of planning and implementing strategies to strengthen health services, by providing regular feedback on health needs, assessment of constraints, implementation progress and impact and extra analytic capacity to devise constraint-solutions.

5) Two possible ways of reducing barriers to strengthening health systems are: a) to expect the system challenges which research shows apply to a number of programmes and address these; and/or b) develop a specific constraint-minimisation strategy for a specific strengthening strategy in one place.

6) There is some weak evidence that multiple action strategies are more likely to have a more significant and long term effect than one-action strategies alone, if the multiple actions are reinforcing.

7) With limited resources and capacity, most multiple action strategies the specific actions will need to be sequenced and phased-in at different times. This will require that the prior conditions for certain actions are understood.

8) It is more difficult to design and coordinate a multiple action strategy and the risks of failure are greater than for less-complex or single subject strategies, especially for sequenced strategies. If is more difficult to consult and get consensus and continual support for each action than for one. There is a chance that specific actions will not be implemented as intended and may be implemented in ways which undermine or conflict with other actions.

Example: incentives to provide certain services (e.g. special payments for immunization) can reduce motivation to provide others, which may be more needed locally.
9) More complex multiple action strategies demand higher management capacity if the actions are to reinforce each other and are not to become conflicting. Careful and persistent management is needed in consultation, consensus building, planning, coordination, reviewing and regular readjustment. They may not be feasible in situations where management capacity at national regional or local level is limited and cannot rapidly be developed or separate management capacity cannot be introduced.

4.3.2 Specific items to consider in choosing, formulating and implementing a strengthening strategy

Strategies to maintain and increase the number of health workers are likely to make a big difference to strengthening health care delivery in LICs\(^1\) especially in rural areas or unpopular areas with population concentrations (S3),

Leadership and implementation structure are required: “the right” leadership support and champions are important, as well as a strategy implementation team, and other support teams including facilitators, experts, and strategy-progress information providers (who could be researchers). (S4)

Assessment and planning: strengthening programmes appear to be more successful which assess local opportunities and constraints, and plan actions to exploit opportunities and resources and to address constraints.(S3)

Available research capacity and evidence can assist strengthening. Evidence of what works elsewhere and of health needs, constraints and results of pilots has been found to be important for persuading decision-makers, for providing input into planning and reviews and allowing adaptation and needs based actions. Both conventional researchers and action- or developmental researchers can play a key role in some programmes in providing data, but also extra analytic capacity and ideas for revising strategies and are an important resource to use and develop.(S3)

Participation and social networks help form priorities, shape the strengthening approach, and create “local ownership” often necessary for maintaining the changes. The disadvantages also need also to be considered: real participation is costly, time consuming, difficult to create and maintain, and could lead to a loss of the “active ingredients” in the strengthening strategy which is not offset by the added implementability (S3)

\(^1\) Chen et al (2004) estimate that sub-Saharan Africa will need to add “one million health workers through retention, recruitment, and training if they are to come close to approaching the MDGs for health.”
Each level of the health and local government system has a role in strengthening all health services, which needs to be specified, ideally through consultation, and then developed through training and other actions. (S3)

Feedback to strategy implementers is needed from continual monitoring of progress, constraints and new opportunities arising from the changing situation. (S4)

Continual flexibility and adaptation is needed through regular formal and informal review points are needed where the strategy is modified for the changing situation (S4).

There is no strong evidence for or against the view that “vertical” programmes or delivery systems create a number of problems, such as distorting overall primary health care away from local needs.

Policy and institutional constraints can be more serious than resource constraints. Some health-system structures may moderate the effects of these former constraints (S5).

There are some common and repeatedly found constraints to many strategies and scale-up programmes which need to be considered and used as a starting point for local analysis:

- Finance for health services
- Human resources and management and planning
- Employee and provider motivation and payment systems
- Quality and performance improvement programmes and methods
- Necessary changes to organisation
- Drug supply and better prescribing
- Management development and management system development especially for management information and use
- Good governance including community participation in health services
- Cross-sector interventions which strengthen health services

More information about each of these is provided in the research review report and appendices (Øvretveit 2006b,c).

**4.3.3 Find reports from situations most like your own**

Current thinking suggests that the type of strengthening strategy which is most likely to be implemented and effective may be profoundly influenced by the resources available and the nature of governance (S5). Decision makers could consider where their situation is represented on the figure below, and then learn from studies from situations which share similar resource and governance characteristics. The lessons about type of
strategy, its implementation and the conditions needed may be more applicable to their situation than lessons from situations with different resources and governance.

Resources are defined here as a combination of average per capita income, the amount spent on health care and the number or density of health workers.

Governance is defined primarily as degree of effective accountability for politicians and government officers, and as a combination of: the strength of the formal government and health system management process and structure, especially for systematic planning and reporting; performance on anti-corruption criteria; citizen and community participation and history of stakeholder consultation, involvement, and culture of accountability. A war situation is low governance.

Some guidance for identifying similar countries on these dimensions can be gained from the listings in Appendix 2 section 6 (Øvretveit 2006c), reproduced from Ranson et al 2003.

5 Example of possible steps for a health service strengthening programme

The following describes a series of steps to illustrate how the guidance above could be used by leaders to plan and implement a health services strengthening programme.
- Create a structure to formulate a service-strengthening strategy for the country and each region, for public or private services or for both.
  
  o This includes defining the responsibilities of managers at each level, the groups of stakeholders for consultation and consensus building which the managers will work with. It also means defining the management processes, which are at this stage the reporting systems for receiving the terms of reference of the groups and reporting-up proposed actions.

- Decide which of the broad country-categories best describes the situation in the area with the services to be strengthened (See the above resource/governance classification figure).

- Make an assessment of the limitations and the strengths of primary, secondary and other health services in different areas for meeting the needs of those most in need especially the poorest and most vulnerable groups (this provides evidence for supporting funding proposals and base-line data for monitoring the results of the strengthening programme)

- Consider the implementability, costs and benefits to specific strengthening strategies within the following categories, using both evidence from published research and the views of stakeholders and communities

  o Finance for health services
  o Human resources and management and planning
  o Employee and provider motivation and payment systems
  o Quality and performance improvement programmes and methods
  o Necessary changes to organisation
  o Drug supply and better prescribing
  o Management development and management system development especially for management information and use
  o Good governance including community participation in health services
  o Cross-sector interventions which strengthen health services

- Use lists of constraints which research has discovered limit health service strengthening (below) to guide national and local information gathering on the nature, severity and possible solutions for national and local constraints:
Consider from this and other reports which evidence about constraint-reduction actions is most applicable to your country, and the strength of the evidence. (Evidence of effective actions which help to reduce the constraints at different levels are described in (Oliveir Cruz 2003):)

**Community and household level 1:** Community participation.

**Health services delivery level 2:** Staff motivation; Team work; Frequent communication;

**Health sector policy and management level 3:** Liaison units or group of facilitators for driving and maintaining change; Frequent communication;
Supervision and feedback mechanisms; Effective technical and managerial support to strengthen capacity of community health workers, staff, and NGOs; Participative, bottom up approaches involving community, managers and staff

Public policies cutting across sectors: Decentralization and autonomy at regional and local levels; Intersectoral collaboration; partnerships (with clear definition of roles of each partner and democratic involvement)

Environmental characteristics: Political and macroeconomic stability; Commitment, leadership and ownership of all partners (government, staff, community).

- Combine actions to strengthen delivery of disease specific programmes with actions to strengthen health services and the health system overall.
- Combine this information with the national information described above to formulate sub-strategies to reduce each of the constraints. Consider which actions would produce significant short term results and which are longer term actions.
- Consider which actions in each sub-strategy are the same or similar and then prioritise these in the overall strengthening strategy.
- Sequence the strategy in relation to priorities, funding availability and your assessment of the absorptive- and change-coping capacity of the system.
- Consider carrying out a pilot strengthening project to test the strategy and the constraint reducing actions.
- Create a more detailed structure for implementation involving stakeholders, and with systems to allocate the resources to each sub strategy, and to monitor and to regularly review the strategy.

The details of how to carry through implementation will be different in each country. Decision-makers will again be helped to choose country examples to draw on by considering which countries in the resource/governance categorisation of figure are similar to their own.

6 Conclusions for decision makers

It is clear that health service delivery and systems in lower income countries require rapid strengthening and that more resources are now available to support this. Research does provide the basis for some guidance for decision makers to ensure these resources are used to the best effect. Funding sources will require that proposals for strengthening programmes are based on the best available evidence about which strategies can be implemented, how they are best implemented and the likely results.
It is also clear that the work of strengthening health services needs to be organised and carried out along-side existing every day operations and planning, and that additional management capacity structures and programmes are needed for this strengthening work.

Research does not provide clear evidence that one type of strengthening strategy is more cost-effective than another or more easy to implement. A review of research suggests that similar strategies have different implementation trajectories and results in different countries and regions. Even scale-up projects often have very different fates in different regions of one country.

Each strategy needs to be adapted and managed to suit the local situation. This requires a capacity to adapt and progress the strategy through the inevitable obstacles, and this capacity needs to be separated from operations to concentrate on the strengthening work. Multiple component strategies may be more effective, but only if there is capacity continually to coordinate the complexity of the strategy.

Managers and groups planning and formulating strengthening strategies will need to build consensus with stakeholders and need their active involvement if the strategy is to be implemented. All can be helped by drawing on research into strategies in similar situations to their own, especially in using studies of constraints and solutions as a starting point for their own local investigation of likely constraints and local plans for addressing these.

More details of research evidence are presented in Øvretveit (2006b &c) reports 2 and 3.

7 Summary recommendations

If some strategies are not listed below, this does not mean that they are not effective. Rather, that there is insufficient evidence of their implementability and effectiveness in many LIC situations. There are some interventions where the rationale is excellent or where anecdotal or where isolated examples show great success, but these are not noted below.

The strength of recommendation below are not wholly based on the strength of evidence of effectiveness, but are also based on evidence of whether the intervention is implementable in most situations and the cost and risks. They are based on an estimate of the likely benefit (in part based on strength of evidence of effectiveness of an intervention in most LIC situations), compared to the cost and risk of the recommendation not being fully implementable and of the harm which may come.

100% recommendation = strong evidence of effectiveness in many situations with minimal relative costs, and easy and certain to implement with no likely harm resulting.
50% recommendation = some evidence but much depends on how implemented and the situation (intervention is context dependent), with a reasonable degree of cost/benefit, and some risk of no implementation or benefits not being realised.

The strength of evidence S1-S6 is based on the categories described in section 3.2 of this paper above.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Recommendation</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1) Specific interventions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>70% Increase finance to ministry of health, if government health system has been historically underfunded and there is reason to believe the resources will be spent on health care and used effectively.</td>
<td>Some evidence that countries with good governance have been able to spend effectively on health reforms or specific programmes (strength of evidence S3). There is evidence that increasing resources can be an effective intervention to create the conditions for other interventions to be successful (eg allows improvements to infrastructure, leadership etc required to implement interventions)</td>
</tr>
<tr>
<td>Health workforce</td>
<td>80% Increase workforce in total and possibly specific cadres (eg midwives, doctors)</td>
<td>Weak evidence (S3) but strong rationale in many LIC situations</td>
</tr>
<tr>
<td>Contracting out specific services</td>
<td>60% Invite offers from other organisations to provide certain non-core services, 40% switch to outside provider.</td>
<td>Conflicting evidence (S3)</td>
</tr>
<tr>
<td>Drug logistics</td>
<td>40% Finance, develop and implement a strategy to ensure health facilities always have drugs considered essential for their level and provide rational prescribing training</td>
<td>Conflicting evidence of success in implementing drug supply improvements and sustainable funding (S3), very dependent on situation, and may have negative results if personnel not able to prescribe properly, but viewed as essential by the population.</td>
</tr>
<tr>
<td><strong>2) Conditions for</strong></td>
<td>These are factors which are not the intervention but form the context for it and need to be</td>
<td></td>
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<tr>
<td><strong>implementation</strong></td>
<td>addressed by a “secondary strategy”</td>
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<tr>
<td>Leadership</td>
<td>90% Develop competent and committed leaders to carry through a strategy, through training, selection and removing incompetent leaders</td>
<td>Moderate evidence that strengthening strategies often fail due to leadership without skills (S2) but little evidence of effective leadership development for implementing strengthening strategies</td>
</tr>
<tr>
<td>Management structure</td>
<td>80% Develop management structure to implement the strategy while providing routine services</td>
<td>Moderate evidence that strengthening strategies are less successful with management structure with weak delegation and accountability (S2)</td>
</tr>
<tr>
<td>Representation</td>
<td>70% Develop and use representation from powerful groups who will support or oppose implementation</td>
<td>Some evidence that most strategies are difficult to implement due to “organisational inertia”, and that some strategies or blocked or accelerated by powerful interest groups (S3)</td>
</tr>
<tr>
<td>Coordination and community organisation</td>
<td>65% Create and use formal networks and community groups to help develop implementation design and carry through and maintain implementation</td>
<td>Some evidence that using community groups and coordinating with other agencies is effective in designing and carrying out implementable strategies and sustaining them (S3).</td>
</tr>
<tr>
<td>Resources</td>
<td>80% Ensure finance and people are sufficient and can be made available to pay for and work continually on implementation</td>
<td>Some evidence that the needed financial and people resources are often underestimated, in part because implementation is often longer than expected (S3)</td>
</tr>
<tr>
<td>Corruption</td>
<td>50% Reduce the opportunities for corruption in transferring resources.</td>
<td>Some evidence from case studies that corruption above a certain level reduces resources and increases the time needed for service strengthening (S3)</td>
</tr>
</tbody>
</table>

3) General approach to implementation

*The method used to implement many different types of intervention (eg participatory)*

| Constraints reduction plan | 90% Make an assessment of constraints using frameworks used in research for this purpose and develop a constraints reduction strategy | Good evidence that constraints assessment and plans were a factor in successful implementation of some specific strengthening programmes (S2) |
| Adaptation | 90% adapt the intervention to the situation, using the constraints analysis, previous research in similar situations and consulting with those who know the situation. | Good evidence that most interventions need adaptation and that competent leaders will still need detailed advice from local experts to formulate an implementable plan (S3) |
| Consultation | 70% consult and involve interest groups at all stages | Evidence that some strategies have failed in part due to gaining support and ideas about details of implementation |
Muliple action strategies

40% Use a number of actions of different types at different levels if the management capacity and systems are able continuously coordinate the different actions.

Some evidence that multiple actions at difference levels can be more effective than single actions, but only if carefully planned and coordinated in implementation. Some evidence that more complex strategies cannot be adequately managed by some LIC government managers and systems (S3)

As noted above, if some strategies are not listed, this does not mean that they are not effective. Rather that there is insufficient evidence of their implementability and effectiveness in many LIC situations.
8 Appendix: types of research design

D1. Randomized Controlled Trials: Studies that involve a random allocation of the intervention and comparison (e.g. usual care) to different study groups, including measurement of the outcome before and after the intervention has been made.

D2. Non-randomized Controlled Interventions: Non-randomized studies containing a before and after measurement that compare results in two or more groups. The comparison intervention may be “usual care” or another intervention. Case-control studies, which divide groups based on different outcomes, and then assess prior “exposure” to an intervention, could also be considered in this group. Those case-control studies where the assessment is made in a nested (i.e. prospective) manner would have a stronger design than those studies where the intervention or attributes occurred in the past.

D3. Uncontrolled Interventions: Non-randomized studies containing a before and after measurement, but without any comparison group for the intervention (a cohort study).

D4. Cross-sectional studies: Non-intervention studies, based on surveys conducted at one point in time, or where measurement is made at only one point in time when an intervention has occurred without comparable control groups.

D5. Descriptive Studies: Descriptive case studies and expert opinions, and those reports that lack comparison groups or measurement of outcome variables.
9 References


Øvretveit, J (2006) Appendix 1 review of research on implementation and results of actions to strengthen health services in low income countries, World Bank and Karolinska Institute MMC, Stockholm: 2006. jovret@aol.com

Øvretveit, J (2006) Appendix 2: review methods and frameworks from studies of strengthening strategies, World Bank and Stockholm: Karolinska Institute MMC, 2006. jovret@aol.com

**Appendix 1 (Report 2): Review of research on implementation and results of actions to strengthen health services in low income countries (separate document)**


**Appendix 2 (Report 3): Review methods and frameworks from studies (separate document)**


1 Review method
2 Strategies to Strengthen Health Services – lists from different studies
3 Hanson 2003 “constraints” list
4 WHO 2005 constraints list
5 Classification used by Travis et al 2004 overview
6 Ranson et al 2003 Governance/health system constraint - placing of each country
7 WHO 2005b Table 1: constraints and disease and system-wide strategies
8 WHO 2005b Table 2 –current situation for each health system-strengthening element
9 Constraints to health service delivery in Tanzania (Munishi (2003))
10 Decentralisation approaches (Munishi (2003))
11 Implementation research
12 Notes on change for health service strengthening