Council on Health Research for Development (COHRED)

**Review version for expert consultation.**
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# Building and strengthening national health research systems

## A manager's guide to developing and managing effective health research systems

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**Comments and feedback on this manual are welcome. Please complete the review form (available in www.cohred.org/NHRSsupport/), or contact Dr Andrew Kennedy (email: nhrs@cohred.org; fax: +41 22 591 8910; tel: +41 591 8903).**

## A practical guide for health research directors and managers

This manual is designed to support the efforts of forward-looking health research leaders in low and middle income countries – directors of research, senior managers, medical school deans and leaders of major health research programmes, and those in similar roles.

It is a practical guide, which will help health research leaders plan and put in place a health research system that works for the needs of a country.

The advice, approaches and tools in this manual are based on more than a decade of work by COHRED with senior health sector officials, managers and research leaders in many countries. These approaches respond to demands that health research must be far more focused on and responsive to a country's needs – in two words: *better managed*.

Many health research leaders have voiced frustration that current health research activities are not of direct use to policy and decision making; that they do not consistently produce evidence that can guide decision makers' on how to address issues of health equity, proceed with health sector reform, or improve the delivery of health services or staffing needs, and deal with the many other challenges faced by the country's health system. Furthermore, health research can play an important role in advancing social and economic development, but few countries have established the systems to enable this to happen

### Management advice and tools for health research system development

The aim of this manual is to provide decision makers with a practical guide that they can use to inform their efforts in NHRS development. It is not designed to provide a recipe that has to be followed step by step. Instead it provides a framework that countries can use to examine their national health research system and a series of "approaches" for developing the research system that can be adapted to tailor efforts to local contexts and requirements.

These approaches comprise both technical and process components:

- **Technical components** can be template questionnaires and policy documents, or analyses of methods and strategies used to provide information or deal with specific gaps or weaknesses;
- **Process components** focus on the practical steps required to carry out and manage the activities.

A modular design has been chosen for the development of this manual. This first version sets out an overarching model for NHRS development and a framework for guiding these activities. It also includes a module on NHRS Assessment, in particular on NHRS Mapping, which collects information necessary to inform all further NHRS development efforts.

Other modules under development cover:

- Additional components of the NHRS Assessment approach to broaden the scope and increase the depth of information collected;
- An approach to Priority Setting for health research;
- An approach to Health Research Policy development and implementation;
- An approach to Equitable Research Contract formulation for research institutions and government.

### Learning between countries

The framework and approaches presented will be complemented by examples illustrating the practical experiences of senior health research leaders in their national health research development efforts.

This is a ‘review version’ of the manual, it is being circulated to a small expert group for review and comment before being launched in February 2008. **We would therefore like to receive your feedback by the end of January** at the latest to enable us to incorporate your input into the launch version.

We welcome and encourage all comments, suggestions, feedback and the sharing of experience on approaches that have worked (or not) in national health research system development.

Please complete the review form (available from http://www.cohred.org/NHRSsupport/), or contact Dr Andrew Kennedy (email: nhrs@cohred.org; fax: +41 22 591 8910; tel: +41 591 8903). We look forward to hearing from you.

The manual will be regularly updated to include new thinking and additional approaches and experiences, validated through practical work in countries. Check for regular updates on http://www.cohred.org/NHRSsupport/

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## Index

## Boxes

## Figures

# 1. National Health Research System Development

## 1.1. Context

Many countries, from the UK and Ireland, to China and Brazil, to Laos and Guinea Bissau, are currently examining how they can make sure that their investments in health research more effectively deliver the evidence required to improve health and health equity and drive national development.

Other countries acknowledge that health research does not fulfil its potential but are unsure of how to start the process of 'reform' required to deal with these limitations. The particularly broad and complex nature of the health research system makes this task a difficult one. The national health research system is not a distinct structure; it is formed from the overlap and relationships between national systems aimed at health, education, science and technology and development; it covers both the public and private sectors and it interacts with foreign and international systems.

Within this context few governments have the dedicated expertise in health research system development that they can draw on to guide this process. For example, in the UK the Rand Corporation were heavily involved in developing the Department of Health's 2006 National Health Research Strategy.

The aim of this manual is to provide decision makers with guidance on developing their national health research systems. Based on more than 15 years of experience working with low and middle incomes countries on national health research system development, it provides a **framework** with which the functioning of the system can be examined, a **process** within which the practical steps to manage development efforts can be planned and a series of **technical components** that countries can tailor to their own particular needs and contexts.

These three aspects of NHRS development, apply, in principle, anywhere, but this manual is targeted at countries with greatly varying levels of system development. The approach adopted has therefore been designed to be flexible and adaptable. With this action oriented focus, even a relatively limited set of basic information can have a major influence on NHRS development. Furthermore the approach has been designed to ensure long-term sustainable development, firstly, because it is sensitive to limited resources; and secondly, because it enables local experience and understanding to be built as part of the health research system improvement process.

## 1.2. Why are countries looking more closely at their systems of health research?

Internationally there has been an increased demand for evidence to demonstrate the effectiveness of public expenditures. This applies equally to the health research sector where all but a very few countries make substantial investments.

In recent years, there has been a convergence of opinion concerning the profile and need for health research, highlighting its importance as a source of solutions to major health problems, as an essential input to health sector decision making and as a driver of economic development [Figure 1].

As the profile of health research has risen, there has been a growing recognition that not enough research is being directed towards the highest priority areas. This can be seen at the global level with the lack of research addressing the diseases of the poor (as characterised by the campaigns to address the "10-90 Gap" and "Drugs for Neglected Diseases"), but it can also be seen at the national level - in high, middle and low-income countries [Box 1].

**Box 1 – Mismatches between health research production and national needs**

Common contributory factors:

- A science and technology driven research system may prioritise research for technology or economic development over health development. In the low and middle in countries that have made significant progress increasing research production, economic priorities have take precedence over health priorities.
- Curiosity driven research often targets areas where researchers can gain high impact journal articles at the expense of research with aims to inform health sector decision making. Incentive structures and career pathways often promote research for researchers rather than research for health development.
- Donor driven research agendas can divert national investments to international priorities. Low income countries tend to invest in human resources and infrastructure for health research relying on foreign sources for investments in research projects. This results in commissioning decisions often bypassing national decision makers and their needs.
- Many countries have yet to identify their health research priorities and some have not set health or health system priorities. Such a policy environment prevents researchers and research funders, whether national or foreign, from aligning research production with research needs.

These developments have generated a greater depth of understanding of the particularly complex relationship between health research and the range of benefits returned. This, in turn, has identified the limitations of current approaches to the management of health research at the national level.

Decision makers are thus faced with the situation where demand for health research is rising, but management of the health research systems that can supply this research is limited. Traditional approaches to reform will not be sufficient in this context; decision makers within the health research system often have little direct authority over the range of stakeholders that need to act for reform to be implemented. A holistic approach, that considers the system of health research from conception to impact and its relationship with other key systems, such as health, education and science and technology, will be required for health research to fulfil its potential role in driving national health, social and economic development and achieve equity in health.

## 1.3. The foundations of National Health Research System development

In many countries, the NHRS functions in an almost "ad hoc" manner. Many of its components operate in isolation – often not even realising they are part of a research system – rather than working towards common national objectives in research and development. Health research is often commissioned and conducted with little, if any, coordination or consultation with the range of users that might act on the findings to improve health, increase the effectiveness of health systems, reduce inequity or stimulate economic growth.

An effective governance and management framework, to set direction and provide a regulatory structure, will be necessary to make the transition from such an ad hoc system to a "formal" NHRS that maximises the benefits that can be achieved from health research. A NHRS in which health research realises its full potential does not happen by chance, the process of NHRS development has to be effectively designed and managed [Figure 2].

## 1.4. Understanding the role of National Health Research Systems

Before determining what changes will be required to improve systems of health research, an understanding of what a NHRS does and how it works will be necessary. The role of the system's "governance and management bodies" is particularly important, as this is where the responsibility for driving NHRS development lies.

**Box 2 – From Essential National Health Research to National Health Research Systems**

The concept of a National Health Research System (NHRS) emerged onto the international agenda from preparatory work conducted in the lead up to the International Conference on Health Research for Development held in Bangkok in 2000 (IOC 2000). Ten years on from the 1990 Commission on Health Research for Development it became clear that for countries to operationalise Essential National Health Research (ENHR) and improve health systems using the "essential" evidence generated, then a more comprehensive framework of how research was coordinated, produced, translated and put into practice - beyond setting national priorities and monitoring resource flows for health research - was necessary. The NHRS concept emerged during a period of intense debate on the functioning and evaluation of health systems, and in an environment where 'systems' and 're-engineering' theories were being transferred into the health sector from the quality improvement field.

The aim of the framework presented here is to provide a structure around which the NHRS, in terms of its functions, its processes, its institutions and its lines of authority, can be described. This can then be used as a starting point for NHRS improvement.

A national health research system can be defined as:

> The people and institutions that generate or use research evidence to maintain, promote and restore the health and development of a population; and the activities and environment that facilitate these processes.

It can be viewed from a number of different complementary perspectives, and each illustrates an important facet needed for successful decision making:

- A **Functional** perspective [Box 3] sets out, at a conceptual level, the main tasks that a NHRS should conduct. These tasks cover the infrastructure supporting the NHRS, the research production process, and, importantly, efforts to enhance the uptake of research findings by those that can use them to improve health and development. On its own this perspective presents the NHRS as something of a 'black box': it lacks the clarity to illustrate how these functions are, or should be, operationalised within the system.

- A **Systems** perspective [Figure 3] describes the NHRS in terms of the key components of the research cycle, from needs assessment to research project, evidence based action and then impact, which in turn feeds back into the research needs assessment process. Viewing the system from this perspective is useful because it is less abstract, stakeholders can more easily view their role in the NHRS at each of the different stages, and it provides a framework to illustrate where in the cycle the different functions operate and where improvements are necessary[1].

- An **Institutional** perspective [Figure 4] maps the institutions that commission, conduct and use research within the system. These maps are used to illustrate what roles the institutions play within the system, which can be especially useful in helping decision makers to understand how the NHRS works at a practical level. This information can be presented in different ways, for example by sector (Government, Education, Health, Business enterprise etc). The default, public-private, option is used in this manual because it illustrates lines of authority for decision making, and thus it shows which decision-makers should be brought on board the NHRS development process.

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[1] This systems perspective of a NHRS has been adapted from the "Payback" model of Buxton and Hanney (Buxton 1996, Buxton 2000, Hanney 2004) which describes the system of research production and utilisation for health and development gain. The payback model is designed to help research funders assess the full range of returns gained from their research investments (for further details see http://www.brunel.ac.uk/about/acad/herg/publications/payback).

**Box 3 – The National Health Research System from a functional perspective**

Five primary functions of a national health research system can be defined (IOC 2000, WHO 2001, Pang *et al* 2003):

**1. Governance and management**

This covers the range of activities that must be carried out to ensure that the NHRS is provided with leadership and strategic direction, that it coordinates the various elements of the system and produces the necessary research. Sub-functions include: strategic vision, system structure, policy formulation, priority setting, monitoring and evaluation, promotion and advocacy, and the setting of norms, standards and ethical frameworks.

**2. Financing**

This function concerns the allocation of funds for health research in a manner consistent with national research priorities. In many low and middle income countries few research commissioning decisions are directly controlled by national decision-makers. Better coordination of the financial investments of foreign partners and advocating for increased national commitments to health research are therefore important elements of the financing function.

**3. Knowledge generation**

The aim of this function is generate knowledge to enable countries to determine their particular health problems, assess potential solutions, and choose the actions most likely to produce the greatest improvements in health. Knowledge generation is defined as a responsibility not just of researchers, but also of health/public services, NGOs and other stakeholders.

**4. Utilisation and management of knowledge**

This function highlights that the research process does not stop at knowledge generation, but that for health and other benefits to be realised knowledge must be communicated to decision makers and then translated into policy or action. The definition stresses the importance of strong links between researchers, policy-makers, and practitioners, and the generation of an information producing, sharing, using culture within the NHRS.

**5. Capacity development**

Capacity development should be considered for all the necessary competencies required of a well-functioning NHRS and not just capacity in research skills. Competencies include research management, knowledge management, research utilisation, and research communication. Furthermore, to ensure sustainable and effective capacity strengthening a comprehensive systems approach should be adopted.

Above all others, the relationship between the health research system and the health system is the most important. For health research to play its full role in informing decision making at the policy, management and practice levels, the health research system must be considered a key component of the health system[2]. For research to be used effectively, research must be relevant, available and fed into decision making processes. This will not happen by chance, the health research system and the health system will have to be designed to make this happen and a culture of evidence based decision making engendered amongst decision makers at all levels of the health system [Figure 5].

Almost all countries have a NHRS (even if the components act in an ad hoc uncoordinated manner) but no two NHRS are the same. Even at the most basic level, the institutional structure, channels of communication and decision making, the political and power relations and the policy framework differ between systems.

This framework describes from three different perspectives, what a NHRS does, the processes through which it works, and the structures that undertake these tasks. To move from this framework to actionable information that can be used to guide NHRS development efforts, information describing the system, its capacities and its performance is required. This "National Health Research Systems Assessment" provides an approach to collecting, analysing and using this information as part of a process of NHRS improvement.

## 1.5. What can be expected from national health research system development?

1. **Short term**

   Activities will focus on establishing structures and processes, and developing and implementing policies and improvement plans. This should result in countries:

   - Establishing a framework for **governance and management** of the NHRS;
   - Developing national **policies and priorities** for health research;
   - Making the **transition from an ad hoc to a formal NHRS** and starting a long-term cycle of NHRS improvement.

2. **Medium term**

   If effective mechanisms have been established, the NHRS should start to produce:

   - A greater share of national health research production addressing national priorities;
   - Better alignment of research funding, both national and international, with national priorities;
   - A greater use of research in decision-making in health policy, health system management and health care practice;
   - Enhanced research capacity not just in research skills but also in the skills required to demand, manage and use research.

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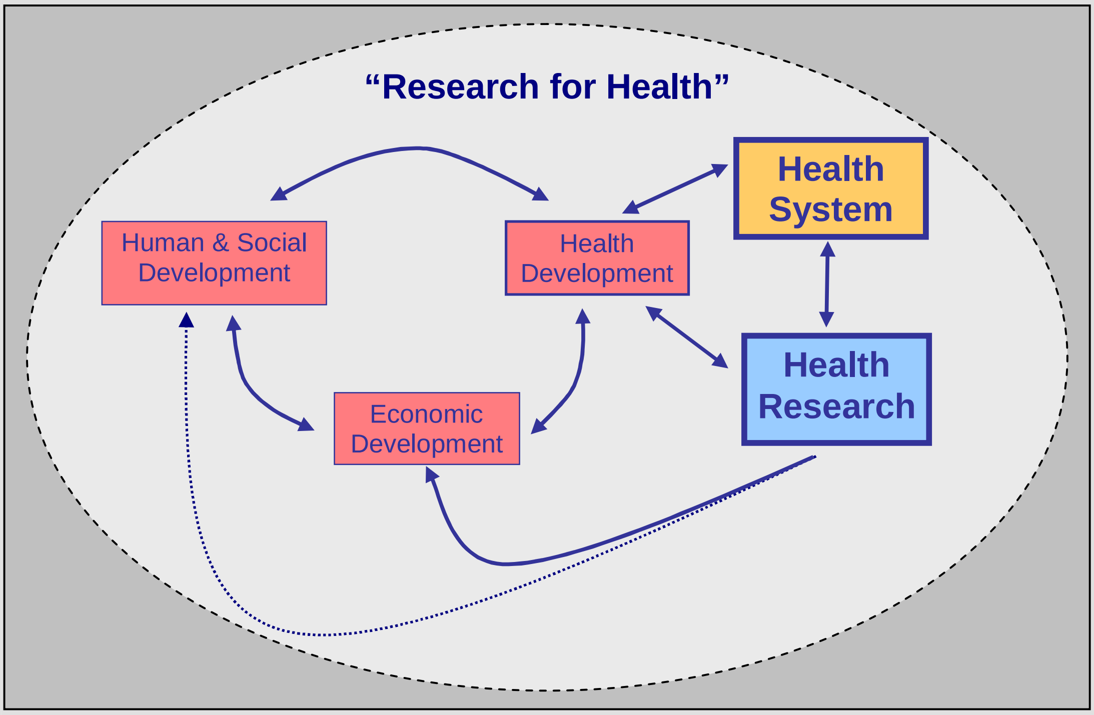
[2] For health research to contribute to social and economic development, it needs to be considered as part of social and science, technology and innovation systems. Future editions of this manual will include modules on the links between the NHRS and these systems.

3. **Long term**
   The ultimate aims of the NHRS are to improve health, reduce health inequity, and drive social and economic development.  However, given the number of factors that influence these outcomes attributing the effects to the NHRS will be difficult.  However, in-depth evaluation to assess the contribution of the NHRS to development in these areas should be integrated into system monitoring and evaluation.

**Figure 1 – The benefits of health research**



*The potential benefits of "Research for Health" extend far beyond the generation of new knowledge needed for specific disease control or health system improvement. Health research is also an important part of general science and technology and innovation systems, both in countries and globally.*

By improving health, health research contributes **indirectly** to the 'virtuous cycle' where populations in which health is more equitably distributed are better educated and more productive. Populations with higher education levels tend to have better health related behaviours and are more effective users of health services. More economically successful populations spend more on health care services and consult earlier in their health problems, reducing the risk of complications and serious illness, thus reducing health care costs.

Whilst the **direct** economic benefits of health research are widely acknowledged in high income countries, where the pharmaceutical and biotechnology industries employ significant numbers of highly skilled staff and generate considerable income, it is only recently that low and middle income countries have moved into these fields. In most LMICs, health research is conducted as a predominantly public sector enterprise focused on the advancement of scientific understanding and, often to a lesser extent, the evidence needs of the public and the health system. Few countries have introduced policies to stimulate the jump from health research to health innovation, and the delivery of new services and production of new health interventions, that can both improve health and contribute to economic development.

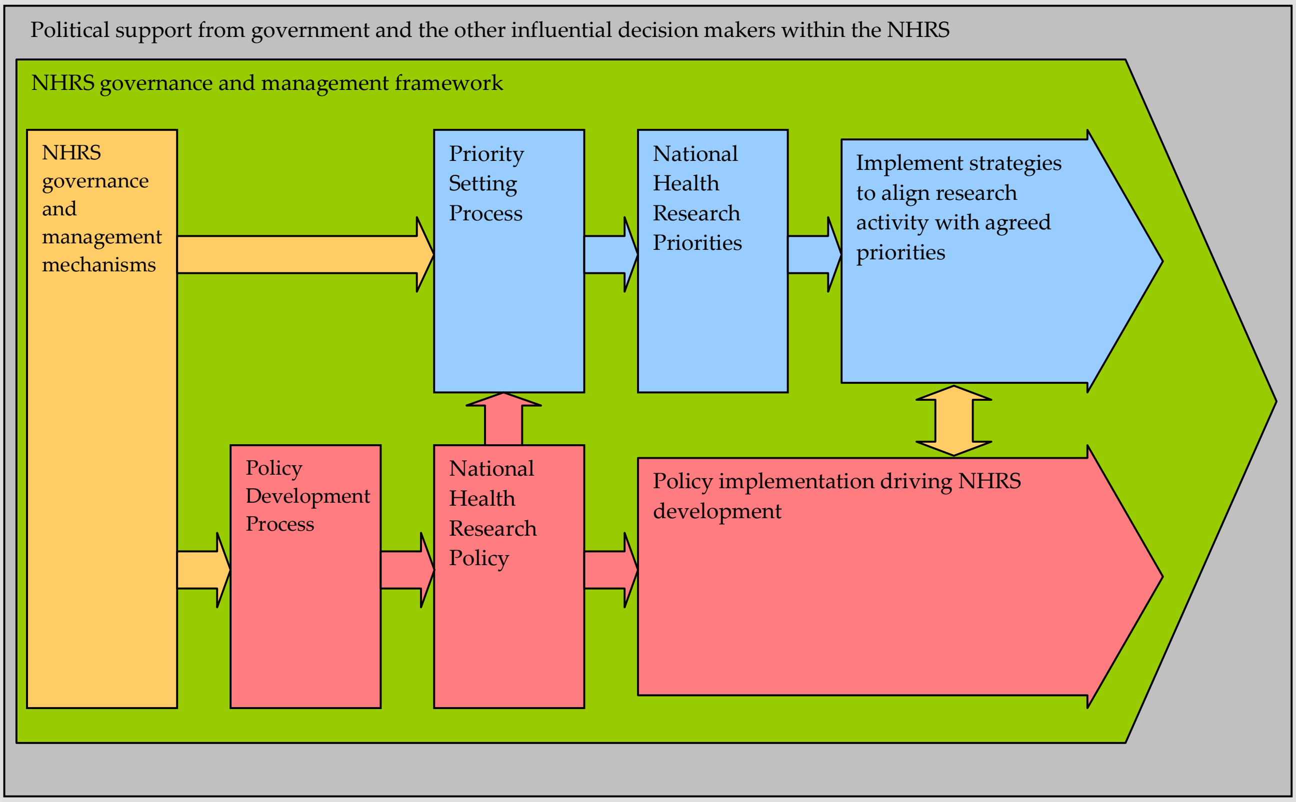
Health research has an especially important role to play in research-driven economic development, because in many LMICs much of their research expertise is located in the health sector. In analysis of the academic research production of low income countries, health research formed more than 50% of all production in 72% of countries.

One area where the benefits from health research have not been widely acknowledged is in human and social development. Through its effects on health, health research can contribute to a better educated population. However in addition it can also enrich the social fabric of the country, firstly by retaining skilled and educated populations within the country and effectively using these skills to further national development. Secondly, health research can empower populations to a more effective engagement within the public sphere through increased understanding of science and the promotion of an evidence based culture. It is also here that the interface between health, health research and the right to health and development becomes clear.

For health research to have an impact on equity, the health research system, the health system and in a wider context, the social and economic systems have to be focused to deal with equity issues. Health research in many countries does not fulfil its potential in helping to solve problems of health inequities because few have designed their national systems to specifically address this issue.

This figure illustrates the cycle of interactions between health and human, social and economic development. These are key aspirations of individuals and societies: prosperity, the achievement of optimal potential, and health to both enjoy and facilitate these aims. Research for health can play important role in realising these aspirations.

**Figure 2 – The foundations of national health research system development**



*Three key components of an effective governance and management framework: Governance and management mechanisms (e.g. a research council), a national health research policy and health research priorities. Together these components form the foundations on which NHRS development can be built.*

Three core components– collectively – form the basis from which a country can make the transition from an ad hoc to a formal system of health research.

- **Governance and management** (for example through a research council, academy of science, national research committee or directorate or research) provides the vision, leadership, oversight, decision making and execution functions within the NHRS. Where such mechanisms are absent their establishment should be considered as one of the first steps in NHRS development. The mechanisms are necessary to steer, plan, implement and 'manage' NHRS development, and as the system matures, to monitor, evaluate and further reform the system to ensure continued relevance to agreed objectives. Policy and Priority development are two essential 'tools' that result from effective governance and management.

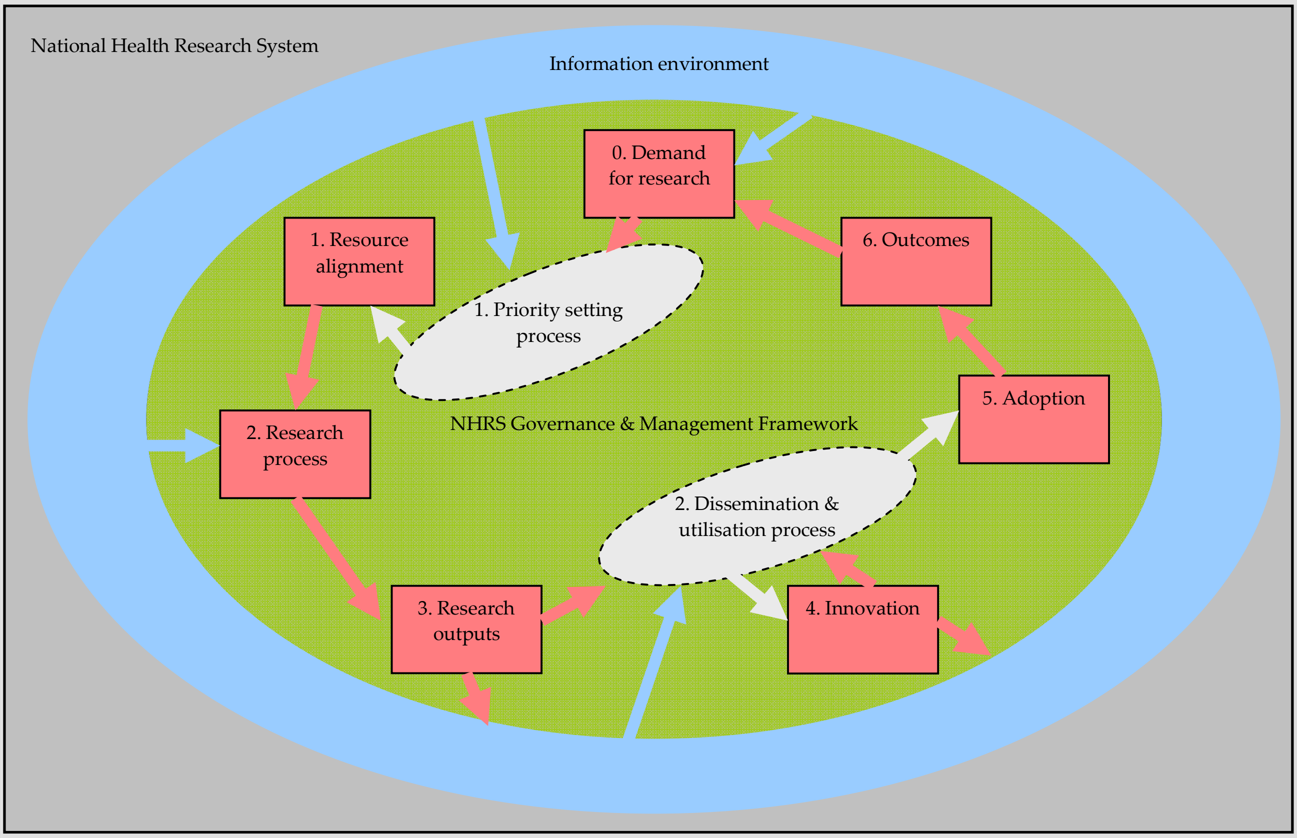
- **NHR Policy** provides the legislative and policy framework within which all actors in health research can operate and through which the goals of the system are set and strategies for their delivery proposed. Thus, a NHR Policy framework (it is more appropriate to speak of a policy framework as it is unlikely that the entire NHRS can be framed in a single comprehensive policy), consisting of a number of smaller policies and pieces of legislation, can be used as the vehicle through which reform of the NHRS can be managed. Key components of the policy framework will be definition of the process through which national health research priorities should be set; a strategy to ensure stable and predictable health research financing, and a long term development framework for human resources for health research. **As important as the policy is the process of policy development**. This should be conducted in a consultative manner that builds ownership for the proposed changes amongst those who will have to take action, and those who will be affected. Without the support of these groups implementing the policy will be extremely difficult.

- **NHR Priorities** define health research needs for the country. Without defined priorities researchers and funders, whether national or foreign, cannot align their activities with national requirements. Nor can governance mechanisms measure the impact of the NHRS or demonstrate the transparency and accountability of the system. A rigorous priority setting process can ensure that the priorities defined balance the needs of the different stakeholders, policy makers, health systems, communities or the business enterprise sector, and the needs of the system's short, medium and long terms objectives. (A module of this manual devoted to priority setting is currently being pilot tested and will be made available shortly).

The development and implementation of each of these components are dependent on high level government support and strong leadership. To ensure that "health research" turns into "research for health and development" support will be required from all the ministries that will have to act to make this happen. In addition to the Ministry of Health, these ministries will likely include Science and Technology and Higher Education, which hold responsibilities for the research production sectors. They may also include ministries whose cooperation is needed to build the environment for good research, such as Ministries of Planning and Finance and Offices of the Cabinet, Prime Minister or President.

At the same time, the support of those responsible for realising the benefits of health research needs to be obtained as well: academia, research institutes, the health system, and in some countries the Non-Governmental Organisation (NGO), business enterprise and Overseas Development Assistance (ODA) sectors.

**Figure 3 – The National Health Research System from a systems perspective**



*When planning system strengthening, an overview of how the system works is an essential starting point. This can inform questions of: How does each step function in our system? Which work well and which are weak? Where is development needed – or what are the priorities for developing specific components of the system?*

The systems perspective illustrates the workings of the NHRS.

**Information environment**

The NHRS does not function in isolation; it relies on information from the health system and the science, technology and innovation sector, both nationally and internationally. In turn, the knowledge generated by the NHRS, as well as being used within the system, also feeds back into this wider knowledge environment.

**Step 0: Demand for research**

Before the research cycle can start in earnest there must be a demand for research. This demand may come from research users, whether policy makers, health managers, health practitioners, the public, or indeed the business enterprise sector, faced with a problem that requires research evidence to solve. Alternatively, demand can come from the researchers themselves, they may require research to advance scientific understanding or use make use of existing research to produce, or improve, cost-effective policies, services or products. An important input to stimulating demand is information, which may describe the current health situation, innovations or new research developments.

**Process 1: Priority setting**

Given the resource limitations faced by all countries in the world, rich or poor, not all demands for research can be acted upon. Competing demands must be dealt with and prioritised according to the health and socio-economic needs of the country. Together this process of identifying demand, defining needs and prioritisation is termed Priority Setting. Underpinning the Priority Setting process is evidence, on the current health situation, the capacities of the NHRS and the existing knowledge base.

The scale of the priority setting process will be defined by the capacities and resources available to the country. In some countries, the identification of demand may be limited to the research required to inform the implementation of the National Health Policy; in others it may entail a formal consultation process involving researchers, research commissioners and the full range of research users, including those peripheral to the system who may need significant facilitation to help them identify their research demands. The scope and depth of the priority setting process will also vary, from the provision of broad guidance on the health conditions or health system challenges for which research is required to the definition of specific research questions on which grant proposals will be sought. As the NHRS evolves so too can this process to better target the research activities of the system to research needs. (a forthcoming module on priority setting will provide detailed information)

**Step 1: Resource alignment**

To translate the agenda developed by the priority setting process into a portfolio of projects and programmes addressing national health research priorities will require the explicit realignment of interests and activities on the part of research commissioners, research managers and researchers. This realignment will have to include research capacities at the individual, institutional and system levels, and the distribution of financial resources available for research.

The distinction between projects and programmes is an important one. Research projects have a relatively, short-term focus and are designed to tackle specific research questions. Research programmes work in a longer timeframe with aims to deal with a range of research questions around a larger problem. A considerable body of research in different fields, from basic science to applied health services research, or in the same field, advancing understanding, may be required to provide the evidence needed to solve the problem. Research programmes can play an important role in managing this research process and the generated evidence base, to deliver the information required.

**Step 2: Research process**

Only at this step does “research”, as it is traditionally understood, begin. Research teams with the necessary skills set will be established, often requiring multidisciplinary and multi-institutional collaborations. They will develop project proposals to address the priority research topics based on the research literature and other relevant information. These proposals may then go through institutional review processes of quality control before submission. Successful proposals will undergo a process of ethics review and project governance mechanisms, steering committees or data monitoring committees, can be established. The project team can then conduct the planned data collection analysis and interpretation. Research managers can play their role in facilitating this process.

**Step 3: Research outputs**
If successful the research process will end with the production of a publication describing the study and setting out its findings and recommendations. In general, this will take the form of reports to the project funders, or articles published in academic research journals. However, publication should not be taken for granted, a significant proportion of research projects do not complete the research process or do not fully report their findings. Research managers have an important role to play in monitoring output delivery.

It should be noted that many research projects do not have a direct or immediate impact. What is more common is that a programme or body of research is progressively built that increases understanding around a specific problem until the case for change becomes established. At the same time in cases where research is tied to specific decision making needs, the links between steps 3, 4 and 5 are greatly strengthened and individual research projects are much more likely to influence decisions that lead to immediate improvements, particularly in health and health systems.

**Process 2: Dissemination & utilisation**
For research results to be used effectively, the research has to be excellent and the results relevant, available, and channelled into decision making. The "dissemination and utilisation process" is meant to cover the range of activities, formal and informal, that make this happen.

**Dissemination** is more than the passive production of journal articles. Dissemination refers to researcher driven activities to promote the findings of their research to those that can use it. These efforts may target potential users directly through presentations, the production of briefs or guidelines, study or training days and so on; or they may target users indirectly through the media, health promotion campaigns or 'policy shapers', who may be influential individuals or organisations, such as NGOs.

**Utilisation** activities are user driven, and refer to the active search for evidence to inform decision making. Activities may take the form of developing an evidence based culture amongst research users and ensuring they have access to research literature and the skills to identify, adapt and act upon the information they require. It may also involve mechanisms through which research is channelled into decision making processes, for example through the implementation of guidelines to encourage evidence based decision making, through "knowledge broker" mechanisms that identify and translate research into a form that can be used by decision makers, or through ensuring that the decisions of health technology or drug regulatory bodies are based on solid evidence of cost-effectiveness [Box 4].

This process of dissemination and utilisation provides two ways through which research findings can lead to changes in health related behaviours, health care practice or healthcare management; either through a direct change or indirectly through a process of innovation.

Underpinning this process is research communication, which concerns a range of issues on how researchers can communicate often quite complex findings to mangers policy makers, practitioners and the public, and how these groups can be enabled to better understand research and make more effective use of it in decision making.

**Step 4: Innovation.**
Innovation is the process through which research results are used to develop or improve a policy, service or product that can then be used by the health system or the public to improve health. Innovations will also have to go through a process of dissemination or utilisation before they are adopted.

**Box 4 – Research utilisation resources and initiatives**

1. Canadian Health Services Research Foundation: http://www.chsrf.ca/knowledge_transfer/tools_e.php
2. Regional East African Community Health-Policy Initiative (REACH): http://www.crdi.ca/uploads/user-S/11551301781REACH_Prospectus.pdf
3. Evidence-Informed Policy Network (EVIPNet): http://www.who.int/rpc/evipnet/en/
4. UK National Institute for Health and Clinical Excellence (NICE) : www.nice.org.uk

**Step 5: Adoption**
For research findings or innovations to result in improved health outcomes or in economic benefits, they will have to be used by policy makers, practitioners or the public. This may involve the implementation of a new policy initiative, a change in prescribing practice, the use of a new service or a change in health related behaviours. The efforts required to facilitate this change may be relatively minor (the purchase of additional supplies of *Drug A* rather than *Drug B*) or they may require major health system reform (the provision of services for *Condition X* in primary rather than secondary care facilities). Such a process of change management will have to be considered in decisions on the adoption of research findings and innovations. In fact, if major changes are anticipated, the capability of the health system to manage these changes may become a research priority in its own right.

**Step 6: Outcomes**
For health research to fulfil its ultimate aims these evidence based improvements in the health system or health behaviours will have to result in gains in health, health equity and development. This should not however be taken for granted and an important element of research cycle is to "close the loop" and ensure that the anticipated health benefits are realised. As in any planning cycle a monitoring and evaluation system that routinely assesses the impact of the implementation of new health technology and policy, will play an important role.

**NHRS Governance & Management**
Underpinning the activities of the NHRS is the system's Governance and Management Framework. This ensures that the infrastructure resources and capacities required to support the research cycle are established and that the system is effectively managed to deliver its goals. It should be noted that governance and management functions not just at the system level, but at the institutional level and the project level.

## Figure 4 – The National Health Research System from an institutional perspective

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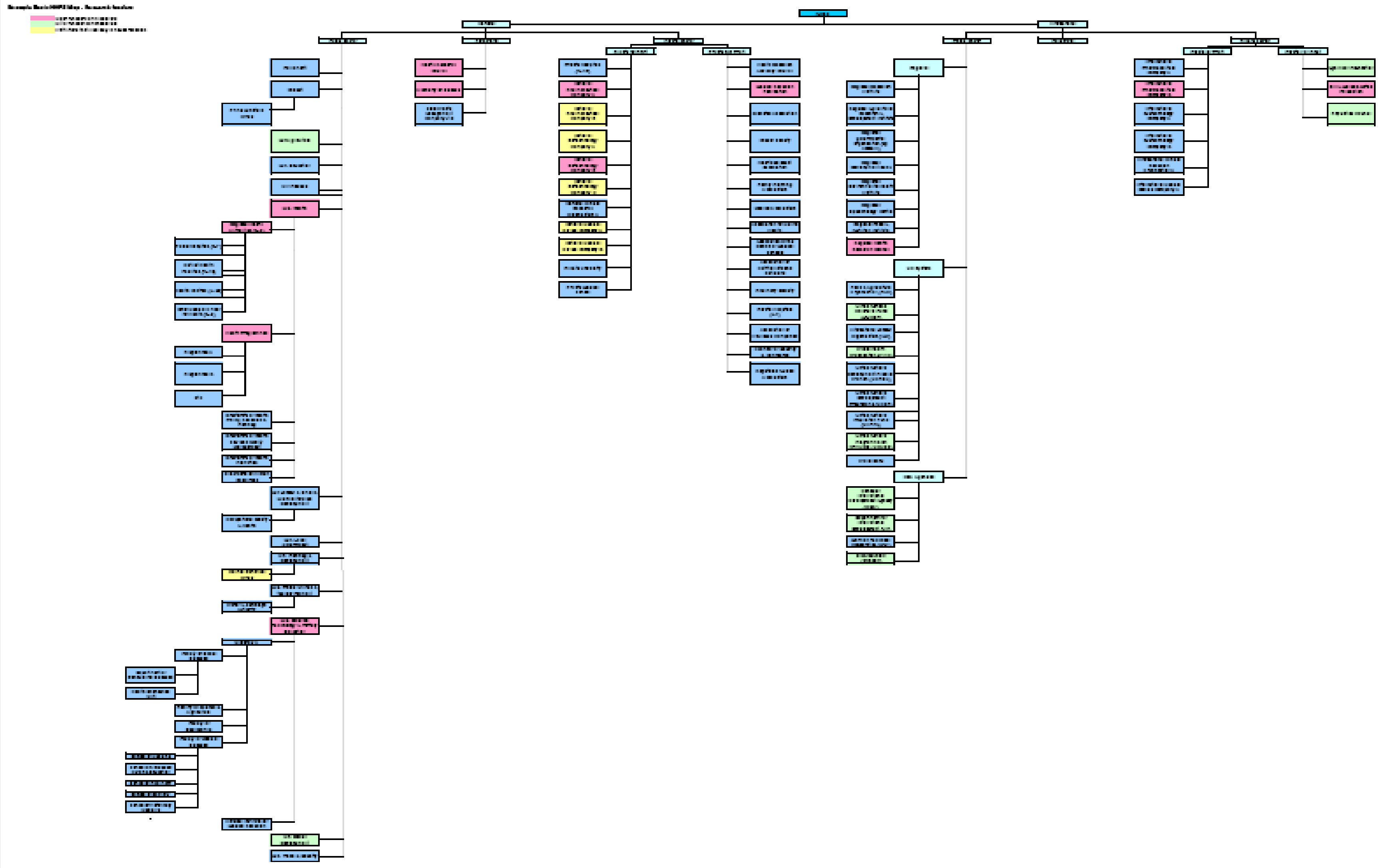
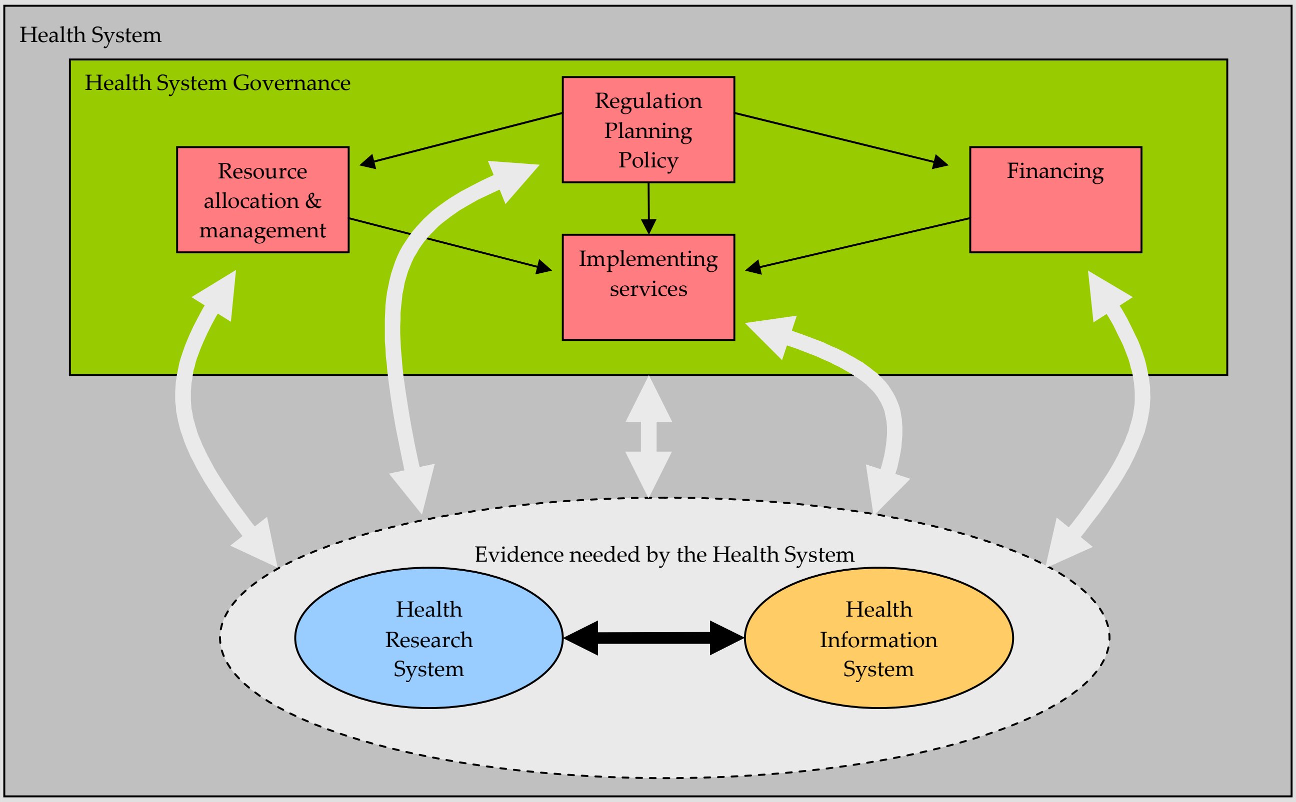


*The aim of looking at the NHRS from this perspective is that it allows to decision makers to identify the main institutions active within the NHRS and the roles they play. This example, illustrates the institutions that fund research within the system, but this basic format can be used to illustrate research production, research use, or research governance for example. For larger NHRS the diagram may have to concentrate on top level institutions only, using separate diagrams to illustrate the university sector or the health system.*

**Figure 5 – Evidence - an integral part of the Health System**



*Health research needs to be considered as a central component of the health system. To achieve the goal of maximal population health, evidence –based decision making within the health system is vital.*

The health system can be described as having four main functions underpinned by a system of governance. Each of these five elements will require evidence to inform effective decision-making and some can be provided by routine health information systems. However health information systems cannot capture all the information needed for specific decision making at the right times, but the health research system is able to deliver this. Together the health research and health information systems provide the evidence needed by the health system to inform decisions and to continuously improve its performance.

However, these interactions should not be considered as a one way provision of information, but rather an information exchange. The National Health Information System (NHIS) will collect routine information from these elements which it will compile and analyse before feeding back into decision-making processes. An effective NHRS needs the research demands of these users to feed into the process of research priority setting,

Routine health information is a key input to stimulating research demand, to priority setting and to individual research projects. In return the NHRS can feed new methods and indicators, identified as useful in decision making, into the NHIS. In many countries there are considerable overlaps, in responsibilities and capacities, between the two systems.

## 2. National Health Research System Assessment

### 2.1. The importance of NHRS Assessment

NHRS Assessment provides the evidence on which NHRS development efforts are based. It provides the information required to describe the NHRS and the evidence required to establish the foundations of NHRS development, providing the inputs needed to design governance and management frameworks, to develop health research policies and to set health research priorities.

As development progresses, NHRS Assessment will continue to provide evidence to deepen understanding of the capacities and performance of the system, assess the effectiveness of NHRS improvements and inform decisions on NHRS development priorities. Over time NHRS Assessment will evolve to become an essential part of the management of the NHRS integrated into a continuous cycle of evidence based NHRS improvement (see Figure 6).

There are many reasons why NHRS Development should be evidence based:

1. **Technical guidance**
   It sets a standard demonstrating that decision makers practice what they preach. If health system decision making should be based on sound evidence, then so should decision making in the health research system;

2. **Involvement**
   For change to be implemented in the health research system then stakeholders in other systems, health, education, science and technology will have to act or change behaviours. Decision making in this context is therefore more reliant than ever on good information, and on transparent and inclusive evidence based decision-making;

3. **Accountability**
   Transparent decision making aids accountability and allows the effectiveness of decisions to be assessed and monitored;

4. **Impact assessment**
   The evidence can be used to demonstrate the effective use of resources devoted to NHRS development activities and in turn this information can be used to build support for improvement efforts.

Countries may be at very different stages within the development of their national systems of health research but evidence based improvement efforts can be started using even a very limited set of good data. At the most basic level, a cycle of NHRS improvement can be started by describing the **aims, values, policies and structures of the system**. At the other end of the scale NHRS development may require detailed analysis of research production or impact to inform improvement efforts. Both are valid, the key is to get started and to view NHRS assessment as an ongoing process that will grow over time.

The importance of high level government support for NHRS development cannot be emphasised enough. In countries where this support is lacking, NHRS Assessment, led by influential stakeholders or bodies from the NHRS, can provide valuable evidence to build this support. If this is to succeed, then the 'process' to bring on board government decision makers will be as important as the NHRS assessment outcomes.

## 2.2. How comprehensive should NHRS Assessment be?

NHRS Assessment should be designed to address the essential evidence needed for NHRS development. The underlying approach adopted by this manual is one where development activities are viewed as a long term series of incremental improvements. NHRS Assessment is thus presented here in the increasing levels of intensity that will be required as this process evolves. The approach, however, is flexible and if specific information needs are identified that require greater 'depth' of information then these can be designed into the assessment.

NHRS Assessment can be undertaken at a basic level and then over time built up, depending on resources available. There are a number of reasons why this approach has been adopted:

1. **To change data into action**
   There is a risk that NHRS Assessment can become an academic exercise, which never moves from the stage of research to action. By working in an action-oriented manner, where evidence is collected to inform development decisions, then NHRS improvement efforts can start at an early stage. This has the benefit of demonstrating to stakeholders the commitment and rigour of the effort and reinforcing convictions that their continued involvement is worthwhile;

2. **To deliver appropriate timely information**
   For evidence to be used by decision makers it must be relevant and made available at the right time. Assessment activities should therefore be designed to provide the evidence required to make the decisions at hand. Overloading decision makers with complex information will make action based on the findings of NHRS assessment more difficult;

3. **To enhance inclusively and ownership**
   An incremental approach has the benefit of building ownership and facilitating dialogue through increased opportunities for involvement in NHRS development decision making. Furthermore, it can facilitate increased understanding of the NHRS, its problems and potential solutions, through this involvement in this process;

4. **To be sensitive to available resources**
   A common reason for the failure of development efforts is that governments can engage in too many reform initiatives for any to work efficiently. This risk can be limited by tailoring NHRS development to fit within human and financial resource

limitations and the capacity of government to effect change in the range of sectors necessary.

The main pre-requisite for adopting this incremental approach is that it requires a long-term commitment. In any case, national health research systems are not built overnight. While NHRS development activities can deliver quick gains, it can take decades for a NHRS to reach its full potential, and over this timeframe NHRS development will need to be sensitive to national development needs. In unstable political situations alternatives to this incremental approach may be necessary or strategies to insulate NHRS development efforts from external influence implemented.

**Box 5 – The four levels of NHRS Assessment**

1. NHRS Mapping - system description
2. NHRS Profiling - system capabilities
3. NHRS Analysis - system performance
4. NHRS Intervention evaluation – system intervention

NHRS Assessment can be considered at four levels of intensity:

### 2.2.1. NHRS Mapping - a description the system

Assessment at this level focuses on providing the information necessary to describe the governance and management framework of the system, the institutions that commission, conduct and use research, the actors playing key roles in the system and the policy environment within which the NHRS operates.

The main aim is to provide a "picture" of the NHRS and identify gaps in the defined set of policies and structures, and identify the influential actors and institutions. This information, which can be collected in a matter of weeks, is essential to establish the foundations of the NHRS.

Information will be collected through desk research, document review and interviews with key stakeholders. Interviews are particularly effective because these can be used to sensitise stakeholders to the rationale behind NHRS development, to gain their input on the main challenges facing the NHRS and to provide valuable information on power and political relations within the system.

NHRS Mapping should be considered a prerequisite for NHRS development, without this basic description of the system it will be difficult to effectively plan the development process.

Section 3 provides a detailed guide to NHRS Mapping.

### 2.2.2. NHRS Profiling - the capabilities of the system

Once the main components of the NHRS have been identified a profile can supplement this information with additional detail describing activity, and capacity to demand, commission, produce and use research.

The main aim of a NHRS Profile is to assess the 'volume' of health research activity and capacity and the extent to which this matches needs. This information can provide valuable inputs to health research policy and priority formulation. However, data collection can quickly become extensive and so ensuring that it remains focused on decision making needs is an important step in the design of assessment at this level.

Some information will be available through desk research, document or database review and interviews with stakeholders, but it is likely that primary data collection from research commissioners, producers and users will be necessary. In this situation political support and authority will be especially important to ensure cooperation with data collection activities. Data collection and analysis may take a number of months, depending on the size of a country's NHRS.

NHRS Profiling should be considered as useful, but not essential, for policy development and priority setting to begin. However, for NHRS improvement efforts to move past the establishment of the basic system infrastructure NHRS profile information is essential.

### 2.2.3. NHRS Analysis - the performance of the system

Once we know the basic components of the system and their capabilities, NHRS Analysis proceeds to measure their actual performance. For example, analysis of Research Ethics Review processes, the use of research in policy formulation, or the impact of research commissioned on specific topics or by particular funders.

NHRS Analysis aims to provide evidence to better understand identified problems within the system and inform improvement efforts. Data collection at this level may involve detailed interviews, questionnaires and data abstraction from databases or project reports, and can be designed to suit available resources.

NHRS Analysis is a more advanced level of assessment and will prove useful once specific parts of the NHRS have been identified as in need of strengthening.

### 2.2.4. NHRS Intervention evaluation – effectiveness of improvement efforts

The next level of assessment is focused on the evaluation of interventions introduced to improve the NHRS. For example, intervention evaluation could start early on in the NHRS development process by evaluating the implementation of a health research policy and priority setting activities.

The aim is to ensure that efforts to improve the NHRS deliver the planned benefits. Some of this information will be collected as part of routine monitoring but for major interventions a more comprehensive longer term assessment may be necessary. Data collection should start before the intervention is implemented to provide a baseline against which improvement can be measured, but it may be a number of years before the intervention has matured sufficiently for full evaluation to be useful.

The long term aim is for these four levels of NHRS assessment to become integrated into NHRS management and development and that a cycle of NHRS improvement is established.

No two countries have the same health research system. There will, of course, be common features, but the precise structure of the system, the power relations within it, the priorities for its development and the potential solutions to its underlying problems will differ considerably. Therefore, there can never be a viable 'one size fits all' approach to NHRS Assessment, but equally there is no need for every country to entirely reinvent the field.

### 2.3. The importance of building a 'process'

NHRS Assessment should be considered as a process, not as an event. In the short-term, this process establishes mechanisms to bring people together to raise awareness and build consensus, strengthen partnerships, align assessment activities to with information needs and ensure a focus on results. Over time this process of consultation and feedback should be incorporated into the routine decision making practices of NHRS development.

The process includes all the tasks and activities that have to be undertaken to manage the assessment and integrate its findings into NHRS development decision making. Of particular importance are the interactions with the stakeholders (including the public and community groups) and structures of the system in the lead up to the NHRS Assessment as it will build consensus and commitment to act on the findings afterwards. If decision makers are involved in assessment decision making from an early stage then the findings are more likely to be useful and implemented.

Effective processes focus on asking the right questions, building understanding and ownership, and delivering relevant and feasible interpretation and action. Reforms that may follow a NHRS assessment often bring advantage to some groups while disadvantaging others. Prior agreement with the assessment aims, methods and procedures and an inclusive processes for resolving conflicts around these findings and consequent actions are essential to optimise implementation.

This approach to assessment is especially important in the context of national health research systems because of the broad range of stakeholders that will have to act if effective change is to result. For example, to better align research activity with research priorities, "research commissioners" and "researchers" will have to adapt, often substantially. To align research commissioning may require action on the parts of Ministries of Finance, Health, Education and Science and Technology, national research councils and Overseas Development Assistance partners. To better align researchers' interests with priorities may require a cultural shift among researchers and changes to incentive structures and career pathways. If this is to work successfully, then a large number of groups will have to be convinced that these changes are necessary and important and will need to support the ways in which it will be done.

To successfully engage stakeholders, the individuals and organisations need to become motivated to take an active role in the NHRS development process. As a minimum, this will require that:

- Participants' views are taken into account in decision making;
- The process of decision making is evidence based, transparent and fair;
- Participants' have the appropriate incentives to take the actions required of them;
- Participants dissatisfied with the outcome have, within reasons, mechanisms to 'appeal' he decisions made and present their views.

NHRS Assessment should be considered as a fundamental component of the process of NHRS Development. This process cannot be undertaken in an ad hoc manner. It will have to be consciously planned and actively managed to ensure that support for development is maintained and that potential areas of conflict are identified in advance and strategies to resolve them implemented.

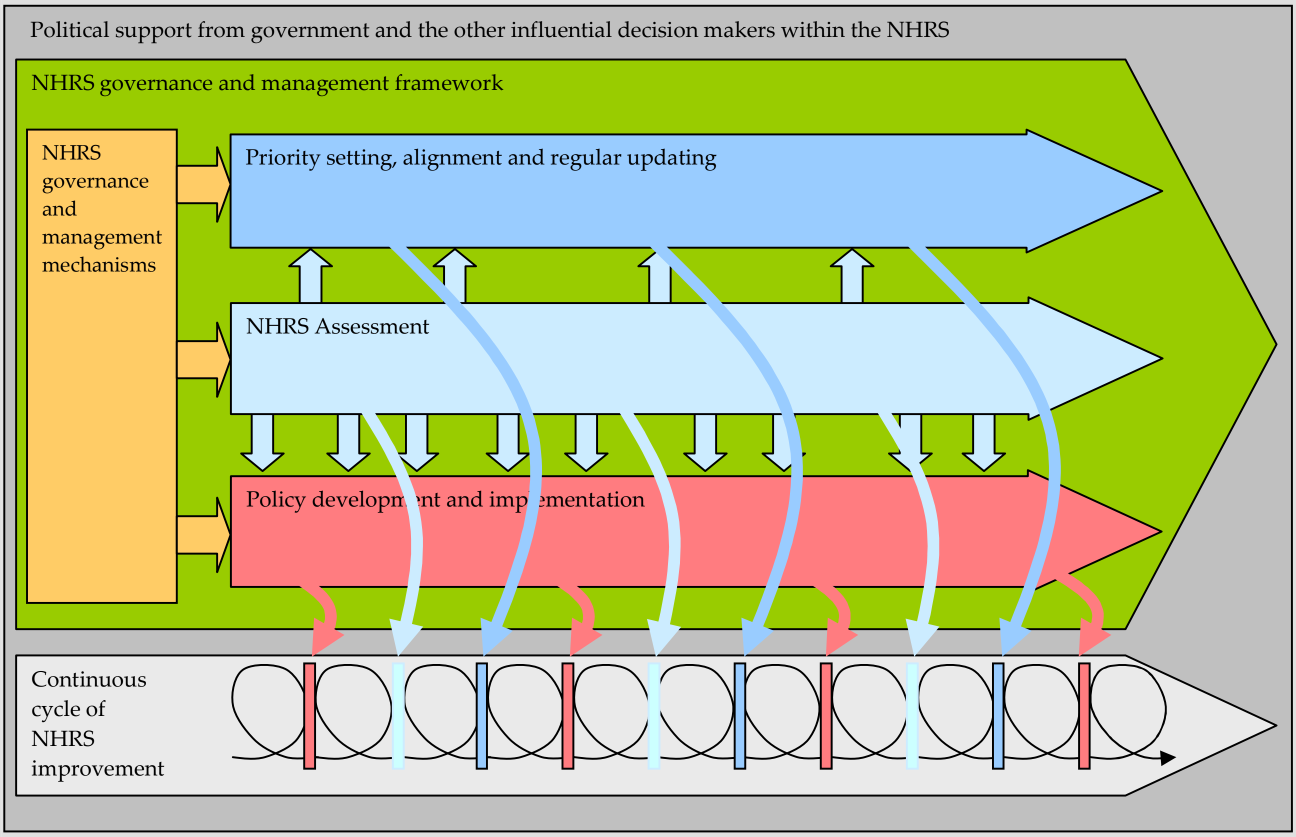
### 2.4. NHRS Assessment and health equity

A key value that runs through this manual is that a main aim of a NHRS should be to reduce inequities in health. To do so, NHRS development will have to build a health equity focus into system improvement efforts, and NHRS Assessments will have to provide the evidence to inform this.

Recent work from the World Bank and others has demonstrated that unless health programmes are explicitly designed to target the poor then investments in health frequently bypasses the poorest sections of society. Similarly, unless a NHRS is designed to produce evidence that can be used to reduce health inequities, then this evidence will not be produced. Furthermore if the system is not designed to feed this information into the policy decision making process it will not be used.

The approach to NHRS Assessment presented in this manual, will therefore include an equity component at each level of assessment activities. This will provide evidence to assess whether equity considerations are built into the policies and structures of the system, and whether relevant research is produced and used to reduce inequities in health.

**Figure 6 – Evidence - driving national health research system development**



*NHRS Assessment provides the evidence to guide decision making for NHRS development*

NHRS Assessment is an essential component of the governance and management of the NHRS. It is a key input to effective policy development and rigorous priority setting. Together with policy implementation and priority setting, assessment drives NHRS development by providing evidence to inform system improvement, for example on human and institutional resources; research, management and innovation capacity; financing; the equity focus of the system, research outputs; and research utilisation. As development progresses it will evaluate system performance and interventions aimed at system improvement, evolving into a cycle of continuous NHRS improvement

NHRS Assessment may also be undertaken as an activity outside, or in the absence of, an official governance and management framework. In this context it can be used to generate evidence to help build the case that reform of the NHRS is necessary highlighting gaps in the system structure or a lack of alignment between research needs and research activity. This information can then be used to establish, or reform, the governance and management framework in line with the needs of the national system.

## 3. National Health Research System Mapping module

### 3.1. The role of Mapping in NHRS Development

NHRS Mapping is generally the first step that countries take in the development of their systems. It provides the basic information - on the existing framework for governance and management, on the institutional structure and on the influential actors - necessary to define initial steps in NHRS development.

The mapping information is a key input in building the foundations of a formal NHRS, and directing further NHRS Development, whether this takes the form of designing 'interventions' to address identified gaps in the system, or additional NHRS Assessment activities to provide more detailed information to guide improvement efforts.

### 3.2. The NHRS Mapping Form

The NHRS Mapping Form provides a data collection guide to describing the basic structure of the NHRS. It is split into four main sections, a series of more specialised annexes (the equity annex is included here and additional annexes will be added over time), and an "administrative" section for recording information required for documenting the data collection process (see sections 3.8 and 3.9 below).

#### Section 1 - Governance & Management of the National Health Research System

The questions in this section have been designed to describe the main components of the Governance and Management framework for the NHRS.

**Governance and management mechanisms**

1.1. Describe the **governance structure** or mechanisms of health research in your country (in other words: what is the overall governance of your NHRS) ?

NHRS governance bodies set out the framework of relationships, systems, processes and rules for making decisions within the system. They also provide the structure through which the system's objectives are set, as well as the means of attaining and monitoring the performance of those objectives.

1.2. What is the actual ('day-to-day') **management or coordination mechanism**(s) of your NHRS?

NHRS Management bodies lead and direct the operations of the NHRS. The distinction between governance and management is that governance covers what the system should do, how it should work and what measures should be taken to assess whether it achieves its objectives, whereas management relates to the planning and execution of the activities to make this happen.

These roles may be undertaken within the government sector, with a committee or department within a Ministry providing the Governance body and a secretariat or commission carrying out day to day Management activities. In other countries, the Governance and Management functions may be delegated to bodies in the parastatal sector, taking the form of a national Health or Medical Research Council. A common variant of this structure is a national research council that covers all fields of science, and deals with health research issues through a dedicated sub-committee. Governance bodies for research councils often take the form of a high level Board or Committee chaired at the Ministerial or even Prime Ministerial level. Management duties are then carried out by the secretariat of the council.

There may be no single structure that performs these functions, instead Governance and Management functions may be undertaken by a number of separate bodies depending on the sector in which the research is undertaken or the type of research conducted. For example the Ministry of Health may hold this role for research conducted in hospitals or for health services research, and the Ministry of Science & Technology may take the role for university based research and basic sciences.

1.3. Does the **Ministry of Health** have a **director / directorate / department** that deals especially with and coordinates health research in your country ?

1.4. Do any other Ministries (e.g. Finance, Science & Technology, Higher Education, or their equivalents) have designated officials who deal with health / health sector / health research ?

The other questions on Governance and Management bodies identify the officers or positions responsible for dealing with health research in the Ministry of Health, and health or health research in the other key ministries. In most countries this will include ministries responsible for Finance, Research, Science and Technology and Higher Education, and in some countries it can also include ministries covering Agriculture, Defence and Trade and Industry. Considerable health related research can be undertake in Agriculture and Defence sectors, notably on parasitic disease and HIV/AIDS respectively, and where countries have established capacity in product development Ministries of Trade and Industry can be significantly involved.

**Policies**

1.5. Does your country have a **National Health** or **Health Sector** strategy, plan, or policy?

The aim of this question is to identify the major health and health system challenges in the country and the key policy decisions faced. This will help to determine health research needs of the health sector and the value attributed to research as an input to policy development. Health programme strategies should be included here if they provide useful additional content on policy challenges or acknowledged research requirements.

1.6. Does your country have a **National Health Research** strategy, plan, or policy?

The development of a National Health Research Policy is a key part of the process of NHRS Development and can be used to drive the development process. Information on existing policy in this area and progress with implementation is therefore extremely valuable in planning further development.

1.7. Does your country have **any other national** strategies, plans, or policies relevant to health research?

1.8. Is there any **legislation** in your country that deals specifically with health research ?

These additional questions aim to complete the description of the policy and legislative framework for health research. Policy development for Science & Technology, Education, Economic development, Social development and Poverty Reduction can have a significant impact on the health research system. Legislation particularly that defining the establishment of Governance and Management bodies, is useful in determining the mandates of these structures and official lines of authority.

**Priorities**

1.9. Does your Ministry of Health have an **'active' list of National Health Priorities** ?

As with Health Policy, Health Priorities provide information to help identify what the major challenges are facing the health sector. Priority setting may be undertaken as a stand alone process, or it may be included in national Health, Development or Poverty Reduction strategies.

Information on the process through which Priorities have been set is important because this will allow the scope of the priorities to be assessed, for example whether they have been set for policy making needs only, or whether they also include the perspectives of health system managers, health practitioners, civil society groups, the business sector and the public.

1.10. Does your Ministry of Health have an **'active' list of National Health RESEARCH Priorities** ?

1.11. Does your country have **any other national research or research capacity development priorities** relevant to health research ?

National Health Research Priorities, along with Policy, and Governance and Management bodies form the foundations of the NHRS. Priorities are essential to allow funders and researchers, whether national or international, to align research activity with national needs. Information on existing priorities where countries lie in terms of establishing the governance and management framework of the NHRS and what research needs have been defined.

Some countries may have competing sets of priorities, for example set at the national and regional levels or by the Ministry of Health and the Ministry of Science and Technology. All should be described, along with the process through which they were developed to again assess scope. In this situation rationalisation of the competing priorities can be an important part of NHRS Development.

### Guiding principles

1.12. Does the NHRS have stated **values** (e.g. ethical conduct of research, issues of excellence, relevance, or equity; or any other values) ?

Stated values set out the principles under which the functions of the NHRS should be conducted. Such value statements are more than commitments to ensure that research adheres to ethical standards and can include statements committing the system to standards covering quality, transparency, and accountability, or to ensure that activity addresses issues of national or specific relevance, for example health equity.

1.13. What are the **aims of the NHRS** or of major components of the NHRS (for example as might be included in a mission or vision statement) ?

Aims may be found within mission or vision statements of policy or strategy documents and can be phrased as the aims, objectives or goals of the NHRS. They provide direction for the system, defining the scope, guiding policy development and providing a reference point for determining the activities of the system. Statements can range from an aspiration, for example to maximise the socio-economic development of the country, to the more practical, for example setting specific targets for the system in improving health and health systems, reducing health inequity or enhancing social and economic development,

Statements of guiding principles are important because they set out what can be expected of the NHRS. This can provide direction for research commissioners and producers, and facilitate the monitoring and evaluation and the transparency and accountability of the system.

**Governance and management procedures**

1.14. Does the NHRS have a system of **monitoring and evaluation** ?

As noted above in Section 2 (NHRS Assessment), evidence to inform the improvement, management and governance of the NHRS is essential for system development. This question seeks to describe existing efforts for monitoring and evaluation (M&E) of the NHRS, which can help to guide further information needs.

Few countries have dedicated M&E systems for their NHRS, but some may collect useful data as part of M&E systems in the higher education or R&D sectors. These generally focus on inputs, human and financial, and outputs, publications and patents, but rarely provide data sufficiently disaggregated to aid NHRS decision makers, for example to provide information on projects or publications addressing defined health research priorities.

1.15. Describe the **ethical review** processes or structures for health research in your country.

A key component of research governance at the level of projects and programmes is the ethical review of research proposals. Information here will describe the structure of the review process, the standards to which they adhere and the range of institutions covered.

**Dissemination and utilisation**

1.16. Describe how your country attempts to increase the **utilisation of research results by policy makers, managers, practitioners, public**; in other words, how are you promoting or communicating 'evidence-based policy and decision making' ?

Utilisation covers user driven activities to identify evidence to inform decision making. Such activities can take the form of efforts to develop an evidence based culture amongst research users, and ensuring they have access to research literature and have the skills to use the results in decision making. It can also involve more formal mechanisms through which research is channelled into decision making processes, for example through "knowledge broker" initiatives that identify and translate research into a form that can be used by decision makers.

1.17. Who is responsible in your country for **dissemination of research findings**?

Dissemination refers to researcher driven efforts to promote the findings of their research to those that can use it, beyond simply publishing results in journal articles or reports. In many countries dissemination occurs in an ad hoc manner, but in others responsibility for these activities may be assigned to senior researchers or to research institutions, which may have a specialised 'communications' office. Activities can target potential users directly through presentations, briefs, guidelines or workshops; or they may target users indirectly through the media, health promotion campaigns or through 'policy shapers', influential individuals or organisations within the NHRS such as University Chancellors, Deans of Medical Schools or NGOs.

1.18. Describe **how the health service policy makers** (the ministry) in your country **remain informed of advances in health and medical care** produced internationally.

In addition to utilisation and dissemination activities described above, the Ministry of Health may have channels for tracking international developments in health research of potential relevance to the country. This is often an ad hoc process, but health programmes may be assigned this responsibility or regular reviews may be undertaken with national or international experts, alternatively this role may be included within the mandates of 'knowledge brokers' or specialist libraries.

**Links with the Health System**

1.19. Who is responsible in your country for **monitoring and evaluation of the impact of new health policies or interventions** on health and development?

An important consideration with the introduction of new health policies, treatments or services is the extent to which the expected benefits are delivered. Collection of such information may form part of the M&E processes of the health system or of health programmes, but in some countries this may fall within the remit of the NHRS. Instances where expected benefits are not realised can provide a useful source of research demands that can be fed into priority setting processes.

1.20. Describe how research evidence is used by the body that regulates the introduction of new health technologies, including drugs.

Bodies regulating the introduction of new health technologies provide an important opportunity to implement evidence based decision making. Information to note will be the types of health technology covered by the regulatory body, in particular whether it only considers pharmaceuticals or whether it also includes medical devices, health services and procedures (for example a new surgical technique). Furthermore, the use of research in decision making should be documented, including what criteria are used to guide decisions and to what extent these are based on evidence of effectiveness and cost-effectiveness.

## Section 2 – Institutions engaged in 'research for health'

This section collects data on the institutions involved in commissioning, conducting and using health research, beyond simply Medical Schools and the Ministry of Health. This information is useful in a number of ways; it allows decision makers to see the full range of actors and the roles that they play within the NHRS; it identifies those institutions that should be involved in NHRS development decision making; and it can provide a sample frame for future, more detailed data, collection efforts.

2.1 Identification of **institutions that commission, conduct and use research for health** in your country:

An important part of tailoring the NHRS Mapping Form to local needs (see Section 3.3 and Figure 8 below) will be the decisions on whether research users should be included in the mapping exercise and what coding scheme to apply to the Commission, Conduct and Use classification. The default position presented here is that users are included and that institutions are coded Yes/No.

The institutions have been categorised as follows:

(a) **Government departments and agencies**. This will of course include Ministries of Health and Science and Technology, but may also include ministries dealing with education, finance, social development and defence, among others. Research institutes under direct government control and relevant provincial government departments and agencies may also be listed. Research Councils may be included here or category (c) below.

(b) **Health care system**. This should at least cover the main health service providers (major hospitals and teaching hospitals) and health system administration (regional health authorities or district health offices). Both the public and private sectors should be included. Health centres and clinics health clinics, other important institutions in the health sector that commission, conduct or use research should also be considered.

(c) **Higher education and (national) research institutes / laboratories.** This category should list all degree or equivalent awarding tertiary education institutions in both the public and private sectors, including research institutes and experimental stations operating under higher education establishments. It should also include non academic and foreign institutions. Note Medical Schools may fall under this category or under category (b) depending on lines of authority.

(d) **Private non-profit organisations involved in research for health**. Consider civil society organisations like charitable institutions, non-governmental organisations (NGOs), professional bodies (e.g. medical associations) and patient, community and faith-based organisations with an interest in health research.

(e) **Business enterprise or industry (Private for-profit).** Any private for-profit company, not already listed, involved in commissioning, conducting or using research for health. This will mainly relate to pharmaceutical and biotechnology companies, but may also include producers of medical devices, clinical research organisations and consultancy firms.

(f) **International research and development sponsors or partners involved in research for health**. This category should include all agencies (including international organisations), donors, foundations and international NGOs, active in the country and directly involved with health research.

**(g) Are there any other institutions / commissions / structures / councils / networks / fora etc. in your country that have an important impact on the activities of the NHRS that were not mentioned above?** This category should include any important organisation or body not included above, for example a National Health Research Forum, an Essential National Health Research Council, research networks.

The aim of this section is to identify all the institutions that play, or should play, an important role in the NHRS. The categorisation is less important, it is used to help think through all the different institutions that can be involved in research for health. Some institutions might quite legitimately be included under two or more categories, and there may not be consensus on how their involvement in commissioning, conducting or using research should be coded. Where these discrepancies occur they should be documented and the Steering Group or project leader given the final say.

2.2 Identification of **Media organisations that play an active role in dissemination (and even conducting or commissioning) research for health** in your country.

Due to the important role that the media plays in communicating research issues to the population and the influence it exerts on policy makers, identifying the main channels through which this takes place can be useful. This may be specific television or radio programs, newspaper features or websites as well through the mainstream news media.

### Section 3 - Key stakeholders involved in 'research for health'

The information collected in this section identifies those individuals and institutions that will have to support NHRS development efforts if they are to be successful. Those identified should lead opinion or control decisions in their area, thus facilitating 'reforms' based on the results of NHRS assessment efforts.

3.1. From the institutions, commissions, mechanisms, companies and other structures noted in Section 2 - identify the positions and institutions that have the greatest influence over the NHRS for the following sectors: Government, Research producers, Civil society, International partners and Business enterprise; as appropriate.

In designing the NHRS Mapping process (see Section 3.3 and Figure 8 below) criteria will be set to determine how influential institutions and individuals will be identified. Criteria may include, influence over decision making or funding, or the respect that individuals hold amongst stakeholder groups.

As this can be a sensitive issue, the reporting of this information can be left out of formal reports where there is a risk that its publication may cause conflict.

### Section 4 - Available literature and data review on 'research for health'

The aim of this section identify useful sources of information that can be used in NHRS assessment and future development activities, such as policy development or priority setting.

4.1. What are the most important or most used previous analyses, reports or information sources on health and health research systems in your country.

It should seek to identify any previous analyses of the national health research system. Such reports are relatively rare but they can take the form of assessments of research funding ('resource flows'), human resources, research publications and research use in policy and practice or may focus on research production and utilisation in specific fields.

It can also include sources describing the health and health system context, wider systems of research and innovation and the political, social and economic environment.

### Section 5 - Administrative information

This section collects information that can be used to document the NHRS Mapping process, identifying the stakeholders interviewed, the documents reviewed and the human resources required. The information on interviews and documents can be used to demonstrate the rigour of the assessment. Information on human resources can illustrate how funds for NHRS assessment have been spent and along with actions based on the findings of the assessment can show the effectiveness of the investments. Such information can be helpful in building support for NHRS assessment activities.

### 3.2.1. NHRS Mapping Form – Health Equity Annex

The aim of this annex to the main NHRS Mapping Form is to collect information to assess whether the NHRS is designed to promote health equity. It guides the compilation of the equity related content of key policies and priorities, and identifies the structures and institutions with responsibilities and interests in increasing equity in health.

In addition, to an overview of equity content, some questions request further detail on the variables against which health equity is assessed and the forms (or 'stratifiers') of inequity considered. Variables cover: health determinants, the health system, coverage and use of health services, and health outcomes. Stratifiers, adapted from the PROGRESS model (Evans & Brown 2003) include: Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age.

## 3.3. The NHRS Mapping process

As noted, NHRS Mapping is generally the first step that countries take in NHRS development, but this step can be taken from a number of different starting points. Depending on the starting point faced, the mapping process may differ [Figure 7].

In some countries NHRS Development may be a relatively new concept. In this situation it is probably necessary to devote more effort to the process of NHRS Mapping than to the mapping itself. In this context the process should not be considered as simply those activities required to successfully undertake the NHRS mapping. Rather the mapping exercise should be used as a vehicle through which important stakeholders commit themselves to collaborate with the process of NHRS development.

At the outset this will involve bringing the different stakeholder groups together to discuss the role of health research in the country and the barriers limiting this role. In addition to facilitating dialogue, these meetings can be used to increase understanding of what a NHRS is how it functions and the how NHRS development can improve the effectiveness of health research. Even for highly experienced researchers presentation of the NHRS concept in these meetings can be the first time they view their research or their role from a systems perspective rather than a 'vertical' or problem perspective. Such 'concept shifts' can be very important in building support for NHRS development.

This stakeholder engagement can also be used to the collect data required for the NHRS mapping that cannot be obtained from preliminary the desk research. Where additional information is required, obtaining authority, contacts and documentation can be facilitated by these interactions.

On completion of the data collection phase further consultation will be necessary, firstly to verify the information collected and resolve any conflicting pieces of evidence; and secondly to use the information collected to inform decisions on the next steps in NHRS development.

At the other end of the scale there are countries where NHRS development is already recognised as necessary and where stakeholders are keen to move to action. In this context, greater emphasis should be placed on ensuring the data collection phase is conducted rigorously but to a short timescale. The initial consultations are still important to set out the framework being used for NHRS development and the aims and objectives of the assessment, as well as ensuring that access to key documentation and contacts are facilitated. In this case, the interpretation of the mapping results and decisions on action based on these findings is probably the most important facet of NHRS mapping.

### 3.4. Data collection

It will be necessary to consult a range of sources to compile the information required in the NHRS Mapping Form. Some information will be available through document and website review, but this may need to be supplemented by interviewing key contacts within the major institutions. Other information, or access to documentation, may only be available through interviews with stakeholders.

The main principle of data collection is that for the mapping component the main focus is on details of structures, policies or statements dealing with overall national research and health research system rather than on individual components of the system, e.g. the Ministry of Health or specific research institutions.

However, there are no "right" or "wrong" answers, where a formal structure or mechanism does not exist, a description of how the informal structure works or how decisions are made without this structure may be useful. It may also be useful to describe occasional examples of good practice that can be used in the design of future strategies.

### 3.5. Analysis

Analysis of NHRS mapping data focuses mainly on identifying gaps in the governance and management framework of the system, i.e. the core of establishing an "enabling environment" for health research. Most of the other information collected can be used directly within development efforts or further assessment activities.

Where policies and priorities are identified content analysis may be possible to assess their coherence with the defined needs and aims of the NHRS, in particular the extent to which they are focused in health inequities.

The institution data can be used to construct maps illustrating the NHRS from the institutional perspective (Figures 4 and 8). These maps can be used to show what roles the institutions play within the system helping decision makers and stakeholders to understand how the NHRS works at a practical level.

Although the information is collected by sector (Government, Health system, Higher Education, etc), it may be more useful to structure the maps around a public-private, national-foreign classification. This better illustrates lines of authority for decision making and shows which decision-makers should be brought on board the NHRS development process.

Once all the institutions involved in "research for health", national as well as foreign, are included this map it can quickly become very complex. For core NHRS management activities it may be necessary to limit this map to only the most important institutions, using criteria such as "level of funding" or "number of research outputs".

On the other hand, it may be useful to produce detailed maps at intervals of some years, to gain an understanding of change within the "research for health" sector and inform decisions on where the least funding could lever the greatest benefits within the system. These will not always be in the traditional "research bodies".

## 3.6. Using the mapping results for NHRS Development

As an aid to interpretation of the mapping results a series of scenarios, based on the results of previous mapping studies, are outlined below with a summary of the possible actions that decision makers could take based on these findings.

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### Scenario 1 – *building the foundations of the NHRS*

**Main results of the NHRS Mapping**

- No formal governance and management mechanisms or procedures exist within the NHRS;
- No national health research policy has been developed and little consideration has been given to health research in other policies;
- No national health research priorities have been set, but health priorities have been defined in the national poverty reduction strategy and in health programme strategies;
- There are few formal links between the NHRS and the health system for the dissemination and utilisation of research.

**Analysis**
A governance and management framework for the NHRS should be put in place to drive NHRS development. Generally, the first step should be to formally establish the mechanisms to carry out the governance and management roles, for example an Inter-ministerial Committee for Health Research or a Research Council. These bodies can then plan further NHRS development and start the process of policy formulation and priority setting. It is likely that the formal establishment of these bodies will require ratification by the national legislature through an Act or Decree.

**NHRS development**
The proposed actions will require high-level support within government.

Where this exists, decision makers can move straight to the process of drafting the Act and consulting with stakeholders on the most effective governance and management architecture for the country, taking into account existing lines of decision making authority within the NHRS.

Where backing from government for these proposals is limited, attention should be focused on building this support. Without an effective governance and management framework for the system, NHRS development will be extremely difficult, and it is a government role to put in place the necessary legislation.

Arguments that may be effective in convincing policy makers of the need for reform can focus on the waste of resources and lack of evidence to improve health and the health system, or highlight health, efficiency and economic gains that can be generated by health research. If the lack of support can be attributed to political or power relationships within government then alternative measures may be necessary, for example ensuring that the design of the proposed framework is sensitive to these issues.

It may be necessary to make this case directly with senior government figures and indirectly through opinion leaders in government, medical schools, universities, NGOs, or international partners, and through the media.

**NHRS assessment**
Further NHRS assessment will provide important evidence to inform policy development and priority setting. This will likely focus on NHRS Profile level assessment, examining the current capabilities of the system.

NHRS assessment can also provide evidence to help build support for the proposed actions by illustrating the consequences of having a weak NHRS governance and management framework. For example, studies could be undertaken to assess the extent to which research production matches health priorities or the needs of health policy makers, managers and practitioners; or assess the sums invested by the government in health research, if not directly in funding research projects then indirectly in supporting infrastructure and salaries.

Alternatively, economic modelling studies, to could be undertaken to estimate the health and cost of benefits solving or reducing specific health or health system problems, can highlight the potential gains from a more effective NHRS.

---

**Scenario 2 -** ***rationalising system governance and management***

**Main results of the NHRS Mapping**

- There are a number of separate governance and management mechanisms covering the NHRS. Each government ministry or agency that commissions research has its own governance and management infrastructure. There are no channels of communication between the different mechanisms;
- No national health research policy has been developed, but health and science and technology policies do exist and both consider some health research issues;
- No national health research priorities have been set, but the health and S&T policies set out priority areas. Health priorities focus on the major conditions contributing to national burden of disease and increasing access and improving care for disadvantaged communities; whereas S&T priorities focus on technological development.
- There are few formal links between the NHRS and the health system for the dissemination and utilisation of research;
- The institutional mapping has identified the Ministry of Health as a minor funder of health research and Ministry of Science and Technology as a major funder.

**Analysis**
The complex governance and management framework, highlighted by the mapping, may not provide the foundations necessary to ensure an effective NHRS. The lack of communication between the different mechanisms and the competing priorities may lead to a lack of focus and clarity on research needs. Further consultation and assessment will be required to inform decisions on whether a rationalisation of the governance and management framework and dedicated NHRS policy and priorities are necessary. The mapping also identifies links between the NHRS and the health system as an area in need of further assessment.

**NHRS development**
Action will focus on examining options for improving communications between the different governance and management frameworks. This will involve consultation with decision makers from the range of different governance and management mechanisms and it may be necessary to also include a higher level consultation to inform macro-level decision making on what the balance should be between health and science and technology priorities. The issue of whether more formal links between the NHRS and the health system are required is another area that should be examined

**NHRS assessment**
Further NHRS assessment will be essential to inform discussions on the effectiveness of the

current governance and management framework. A NHRS Profile level assessment of the extent to which research funding, activity and production are aligned with health or S&T priorities would be a key input.

NHRS assessment at the Profile and Analysis levels examining how effectively research is used within the health system would also prove valuable, informing the need for policy development in this area.

**Scenario 3 -** ***the infrastructure has been established but does the NHRS generate and use research effectively?***

**Main results of the NHRS Mapping**

- A National Health Research Council holds responsibility for the governance and management functions of the NHRS;
- A national health research policy has been developed. Major policy goals include a funding strategy and a human resources strategy.
- National health research priorities have been set, and are aligned with health and health system priorities;
- A system for ethics review has been established, but the NHRS has no M&E system;
- A post has been established in the Ministry of Health with responsibilities to review the research literature to inform policy development, but there are few other formal linkages between the NHRS and the health system;
- A range of institutions has been identified as health research funders in the health, S&T and development sectors, both national and foreign.

**Analysis**

Most of the infrastructure required for system governance and management has been put in place, the questions that remain are has it been effectively implemented and is the NHRS funding, generating and using research to improve health and health systems.

Further NHRS assessment will be required to answer these questions. Such assessment can also help to address one of the remaining gaps in the governance and management framework, the development of an M&E system.

**NHRS development**

Immediate action based on the mapping results is limited, further information will be required before decisions on the need for reform can be made. However, decision makers may find a series of consultations useful to inform the design of the NHRS assessment and the subsequent M&E system, and to consider whether priorities cover the full range of expectations of the NHRS, for example to address health equity and social and economic development.

**NHRS assessment**

An important component of a NHRS Profile level assessment would be to examine the extent to which funding is aligned with health research priorities, for both national and foreign funders.

Assessment of the use of research and the research culture within the health system would provide valuable information to assess whether more formal links might be required between the NHRS and the health system. A NHRS Analysis level assessment of the benefits gained from establishing the literature review position within the Ministry of Health might also be useful.

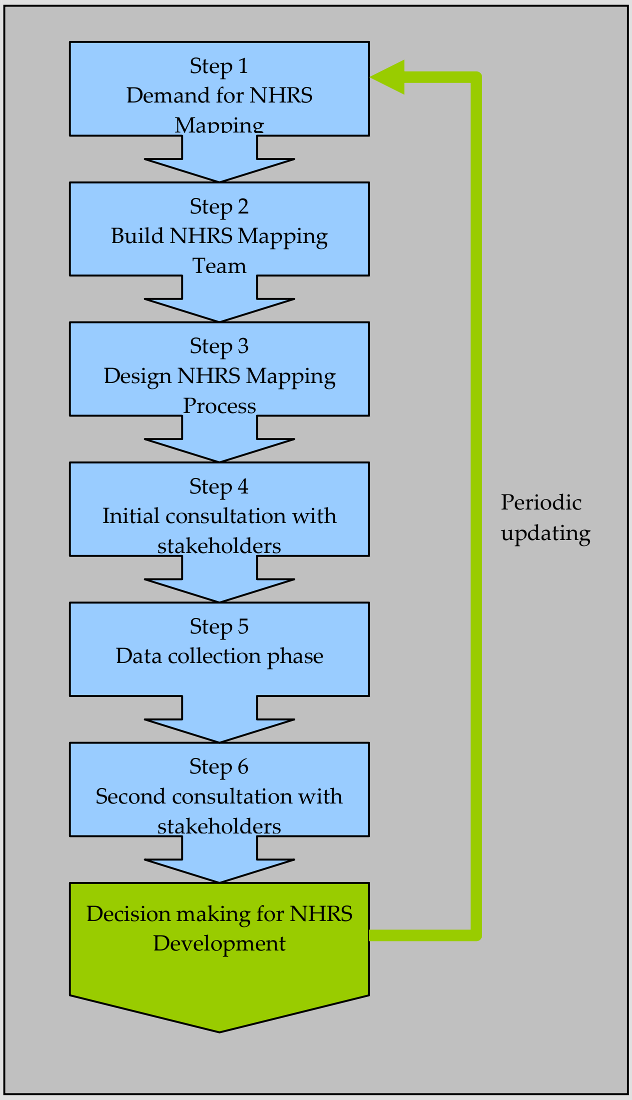
## 3.7. Further development of the NHRS Mapping module

This module presents the default NHRS Mapping Form, which guides data collection giving a basic description of a NHRS, and a Health Equity Annex, which includes additional content to describe the equity focus of the NHRS. Additional annexes, currently undergoing development and testing, will be made available in the future editions of this manual.

These will cover:

- NHRS and Health System linkages;
- Donor alignment in the health research sector;
- NHRS and Science and Technology linkages;
- Research dissemination and utilisation.

**Figure 7 – National Health Research System Mapping process**



*Managing the process of NHRS Mapping*

**Step 1 - Demand for NHRS Mapping**
The source of the demand for NHRS mapping will influence how the NHRS mapping process should be conducted. There are generally three scenarios from which this demand is driven:

1. Influential stakeholders within the system have identified a need for NHRS Development, but this need has not been recognised by policy makers. In this case considerable effort and attention will have to be devoted into identifying the key positions and individuals in the relevant Ministries and what arguments can be used to convince them of the need for NHRS Development;
2. Policy makers have accepted the need for NHRS Development, by the concept is still relatively new within the national context. Activities to build awareness and understanding on the NHRS concept and the potential benefits of NHRS Development will play an important part of the process within which the mapping is undertaken;
3. The need for NHRS Development has been recognised in the country and evidence is being sought to inform development priorities. The main focus under this scenario will be delivering the results of the mapping exercise in a rigorous but timely manner.

**Step 2 - Build NHRS Mapping team**

1. **Staff**
   The mapping exercise should be conducted by experienced researchers. Experience of conducting qualitative interviews and facilitating focus group discussions would be an advantage. It is not advised to employ consultants or researchers on one-off short-terms contracts to do this work as the valuable learning gained through conducting the mapping exercise, including “off the record” comments from stakeholders, will be lost. At the same time, an “external facilitator” can help the neutrality of the process. The team built to conduct the mapping should, from the beginning, be seen as having a long-term role to play in further

NHRS Assessment and NHRS development activities.

2. **"Steering Committee"**
   The main aims of establishing a Steering Committee are to enhance the legitimacy of the effort (in terms of the team, approach and methods used), facilitate cooperation and encourage action based on the findings of the exercise. Stakeholder groups that can be considered for participation on the committee are noted in Box 6.

**Step 3 - Design the NHRS Mapping process**

1. Review NHRS Mapping Form and tailor it to the local system and context. For the four sections of the form t his will involve:

- Section 1 – Ensure that questions in this section on Governance and Management correspond to the system structure in the country. For example, identifying which Ministry is responsible for research.
- Section 2 – Decide on depth of institutional data collection.
    i. Decide whether the identification of Research Users will be included. This information is useful for further NHRS Assessment and NHRS Development planning, but it can require additional time and resources;
    ii. Set criteria for determining whether an institution should be considered as part of the NHRS. For example for commissioners and producers this might be a set number of projects funded or conducted in the past three years. For users more pragmatic criteria may be required because the number of institutions that use research can become very large. For example within the health system all institutions within the hierarchy as far as district hospitals might be included, but health centres excluded;
    iii. Decide on the detail of the description to be used for each institution. This can range to a simple Yes/No as to whether the institution commissions, conducts or uses research, to a rating of the volume of research commissioned or produced (Major/Minor) or a description of the type of use (Policy, practice, research, teaching, product development);
    iv. Decide at what detail large institutions will be reported, for example for universities this could be faculties, departments or units, or for Ministries directorates or departments.
- Section3 – Set the criteria for determining whether an institution or individual should be considered influential within the system. For example these may include, control over decision making or funding, or the respect that they hold amongst stakeholder groups.
- Section 4 – Agree what type of literature should be included and how this literature will be identified.
- Annexes – Decide which annexes to include in the Mapping exercise (currently the only annex available examines the health equity focus of the NHRS, further annexes are under development).

2. If certain NHRS Development priorities are known at this stage, then some data collection to inform decision making on these issues may be built into the process. For example, in Trinidad and Tobago the key question facing decision makers was how the Governance and Management bodies of the NHRS should be structured. Therefore, during interviews with stakeholders to collect information for the NHRS Mapping, a section was added to gain their input on what type of Governance and Management bodies should be established and under what lines of authority.

3. The NHRS Mapping Form should be reviewed to identify a "source" for each question, i.e. from which website, document, or stakeholder, the information will be collected. Where this is unclear a source of advice to provide information on who to contact or where to look should be identified.

4. Define the management plan for the Mapping exercise.
   - Decide when stakeholder groups will be consulted, the aims of the consultations, the inputs required, the outputs expected and who from the different groups should be invited;
   - Identify the major tasks that are required, assign responsibilities for these tasks and agree timelines;
   - Calculate a budget for the Mapping, and where necessary develop a funding strategy.

**Box 6 - Important Stakeholder Groups ( a non-exhaustive list)**

- Government
  - Ministry of Health
  - Ministry of Education
  - Ministry of Science & Technology
  - 
- Academia
  - Universities
  - Medical Schools
  - Health, Medical and Other Research Councils
  - 
- Civil Society
  - Influential professional, patient, community or faith-based organisations
  - Organisations representing important disadvantaged and vulnerable populations
  - 
- Key international partners
  - Bilateral agencies
  - Multilateral agencies
  - Foundations and Global Health or Health Research Partnerships
  -

**Step 4 - Initial consultation with stakeholders**

This meeting can have a number of aims:

1. Review past activities assessing research, health research or research use in the country, including previous policy development;
2. Present the concept of a NHRS, the arguments driving national efforts in NHRS Development
3. Sensitise stakeholders to the benefits that can be gained from a NHRS assessment;
4. Provide a platform for stakeholders to present their perspectives on NHRS improvement needs and comment on assessment and development plans;
5. Facilitate data collection by identifying useful contacts and documents from which the required information for NHRS Mapping Form can be collected;
6. Build early commitment and ownership for the NHRS Development process, and generate offers of support and participation.

**Step 5 - Data collection phase**

Some of the data required for the completion of the NHRS Mapping Form will be available from websites and publicly available documents. However, it may be necessary to conduct interviews with key stakeholders to supplement this information. Interviews are useful for a number of reasons:

- Much useful information is not well documented, or important documents may not be easily identified or available;
- In the interview context it may be possible to glean information from stakeholders that they may not be willing to put down in writing, especially on the political and power relations within the NHRS that will have to be taken into account in decision making on NHRS Development;
- Stakeholders can be sensitised to NHRS Development efforts and their perceptions on the key priorities for development can be elicited.

**Step 6 - Second consultation with stakeholders**

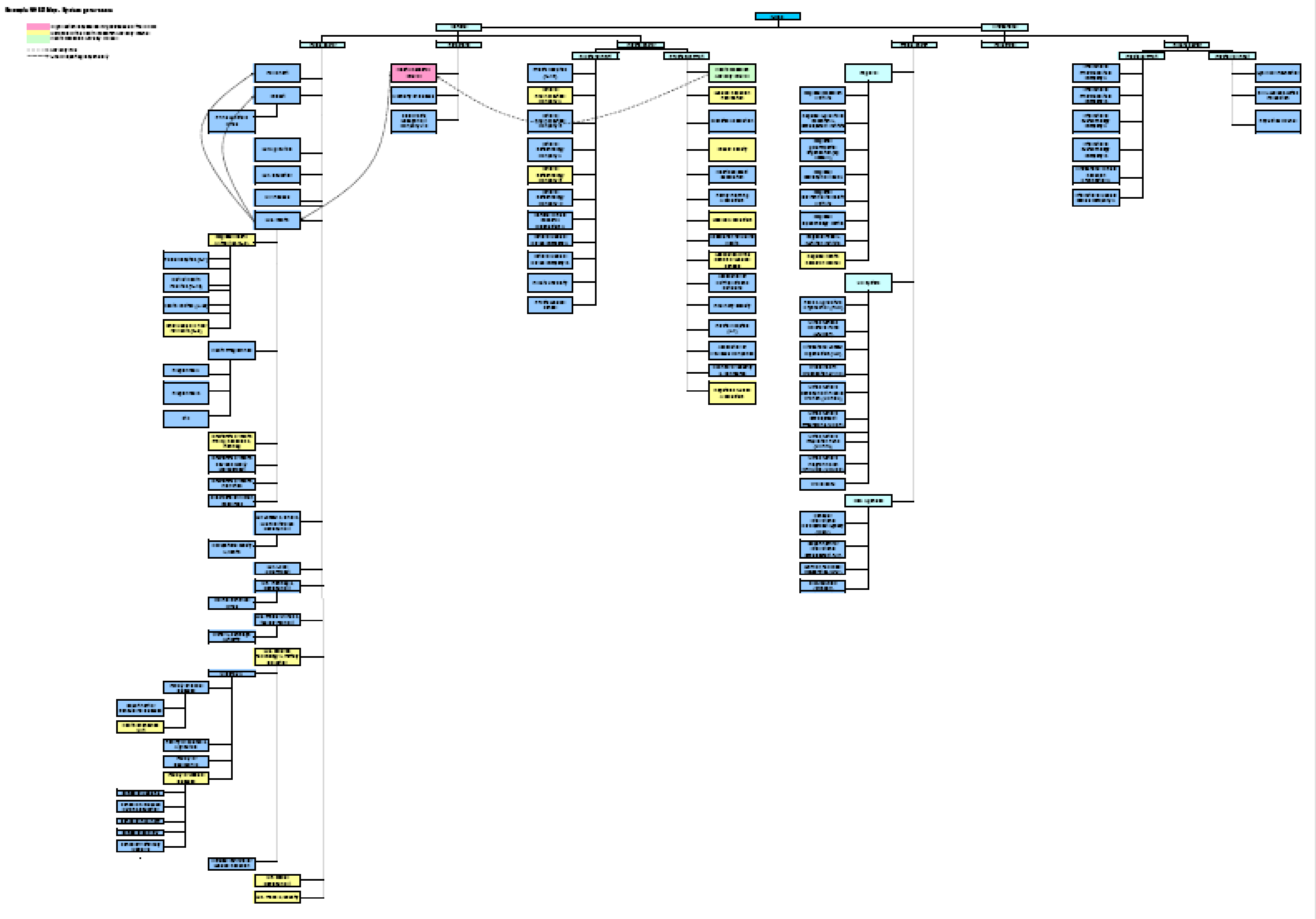
The second consultation meeting has two aims. Firstly, to present the results of the Mapping exercise, and secondly, to make decisions on the next steps in NHRS development based on these results.

Based on the results of this Mapping process NHRS development can begin in earnest. However, it is important that a firm commitment to action is agreed at this meeting, and that a timetable is set for this action. If a decision is not agreed at this stage there is a significant risk that the NHRS development process will stop here.

As development of the system progresses, documentation of improvement efforts will ensure that key information is kept up to date, but more formal periodic mapping exercises can be useful to examine progress and the results of system reform.

**Figure 8a – NHRS Map example – illustrating system governance**

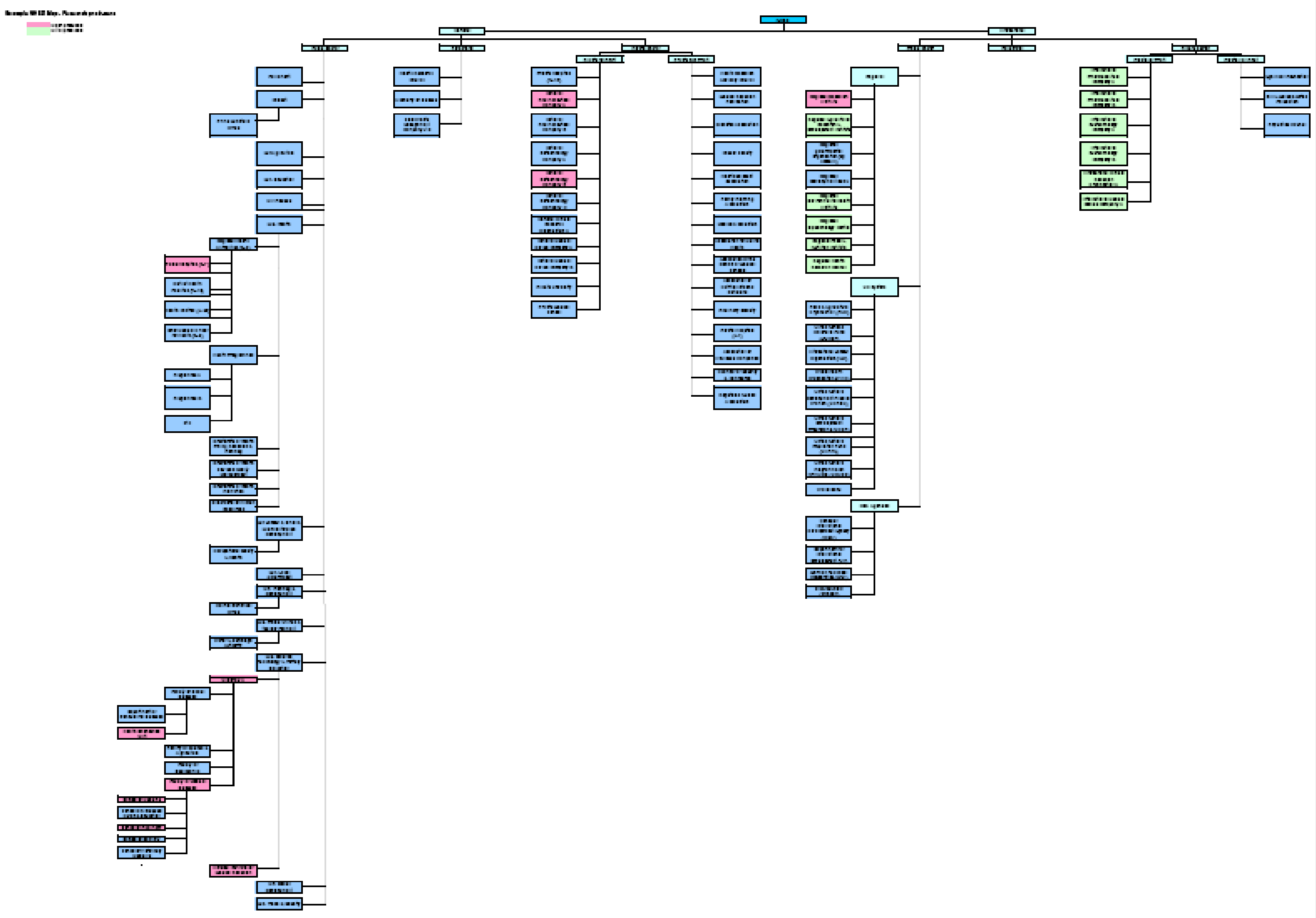
INSERT Figure8a.pdf here



*This map illustrates possible structure, membership and reporting responsibilities for governance of the NHRS*

**Figure 8b – NHRS Map example – illustrating research producers**

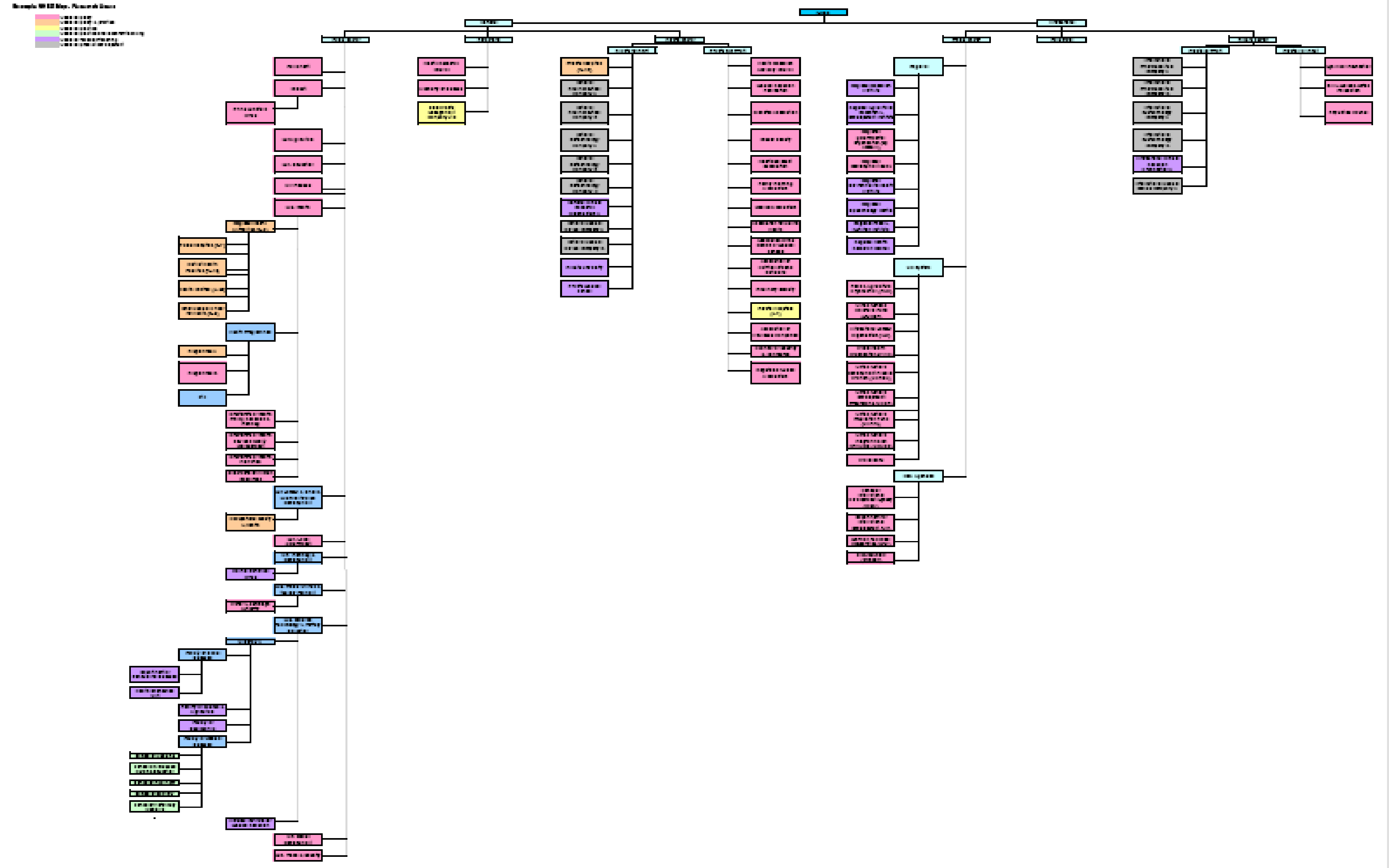
**INSERT Figure8b.pdf here**



*This map identifies health research “producers”, and classifies them into major and minor contributors*

**Figure 8c – NHRS Map example – illustrating research users**

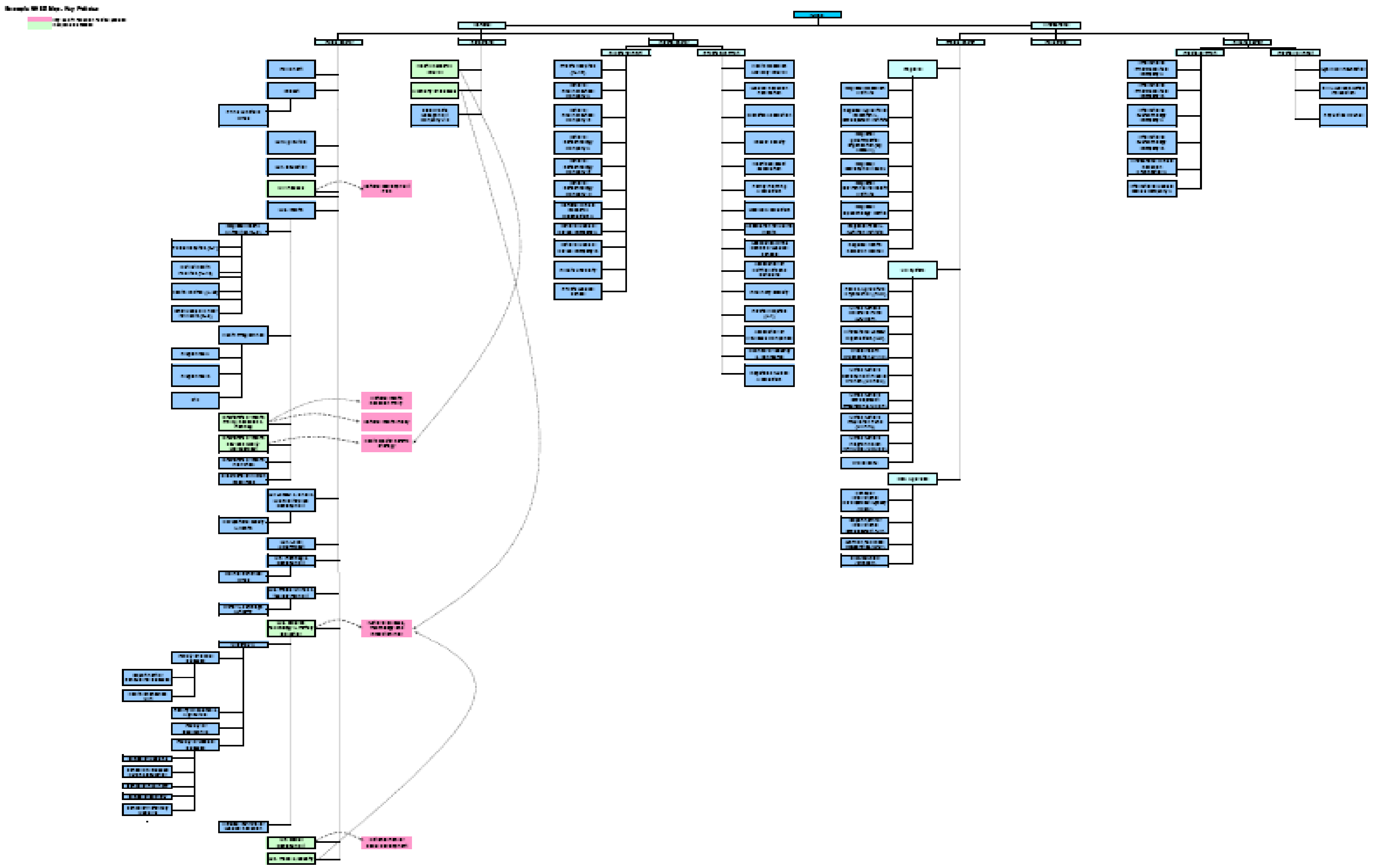
**INSERT Figure8c.pdf here**



*This map shows the health research users, and describes the type of use, which can be useful in determining the different "user groups" within the system*

## Figure 8d – NHRS Map example – illustrating policy framework

**INSERT Figure8d.pdf here**



*This map highlights the policy framework within which the NHRS operates and the institutions responsible for policy implementation*

### 3.8. NHRS Mapping Form

# National Health Research Systems (NHRS) Assessment

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## NHRS Mapping Form

The aim of this form is to provide a guide to collect the basic information required to describe a NHRS - the existing framework for governance and management, the institutional structure and the influential actors. It will be necessary to consult a range of sources to compile the information required. Some information will be available through document and website review, but this may need to be supplemented by interviewing key contacts within the major institutions. Other information, or access to documentation, may only be available through interviews with stakeholders.

## 1. Governance and Management of the National Health Research System (NHRS)

1.1. Describe the **governance structure** or mechanisms of health research in your country (in other words: what is the overall governance of your NHRS) ?

- Provide the name of structure(s) or organisation(s) involved and provide documents and/or references describing their roles and responsibilities where available.

| |
|---|
| *Example: a national research commission; a medical research council tasked with overall review; a ministry of science and technology or of research* |
| |

1.2. What is the actual (‘day-to-day’) **management or coordination mechanism**(s) of your NHRS?

- Provide names of structure(s), position(s) or organisation(s) involved and provide documents and/or references describing their roles and responsibilities where available.

| |
|---|
| *Example: director in ministry of health / higher education; president of the research council; joint body of universities; etc.* |
| |

1.3. Does the **Ministry of Health** have a **director / directorate / department** that deals especially with and coordinates health research in your country ?

- Provide the name and contact details of the responsible officer or structure;
- If there is no such office or officer in the Ministry of Health, are there offices in other government departments that take responsibility for health research ?
  - If so, provide the name and contact details of the responsible officer(s) or structure (s).

| |
|---|
| *Example: Director of Health / Medical Research in MOH; or, officer in Ministry of Education, or Science and Technology, or Research, National Health, Medical or Other Research Council, etc.* |
| |

1.4. Do any **other Ministries** (e.g. Finance, Science & Technology, Higher Education, or their equivalents) have designated officials who deal with health / health sector / health research ?

- If YES, give name(s), position(s), details of responsibilities.

*Example: A Department of Finance official with specific liaison responsibility with Ministry of Health; etc*

1.5. Does your country have a **National Health** or **Health Sector** strategy, plan, or policy?

- If YES,
  - provide a short description of its main objectives and relevant documents and/or references where available;
  - provide a short description of any health or medical research content

*Example: Health research is highlighted as necessary for decision making, improving services, or developing new interventions etc.*

1.6. Does your country have a **National Health Research** strategy, plan, or policy?

- If YES, provide a short description of its aims, scope and content; and relevant documents and/or references where available;

*Example: A specific strategy, plan or policy dealing with health research, health research capacity building or health research system development; etc.*

1.7. Does your country have **any other national** strategies, plans, or policies relevant to health research?

- If YES,
  - provide a short description of its main objectives and relevant documents and/or references where available;
  - provide a short description of relevant health or medical research content

*Example: Health related research highlighted as a component in National Science& Technology, Higher Education, Economic development, Social development, or Agriculture Strategies etc.*

1.8. Is there any **legislation** in your country that deals specifically with health research ?

- If YES, provide a short description and relevant documents and/or references where available.

*Example: the Health Act (if it does refer to health research); or a health research Act; or a Science and Technology Act; also decrees, regulations (under acts), by-laws in provinces that deal especially with health research; Acts that establish national health research body (e.g. Medical Research Council); etc*

1.9. Does your Ministry of Health have an **'active' list of National Health Priorities** ?

- If YES:
  - Provide a short description of the process used to develop the priorities covering methodology, frequency of updating and inclusiveness of consultation process
  - Provide relevant documents and/or references where available, and
  - List the priorities;
  - Give a date when these were officially adopted by the Ministry.

*Example: list of 'official' health priorities; if the Ministry has no list but other national bodies do have, for example, a national health system, answer the same questions.*

1.10. Does your Ministry of Health have an **'active' list of National Health RESEARCH Priorities** ?

- If YES:
  - Provide a short description of the process used to develop the priorities covering methodology, frequency of updating and inclusiveness of consultation process
  - Provide relevant documents and/or references where available, and
  - List the priorities;
  - Give a date when these were officially adopted by the Ministry.

*Example: list of 'official' health RESEARCH priorities; if the Ministry has no list but other national bodies do have, for example, a medical research council, answer the same questions.*

1.11. Does your country have **any other national research or research capacity development priorities** relevant to health research ?

- If YES,
  - provide a short description of its main objectives and relevant documents and/or references where available;
  - provide a short description of relevant health or medical research content

*Example: Health related research included within priorities set for Science& Technology, Higher Education, Economic development, Social development, or Agriculture etc.*

1.12. Does the NHRS have stated **values** (e.g. covering ethical conduct of research, issues of excellence, relevance, or equity; or any other values) ?

- If YES, provide a short description and relevant documents and/or references where available.

*Example: medical research council documents often have ‘clauses’ that deal with ‘research to be conducted to the highest ethical standards’ or ‘research needs to be relevant to the country’s population; etc*

1.13. What are the **aims of the NHRS** or of major components of the NHRS (for example as might be included in a mission or vision statement) ?

- Provide a short description and relevant documents and/or references where available.

*Example: if there are no clear aims or mission statement, state here; otherwise, list actual aims and objectives as listed in mission statements, or in other relevant documents.*

1.14. Does the NHRS have a system of **monitoring and evaluation** ?

- If yes, provide the name(s) of the structure(s), mechanism(s), office(s), or organisation(s) involved in monitoring and evaluation of the activities of the NHRS or of its major components, and provide relevant documents or references where available.

| |
|---|
| *Example: the ministry may be required to provide an annual report to parliament on health research; or, the medical research council may be required to list its activities (and that of others) in its annual report; etc.* |
| |

1.15. Describe the **ethical review** processes or structures for health research in your country.

- If YES, provide a short description of national or institutional ethics review of research protocols, and provide relevant documents and/or references where available.

| |
|---|
| *Example: is there a national ethics committee that reviews proposals? Do research institutions have ethics committees of their own; is there legislation regulating such committees ?; who deals with internationally sponsored research; is there review of private (for-profit) health research ? etc* |
| |

1.16. Describe how your country attempts to increase the **utilisation of research results by policy makers, managers, practitioners, public**; in other words, how are you promoting or implementing 'evidence-based policy and decision making' ?

- Provide a short description of efforts or mechanisms to achieve this, and provide relevant documents and/or references where available.

| |
|---|
| *Example: guidelines on the use of research in policy development and practice; provision of access to international research literature; mechanisms to review and 'translate' research for use by policy makers and managers; organisation of specific symposia or congresses; courses; are there national 'clinical practice' guidelines for specific conditions; links to the media; etc.* |
| |

1.17. Who is responsible in your country for **dissemination of research findings**?

- Provide a short description of how this is done, if at all, and provide relevant documents and/or references and/or examples of 'best practice' where available.

| |
|---|
| *Example: the director of research in the MOH; or academic institutions; researchers; press-office; or there may be no defined responsibility and dissemination activities are conducted in an ad hoc manner* |
| |

1.18. Describe **how the health service policy makers** (the ministry) in your country **remain informed of advances in health and medical care** produced internationally.

** Specifically, is there a regular mechanism whereby some institution in your country will keep the Ministry of Health up to date on advances in terms of the top-ten health priorities ?*

- Provide a short description of efforts or mechanisms to achieve this, and provide relevant documents and/or references where available.

| |
|---|
| *Example: there is no specific mechanism – it happens by ‘meetings’ or attending conferences; or, there is an annual health forum with academics, researchers, and ministry officials; or the country adopts WHO recommendations directly; Has the Ministry asked a University or Research Council to keep informing them about advances in health priority areas; or is there a ministerial ‘advisory committee’ (for example on medical technology); or links between health programmes and researchers in related fields ?* |
| |

1.19. Who is responsible in your country for **monitoring and evaluation of the impact of new health policies or interventions** on health and development?

- Provide a short description of how this is done, if at all, and provide relevant documents and/or references and/or examples where available.

| |
|---|
| *Example: the director of research in the MOH; or academic institutions; etc* |
| |

1.20. Describe how research evidence is used by the body that regulates the introduction of new health technologies, including drugs.

- Provide the name of structure(s) or organisation(s) involved and provide documents and/or references describing their roles and responsibilities where available;
- The types of health technology regulated: pharmaceuticals, medical devices, services, procedures etc;
- Describe the use of research evidence by the regulating body, noting:
    - The criteria use to guide decision making;
    - The use of evidence on effectiveness;
    - The use of evidence on cost-effectiveness.

*Example: national drug regulating office or agency; national food regulating agency; commission of experts or commission of ministry officials or of both; accept foreign institution's approvals; etc*

## 2. Institutions engaged in 'research for health'

2.1 Identification of **institutions that commission, conduct and use research for health** in your country: (Note: add additional rows as necessary)

| **Institution** | **Commission** | **Conduct** | **Use** |
|---|---|---|---|
| **(a) Government departments and agencies**<br>*(this will include research institutes under government control, and it may include ministries of education, science and technology, agriculture and finance, among others; in some countries, provincial departments and agencies may also be of relevance to list here)* | | | |
| | Yes/no | Yes/no | Yes/no |
| | | | |
| | | | |
| | | | |
| | | | |
| **(b) Health care system**<br>*(give the names of the major hospitals and teaching hospitals, health clinics, both the public and private sectors, or other important institutions in the health sector that commission, conduct or use research)* | | | |
| | Yes/no | Yes/no | Yes/no |
| | | | |
| | | | |
| | | | |
| | | | |
| **(c) Higher education and (national) research institutes / laboratories**<br>*(Include degree or equivalent awarding tertiary education institutions in both the public and private sectors. This includes research institutes and experimental stations operating under the direct control of, administered by or associated with higher education establishments. It also includes non academic and foreign institutions)*<br>NB. Medical Schools may fall under this category or under category (b) depending on the major source of its funding. For example, in some countries the medical schools fall directly under the ministry of health, and can then be listed in category (b). | | | |
| | Yes/no | Yes/no | Yes/no |
| | | | |
| | | | |
| | | | |
| | | | |
| **(d) Private non-profit organisations involved in research for health**<br>(this can include civil society organisations like charitable institutions, national non-governmental organisations (NGOs), professional bodies (e.g. medical associations) and community organisations) | | | |
| | Yes/no | Yes/no | Yes/no |
| | | | |
| | | | |
| | | | |
| | | | |
| **(e) Business enterprise or industry (Private for-profit)**<br>*(any private for-profit company providing products or services whether national or foreign. This will mainly relate to pharmaceutical and biotechnology companies, but may also include producers of medical devices, clinical research organisations and consultancy firms if they commission, conduct or use research for health)* | | | |
| | Yes/no | Yes/no | Yes/no |
| | | | |
| | | | |
| | | | |
| | | | |
| **Institution** | **Commission** | **Conduct** | **Use** |

| | | | |
|---|---|---|---|
| **(f) International research and development sponsors or partners involved in research for health**<br>*(agencies, foundations and donors, including international organisations active in the country. Include all such institutions directly involved with health research)* | | | |
| | Yes/no | Yes/no | Yes/no |
| | | | |
| | | | |
| | | | |
| | | | |
| **(g) Are there any other institutions / commissions / structures / councils / networks / fora etc. in your country that have an important impact on the activities of the NHRS that were not mentioned above ?** | | | |
| | Yes/no | Yes/no | Yes/no |
| | | | |
| | | | |
| | | | |
| | | | |

2.2 Identification of **Media organisations that play an active role in dissemination (and even conducting or commissioning) research for health** in your country.

- Provide a short description of how this is done, if at all, and provide relevant documents and/or references and/or examples where available.

| |
|---|
| *Example: newspapers, websites, radio stations or tv channels with regular health updates / health reporting, etc* |
| |

## 3. Key stakeholders involved in 'research for health'

3.1. From the institutions, commissions, mechanisms, companies and other structures noted in Section 2 - identify the positions and institutions that have the **greatest influence over the NHRS** for the following sectors: Government, Research producers, Civil society, International partners and Business enterprise; as appropriate.

- Provide a short description of these and how they influence the NHRS, and provide relevant documents and/or references and/or examples where available.

*Example: list top 3 most influential stakeholders for Government, Research producers, Civil society, International partners and Business enterprise sectors*

## 4. Available literature and data review on 'research for health'

4.1. What are the most important or most used **previous analyses, reports or information sources** on health and health research systems in your country (examples are: World Health Survey, Demographic and Health Surveys, Surveillance systems, Surveys of health systems capacity and activity, Resource flows studies, bibliometric studies, Health Research System Assessments, etc).

- Provide a short description of these, and provide relevant documents and/or references and/or examples where available.

*Example: results of major health survey, reports form surveillance systems, assessment of health research production or the health research system, research capacity assessments; etc*

## 5. Administrative information

5.1. Give the names of the stakeholders interviewed in the course of data collection.

| |
|---|
| *Example: Staff from Ministries, Universities, Medical Schools; etc* |
| |

5.2. Give references for the documents reviewed in the course of data collection.

| |
|---|
| *Example: Policies, plans, strategies, annual reports, work plans, budget statements, websites; etc* |
| |

5.3. How many working days did it take to collect the information and complete this form ?
(Include time spent arranging meetings and requesting documentation)

Number of working days:

## Definitions

### Dissemination

The dissemination is the process of taking the reports of the research findings and making them available to potential users of the information. This is considered more than the passive production of academic publications, which are classified as primary outputs of research. Dissemination activities may take the form of presentations to academics and other users, media activities, the production of targeted briefs, and study or training days.

### Governance

NHRS governance sets out the framework of relationships, systems, processes and rules for making decisions within the system. It also provides the structure through which the system's objectives are set, as well as the means of attaining and monitoring the performance of those objectives.

### Legislation

For purposes of this questionnaire, include all formal legal documents that governments uses to influence society: acts, laws, decrees, policies, 'white papers', other 'official statements by a ministry.

### Management

Management characterises the process of leading and directing the operations of the NHRS. The distinction between governance and management is that governance covers what the system should do, how it should work and what measures should be taken to assess whether it achieves its objectives, whereas management relates to the planning and execution of the activities to make this happen.

### National Health Research System (NHRS)

The people and institutions that generate or use research evidence to maintain, promote and restore the health and development of a population; and the activities and environment that facilitate these processes.

### Health Research

The generation of knowledge that can be used to promote, restore, maintain, protect, monitor and/or conduct surveillance of the health of populations. It includes biomedical research, which comprises the study of detection, cause, treatment and rehabilitation of persons with specific diseases or conditions, the design of methods, drugs and devices to address these health problems, and scientific investigations in such areas as cellular and molecular bases of disease, genetics and immunology. It also includes clinical research, which is based on the observation and treatment of patients or volunteers; epidemiological research, which is concerned with the study and control of diseases and of exposures and other situations suspected of being harmful to health; social science research, which investigates the broad social determinants of health; behavioural research, which is associated with risk factors for ill health and disease with a view to promoting health and preventing disease; operational research on health systems and how these can be improved to achieve desired health outcomes, including project or programme evaluation; and research capacity strengthening activities aimed to increase or strengthen individual or institutional capacities to conduct research.

### 3.9. NHRS Mapping Form – Health Equity Annex

# National Health Research Systems (NHRS) Assessment

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## NHRS Mapping Form – Health Equity Annex

The aim of this annex to the main NHRS Mapping Form is to provide a guide to collecting information to allow an assessment of whether the NHRS is designed to promote health equity. It compiles the equity related content of key policies and priorities, and identifies the structures and institutions with responsibilities and interests in increasing equity in health.

**Definition**

Equity in health implies that ideally everyone should have a fair opportunity to attain their full health potential and, more pragmatically, that no one should be disadvantaged from achieving this potential, if it can be avoided

Source: Whitehead, M (2000). The concepts and principles of equity and health. WHO Regional Office for Europe, Copenhagen.

## A1. Governance and Management of the National Health Research System (NHRS)

A1.1. Does the **Ministry of Health** have a **director / directorate / department** that deals especially with and coordinates efforts to address health equity in your country ?

- Provide the name and contact details of the responsible officer or structure;
- If there is no such office or officer in the Ministry of Health, describe how the ministry manages efforts to address health equity.

| |
|---|
| *Please give the name of the director, directorate or department in the MOH that responsible for health equity, or describe how this issue is managed within the Ministry* |
| |

A1.2. Do any **other Ministries** within government hold responsibilities for identifying or tackling issues of equity in general and health equity in particular (for example dealing with issues related to inequity attribute to Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age)?

- If YES, give name(s), position(s), details of responsibilities.

*Example: Ministries of Social Development, Gender Affairs or Finance, Central Statistical Office, Poverty Reduction Commission; etc*

A1.3. Does the **National Health** or **Health Sector** strategy, plan, or policy (described in Question 1.5 of Section 1) explicitly address issues of health equity ?

- If YES,
  - provide a short summary of the equity related content;
  - Note ‘stratifiers’ of health equity addressed, including: Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age;
  - Note aspects of health equity considered, for example health determinants, health system inputs, coverage and use of health services, and health outcomes.

*Example: Highlight where equity issues are explicitly addressed, for example issues related to gender, poverty, ethnicity etc or other under served or disadvantaged groups.*

A1.4. Does the **National Health Research** strategy, plan, or policy (described in Question 1.6 of Section 1) explicitly address issues of health equity ?

- If YES,
  - Provide a short summary of the equity related content;
  - Note 'stratifiers' of health equity addressed, including: Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age;
  - Note aspects of health equity considered, for example health determinants, health system inputs, coverage and use of health services, and health outcomes;
  - Describe any content related to increasing the recruitment, education or retention of females researchers

| |
|---|
| *Example: Highlight where equity issues are explicitly addressed, for example issues related to gender, poverty, ethnicity etc or under served or disadvantaged groups.* |
| |

A1.5. Do the **other national** strategies, plans, or policies (described in Question 1.7 of Section 1) explicitly address issues of health equity ?

- If YES,
  - provide a short summary of the equity related content;
  - Note 'stratifiers' of health equity addressed, including: Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age;
  - Note aspects of health equity considered, for example health determinants, health system inputs, coverage and use of health services, and health outcomes.

| |
|---|
| *Example: issues related to gender, poverty, ethnicity etc or other under served or disadvantaged groups.* |
| |

A1.6. Do any of the **National Health Priorities** (described in Question 1.9 of Section 1) deal with issues related to health equity ?

- If YES:
  - Describe how health equity is dealt with in the priority setting process;
  - Note ‘stratifiers’ of health equity addressed, including: Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age;
  - Note aspects of health equity considered, for example health determinants, health system inputs, coverage and use of health services, and health outcomes.

| |
|---|
| *Example: priorities related to gender, poverty, ethnicity etc or other under served or disadvantaged groups.* |
| |

A1.7. Do any of the **National Health RESEARCH Priorities** (described in Question 1.10 of Section 1) deal with issues related to health equity ?

- If YES:
  - Describe how health equity is dealt with in the priority setting process;
  - Note ‘stratifiers’ of health equity addressed, including: Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age;
  - Note aspects of health equity considered, for example health determinants, health system inputs, coverage and use of health services, and health outcomes.

| |
|---|
| *Example: priorities related to gender, poverty, ethnicity etc or other under served or disadvantaged groups.* |
| |

A1.8. Do any of the **other national research or research capacity development priorities** (described in Question 1.11 of Section 1) deal with issues related to health equity ?

- If YES:
  - Describe how health equity is dealt with in the priority setting process;
  - Note ‘stratifiers’ of health equity addressed, including: Place of residence (e.g. rural/urban), Religion, Occupation, Gender, Race/ethnicity, Education, Socioeconomic status, Social networks and capital (e.g. displaced populations), Age;
  - Note aspects of health equity considered, for example health determinants, health system inputs, coverage and use of health services, and health outcomes.

| |
|---|
| *Example: priorities related to gender, poverty, ethnicity etc or other under served or disadvantaged groups.* |
| |

A1.9. Do the NHRS **values** (described in Question 1.12 of Section 1) include a commitment to health equity ?

- If YES, provide a short description of the health equity statement.

| |
|---|
| *Example: list values related to health equity.* |
| |

A1.10. Do the NHRS **aims** (described in Question 1.13 of Section 1) include a commitment to health equity ?

- If YES, provide a short description of the health equity content.

| |
|---|
| *Example: list aims related to health equity.* |
| |

A1.11. Does the system of **monitoring and evaluation** for the NHRS (described in Question 1.14 of Section 1) include components that assess how the system deals with health equity?

- If YES, describe the health equity content.

| |
|---|
| *Example: monitoring the number of research projects or outputs on health equity topics or assessing the extent to which health equity relevant evidence is used in policy making; etc.* |
| |

## A2. Institutions engaged in ‘research for health’

A2.1. For the institutions **that commission, conduct and use research for health** (described in Question 2.1 of Section 2) identify those have a particular health equity focus.

| **Institution** |
|---|
| **(a) Government departments and agencies**<br>*(departments or institutes with responsibilities to deal with issues related to health equity, for example poverty, gender, disadvantaged communities)* |
| |
| |
| |
| |
| |
| **(b) Health care system**<br>*(give the names of the major hospitals and teaching hospitals, health clinics, both the public and private sectors, or other important institutions in the health sector that commission or conduct research)* |
| |
| |
| |
| |
| |
| **(c)Higher education and (national) research institutes / laboratories**<br>*(departments or research units with focus on health equity, for example in public health, social sciences, gender studies)* |
| |
| |
| |
| |
| |
| **(d) Private non-profit organisations involved in research for health**<br>*(NGO’s, faith based organisations or professional associations with focus on health equity, for example those providing support to poor and disadvantaged communities)* |
| |
| |
| |
| |
| |
| **(e) Business enterprise or industry (Private for-profit)**<br>*(this may include private sector organisations that provide services to poor and disadvantaged communities)* |
| |
| |
| |
| |
| |

(A2.1 continued)

| |
|---|
| **(f) International research and development sponsors or partners involved in research for health**<br>*(agencies, foundations and donors, including international organisations active in the country with a focus on health equity)* |
| |
| |
| |
| |
| |
| **(g) Are there any other institutions / commissions / structures / councils / networks / fora  etc. in your country that have an important impact on the activities of the NHRS and there were not mentioned above ?**<br>*(organisations with an influence on the NHRS and a focus on health equity)* |
| |
| |
| |
| |
| |

## A3. Key stakeholders involved in ‘research for health’

A3.1. From the institutions, commissions, mechanisms, companies and other structures noted in Section A2 - identify the positions and institutions that have **the greatest influence on the health equity** in your country.

- Provide a short description noting how they influence the health equity and provide relevant documents and/or references and/or examples where available.

| |
|---|
| *Example: list the top 3 most influential stakeholders with a focus on health equity* |
| |

## A4. Available literature and data review on ‘research for health’

A4.1. What are the most important or most used **previous analyses, reports or information sources** on providing evidence on health equity issues in your country (examples are: World Health Survey, Demographic and Health Surveys, Surveillance systems, Surveys of health systems capacity and activity, Health Research System Assessments, etc).

- Provide a short description of these, and provide relevant documents and/or references and/or examples where available.

| |
|---|
| *Example: A specific annual report of the Ministry or central statistical office; research studies; technical reviews; etc* |
| |

## A5. Administrative information

A5.1. Give the names of the stakeholders interviewed in the course of data collection for this annex.

| |
|---|
| *Example: Staff from Ministries, Universities, Medical Schools; etc* |
| |

A5.2. Give references for the documents reviewed in the course of data collection for this annex.

| |
|---|
| *Example: Policies, plans, strategies, annual reports, work plans, budget statements, websites; etc* |
| |

A5.3. How many working days did it take to collect the information and complete this annex? (Include time spent arranging meetings and requesting documentation)

Number of working days:

## Definitions

**Equity in health** implies that ideally everyone should have a fair opportunity to attain their full health potential and, more pragmatically, that no one should be disadvantaged from achieving this potential, if it can be avoided

Source: Whitehead, M (2000). The concepts and principles of equity and health. WHO Regional Office for Europe, Copenhagen

**Health determinants**: socioeconomic, environmental, behavioural and genetic factors and the contextual and legal environments within which the health system operates.

**Health system inputs**: policy and organisation, health infrastructure, facilities and equipment, costs, human and financial resources and health information systems and related processes.

**Coverage and use of health services**: the performance or outputs of the health system such as availability, quality and use of health information and services.

**Health outcomes**: mortality, morbidity, disability, well-being, disease outbreaks and health status.

Adapted from: Abouzahr, C. & Boerma, T. (2005) Health information systems: the foundations of public health. Bull World Health Organ, 83, 578-583.

**Health equity stratifiers**:

- Place of residence: for example classification by rural, urban, slum, province;
- Religion;
- Occupation: for example, the Standard Occupational Classification system (Managers and senior officials; Professional occupations; Associate professional and technical occupations; Administrative and secretarial occupations; Skilled trades occupations; Personal service occupations; Sales and customer service occupations; Process, plant and machine operatives; Elementary occupations);
- Gender;
- Race/ethnicity: including language group, tribal affiliation, or immigrant – native-born citizen;
- Education: for example number of years of education; completion of primary, secondary, tertiary education; highest educational qualification;
- Socioeconomic status: for example absolute poverty [income of <$1, <2$, $2 or more per day], relative poverty [income quintiles, Gini coefficient];
- Social networks and capital: for example, displaced populations;
- Age.

Adapted from: Evans, T. Brown, H. (2003) Road traffic crashes: operationalizing equity in the context of health sector reform. Injury Control and Safety Promotion, 10, 11-12.

## Abbreviations

| | |
|---|---|
| ENHR | Essential national health research |
| LMIC | Low and middle income countries |
| M&E | Monitoring and evaluation |
| NGO | Non governmental organisation |
| NHIS | National health information system |
| NHR | National health research |
| NHRS | National health research system |
| ODA | Overseas development assistance |
| R&D | Research and development |
| S&T | Science and technology |

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