Capacity Building for Patient Safety Research

1st Expert Consultation meeting
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Bangkok, Thailand

Introduction

Research for patient safety is in its infancy worldwide and in many countries research efforts to improve patient safety have been fragmented and received minimum attention and funding.

As a result, in most countries, the infrastructure for research on patient safety, including the institutional and managerial structures and the body of researchers, is limited. Particularly challenging is the situation in developing countries, where the discrepancy between the allocation of research funding and the problems that account for the highest global disease burden are greater, and where the resource constraints are much larger. Many national research programmes lack clear research directions and appropriate governance and management structures. Furthermore, the severe human resource crisis that affects many developing countries adds significant complexity to the problem.

It is important to be aware that research for patient safety is not only about increasing knowledge, it is also about translating knowledge into practice and about bridging the interface between research, dissemination, and adoption at policy, practice, managerial and consumer levels. Research for patient safety needs to be therefore mainstreamed into health care systems policies and activities, and needs to be integrated within health care reform and other quality improvement programs.

The WHO World Alliance for Patient Safety intends to analyse and propose recommendations leading to strengthening the capacity for patient safety research worldwide.

Target audience of these recommendations are: the Alliance itself, main commissioners and international funding institutions of health and health services research, international networks of health research, educational institutions, and governments interested in supporting and advancing patient safety research.

This briefing highlights the goals and objectives of this exercise, identifies its expected outputs and the criteria for success, and highlights some of the questions that may need to be addressed to accomplish its goals. It ends up with a summary of background information about major challenges for successful capacity building for patient safety research.

The exercise will be delivered by a group of experts who will convene over two days to reflect on the issues indicated above and propose solutions.
Objectives

Aim: the final aim is to support the development of evidence based research to improve patient safety globally

Main Objective: to develop recommendations to strengthening infrastructure and capacity for the support of research that will deliver evidence to patient safety globally

Criteria for Success

Success would include:

- Clear recommendations to the WHO World Alliance for patient safety on how to strengthen infrastructure and capacity to advance the development of patient safety research
- Increased funding for research on patient safety at national and international level
- Bringing Patient Safety into the network agendas
- International collaboration on patient safety research and monitoring
- Mainstreaming patient safety research into health systems
- Advancing the opportunities for human development in this area

Output

A document recommending the infrastructure and capacity that are needed for research in patient safety and how to develop such infrastructure and capacity with a particular emphasis on developing countries

Process of Work

Formation of a working group consisting of members from countries, research funders (donors and international agencies), and international and national experts. The final output will be submitted for consideration to the Research Council of the WHO World Alliance for Patient Safety, before being distributed and discussed with various countries actors and potential interested donors/funders.

Key issues for discussion

- What and who constitute key infrastructure for patient safety research?
- What are the roles of key stakeholders in building infrastructure and capacity on research for patient safety?
  - National agencies, international donors, international organizations, business and industry, consumer and patient groups, academic institutions, health service managers
- What types of capacity should be strengthened?
- **Academic and research institutions:**
  - Are there specific types of research institutions of particular importance?
  - How to influence universities and academic systems?
What are the incentives and barriers for patient safety and associated research within health systems and academic systems?

- **Research funding agencies:**
  - How closely should they be involved in research?
  - Do they need to manage or contribute so that research process and results can be linked with potential users?
  - Which would be the role for international donors?
  - How do we focus donors on this issue?

- **Patient groups or interested public/consumer groups:**
  - How actively should they be involved with patient safety research?

- **Fostering research networks:**
  - Which are the potential models? Creating national networks of research on patient safety?, Regional network on research safety?
  - How do we influence networks to take patient safety research seriously?
  - Is there enough commonality between the agendas across health systems research and networks to try and build something bigger that delivers for both?

- **Creating research partnerships that work (ensuring research linkage with health service provision):**
  - Which are the potential models? Research embedded in health services systems?, Centres of excellence with close links to various types of potential users?, National research programme on patient safety? Global research funds for patient safety to promote both global and national research issues dealing with patient safety?
  - Why should they invest on patient safety research?
  - How does patient safety research interact with health system reform and evaluation? Is the link simply quality or it is greater?
  - What role can business, industry play globally or locally? who are the key businesses? Can we support the building of local partnerships around risk assessment?
  - Is it sensible to try linking to the Department of Trade and Industry around a more general risk training awareness and support?

- **What can be done next?**
  - Global Fund for Patient Safety?
  - National Programme on Patient Safety?
  - Working with selected groups and institutes in countries to create research in patient safety linking to service improvement?
  - Creating a regional network of interested parties on research on patient safety?
Background Paper

Strengthening Capacity for Research on Patient Safety: Some Issues for a debate

Introduction

Healthcare is undergoing unprecedented changes and healthcare providers are facing many challenges in a rapidly changing environment. Despite the global commitment to improving the health outputs of patients, research has indicated that significant levels of error occur that often result in injury to patients. Large scale medical record reviews have been undertaken in Canada, the United States, the United Kingdom, Australia, Denmark, and New Zealand. These studies have reported adverse event rates per admission of between 7.5% to 12.9% and rates of permanent harm or death from adverse events in the range of 0.4% and 2.0%. As yet there has been little research done on the nature and scale of errors in developing and emergent countries. Some data, however, suggests that developing countries account for 77% of all reported cases of counterfeit or substandard drugs, and that at least half of all medical equipment in these countries is unusable or only partly usable.

The emerging recognition of the prevalence and consequence of clinical error led the World Health Organization (WHO) to tackle patient safety. In May 2002, the fifty-fifth World Health Assembly adopted WHA Resolution 55.18, urged countries to pay the closest possible attention to the problem of patient safety and to establish and strengthen science-based systems necessary for improving patient safety and the quality of health care. In May 2004, the Fifty-seventh World Health Assembly supported the creation of an international alliance to facilitate the development of patient safety policy and practice in all Member States and act as a major force for improvement internationally. The creation of the World Alliance for Patient Safety has been a significant step in the struggle to improve the safety of health care in all Member countries.

Among the action areas of the WHO World Alliance for Patient Safety, the Research Program aims to facilitate the spread of research and the use of research findings to make health care safer in all WHO member states, in accordance to the WHO role of advocate, catalyst, communicator, consensus builder, convenor, setter of norms and
steward of research.\textsuperscript{12} WHO is particularly concerned with how to translate research outcomes into policies, programmes and practices, and calls for global action to help meet the gaps in research implementation and capacity, particularly in middle- and low-income countries.

**The role of research in making patients safer**

Research on patient safety aims to build the knowledge base on the scope and impact of adverse events and their associated distributions. It aims to identify the root causes of hazards to patient safety and to develop effective systematic approaches to prevent the occurrence of those hazards. It is therefore evaluative research and applied actions-oriented research. A critical role of research relates to establishing the effectiveness, efficiency and contextual appropriateness of solutions, and to designing strategies to implementing those solutions. It has a powerful role in the conduct of demonstration projects, in the evaluation of interventions, the development and implementation of educational program, the dissemination of results, and the integration of research into health services system.

Advocates of patient safety emphasize the systemic dimension of research in this field. In fact, improving patient safety requires of strategies dealing with the basic broad functions of health systems: stewardship, resource generation and transfer, funding, systems design, and the management of resource and technological inputs, and of clinical and organizational processes and behaviours. Failures may occur at all functions, and therefore, research needs to address them all with their interfaces.

Perhaps one of the best examples of the success of research in mobilizing policy and professional and institutional action is the use of the US Harvard study\textsuperscript{2} to raising public and political awareness towards patient safety. The study was used as the scientific basis for a convincing report of the US Institute of Medicine of the National Academy of Sciences (IOM), *To Err is Human*.\textsuperscript{13} The report drawn the attention of relevant public and private organizations that were in a position to address the quality of US health care. One of the significant consequences was the Presidential order requiring federal agencies and departments to develop activities to make patient care safer. The Governmental response was crystallized in the passing of legislation in 2003 and 2004, whereas the response of the professional and institutional sectors include an elaborated and vast collection of innovative programs and new
organizational arrangements. Few years later, patient safety is an essential component of health care organizations, professional bodies and research institutions in the US.\textsuperscript{14} The impulse originated with the IOM report was also reflected on a substantial budgetary increase towards patient safety research in a number of countries.\textsuperscript{15,16} Research for patient safety is, and has been, prevalent under other comparable concepts and programmes. In particular those dealing with quality and performance improvement, or health care accreditations. On the whole, however, research into this area is still very limited in most countries.

**Which are the challenges facing research for patient safety ?**

Even in countries with the larger support to patient safety research, the field faces important challenges. For example, the US Agency for Health Research and Quality together with experts from the UK, New Zealand and Australia, recognized that existing funding for patient safety research tended to be opportunistic rather than strategic or based on priority needs. The result of this revision was the issuing of recommended research priority areas.\textsuperscript{17} But this process has not taken place in most countries.

Furthermore, the relatively paucity of researchers who have established in the field is recognized as another important challenge.\textsuperscript{17} Some underlying factors are related to the limited educational opportunities and the scarcity of targeted training programs, at the graduate, post-graduate and in-service levels. Also, the lower academic prestige associated to health services research, in general, and in particular to quality improvement and patient safety research, undermines the possibilities for attracting more researchers. It is therefore important to develop strategies to leverage the symbolic relevance of the field and to actively retain and cultivate researchers.

Existing literature from the safety field demonstrates the value of a multidisciplinary approach to patient safety research and demands novel strategies to promote multidisciplinary teams of researchers. To meet this challenge educational and research based policy makers need to analyse the barriers and opportunities for facilitating multidisciplinary teams and develop opportunities for their work.

An additional positive factor to sustaining the capacity for research is through collaboration across researchers and institution, including public and private partnerships, and fostering of networks around patient safety principles and actions.
Effective knowledge transfer is one of the most difficult challenges related to research. There are often delays in converting research knowledge into action. This is also true for patient safety. There is need for iterative dialogue between researchers, policy makers and commissioners to developing practical tools to facilitate the implementation of existing knowledge. Alternatives to this problem go by mainstreaming patient safety research into the existing health services and system structure.

**Specific constraints of developing countries**

The 1990 Commission on Health Research for Development estimated that less than 10% of the world’s resources for health research (which totalled US$ 30 billion in 1986) were being applied to the health problems of developing countries, where 90% of the avoidable burden of ill-health was to be found. This observation raised the ‘10/90 gap’ concept to express the inequities in global expenditures on health research. This imbalance still remains even though global health research spending has more than tripled in the last few years.

Very few countries fund and support research appropriately. The 1990 Commission on Health Research for Development recommended that developing countries should allocate at least 2% of their national health budgets to essential health research and research capacity strengthening, while international development agencies should invest 5% of their health budget in health research and capacity building. However, research activity in developing countries has even declined between 1992 and 2001.

The goal of building capacity for health research is to improve the ability to conduct research, to use results effectively and to promote demand for research. The Global Forum for Health Research recognized that developing countries face important challenges to effectively increase their research capacity. Among these they highlighted the low priority assigned to research and the inadequate efforts to prioritizing research problems; the limited use of existing knowledge and human resources; and also the limited impact of research capacity building strategies on the functioning of health systems. As a consequence, the Global Forum recommended the designing of a framework for defining capacity building needs and impact; establishing a partners' network for debate, monitoring, and advocacy; and supporting funding an enabling environments for research capacity strengthening.
The Council on Health Research for Development (COHRED) with New York University identified five important elements that influence the capacity of developing countries to establish and deliver their health research agendas in developing countries. These are: governance and management capacity, funding, donor practices, inequitable partnerships between donors and countries, and the level of information sharing.27

The reality is that many national research programmes lack clear research directions, and appropriate governance and management structures for research. Furthermore, external actors, such as international health research programmes and other donors, can distort country research agendas and undermine national research systems.27

The severe human resource crisis of many developing countries challenges most efforts to build a critical mass of able and qualified scientists, an essential element to enable successful research programs. Very large numbers of qualified and semi-qualified professionals leave every year their home countries in search of better environments, propelled by increasing opportunities of travel, education and work abroad.

In many developing countries, the poor research environment is an important demotivator and a catalyst for increased migration. Understanding the environment implies addressing limitations at the infrastructure and supplies level, but also the incentives system, including remuneration, career path, teamwork and peer support.28

The weakness of the education systems add additional challenges. For example, the provision of general training on public health methodologies in countries of Sub-Saharan Africa is extremely limited. A recent survey has indicated that of 53 countries surveyed in Africa, there is no provision for public health training in 27 countries (51%); there is one programme in 16 countries (30%) and there is more than one programme in 10 countries (19%).29

The alternative option of training professionals in more developed countries is not exempt from serious challenges. Foreign institutions of developed countries tend to focus on issues that may not represent priorities for developing countries, and furthermore may not provide the skills necessary to operate in lower resource settings. The risk of brain-drain is also more intense among foreign trained professionals.29
The Global Forum for Health Research and COHRED highlighted the need for strengthening professional and institutional networks across developed and developing countries. The past few years have seen remarkable progress in this respect in some other areas, but strengthening networks around health services improvement, quality and patient safety, may yet need of further impulse. Effective networking requires of supporting resources and internal systems to foster relations between and across the partnership, and mechanisms to ensuring the efficient delivery of products and strong linkages with the national health systems.

Because of the systemic nature of Patient Safety research, capacity building needs to involve the many professional groups and stakeholders concerned with the delivery of health care, including research managers, policy analysts, consumers and health care providers. Their involvement would be essential to facilitate more effective research but also the link between knowledge and action.

The translation of knowledge is a crucial issue. It is recognized that development depends to a large extent on the capacity of a country to understand, interpret, and effectively use scientific and technological knowledge. However, developing countries suffer from the lack of effective mechanisms and systems for facilitating quick knowledge transfer. Actions to bridge the knowledge divide through information networks and mechanisms to ensure that the information reaches to, and it is used by, the population who needs it are essential. The Digital Divide, refers to the particular limitations in physical and logistic infrastructure, and is another important constraint.

**Conclusions**

Research is essential to inform health policy and effectively contribute to health system strengthening by providing evidence on corrective interventions. In this respect, is an essential component of health systems actions leading to improved health care. Patient safety is a key component of quality. It is considered as the first and most essential one. New knowledge leading to improved patient safety intimately contributes to improving the quality of care. The link between the two dimensions of the same construct is close and unbreakable. Quality Improvement strategies and research associated to implementation of quality improvement strategies contributes to strengthening patient safety. Research for Patient Safety is essential to diminish
the harm associated to health care, and its relevance within health systems is critical. However, both in developed and developing countries the importance of research is yet relatively limited.

Actions need to be taken at the national, regional and global level. National institutions and international bodies, those involved in research production and research utilization and also those involved in policy making and in health care delivery in countries need to actively engage in efforts to strengthening the capacity for research on patient safety.

References


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