

# WORLD REPORT

ON

HEALTH POLICY AND  
SYSTEMS RESEARCH

HPSSR

World report on health policy and systems research

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# HEALTH POLICY AND SYSTEMS RESEARCH

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# FOREWORD

In the 1990s, two far-sighted reports recognized that health policy and systems research was a neglected area of research, particularly in middle- and low-income countries. These were the historic reports of the Commission on Health Research for Development and that of the Ad Hoc Committee on Health Research. Since then, as the current text well illustrates, the field has developed substantially – not least through the creation of the Alliance for Health Policy and Systems Research in 2000 and that of Health Systems Global in 2012.

This first World Report on Health Policy and Systems Research reflects the importance of monitoring and measuring developments in the field. It provides evidence that allows national policy-makers and funders to see how their investments contribute to the generation and use of policy-relevant knowledge. Its chapters describe the evolution of the field, the current state of play and results to date, the challenge of institutional capacity and emerging trends, illustrating the importance of this area of research for the attainment of the Sustainable Development Goals.

New partners promoting this field of research have come on the scene in the past two decades and ‘closed’ disciplines no longer offer such attractive pathways. This is a broad-ranging report, relevant to stakeholders in public health from many disciplines and training, at all career levels, in all parts of the globe. It collects together for the first time figures on various significant aspects of health policy and systems research: growth in the number of publications, collaboration between researchers in different parts of the world, funding trends, institutional capacity in low- and middle-income countries, and much more. As the WHO Director-General has said, “In the absence of sound evidence, we will have no good way to compel efficient investments in health systems.”

I would strongly encourage the Alliance to continue to monitor and publish, on a regular basis, the evidence (figures and opinions) that will encourage investment in health policy and systems research both in financial and human terms. Meanwhile I commend this report to all who hope to contribute to the realisation of Agenda 2030 and invite them to see how the story of health policy and systems research might inspire innovation and learning in their own area of work.



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# CHAPTER 1

## EVOLUTION

The field of health policy and systems research (HPSR) has demonstrated a remarkable maturation over the past 20 years. As described in this report, the level of funding, the number of publications and the numbers of researchers engaged in HPSR have all grown substantially during recent years. In this chapter we seek to explain why and how this growth has occurred. Clearly one of the key factors driving interest in HPSR is the growing global attention to health systems strengthening. Hafner and Shiffman have made a careful analysis of how health systems strengthening has ascended the ladder of global priorities, but to date a similar analysis has not been conducted for HPSR (1). This chapter attempts to fill this gap.

This review examines the period 1996 to the present. In 1996 the World Health Organization (WHO) published the volume *Health Policy and Systems Development: An agenda for research* (2). This publication, which was an off-shoot of the broader report *Investing in Health Research and Development* (3), laid the foundation for the establishment of the Alliance for Health Policy and Systems Research in 1999 and thus provides a suitable starting point for this investigation.<sup>1</sup>

As for many new fields of endeavour or study in the area of development, the evolution of HPSR reflects a constant back and forth between individual country interests and aspirations, on the one hand, and global-level processes, on the other. Given the diversity of country experiences and responses, global-level processes are often more visible and recognizable, and indeed they are the primary focus of this chapter. However, this focus means that we inevitably provide a partial view of the forces that have shaped HPSR in individual countries.

We start by describing the state of the HPSR field in 1996, identifying three broad challenges to its progress that were clearly visible at that time. Subsequent sections then analyse how these challenges have been addressed over the intervening 20 years, resulting in greater recognition of and investment in HPSR.

### 1996: THREE CORE CHALLENGES FOR HPSR

By the mid-1990s a number of global reports and declarations had stimulated interest in the organization, financing and management of health systems. These included, for example, the landmark Alma Ata Declaration (4), the World Bank's policy study on financing of health services in developing countries (5), UNICEF's interest in community-based health financing embodied in the Bamako Initiative (6), and the World Development Report devoted to investment in health (7). Throughout

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<sup>1</sup> The analysis has been primarily informed by the personal experience of the three main contributors to this chapter – Sara Bennett, Julio Frenk and Anne Mills – all of whom have been intimately involved in the process of securing greater recognition of the importance of HPSR. What they described as their “imperfect recollections” have been supplemented by a review of relevant documentation and by critical peer review of the chapter.

much of the 1980s, up until the mid-1990s, many low- and middle-income countries (LMICs) had struggled to accommodate declining commodity prices and patterns of public expenditure that were considered no longer affordable given declining revenues, leading to a series of structural adjustment programmes. There was, therefore, a strong focus on addressing the economics of health-systems and health-services financing. This was reflected in USAID's Health Financing and Sustainability project (1990-1995), the UK Department for International Development (then Overseas Development Administration) support to the Health Economics and Financing Programme at the London School of Hygiene and Tropical Medicine (1990–2005), and the increasing participation of the World Bank in financing health-sector reform initiatives in developing regions. Elsewhere, however, interest in HPSR emerged from different perspectives. For example, at the Johns Hopkins School of Hygiene and Public Health (as then named), faculty had been closely engaged with the development of the Alma Ata Declaration and initial interest in health – focused on community-based health systems, as well as planning and management. European Community research funding for health development had also been focusing on lower levels of the health system such as the district. WHO's Division of Strengthening of Health Services embraced many of these themes with publications addressing topics such as primary health care (including the role of community health workers), decentralization, strengthening of district health systems, and health financing and economic analysis.

In the mid-1990s there were three principal challenges to the growth of the field of HPSR: (i) the fragmentation and lack of a single agreed definition of the field; (ii) the ongoing dominance of biomedical and clinical research; and (iii) a lack of demand for HPSR. Cross-cutting all these challenges was the problem of relatively limited capacity to undertake high-quality health policy and systems research.

### Fragmentation and definition of the field

In the mid-1990s the field of health policy and systems research was just emerging. While there were several international and national centres focused on different aspects of health systems including their financing and organization, there was no common understanding of how various components of a health system – e.g., health financing, the private sector, community health systems – might fit together. In addition, there were few textbooks, readers or courses that described the array of methods that those engaged in HPSR might employ (with the notable exception of the 1992 reader edited by White et al.)<sup>(8)</sup>. As already noted, the discipline of economics probably provided the dominant framework for health systems research in LMICs, but the relationship between this and other disciplinary approaches had not been well articulated.

This challenge of lack of definition of the field was further exacerbated by confusion between the terms “health systems research” and “health services research”. The latter formed a relatively well accepted and supported field of study in high-income countries that appeared to overlap with but also differ from health systems research which was primarily discussed with reference to low- and middle-income countries <sup>(9)</sup>. While health services research, at the time, focused primarily on micro- and meso-level questions about the interaction between patients, providers, and service-delivery organizations, health systems research typically focused on more macro-level questions concerned with the organization of health systems as a whole. Terminological confusion was certainly evident; for example, the excellent reader mentioned above focused on health services research but also discussed health systems research <sup>(8)</sup>.



Given the scarcity of coherent conceptual frameworks of the field of HPSR, it is hardly surprising that there was no strong community of health policy and systems researchers. After the establishment of the International Health Economics Association (iHEA) in 1994 (10), many international researchers with interests in health financing would attend its conferences but these failed to embrace the breadth of work related to HPSR, given the dominance of the discipline of economics there. Further, while there were some units or programmes with a strong focus on HPSR, they were relatively few and predominantly located in Europe and North America. Many researchers with interests in HPSR were based elsewhere, in schools of public health, university departments, and think tanks, but were often in relatively isolated positions, lacking close colleagues involved in similar work.

### Dominance of a northern, biomedical research model

The 1990 report of the Commission on Health Research for Development was a landmark document that played a significant role in drawing the world's attention to the imbalance firstly between investment in health research relevant to the global south vis-à-vis the global north, but also in identifying particularly under-funded areas of research (11). While the report does not use the term health policy and systems research or even health systems research at any point, it does underline the neglect of "policy and social science, and management research" as well as "problems not classified as diseases, such as health information systems, costs and financing, and the wasteful misuse of drugs".

The focus on biomedical and clinical research had broader ramifications, particularly with respect to the development of research capacity. While biomedical and clinical research may be best addressed in large centres of excellence sited in locations with relatively good infrastructure and support, with the anticipation that research findings are transferable to other similar contexts, HPSR requires very different types of capacities. Given the context-specific nature of much HPSR, it depends on the existence of capacity in every country and preferably at sub-national levels too. Thus, the dominance of a biomedical and clinical research paradigm also contributed to the severe imbalances in research capacity identified in the 1990 Commission report and in later reports by both the Council on Health Research for Development (formed in 1993) and the Global Forum for Health Research (established in 1998).

### Lack of demand for health policy and systems research

A final critical challenge in the HPSR field during the mid-1990s was a lack of demand for evidence to inform decision-making about health-systems strengthening. The field of knowledge translation was still nascent; indeed, it was not until the late 1990s and early 2000s that the term "knowledge translation" became widely used to describe the process of supporting the implementation of key research findings (12).

While certain international agencies, such as the World Bank, were using health systems research to inform their policies, there appeared a tendency to assume that research evidence from one low- or middle-income country would be equally applicable across widely varying contexts. Indeed, the World Bank's adoption of policy supporting the introduction of user fees for health services globally appears to have been largely justified on the basis of studies from South-East Asia demonstrating the insensitivity of populations in these locations to price changes for health services (13, 14). Thus, while evidence was used in some quarters to support decision-making, very little attention was paid to the need for countries to have their own capacity for generating evidence and no attention at all

was paid to the need for investing in the skills of policy-makers so that they could better understand and support research. Indeed there was no acknowledgement that HPSR capacity needed to exist widely, including outside of the research sphere.

## ADDRESSING THE CHALLENGES

The challenges described in the section above have not been overcome, but there have been a number of developments – some based on concerted efforts by the emerging HPSR community and some broader trends – that have alleviated these challenges and have led to growing recognition of and investment in the field.

One of the most significant factors driving increasing interest in the field has been the recognition of the importance of strong health systems. This process has been described elsewhere (1) but, to recap, some of its key features included the growing recognition on the part of those programmes with responsibilities for achieving the Millennium Development Goals (MDGs) that the MDG targets would not be achieved without better health systems. For example, as the Global Fund to Fight AIDS, TB and Malaria and the US President’s Emergency Plan for HIV/AIDS Relief (PEPFAR) sought to scale up antiretroviral therapy, there was a relatively rapid realization that in sub-Saharan Africa the health workforce was inadequate to support this scale up. While this gave rise to an initial focus in the HIV/AIDS community on the health workforce, other aspects of health systems, particularly those where there were acknowledged weaknesses likely to impede the scale up of key HIV/AIDS programmes such as drug supply systems, also quickly attracted attention.

Somewhat similarly, the multi-country evaluation of Integrated Management of Childhood Illness (IMCI) (15) found that improvements in child health, as a consequence of the IMCI strategy, had not been as extensive as anticipated, due largely to weaknesses in health systems. This recognition, along with advocacy efforts to promote the importance of health systems with global health policy-makers (such as the Montreux challenge meeting<sup>2</sup>) and efforts to de-mystify health systems (as in the WHO report on health systems “Everybody’s business” (16)) were helpful in expanding interest in health systems and thus raising awareness about the limitations on our understanding of how health systems work and the importance of HPSR.

While the MDGs were targeted on specific health outcomes and their categorization in some respects undermined a health systems approach, from about 2008 onwards universal health coverage (UHC) became an increasingly central rallying point for global health advocacy. UHC has obvious, direct links to HPSR, requiring an understanding of appropriate financing mechanisms not just for single diseases but for the health system as a whole, as well as knowledge on how best to organize and deliver health services so as to ensure that they are accessible, affordable and accountable. Ultimately the health goal in the Sustainable Development Goals (SDGs) was not framed as UHC, but the latter is still an important target. Perhaps even more significantly, the framing of the broad set of SDGs – including acknowledgement of the importance of governance (Goal 16) and of the links between different goals – suggests a much more systems-oriented way of thinking about what successful development entails than that implicit in the MDGs.

<sup>2</sup> This meeting, which was convened in 2005 by WHO and USAID and involved senior staff from many of the global health initiatives, focused on the importance of health systems strengthening for achieving the goals of global health initiatives.

While the ascendancy of the health systems strengthening agenda certainly paved the way for an increased focus on HPSR, there were additional factors that also increased interest in the field. We identify three primary factors, namely: (i) sustained advocacy for the importance of HPSR, (ii) efforts to clarify the content and focus of the field, and (iii) growing appreciation of and efforts to engage health practitioners and policy-makers in HPSR.

### Sustained global advocacy for HPSR

Table 1 presents some of the key advocacy events or publications during the past 20 years. In the final report of the WHO Ad Hoc Committee on Health Research relating to Future Intervention Options, one of four main recommendations addressed health systems research and noted that future research “should include investigation into health systems and their financing, the determinants of the behaviour of health care providers, and the behaviour of individuals and households” (3). At the final meeting of the Ad Hoc Committee in June 1996, the Norwegian and Swedish delegations accepted a request to facilitate the further development of a proposal for a health systems research initiative. This led to an international meeting of stakeholders in Lejondal, Stockholm in April 1997 that was supported by a background document outlining possible operational and governance mechanisms, as well as funding possibilities for what was to become the Alliance for Health Policy and Systems Research (17).

While initially advocacy for HPSR was scattered and uncoordinated, the creation of the Alliance for Health Policy and Systems Research (Alliance) in 1999 greatly helped to focus attention, and with strong leadership for health systems and associated research at the time within WHO, which included inviting the Alliance to be based within WHO headquarters, a more harmonized approach has emerged.

Early publications and events such as the Ad Hoc Committee report (3) and the 2000 World Health Report (18) began to prepare the ground for increased interest and investment in HPSR. There has been more consistent advocacy since 2004, in particular as a consequence of the Mexico Ministerial Summit. The first action item in the Summit’s statement was for national governments to “commit to fund the necessary health research to ensure vibrant health systems and reduce inequity and social injustice”, and this was further supported by a call for research funders to “to support a substantive and sustainable programme of health systems research aligned with priority country needs.”

The Global Ministerial Forum in Bamako four years later was meant to provide an opportunity to take stock of progress since Mexico. An assessment prepared by the Alliance suggested that, while there had been growing interest in HPSR, the value of HPSR grants remained small and funding was poorly coordinated (19). Another paper around the same time (20) analysed current priorities in health-research funding through an examination of the research portfolio of both the US National Institutes of Health and the Bill & Melinda Gates Foundation and demonstrated the extent to which funding continued to be skewed towards new discoveries rather than ensuring the effective delivery of current drugs and technologies (20).

TABLE 1. Key publications and events advocating for HPSR

YEAR	PUBLICATION OR EVENT	SIGNIFICANCE
1996	Ad Hoc Committee Report <i>Health Policy and Systems Development: An agenda for research</i> (2)	First attempt to identify global research priorities for the health policy and systems field. Contributed to the establishment of the Alliance for Health Policy and Systems Research.
1997	Lejondal Meeting in Stockholm and accompanying reports and proposals	This international consultative meeting with senior scientists, policy-makers and representatives of various agencies with a stake in HPSR led the way for an “Interim Board” for the Alliance for Health Policy and Systems Research.
2000	<i>Health Systems: Improving performance.</i> World Health Report 2000 (18)	One of the early reports to present a conceptual framework for health systems.
2003–2004	Task Force for Health Systems Research (21)	Identified health systems research priorities to help achieve the MDGs. The Report was published in <i>The Lancet</i> .
2004	Ministerial Summit on Health Research, Mexico City, Mexico	Statement from the Summit called for greater investment in health systems research, but also for greater attention to the evidence-to-policy gap.
2004	European Commission report on 20 years of health systems research funding (23)	Called for greater investment in HPSR, as well as greater attention to capacity development for LMIC partners and to getting research into policy and practice.
2006	<i>The Lancet</i> and Mexican Ministry of Health meeting on health system reform	Showcased national-level efforts to drive policy change through HPSR.
2008	Global Ministerial Forum on Research for Health, Bamako, Mali	Follow-on from the Mexico Summit continued to drive focus on health systems research and evidence-to-policy work, as well as assessing progress against Summit commitments.
2008	High-level consultation and task force report <i>Scaling up research and learning for health systems</i> (24)	Issued four main recommendations: i) mobilize a high profile agenda of research and learning on health systems; ii) engage policy-makers in shaping the agenda and encourage research use; iii) strengthen country capacity for HPSR; and iv) increase financing for HPSR.
2010	First Global Symposium on Health Systems Research, Montreux, Switzerland	First international conference focused on HPSR.
2012	WHO Strategy on Research for Health (25)	Initiated in 2007 and developed through a consultative process, this WHO strategy document prioritized research that met health needs and underscored investments in capacity development and knowledge translation.
2012	<i>Changing Mindsets: WHO Strategy on Health Policy and Systems Research</i> (26)	First WHO strategy focused on HPSR.
2012	Second Global Symposium on Health Systems Research, Beijing, China	Establishment of the society, Health Systems Global.
2013	<i>Research for Universal Health Coverage.</i> World Health Report 2013 (27)	Articulated the importance of HPSR to advance progress in universal health coverage and called for greater investment in low- and middle-income countries in HPSR.
2014	Third Global Symposium on Health Systems Research, Cape Town, South Africa	
2014	Statement on advancing implementation research and delivery science	Joint statement issued by the Alliance, USAID, WHO and the World Bank underlining the importance of implementation research.
2016	Fourth Global Symposium on Health Systems Research, Vancouver, Canada	Called for innovative research and frameworks to understand resilience as well as for embedding of research with policy-making processes and practices.

Within the overall field of HPSR, there has recently been growing interest and advocacy in implementation science. The journal *Implementation Science* was first published in 2006, and 2008 saw the First Annual Conference on the Science of Dissemination and Implementation in the United States. WHO launched the Implementation Research Platform in 2010, under the leadership of the Alliance. This global momentum was further driven by a strong focus on implementation research within PEPFAR (28), as well as the appointment of Jim Kim as President of the World Bank in 2012, from where he championed “delivery science”. Further, the field of improvement science, particularly as it relates to improving the quality of health care and patient safety, has also attracted growing attention, particularly in high-income countries (29). These various global processes culminated internationally in the 2014 Statement on Advancing Implementation Research and Delivery Science.

### Efforts to clarify the content and focus of the field

A critical dimension of progress has been growing investment in understanding and mapping the field of HPSR, unpacking the methods and study designs used, and building consensus and agreement around these. Methodological developments also emerged as part of the growth of the field of implementation science (described above) and increasing use of systems-thinking approaches (30) and complexity science (31) in the HPSR field. The development of this work has come more recently – predominantly within the past 10 years. Selected critical publications and other contributions related to these efforts are presented in Table 2.

TABLE 2. Critical contributions to mapping and methodological development in HPSR

YEAR	PAPER/ REPORT	SIGNIFICANCE
2004	Alliance Biennial Report <i>Strengthening Health Systems: The role and promise of health policy and systems research</i> (32)	First of the series of Alliance biennial reports
2009	<i>Systems Thinking for Health Systems Strengthening</i> (30)	Widely cited Alliance report that connected HPSR to growing field of work on complex adaptive systems.
2011	“Building the field of health policy and systems research” series published in <i>PLOS Medicine</i> (33–35)	Also widely cited, this series of three papers sought to identify and explicate the scope and nature of HPSR work.
2011	Establishment of SHAPES: social science approaches for research and engagement in health policy and systems as a thematic working group in Health Systems Global	This thematic working group, with a primary focus on HPSR methods, is one of the most active and dynamic within Health Systems Global.
2012	<i>Changing Mindsets: Strategy on Health Policy and Systems Research</i> (26)	This strategy and background papers for it helped delineate the field of HPSR and the methods it might employ.
2012	<i>Health Policy and Systems Research: A methodology reader</i> (36)	First in a series of readers developed by the Alliance that defines HPSR, identifies alternative knowledge paradigms for HPSR and sets out alternative methodological approaches.
2013	<i>Implementation Research in Health: A practical guide</i> (37)	This guide published by the Alliance with support from the WHO Implementation Research Platform offers an introduction to implementation research.
2014	<i>Participatory Action Research in Health Systems: A methods reader</i> (38)	The latest in Alliance methods readers.

One of the problems mentioned already was disputation around the content and scope of the field of HPSR. There have been several efforts to clarify this. For example, the Lejondal meeting report addressed this question (39). More recently, a background paper, written as part of the development of the WHO strategy on HPSR, sought to delineate the field of HPSR and how it relates to other fields (40). The *PLOS Medicine* series listed above also sought to clarify the scope and methods employed in HPSR.

As previously noted, one particular challenge has been to address confusion between health systems research (the term widely used in LMIC contexts) and health services research (widely used in HIC contexts). During the past 15 years there has been an evolution whereby the two fields have converged considerably (8), with HPSR researchers in LMICs focusing on a more varied mix of levels of questions (macro, meso and micro) (41) and the same being true of health services researchers in HICs. For example, the current US-based AcademyHealth definition of health services research suggests that the field relates to “scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately our health and well-being” (42) – which is essentially the same as most commonly accepted definitions of HPSR. It has been argued that conceptually health services research (i.e., research focused on the micro and meso levels of a health system) should be seen as a subset of health systems research (i.e., research that addresses all levels of the health system) (40). While this is logical, in practice the different usages persist on the basis of custom rather than conceptual clarity. However, there no longer appear to be tensions between the two traditions concerning the appropriate boundaries of research.

Another issue has been the presence or absence of the “P” in HPSR. From the very start of the Alliance (17), it was considered important to include the “P”. This was both to signal the close link between research and policy – the need for research to be oriented towards informing policy – and the importance of doing research not just for policy but also on policy; in other words to signal the inclusion of the fields of health policy analysis and political science. For these reasons, the Alliance has persisted in including policy explicitly, whereas others refer to health systems research. Yet to this day, research on health decision-making is relatively neglected and health policy analysis in LMICs is still in a relatively early phase of development (43).

In seeking to resolve some of the questions regarding the internal and external framing of the field of HPSR, the HPSR community has tended towards inclusivity rather than exclusivity. Increasingly, analysts have argued that HPSR is defined by the questions that it seeks to address, but research within the field may assume different knowledge paradigms, and contributions may be made from different disciplinary perspectives. As a consequence, the field of HPSR has become quite broad. While this broad perspective was a pragmatic approach to unify rather than fragment the field, it remains to be seen how cohesive the field will be over the longer term. Disciplinary and multidisciplinary fields tend to develop by creating sub disciplines or subject areas, which gradually assume their own distinct identity (health economics, for example). The growing attention being paid to implementation/improvement/delivery science suggests that this trend may already be at work in HPSR.

Finally, on the topic of clarifying the field, in recent years there has been significant effort to better organize and catalogue approaches to HPSR so as to facilitate teaching of the field. Some of the products described in Table 2 above, such as the readers, have made significant contributions in this regard. So too have consortia such as the Collaboration for Health Policy and Systems Analysis in Africa (CHEPSAA), the Keystone Initiative in India, and the ARCADE Project. All of these initiatives have developed open-access teaching and learning materials, and thus have made small but significant steps to developing more standardized approaches to teaching HPSR. This process has been further supported by the development of the Teaching and Learning thematic working group within Health Systems Global.

### Growth of interest in evidence-to-policy

One of the key recommendations from the 2004 Mexico Summit on health research concerned promoting the greater use of evidence in policy- and decision-making. Specifically, the Summit statement called for national governments “to establish sustainable programmes to support evidence-based public health and health-care delivery systems, and evidence-based health related policies.” This call reflected growing interest globally in improved use of evidence for policy- and decision-making. Estabrooks and colleagues employed bibliometric co-citation analysis to analyse growth of the knowledge-translation field and found that it started in the mid-1960s and was rooted in three main domains: innovation diffusion, technology transfer, and knowledge utilization [44]. However, evidence-based medicine (EBM) emerged as a fourth domain of importance in the mid-1980s, and high-income countries often adopted policies to support EBM through, for example, the creation of the Canadian Health Services Research Foundation in 1996. The charter of the Foundation had an explicit focus on “evidence-informed decision-making in the organization, management and delivery of health services”<sup>3</sup>. Globally, formal organizational structures to support EBM were established with the creation of the Cochrane Collaboration in 1993, and the Effective Practice and Organization of Care Group (EPOC), established in 1998, which has a remit encompassing health policy and systems research [45].

After the Mexico Summit a number of regionally based Evidence-informed Policy Networks (EVIPNet) were formed by WHO, which continue to operate to this day. These networks have supported the training of policy-makers in use of evidence, as well as the development of policy briefs and hosting of policy dialogues. They have been actively supported by some of the key players in the EBM movement [46, 47]. In addition to these formal networks to support knowledge translation, many research funders have evolved their funding policies to place greater emphasis on the dissemination and use of evidence. The UK Department for International Development, for example, requires that 15% of funding to research consortia be allocated to policy influence and research uptake. The Alliance’s 2007 Biennial Report *Sound Choices* focused on capacity constraints that inhibit the use of evidence in decision-making, and called for greater investment in this field [48]. Select policy-makers have also helped to champion the importance of applying evidence to policy.

Growing interest in evidence-informed decision-making as a field of study, along with enhanced awareness and capacity among policy-makers and practitioners to employ evidence in policy- and decision-making, has brought the field of HPSR closer to the diverse stakeholders – policy-makers, programme managers, health system managers, health workers, and civil-society groups – that

<sup>3</sup> Canadian Foundation for Healthcare Improvement website <http://www.cfhi-fcass.ca/AboutUs/History.aspx>. Accessed 21 September 2016.



use evidence. This is reflected also in the trend towards more implementation research. Having such stakeholders more involved in identifying research priorities and considering the implications of research has both increased the diversity and energy in the field and substantially added to its relevance and utility.

Within HPSR the evidence-to-policy field remains quite fragmented. While some practitioners operate primarily within a traditional knowledge-translation paradigm, others come from the research communication field, still others focus on evidence synthesis, and some are more interested in studying how evidence, among other factors, affects policy development and implementation. There have been very recent initiatives to stimulate dialogue across these groups such as ResUp MeetUp (a research and training exchange on research uptake in Nairobi in 2015) and also the initiation of a Health Systems Global thematic working group on translating evidence into action, but the process of integrating these diverse perspectives appears ongoing.

## CONCLUSIONS

During the past two decades, the prominence of HPSR has grown considerably. We have suggested that this growth is due in good part to a shift in the global pendulum away from disease- or service-specific ways of viewing health services in LMICs towards a more integrated and systems-focused perspective, as now embodied both in UHC and in the SDGs. However, we have also suggested that HPSR has benefitted not only from the growth of interest in health systems strengthening, but also from addressing a number of critical challenges that it faced twenty years ago. These challenges included confronting the dominance of biomedical and clinical research as the primary channel for health research investments through a sustained advocacy campaign; seeking to clarify the scope and methods of the field; and finally nurturing closer collaboration with research users, in particular by capitalizing on the growth of interest in evidence-informed policy. Many of these positive developments are self-reinforcing: for example, successful application of evidence that leads to the design and implementation of better policies (and better health outcomes), as has been the case in both Mexico and Thailand, encourages stronger demands for evidence.

While substantial progress has been made, as indicated by the title of this chapter, and indeed the other chapters within this report, there are a number of outstanding challenges as well as opportunities ahead.

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# CHAPTER 2

## BENCHMARKS

### INTRODUCTION

The previous chapter examined the growth and evolution of HPSR as a field over the past two decades. It described the challenges the field has faced and how these challenges have been overcome, the milestones of methodological advances as well as the field-building publications and events that have played a major role in influencing HPSR's evolution.

In contrast, this chapter provides a series of empirical analyses that reflect both this evolution and the current state of HPSR. This is done in three parts. The first part illustrates trends in HPSR knowledge generation as well as collaborations among researchers across countries. The second part examines trends in increasing donor funding for HPSR over the period 2000-2014, enabling the production of HPSR. The third part addresses issues of capacity, both to generate and use HPSR. These sets of complementary activities by researchers and decision-makers, based on institutional relationships, are essential not only for informing health policies and programme implementation but also for strengthening health systems for improved health outcomes.

Several new analyses were conducted to inform the three parts of this chapter. Knowledge generation was assessed through a bibliometric analysis. The analysis examined trends in the production of HPSR over the period 1990-2015 using the PubMed database (1). In addition to identifying HPSR publications, the analysis sought to shed light on both the production of HPSR on low- and middle-income countries (LMICs) and HPSR produced by authors based in LMICs.<sup>1</sup>

Based on data from the bibliometric analysis, the Alliance developed a set of co-authorship maps with the objective of illustrating the generation of HPSR and connectivity across countries as well as obtaining a better understanding of North-South and South-South collaborations.

Over the period 2000-2014, donor funding for HPSR was assessed through a systematic search of the OECD Creditor Reporting System (CRS) database for funds committed to HPSR. The CRS database includes project funding information from traditional bilateral donors, multilateral donors, and the Bill & Melinda Gates Foundation (Gates Foundation). In addition to total donor funding for HPSR made available over these years, the analysis examined sources of this funding and the distribution of funds among different geographic regions of the world over time.

The capacity to generate and use HPSR was assessed through two independent surveys of HPSR institutions across all regions and ministries of health (MOH) in LMICs respectively.

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<sup>1</sup> All data on country-income groups is based on the World Bank country classification.

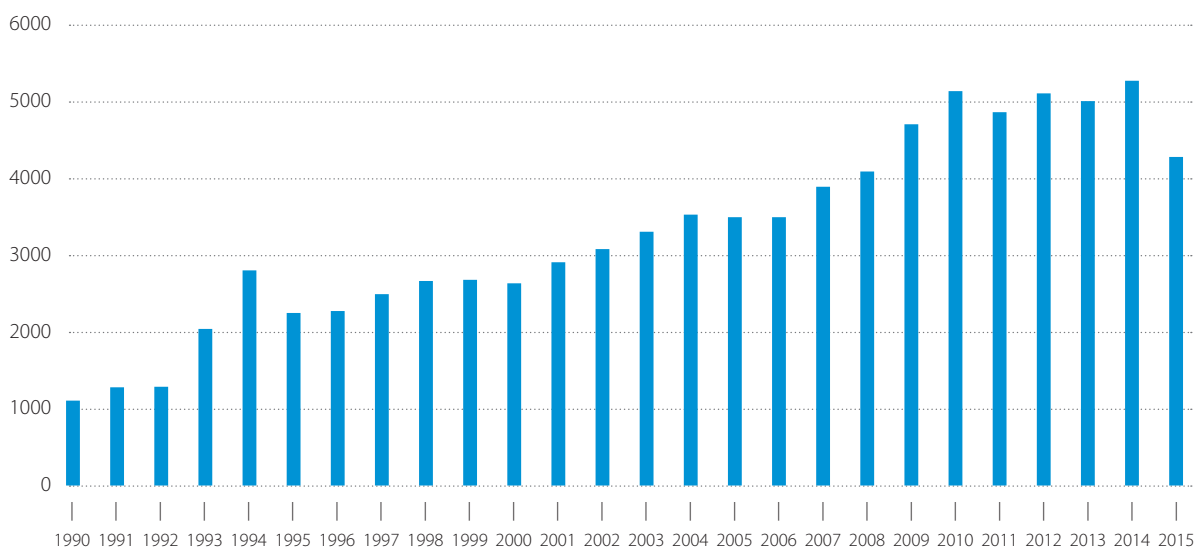
The first survey considered 110 HPSR institutions based in 56 countries that conducted HPSR relevant to LMICs. India and China, with 14 and 7 institutions respectively, were the countries with the highest number of institutions. Sub-Saharan Africa accounted for 25% of responses, the most for any region; at the other end of the scale, institutions in the Middle East and North Africa region accounted for only 4% of the responses received. By country-income groups, 62%, 23% and 15% institutions were based in middle-income countries (MICs), high-income countries (HICs) and low-income countries (LICs) respectively. This survey included questions pertaining to constraints facing the generation of HPSR and institutional arrangements to enable this.

The second survey of twenty-four ministries of health in LMICs focused on capacity to use research evidence to inform decision-making. The largest share of responses (29%) was from the East Asia and Pacific region, followed by sub-Saharan Africa (SSA) (25%). LICs accounted for 29% of responses. This survey included questions on barriers to evidence use as well as institutional arrangements within MOHs for using evidence in decision-making (2).

### EVOLUTION OF HPSR PUBLICATIONS

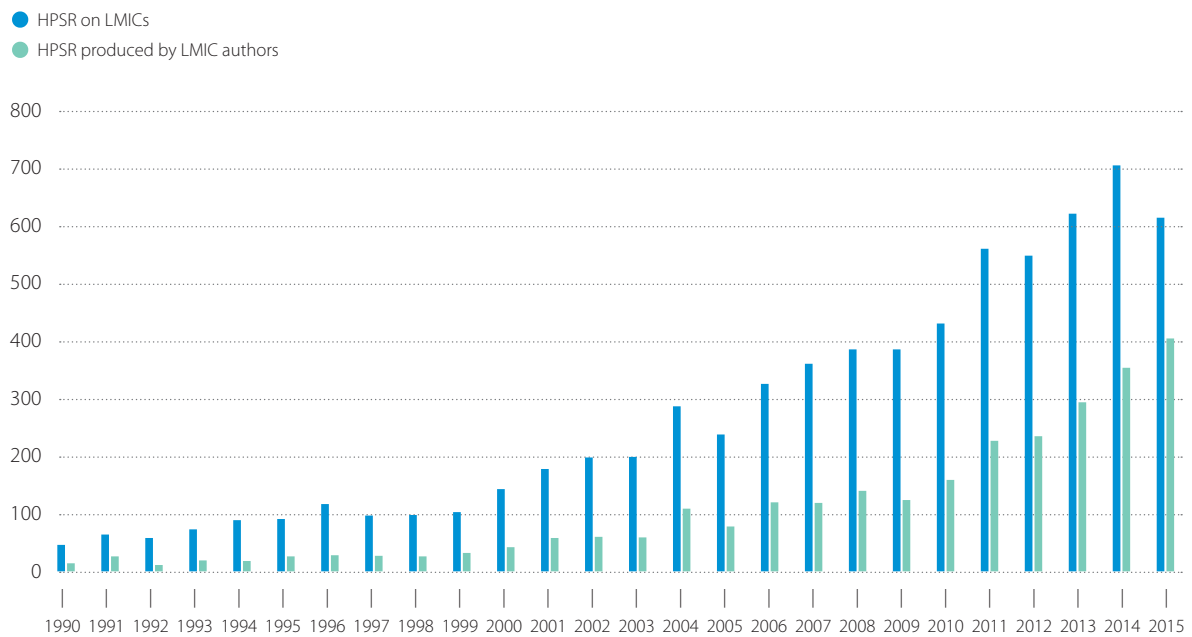
Figure 1 displays the evolution of HPSR publications over the time period 1990-2015. Over this period there has been an approximately five-fold increase in annual HPSR publication. This was accompanied by faster rates of increase both in the production of HPSR on LMICs and HPSR produced by authors in LMICs, as can be seen from Figure 2. The (apparent) decline in publication in 2015 is due to a lag between the publication date in some journals and their appearance (publication date) in PubMed. It seems likely that the upward trend seen in previous years will continue (1).

**FIGURE 1.** Number of HPSR publications (all countries, all publications), 1990–2015



Source: Ref (1)

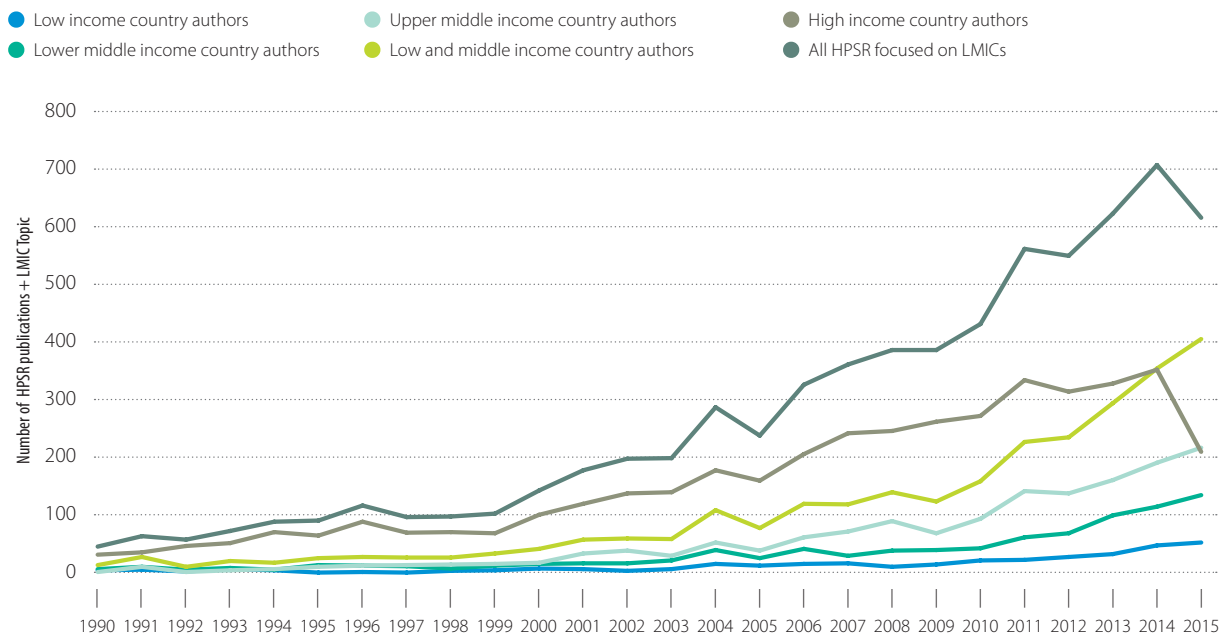
**FIGURE 2.** Number of HPSR publications focused on LMICs and those produced by LMIC authors, 1990-2015



Source: Ref (1)

Figure 3 shows the relative contribution of HPSR authors from different country-income groups. HIC-based first authors until recently produced more HPSR on LMICs than first authors based in LMICs. However, the gap has been rapidly closing, with LMIC-based first authors out-producing their HIC-based colleagues for the first time in 2014. It is nevertheless important to note that the closing of this gap has largely been driven by first authors based in upper middle-income countries with low- and lower middle-income countries lagging behind (1).

FIGURE 3. Lead authorship by income group of HPSR publications focused on LMICs, 1990-2015



Source: Ref (1)

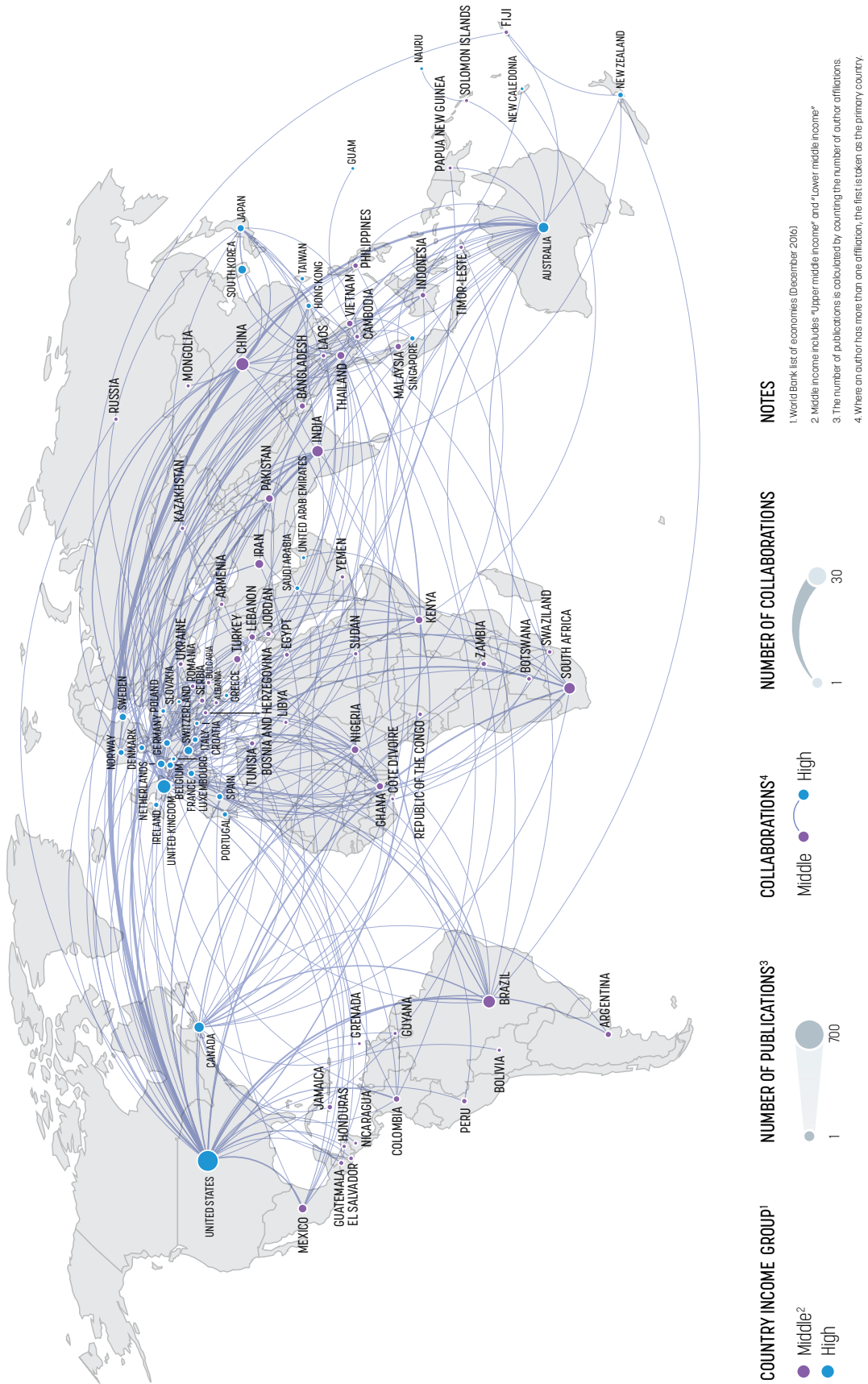
The global production of health policy and systems research is evolving swiftly, with emerging actors from low- and middle-income countries and an increasingly complex array of collaborations worldwide. Figures 4 to 6 present the worldwide production of HPSR according to country-income groups.

As mentioned above, the world maps were developed using PubMed data from the bibliometric analysis. The PubMed database only recently started reporting institutional affiliations of co-authors (beyond first authors). It was therefore only possible to develop maps showing collaborations across countries for the period 2011–2015. Figures 4 and 5 outline North-South collaborations, respectively between HICs and MICs, and HICs and LICs. Figure 6 presents South-South collaborations, by examining linkages among low- and middle-income countries (MICs-MICs, MICs-LICs and LICs-LICs).

The global mapping speaks to the importance of HPSR production, including in low- and middle-income countries, as well as worldwide inter-connections in the field of health policy and systems research. Furthermore, while northern institutions remain important producers of HPSR, middle-income institutions also appear as major producers of HPSR knowledge worldwide. The maps also show a complex connectivity system between HICs and MICs, as well as intense South-South collaborations, including multiple linkages between MICs and LICs.

While the data is not standardized according to population – thus limiting direct comparison of HPSR production across countries – we see that generation of health policy and systems research is still largely driven (in absolute numbers) by HICs and MICs. Furthermore, inter-linkages from LICs to other LICs still remain limited in the global HPSR network, thus speaking to the need to strengthen this type of collaboration.

FIGURE 4. Research collaboration between HICs and MICs, 2011–2015



COUNTRY INCOME GROUP<sup>1</sup>

- Middle<sup>2</sup>
- High

NUMBER OF PUBLICATIONS<sup>3</sup>



COLLABORATIONS<sup>4</sup>

- Middle
- High

NUMBER OF COLLABORATIONS



NOTES

- World Bank list of economies (December 2016)
- Middle income includes "Upper middle income" and "Lower middle income"
- The number of publications is calculated by counting the number of author affiliations
- Where an author has more than one affiliation, the first is taken as the primary country



FIGURE 5. Research collaboration between HICs and LICs, 2011–2015

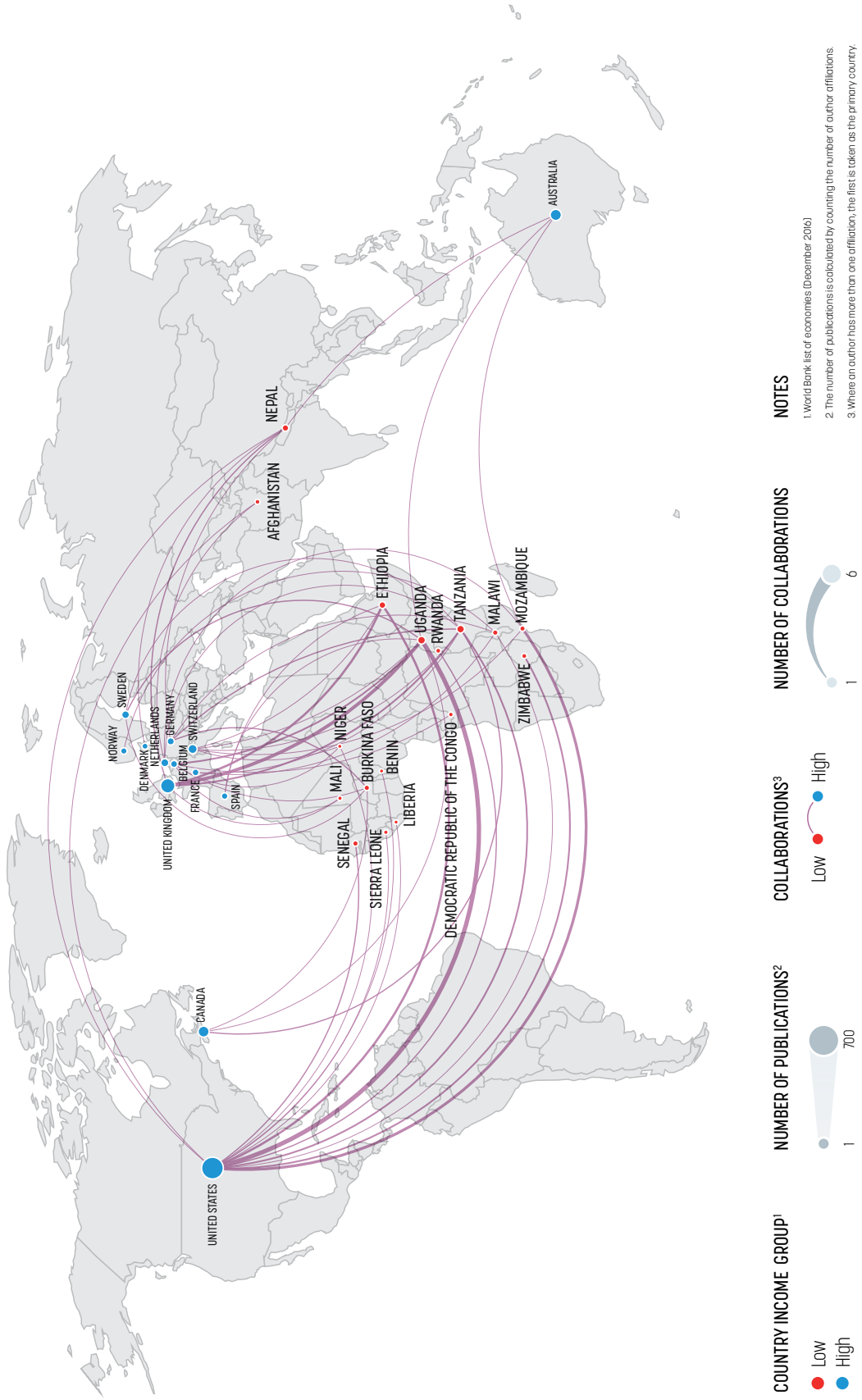
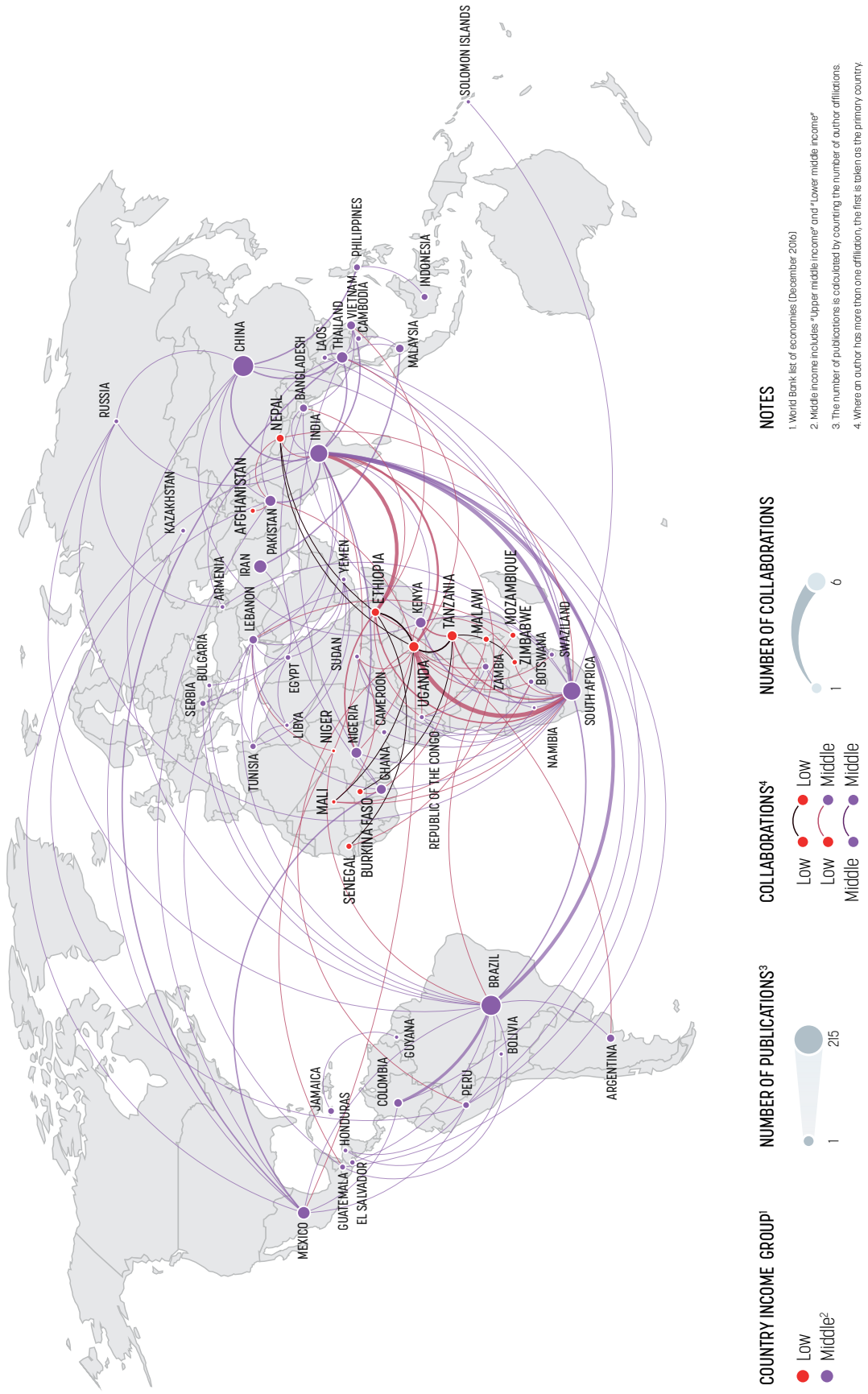




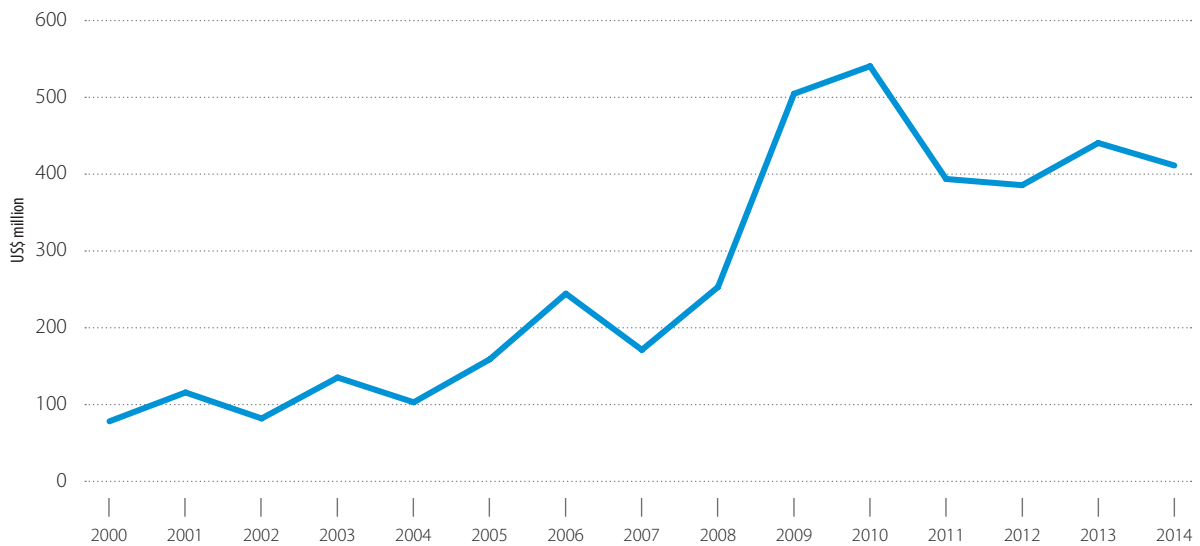
FIGURE 6. Research collaboration between MICs and LICs, 2011–2015



### FUNDING FLOWS FOR HPSR

An analysis of the CRS database reveals that between 2000 and 2014, international donors committed over US\$ 246 billion in development aid to health and population projects in LMICs (3). Total HPSR funding, which was close to US\$ 4 billion over this period, was less than US\$ 100 million a year in 2000 and peaked at about US\$ 540 million in 2010 (Figure 7). It then remained around US\$ 400 million a year through 2014. Over the entire study period, the mean amount of annual funding given to HPSR was US\$ 266 million, but the amount increased and averaged over US\$ 433 million per year in the last five years<sup>2</sup>. It is important to note that pre-2009 amounts underestimate true funding levels for HPSR because the Gates Foundation did not begin reporting to the CRS until that year.

FIGURE 7. Trends in commitments for HPSR activities, 2000–2014

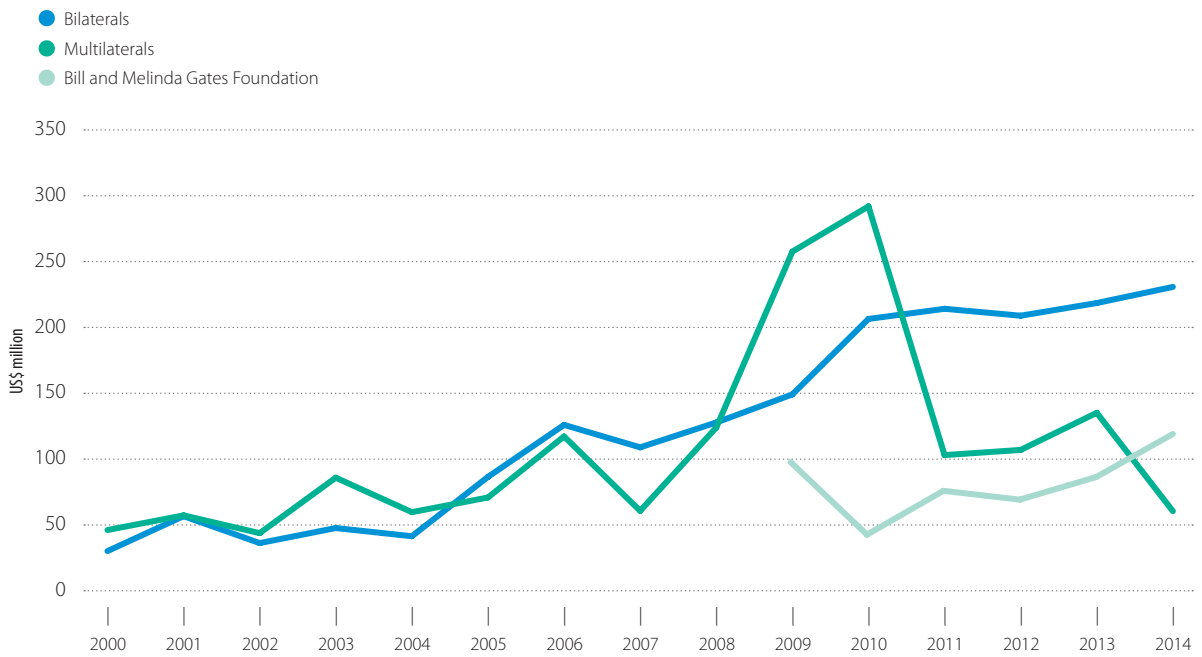


Source: Ref (3)

<sup>2</sup> All figures for funding analysis are in 2014 US dollars.

Figure 8 disaggregates commitments for HPSR according to donor type. Until 2008, bilateral and multilateral donors provided about the same amount of aid for HPSR, but in 2009 funding from multilateral donors greatly increased due to increased aid from the International Bank for Reconstruction and Development (IBRD) in response to the economic crisis. Funding then sharply declined until 2012 when it began to increase again. After 2010, bilateral donors became the largest donors of funding for HPSR (3).

FIGURE 8. Trends in HPSR funding by donor type, 2000–2014



Source: Ref (3)

Table 1 provides a ranking of the donors of HPSR funding from 2000-14. The top 10 donors (United States of America, Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), Gates Foundation, IBRD, International Development Association, Canada, United Kingdom, Norway, Australia, and France) accounted for over 90% of total commitments to HPSR projects over the period 2000-14. It is notable that the Gates Foundation ranked third overall, despite the fact that it did not report its aid to the CRS before 2009.

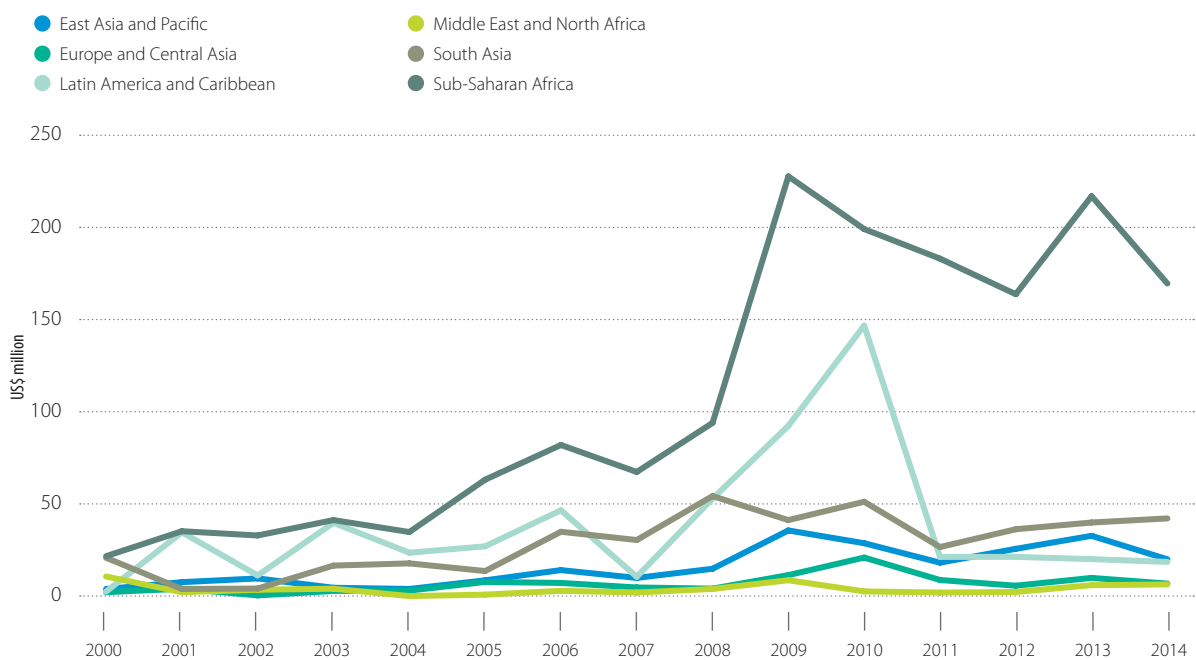
TABLE 1. Top Donors of HPSR funding, 2000–2014

DONOR	TOTAL COMMITMENTS TO HEALTH (2014 US\$M)	TOTAL COMMITMENTS TO HPSR (2014 US\$M)
United States	72,438.7	1,262.6
Global Fund	29,317.9	574.9
Bill & Melinda Gates Foundation	10,357.7	491.7
International Bank for Reconstruction and Development [IBRD]	13,095.1	466.1
International Development Association [IDA]	15,736.3	428.2
Canada	6,327.8	214.9
United Kingdom*	15,180.9	123.2
Norway*	3,577.4	110.2
Australia	3,956.5	39.4
France	4,038.2	37.3
Sweden*	2,853.3	32.1
UNFPA	3,951.5	28.5
Inter-American Development Bank [IDB]	4,319.9	25.2
EU Institutions	8,192.3	22.8
UNAIDS	2,482.8	22.7
Ireland	1,614.6	17.4
Global Alliance for Vaccines and Immunization [GAVI]	7,521.2	17.4
Islamic Development Bank [IsDB]	1,815.5	17.2
Germany	5,729.9	16.4
Belgium	2,138.8	16.1

\*Estimates include core contributions made to the Alliance for Health Policy and Systems Research

Figure 9 shows regional allocations of funding for HPSR. HPSR funding to countries in sub-Saharan Africa (SSA) more than doubled in the years following 2006, whereas commitments to other regions (with the exception of Latin America which received a short-term increase in 2009-2010) remained relatively stable. SSA countries were also the recipients of the largest amount of funding for HPSR activities over the entire time period examined (3).

FIGURE 9. HPSR funding by recipient region, 2000–2014



## CAPACITY TO GENERATE AND USE HEALTH POLICY AND SYSTEMS RESEARCH

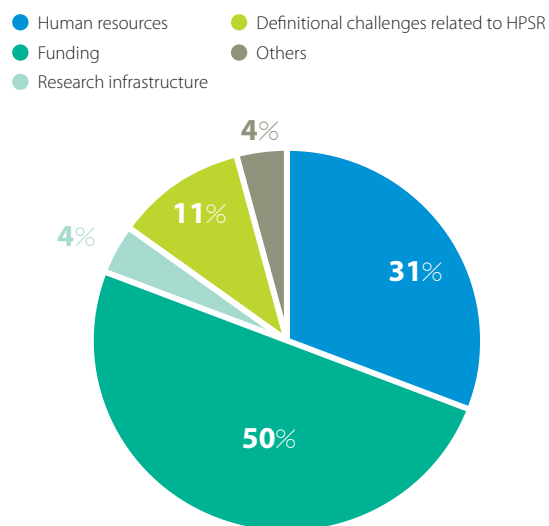
The first part of this chapter demonstrated the growth in HPSR publications since 1990 and the cross-national collaborations underlying HPSR production. The increased funding for HPSR that has been a crucial enabler to the field's growth was discussed in part two.

While funding is necessary to spur the generation of new knowledge, it is not on its own sufficient. Generating new knowledge requires an appropriate number of skilled researchers supported by well-organized and well-functioning research institutions. In the context of the generation of HPSR, in addition to providing places for researchers to work, institutions provide avenues for career development, collaboration and cross-learning. They provide financial systems for managing grants and enable the use of library and information technology services that are central to research. Additionally, they provide a platform that enables individual researchers to link to other research organizations and to policy- and decision-makers within the health system (4, 2).

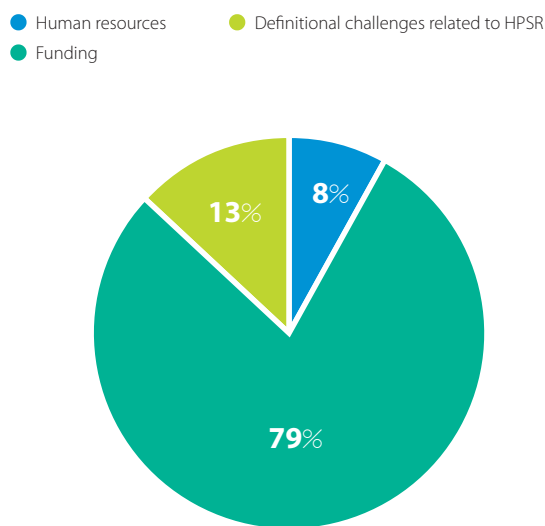
Thus in addition to the funding constraints discussed earlier, the relatively sparse production of HPSR in LMICs and fewer research collaborations compared to HICs reflects challenges to building sufficient capacity<sup>3</sup>, in particular institutional capacity to generate HPSR in these settings; these challenges, are explored below.

In responses to the survey of research institutions referred to at the start of this chapter, funding was identified as the leading constraint to the generation of HPSR by 57% of respondents; this was followed by human resource constraints (25%) and constraints resulting from definitional issues around HPSR (11%). However it is interesting to note how responses vary across institutions based in LMICs and HICs respectively (Figures 10 and 11). In particular human resource constraints were cited as the single most important barrier to knowledge generation by 31% of LMIC-based institutions as opposed to just 8% of HIC-based institutions, highlighting the difficulties research institutions in LMICs still face in attracting and retaining HPSR researchers.

**FIGURE 10.** Most serious constraint to HPSR knowledge production in LMICs



**FIGURE 11.** Most serious constraint to HPSR knowledge production in HICs

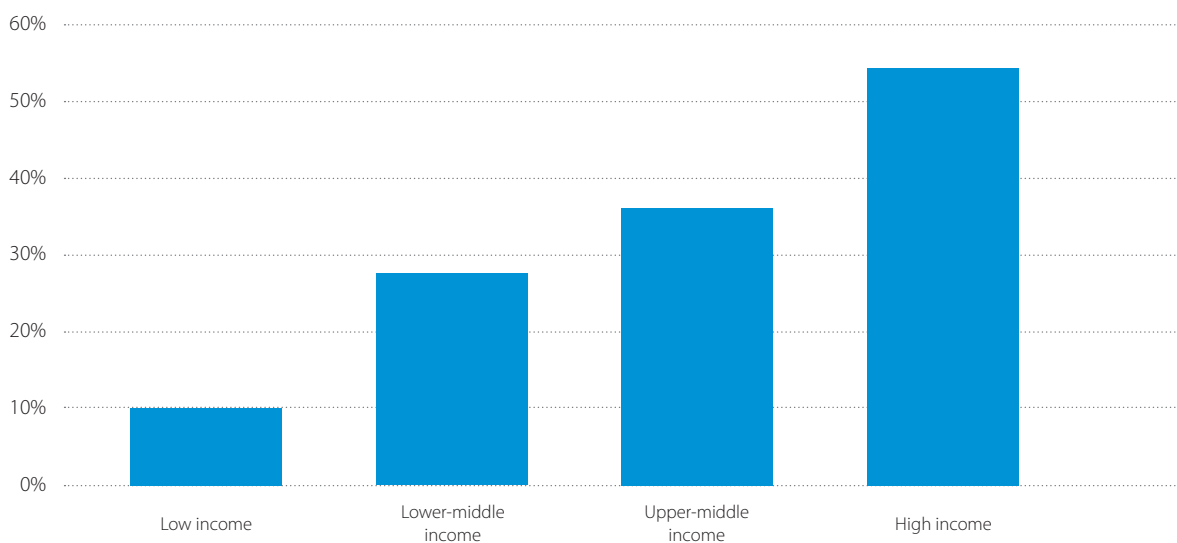


As can be seen from both Figures 10 and 11, funding was identified as the most serious constraint to HPSR knowledge production in both LMIC- and HIC-based institutions. Figure 7 has shown gradual increase in funding availability. Here we focus on a specific aspect of funding, namely the availability of unrestricted long-term funding that has been identified as essential for ensuring the long-term sustainability of HPSR research institutions (5).

<sup>3</sup> For the purpose of this report we use UNDP’s definition of capacity as ‘the ability of individuals, institutions, and societies to perform functions, solve problems and set and achieve objectives in a sustainable manner’.

Figure 12 shows the prevalence of unrestricted long-term funding for HPSR institutions by country-income group (n=99). Across all countries, irrespective of income, a little over one-third (34%) of institutions reported receiving such funding. However, the picture changes when the institutions are categorized by country-income group. While a little more than half of HIC institutions reported receiving unrestricted long-term research funding, less than one-third of institutions in MICs and merely one-tenth in LICs reported receiving such funding.

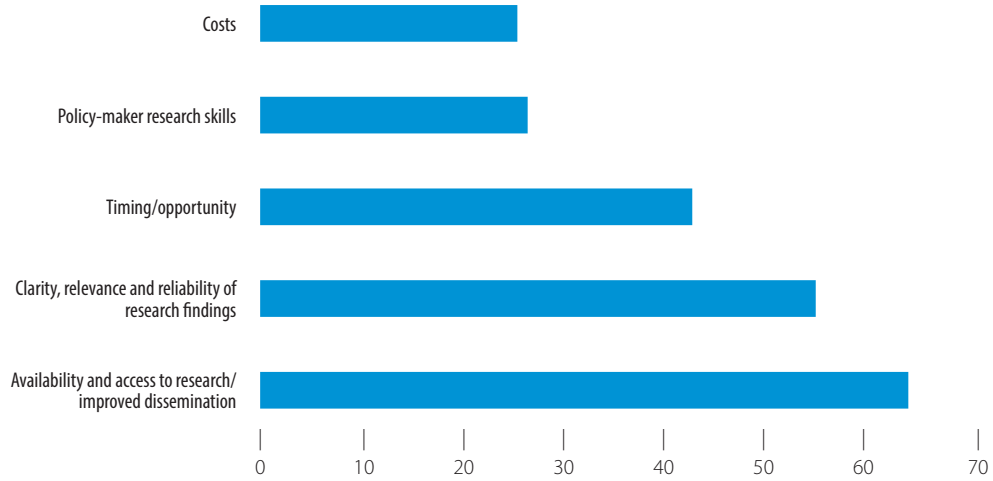
**FIGURE 12.** Proportion of HPSR research institutions receiving unrestricted long-term funding



Turning now to the use of research evidence to inform decision-making and improve health, in a field as applied as HPSR, research production alone is not enough. HPSR will only achieve its true potential in strengthening health systems and improving health when it is routinely and regularly used by decision-makers to inform the decisions they take.

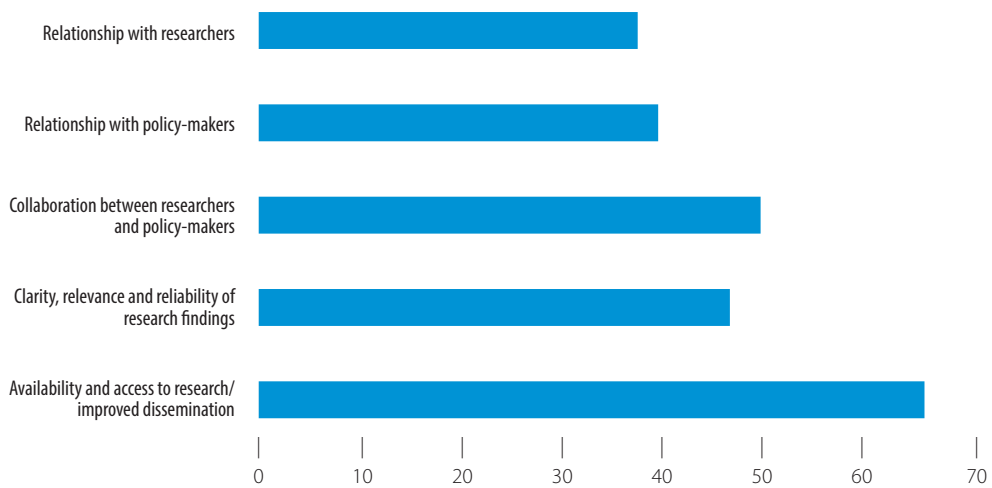
Various challenges exist to the use of evidence in policy-making. A systematic review in 2014, examining 145 studies globally on the use of evidence by policy-makers, found that availability of research, lack of relevant research and inadequate research skills among policy-makers were some of the major barriers to evidence use (Figure 13) (6). On the other hand, the existence of relevant research, access to this research, its improved dissemination and collaborations between policy-makers and researchers were found to positively influence evidence use in policy-making (Figure 14) (6).

FIGURE 13. Most frequently reported barriers to the use of evidence



Source: Ref (6)

FIGURE 14. Most frequently reported enablers to the use of evidence

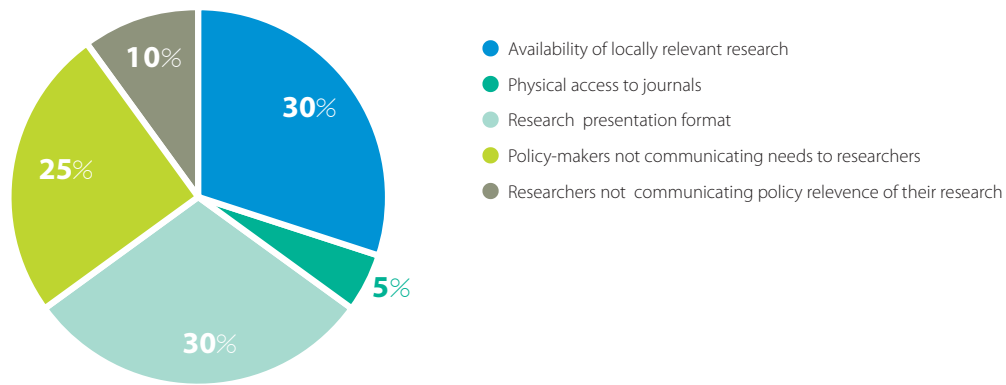


Source: Ref (6)



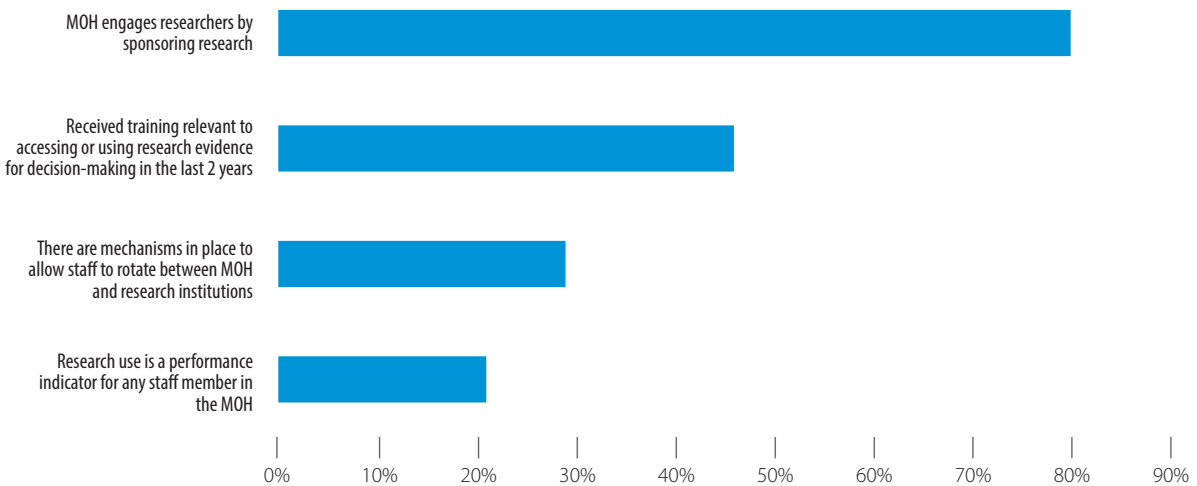
The barriers found in the literature are reflected in the results of the survey of MOHs carried out by the Alliance and also described at the beginning of this chapter. The survey found that (i) the unavailability of locally relevant applied research (30%), (ii) poor presentation of research findings, making it difficult for policymakers to understand (30%), and (iii) inadequate communication between researchers and decision-makers about policy-relevant research (25%) were the three most cited barriers to getting relevant evidence on the part of decision-makers (Figure 15) (2).

FIGURE 15. Barriers to use of research evidence by MOHs



The survey of MOHs sought to understand institutional arrangements within MOHs to enable evidence use to inform policy-making (Figure 16). Nearly 80% of MOHs engage researchers through sponsoring research. However, only just over 20% of MOHs reported that actual use of research was a performance indicator for any staff member.

FIGURE 16. Institutional arrangements within MOHs for using evidence in decision-making



Health policy and systems research has certainly developed since the 1990s. Annual production of HPSR knowledge has increased fivefold since then and, significantly, an increasing proportion of this knowledge is produced on and in LMICs – demonstrating greater HPSR research capacity within LMICs. No longer does cross-national knowledge collaboration invariably involve northern institutions, but South-South knowledge collaborations are more plentiful. HPSR is also significantly better funded than before, evident from the more than fourfold increase in donor funding for HPSR over the period 2000–2014.

However, much remains to be done. The production of HPSR in LMICs, and particularly in LICs, is insufficient. In 2014, for example, LICs produced less than 7% of HPSR on LMICs, while the corresponding figure for MICs was 43%. The funding base for HPSR continues to be narrow, with merely ten donors accounting for over 90% of funds committed.

The generation and use of HPSR in LMICs continue to face significant challenges, particularly at the institutional level. Funding and human resource constraints are leading barriers to knowledge generation. Similarly, the capacity for the use of research evidence is also limited.

The Alliance intends that the first set of results published here should serve as a basis for future monitoring and evaluation of the field of health policy and systems research, thus providing evidence for donors, policy-makers, heads of academic institutions and researchers to invest in resources for sustainable development.

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# CHAPTER 3

## CAPACITY

The core idea behind health policy and systems research (HPSR) is that research should inform and influence policies and systems to achieve health goals (1). This idea forms the strongest ties that bind together individuals in the community of HPSR, whether they are policy-makers, practitioners, researchers, or informed users of research. HPSR has provided a vehicle to express common values around health goals, such as the pursuit of health equity and social justice in guiding the allocation of resources, as well as the need for efficient and accountable use of those resources (2). The field has developed a wide variety of research approaches that provide information on how better to organize, deliver, demand, and finance different types of health services in many settings. It has produced evidence not only on effective policies and how to strengthen the health system more widely but also how to bridge the gaps between knowledge and action, and to influence policy processes.

This experience provides an increasingly solid foundation for the momentum required to face the future challenges for the field and for its contribution to strengthening health systems as the global community moves from the MDGs to the SDGs. The preceding chapters of this report have highlighted the growing activity and influence of HPSR around the world. Despite this growth, however, important challenges remain that will need to be addressed before the field can take its next big leap. Key among them is the need to build and sustain institutional capacity to support HPSR in LMICs and especially LICs (3). Historically, much of the focus of research capacity development has been on the training and career development of individuals, but while the further development of HPSR certainly depends on building a cohort of high quality researchers in a mix of disciplines as well as experts who have the ability to bring together the contributions of different fields, these individuals need to be supported by robust organizations and an enabling environment (system).

The production of high quality HPSR depends on the strength of the organizations within which researchers work. This is not just a matter of the facilities they offer, such as libraries and databases, or the incentives they provide, such as compelling projects, decent remuneration and career advancement. But it is also influenced by the environment and context – in an increasingly global world – in which this work takes place (2). The stability and sustainability of funding, the extent to which health-systems strengthening is prioritized, as well as the relationships and connections between organizations, including decision-makers and other stakeholders within the broader health system and beyond — all impact how HPSR is generated and used in a given setting (4). Recent conceptual models of capacity development emphasize precisely this kind of construct, arguing for context-specific capacity-development interventions that respond to capacity needs at the individual and organizational level, but also at the level of the environment or network (3, 5).

Institutional capacity-building is aimed not only at strengthening organizations that are responsible for the conduct of HPSR but also fostering an enabling research environment with access to research networks and funding (3). And as preceding chapters have highlighted, this is the gap in the evolution of the field. In this chapter, we look at how these three aspects of institutional capacity can be improved in LMICs: organization, networks (particularly policy networks) and an enabling environment.

## STRENGTHENING CAPACITY WITHIN ORGANIZATIONS THAT ENGAGE IN HPSR

The HPSR landscape is only just beginning to be populated by robust institutions. This is particularly true of LMICs, where few such entities have been established. There are success stories in middle-income countries, notable among them are Mexico's *Fundación Mexicana para la Salud* (FUNSALUD), Thailand's *International Health Policy Programme* (IHPP), the *Public Health Foundation of India*, and China's *National Health Development Research Centre* (6). All these institutions have played a significant role in the generation and dissemination of HPSR, leading to important changes in health policy at the national level (7). More recent examples include the *Institute for Health Policy & Health Systems* at *Ebonyi State University* Nigeria, which was established in 2015 (8). The institute is currently working on the development of policy information platforms which are designed to provide access to existing policy-relevant knowledge, in both indexed publications and grey literature, to inform policy-making. Such inspiring examples are, however, rare and many organizations, particularly those located in LICs, struggle with inadequate resources and acute shortages of skilled researchers (9).

From the perspective of human resources, institutional capacity-building begins with ensuring the education of young people who may go on to become researchers. Efforts should therefore be directed towards developing HPSR teaching and training programmes within academic and research organizations. Both short-term (courses) and long-term (degree programmes) strategies could be employed to enhance the sustainability of capacity-strengthening efforts. Because of its interdisciplinary nature, HPSR is not easily accommodated in traditional discipline-focused university departments, and few schools have departments dedicated to health policy and systems research. This tends to mean that HPSR is taught in departments of epidemiology or public health, or in discipline-specific departments that may not fully reflect the applied or inter-disciplinary nature of the field.

The establishment of dedicated divisions or programmes within departments or schools could serve as a means of bringing together the multiple perspectives that reflect the multiple disciplinary nature of HPSR. This means developing effective ways of categorizing, organizing, and teaching multiple theoretical frameworks, and offering support to students in choosing the type or mix of approaches best adapted to the HPSR issues they are addressing. Given the need to understand and influence local context, training programmes also need to be tailored, while still ensuring a common basic training in HPSR concepts, approaches, and terminology. Curricula are also needed to teach people to work in multiple disciplinary teams, and bring the expertise of their particular disciplinary focus to bear on common problems. There is considerable potential for open-access curricula delivered through web-based platforms to achieve these different goals. If courses are designed and led by non-HPSR scientists, however, there is a danger that the field will continue to suffer from a lack of championing for building the field. In order to be able to build the field within traditional schools of public health, these efforts need to be led by well-established and committed HPSR scientists who can advocate for strengthening the research and teaching capacity. *KEYSTONE India* open-access health policy and systems research modules and *CHEPSAA* open access represent two important teaching and training contributions.

Once researchers enter these organizations, the next challenge is retaining them. Creating supportive and attractive research environments, offering access to publication databases and peer-reviewed literature, is key but so is support and encouragement for interesting and relevant work. It is important that incentives exist to ensure that these academics stay in their home countries. Adequate

remuneration is obviously of fundamental importance, but so is the establishment of clear paths for career advancement and promotion. It has been suggested that funders and research organizations should experiment with innovative fellowship programmes that help provide the financial incentive for senior researchers to stay in post, while also offering opportunities for intellectual stimulation and recognition. Within LICs, connecting researchers to regional and global networks is not only important for supporting collaborative research, but is potentially an important strategy for retaining staff. Connectivity is not only important for building opportunities for collaborative research, but can also be a source of peer support and mentorship, which could mitigate some of the challenges of being an isolated researcher.

With regard to career advancement and recognition, it is encouraging that findings from chapter 2 suggest that in some settings and specifically low-income countries, research impact is as important a criterion as publications. Equally encouraging is the growth in the broader health-related publication field of HPSR journals (e.g., *Health Policy and Planning*, *Health Research Policy and Systems*). Such journals provide new publication opportunities for health policy and systems researchers outside of the more limiting traditional health journals which have historically been biased against HPSR (10). At the same time, to be able to attract and retain researchers in the field, new HPSR journals – particularly those focused on specific countries or regions – are needed to support HPSR capacity development. It would also be helpful if general health journals would review their publication policies so as to include more health policy and systems research.

There is also a need to incentivize knowledge production beyond peer-reviewed publications towards developing products that are of direct relevance to decision-makers, such as policy briefs and research summaries. Organizations engaged in HPSR can also incentivize the production of relevant research by directly rewarding it. One approach is to make the practical value of the work produced (i.e., policy-relevant research) rather than the volume of publication or publication in high-impact journals the criterion for advancement within an institution. Key to the successful implementation of such a policy is finding a way to measure relevance. Research institutions and the HPSR community have a central role to play in initiating the development of metrics that can help measure policy relevance of an individual's research contribution and institutionalizing the use of such metrics in decisions around promotions. It is also important that multiple stakeholders, most importantly global and national HPSR funders and HPSR research institutions, come together to put in place incentives that will encourage the generation of policy-relevant knowledge (11). This can be achieved by directing funding towards the development of alternative career tracks, such as creating the post of professor of practice, for example.

### ENHANCING NETWORKS AND POLICY ENGAGEMENT FOR HPSR

Organizations engaged in HPSR should not be seen as stand-alone entities, but as nodes within networks. Establishing such networks is an important part of building institutional capacity for the field. HPSR capacity-development initiatives in HICs have frequently focused on building networks among different organizations. In LMICs, the smaller number of health system researchers and HPSR organizations is exacerbated by the fact that ties between these individuals and organizations are often not well established, so that relevant skills may be available but are difficult to identify and bring to bear on health policy and system issues. Greater investment is needed in developing networks between relevant actors within the same country or local context. Regional networks among countries

at similar stages of development could be formed to facilitate joint research endeavours as well as create opportunities for mentorship. To date, many of these regional networks are supported through bilateral and multilateral funds. There is a need for local and regional resources (e.g., regional bodies such as the African Union or national MOHs) to take ownership and support such networks. This could also provide opportunities for greater strategic engagement with decision-makers in setting the regional research agenda and the co-production of knowledge.

These networks and communities of practice will, however, remain incomplete without the active participation of decision-makers in the co-production of knowledge. In the absence of decision-maker involvement, research will tend to address issues and answer questions that researchers may find interesting or that may meet the requirements of science publishers, but which may not always be aligned with the demands of decision-makers (10, 12). Such research may also be presented in ways that may be appropriate for peer-review publications, but which are not easy for decision-makers to use. This can lead to a downward spiral in which decision-makers have little or no recourse to research, and see their decision-making processes impoverished as a result, while the HPSR that is produced does not benefit from their input, and is more likely to be irrelevant, further discouraging use (12). Such research may generate an abundant supply of information, but if there is no demand for it, there will be very low uptake of the information into the policy-making process.

With regard to the demand and use of HPSR, it is clear that much remains to be done. HPSR must address issues that decision-makers are concerned with and give answers to questions they are asking if the demand and use is to improve (1, 13). The chances of achieving these objectives are greatly improved where demand for research from decision-makers is built into the knowledge-generation process from the very beginning (1). Efforts to understand the demand and use of research by decision-makers have largely focused on strengthening individual capacities through training programmes and engagement with policy-makers. However, just as research capacity-building involves more than just training researchers, building capacity to demand and use research must include efforts to strengthen institutional and system capabilities.

In particular, major efforts are required to improve communication between researchers and decision-makers. One way of facilitating this goal is to embed research within the decision-making apparatus. As noted elsewhere, the term “embeddedness” has a long history in the social sciences and has been adopted by many different fields, several of which have direct relevance for HPSR, including sociology, anthropology, political science, public administration, and economics. In regard to HPSR, embedding has been defined as linking researchers and decision-makers in a system where the latter understand the value of evidence in informing their decisions and the former are positioned to be able to provide timely and relevant evidence to inform each stage of the policy process (1, 14). A body of evidence is now emerging that shows the potential of embedded research in facilitating the integration of scientific findings in policy implementation and health systems strengthening (14-16).

Another way to strengthen the engagement of policy actors in HPSR is to institute rotations of staff between health ministries and research institutions (14). Increasing exposure of decision-makers to documented experience of the value added by HPSR in different settings, and the creation of platforms for their regular interaction with researchers, encourages collaboration, ultimately leading to the successful and sustainable embedding of research in decision-making processes (14). Evidence from countries which have successfully transitioned from low to high use of evidence indicates that

they have created an environment which fosters connections between evidence and policy-making by appointing senior researchers, with a proven track record in public health, to influential policy positions for a reasonably long tenure. For example, in Mexico, four consecutive health ministers have had expertise in health research.

Close collaboration between researchers and decision-makers also depends on a prevailing culture of transparency and accountability. This implies a readiness on the part of all those who contribute to the development of public policies and programmes to share responsibility for the health impact – or lack thereof – on populations. There are a number of things governments can do to encourage transparency and accountability, notable among them encouraging public access to policy debates, dialogues and evaluations. Creating opportunities for public input during the policy-development process could make decision-making more transparent and help to ensure greater use of evidence.

Putting in place legislative and policy measures and information-rich inventories to facilitate evidence-informed decision-making will amount to little in the absence of having officials within the ministry of health trained in accessing and using research evidence (14). In order to strengthen capacity for the demand and use of evidence, efforts are needed to provide support to decision-makers to improve the use of research in decision-making and health-systems strengthening (1). Schools of public policy and/or other executive training institutes should be supported to develop courses or modules on HPSR and its application to the policy-development process (17). Continued education, imparted through ongoing training programmes and mechanisms enabling the rotation of staff between the MOH and research institutions, are two distinct strategies to facilitate the bringing together of the worlds of research and policy. The placement of researchers in various levels of the ministry is critical for sensitizing them to the complex and often messy world of decision-making. A little under half of the respondents to the 2015 survey reported having received training relevant to accessing or using research evidence in decision-making processes in the two years prior to the survey (18). Skills frequently imparted included those in data analysis, carrying out general Internet searches and skills to access databases such as PubMed.

### **FOSTERING AN ENABLING ENVIRONMENT FOR HPSR**

The transformation of HPSR production and consumption will not occur without an increase in funding and a change in the way funding is invested. As borne out by the HPSR survey discussed the previous chapter, the lack of funding for HPSR was considered to be the most serious constraint to knowledge production by 57% of the respondents. Moreover, the form that HPSR funding takes (project-specific versus institutional-development grants) and modalities through which it is made available to those wishing to carry out HPSR (competitive bidding versus endowments) is also a matter of great concern. These challenges contribute to instability and create an environment of uncertainty that directly impedes the growth of the field.

Agencies funding health and development have not supported HPSR in a way that keeps pace with the transition towards the issues raised by the SDGs. Based on systems and processes that were established largely for biomedical research, funding tends to be fragmented, short-term, and often focused in narrow areas or those dominated by disciplinary boundaries (19). Development agencies have at times pursued new topics and fads, which can be both opportunistic and disruptive.



Global health initiatives have tended to be focused on single issues, often contributing little to the strengthening of health systems or the consequences outside the programme. Investments have tended to emphasize emergency situations and short term “wins” in contrast to long-term development (20).

While these short-term approaches are needed, a number of disadvantages are discernible, both for international and national stakeholders. Project-specific grants tend to be smaller in nature, making it difficult for small research organization to generate sufficient revenue to support operational costs. Where international funders are involved, the outcomes targeted may or may not be aligned with the needs and interests of domestic stakeholders. In addition, such projects can in some cases put pressure on researchers to conduct the type of research that is suitable for international peer-reviewed journals but of less practical use to decision-makers. It is therefore essential that donors and aid agencies put more funding for HPSR at the disposal of the local stakeholders who will use the research, while ensuring that funds are earmarked for research support. Where domestic funders are concerned, there is a tendency for projects to be short term and narrow in focus, with researchers being hired to address specific issues.

An alternative to project-specific funding could be long-term development grants intended to provide broad institutional support under which multiple research studies could be funded. From the point of view of institutional capacity-building, long-term development grants offer a number of advantages. First, they allow for the establishment of institutional research infrastructure such as libraries, databases, and information technology, while also enabling institutions to hire and retain research talent. Because this type of funding is not attached to any particular project, it also gives institutions the possibility of developing and working on their own research agendas, including multiple disciplinary projects. New models of longer term funding for research (say 10-20 years), with benchmark reviews along the way for revisions or cancellation, would be more productive for HPSR linked to pursuing long-term health goals.

The way in which funding for HPSR is made available – most often through competitive open solicitations or requests for proposals – also contributes to an environment of uncertainty. Much effort goes into bidding on competitive research proposals, and the lack of predictability of success may make it difficult to retain staff, particularly more senior staff. It has also been pointed out that the tendency of research users to hire short-term consultants can have a negative impact. For local consultants, particularly in low-income contexts where university-sector pay is poor, such jobs can be very attractive to researchers and can divert the attention of university staff away from longer term collaborative research projects. Moreover where outside consultants are brought in, there is little opportunity to develop the longer term, trust-based relationships between policy-makers and researchers or policy analysts which have been shown to influence evidence uptake.

Another important challenge in ensuring institutional capacity in LMICs comes from the fact that most of the funding for research carried out in LICs comes from high-income countries and global funders (19). As the field of HPSR evolves, greater investments by LMIC governments and other funders will be required. The new world order calls for roles and responsibilities that are different, with new roles for the BRICS countries (Brazil, Russia, India, China and South Africa) and other emerging economies as funders of HPSR. In Ghana, for example, the institutionalization of the research and



development directorate in the Ghana Health Service has been possible because of the emphasis on local actors and capacity. The local actors and local capacity drove the programme and avoided the pitfalls of a short-term “project” approach. The available capacity meant that the local actors could keep attracting international competitive funding to keep afloat.

Another example of local investments in HPSR is in China, where funding has been rapidly increased. This is mainly driven by the need of policy-making for health-system reform that is a critical topic since early 2000. Increases in funding for HPSR come mainly from two sources: the government (both central and local) and national funding agencies – for example, the National Natural Science Foundation of China tripled its financial support to HPSR over the past five years. To encourage and stimulate greater investments locally in HPSR, global funders may consider establishing joint-funding schemes and other mechanisms to leverage other contributions by national governments or other funders. Such an approach could also be used to leverage resources allocated for programme activities that could be allocated to address research for systems-level scale-up and integration. This would allow for more diversified funding sources to support HPSR, which will be essential for sustainability.

To reap the benefits of research that tackles difficult, entrenched and complex problems related to health, funders need to provide longer term and more stable funding, and in ways that encourage the participation of local stakeholders and flexibility in amending the research and intervention design according to changing conditions. Such funding would further encourage innovation and risk. Funders need to prioritize HPSR, for example by setting minimum targets for HPSR funding as a proportion of all health research funding, in order to ensure sufficient resources for the conduct of research. In order to optimize the use of existing resources, efforts should be made to allocate resources for HPSR as part of programme activities. Earmarking funds for the generation and use of evidence within programme budgets would ensure adequate funding for relevant research. Efforts should also be made to establish sustainable and flexible funding that is not restricted to individual projects. Institutional endowments and/or cooperative agreements could be used by funders to support a range of multiple disciplinary research activities to address multi-faceted health-system problems.

Finally, as the HPSR field continues to expand, tracking and understanding the funding flows to support such activities is critical to informing decision-makers and to establishing a solid basis for future advocacy efforts. To date, efforts to establish baselines and assess trends in HPSR funding, or to identify the sources and recipients of funding flows, have been only partially successful. Efforts to track funding have typically relied on web-based surveys of the institutions and actors involved in financing or conducting HPSR activities in LMICs. While this report presents a new approach that draws from the OECD Creditor Reporting System, more work is needed to better capture funding flows globally and domestically.

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# CHAPTER 4

## FUTURE

The Sustainable Development Goals (SDGs) are an opportunity to refocus efforts on system-wide reform and intersectoral action, acknowledging that attainment of health goals is dependent not only on actions within the health sector but also on economic, social, educational and environmental factors (1). Implicit in the design of the SDGs is the recognition of the complexity and interconnectedness of global challenges across sectors. Addressing these challenges then requires truly cross-sectoral approaches that emphasize solutions informed by evidence from a range of disciplines. The added value of disciplines such as sociology, anthropology, behavioural economics, psychology, and others, in strengthening health interventions and improving quality, trust and sustainability has been better understood in recent years. HPSR is well-positioned to rise to the challenges presented by the SDGs. The field has been testing models of multidisciplinary collaboration and embedded research and can share lessons learned with the broader health research community (2). The HPSR workforce is made up of a variety of disciplinary backgrounds that have been working together over the last 20 years to define a field that marries quantitative methods with qualitative means of understanding how and why phenomena take place (3). Throughout this process, the field has also developed tools to unpack implementation processes and to support on-the-ground decision-making and action (4).

Countries continue to address changing issues around improving the delivery and financing of health care. But there is also now a stronger recognition of the role of the social determinants of health, and that the pathway to good health is not just through health services. People are more closely linked to each other through new means of communication and transport. Information – and misinformation – is much more widely accessible. Local and global systems for the natural and built environments, food and agriculture, law and order, economy and enterprise, religion, and other sources of power and privilege are affecting people's health in ways not previously appreciated. Health policy and systems research should have a central role in understanding and intervening in this interconnected world. This chapter explores some of the future challenges for HPSR and how HPSR will need to adapt in the following overlapping areas:

- tackling the challenges of interdependence and integration in the SDG era
- balancing the health interests of individuals, communities, and populations
- supporting the agenda for universal health coverage
- unleashing technological and social innovation to benefit the common good and the most marginalized
- synthesizing and adapting HPSR knowledge across a wide range of contexts.

## TACKLING THE CHALLENGES OF INTERDEPENDENCE AND INTEGRATION IN THE SDG ERA

The context for healthy life is changing rapidly, within an environment characterized by environmental degradation, antimicrobial resistance, population migration, epidemiological pressures, and an increasingly complex global economic system. Against this backdrop, expectations about the role of the state, civil society and business are changing. So too are the ways we communicate with each other, the sources and means for violent conflict, and the forced migration of populations across borders and within countries. There are also growing pressures due to environmental degradation, urbanization and ageing populations. Additionally, there are new threats due to emerging diseases and the failure of poorly organized market systems for health services, technologies, and financial products. Each condition is both a driver of change and an effect of each other – they are interdependent issues in an increasingly interconnected world.

Much of the literature on interdependence in health systems has been concerned with important issues of the integration of different health programmes within the health-care system, rather than addressing the broader systems that contribute to peoples' health (5, 6). Within this context of growing interconnectedness, the SDGs represent a shift from efforts to provide overall benefits to a nation to one that focuses on inclusive growth and tackling inequities at the centre of activities. The SDGs also represent a paradigm shift in human development, away from one that builds up core sectors of countries to one that seeks convergence across sectors that influence and depend on each other (1).

The field of HPSR is poised to help address these challenges, if it can be steered in this direction. HPSR should continue to address questions of how to provide a comprehensive mix of services, particularly in the face of multiple and programme-specific management, financing, logistics, and accountability arrangements (7). Similarly, there should be an appropriate focus on how to provide people-centred care that links services across levels of care (8). Connecting efficient purchasing and delivery of care is an ongoing issue in most health-care systems, and the goal of finding the best configuration of public and private finance and delivery is a continuous concern (9). And while HPSR should take on an expanded role in dealing with these evolving issues within health-care systems, the larger challenges of integration and interdependence that threaten people's health must also be taken into account, as discussed below.

In the SDG era, where tackling inequity is centre stage, HPSR has major contributions to make. HPSR has a traditional focus on understanding and addressing different types of disadvantage and inequity, and can address inequities through many approaches and disciplines, including social epidemiology, economics, participatory action research, and ethics (10). Moreover, more specifically within the field of HPSR, the Alliance has pioneered the application of systems thinking in health. This provides a wide set of theories, frameworks and tools to examine and test how different elements of systems – actors, functions and their relationships – fit together to make an overall whole (11, 12). In the future, the balance of health policy and systems research should change, to put more effort on issues related to overcoming inequity and disadvantage. Specific areas that will demand the attention and resources of the global health community are highlighted below, together with recommendations on how HPSR can address the key challenges.

### Environmental degradation

Environmental degradation and food insecurity are crucial health risks, especially in LMICs (13). Outdoor and indoor air pollution have become important risk factors for chronic diseases and food insecurity has been one of the most important public concerns (14). Globally, climate change is projected to decrease crop yields, particularly in Africa, Australia, South America and South Asia, which will contribute to increased food price volatility (15). Poor nutrition, exposure to environmental toxins, and a resurgence of vector-borne diseases, such as malaria and dengue, are all consequences of environmental degradation. The poor are particularly affected, as they are most exposed to the direct and indirect shocks of environmental degradation, are more vulnerable because they lose relatively more wealth, and are less resilient because they have financial and safety nets to manage and recover (16).

Systems thinking is extremely important in dealing with environmental issues in the context of other sectoral priorities. Good cooperation between agencies is necessary for effective policies and practice. For this reason, the scope and approaches of HPSR should be extended and advanced for supporting intersectoral collaboration in environmental health; researchers working in public health, policy, environmental science, and implementation science should all work together.

### Antimicrobial resistance and disordered market systems

Antibiotics have changed the world; they revolutionized the treatment of infections, transforming once deadly diseases into manageable health problems. The growing phenomenon of resistance is threatening modern medicine (such as major surgery, organ transplantation and cancer chemotherapy) and has been classified as a major threat to global health. Antimicrobial resistance needs to be tackled on levels ranging from individuals, households, and communities, to health-care facilities, the entire health sector, and finally to national and global levels. The failure to develop new antimicrobials, while counterfeit and substandard drugs flourish, represents major market failure at both local and global levels. Inequitable access to antibiotics and other therapeutics are symptoms of poorly organized market systems. In order effectively to balance access to antimicrobials and to counteract their misuse and overuse, new regulatory strategies, socially oriented investment, and a realignment of incentives are needed at all levels (17, 18). Multi-level governance is the key for successful action in containment strategies, abetted by HPSR to assess how well these work and to guide their evolution. Such strategies will involve patients, the health facilities where they receive care, the health-care systems, and broader national institutions and contexts, as well as international stakeholders and global institutions.

The Global Action Plan on antimicrobial resistance, endorsed by the World Health Assembly in 2015, highlights the importance of adopting a “one health” approach that can cross traditional disciplinary boundaries. One Health is the collaborative effort of multiple disciplines – working locally, nationally and globally to attain optimal health for people, animals and the environment. Many of the 17 SDGs are relevant to this approach, such as the need for clean water, sustainable communities, global partnerships, and the promotion of good health. HPSR can play a much needed role in addressing systems issues in all these sectors, in order to support the design and implementation of context-specific interventions.

## Population migration

Population migration is a major social, political and health-systems challenge. One billion individuals are now on the move globally, one quarter of them crossing national borders. The estimated refugee population reached an unprecedented 19.6 million individuals worldwide in 2015 – half of them being children (19). Health systems are at the forefront of the response to the ongoing crisis facing refugees and other migrants both at first point of contact and later during resettlement. It is urgent to develop more effective approaches that respond to the health needs of displaced populations and the evidence base is quite weak. Whereas no systematic association exists between migration and importation of communicable diseases, displacement complicates delivery of maternal and obstetric care, increasing risks of unsafe childbirth and maternal and neonatal morbidity and mortality. The high number of unaccompanied migrant children is another compelling reason to take strong action to protect children with people-centred health systems.

Universal health care is at the core of the third SDG, and should also cover displaced populations. Access to health care is shaped by legal frameworks governing the rights of refugees and asylum seekers and by the regulation of the migration process. Barriers in accessing health services include communication difficulties, cultural issues, structural problems (e.g., transport) and bureaucratic barriers (e.g., user fees, social insurance systems). Provision of preventive care, including primary and secondary prevention of cardiovascular disease and antenatal care, could generate savings for health systems by alleviating the burden of stroke, myocardial infarction, and adverse birth outcomes. Greater efforts are needed to strengthen the resilience of health systems to foster equity and efficiency in refugee health. Another priority is developing the evidence base for intersectoral approaches to the health care of displaced populations, also addressing social determinants of health.

## BALANCING THE HEALTH INTERESTS OF INDIVIDUALS, COMMUNITIES, AND POPULATIONS IN THE CONTEXT OF PEOPLE-CENTRED CARE

The *WHO Framework on integrated people-centred health services* is a global call for a paradigm shift: ‘the way health services are funded, managed and delivered means putting the needs of people and communities, not diseases, at the centre of health systems, and empowering people to take charge of their own health’ (20). In this context, the HPSR of the future will need increasingly to explore questions of balance between the health interests of individuals and families, the communities in which they live, and the larger populations and ways in which societies organize themselves. This even includes the roles of nation states and other groupings that transcend national boundaries (e.g., large social movements and extremist organizations).

At the individual level, people often obtain their health care from sources other than those considered as expert – e.g., health providers who range from specialist physicians to traditional healers. People increasingly seek expert health information on their own through new media, such as through the Internet, social media, radio, or other channels, with the source often having a marketing rather than public-health orientation. Many people also have greater access to diagnostics they can use themselves, and can more readily obtain therapeutics, either on their own or through a health provider (playing the role of gatekeeper). While increased access to health information can influence healthy life choices and improve access to health care, there are also growing challenges related to misleading information (e.g., diet fads), inappropriate screening and diagnostics that raise both anxiety and health

costs, as well as substandard and even dangerous treatment (e.g., through counterfeit medicines, unnecessary surgeries). Poorly regulated health markets and efforts to enhance self-diagnosis and treatment can lead to higher health costs and distortions in health priorities.

HPSR will be critical in providing solutions to getting the balance right between personal prevention and treatment, and serving the interests of communities and populations. It seems likely that people will have increasingly unequal access to specialized health knowledge, products and services, even as many more are exposed to a wider variety of health advice and products – but with highly variable reliability and quality. Future primary health care is likely to involve more explicit self-care, but with increasingly uncertain and diverse roles and organization for front-line health providers. This is an important area for HPSR to address, where research can build on the now familiar work that has examined questions of task-shifting of traditional services from more specialized providers, or those of testing the role of new cadres of professional, volunteers, and peers as health workers. For example, future research may look at new ways in which health-care advice and services can be provided directly in the home, in schools, or in the workplace. Do the new primary-care workers need a more explicit understanding of evidence and research to fulfil their role and, if so, how would this be accomplished? HPSR will also be useful in examining how these new arrangements can help improve monitoring of how best to serve both individual and population health interests, and examine the trade-offs between them.

### **SUPPORTING THE AGENDA FOR UNIVERSAL HEALTH COVERAGE (UHC)**

SDG Target 3.8 relates specifically to UHC and is: “Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.” UHC is a priority in many countries. It is likely to endure as an ongoing challenge for health systems around the world, as they seek to balance costs, types of insurance and other financing of care, with ensuring high coverage, quality and mix of health services. Getting this balance right will require learning organizations to lead and adapt to change; this provides an important role for HPSR to guide changes in the design of provision and financing of health services. HPSR will enable the continuous improvement that is needed in systems striving to provide UHC. HPSR will help address locally defined problems and find context-specific answers to questions such as:

- How best to use different resources for health in the country?
- How to connect efficient purchasing and delivery of health services? What is the configuration of public and private provision, financing, and regulatory approaches?
- How to finance high-cost interventions, particularly when they have the potential to change the nature of programmes (e.g., new laboratory tests and requirements for screening, new diagnostics, or new treatments)?

## UNLEASHING TECHNOLOGICAL AND SOCIAL INNOVATION TO BENEFIT THE COMMON GOOD AND THE MOST MARGINALIZED

New health products, technologies, and the institutions that support them have not favoured poor and vulnerable populations and those in LMICs. The current institutional arrangements favour profit maximization and a focus on issues affecting the rich, while neglecting products and technologies that address common conditions of LMICs. But this may change. There are now efforts to promote research and development to benefit those in LMICs, including new public-private partnerships, tax credits for neglected diseases, prize funds and advance-market commitments, and other innovative approaches including open-source drug discovery, patent pools, and regulatory harmonization to incentivize research and development [21].

There are new opportunities for HPSR to affect how technology can influence health systems, as well as the broader systems affecting health and that support innovation. There are constraints and disincentives in each of the main steps of the technology value chain; areas where HPSR can play important roles. This includes addressing different types of access:

- Therapeutic access focuses on whether research institutions and industry undertake or prioritize the research and development (R&D) to address public-health challenges. Do research priorities align with public-health priorities, or not? Their misalignment results in neglected diseases.
- Financial access relates to the affordability of the product by those in need when it enters the marketplace. This can be influenced by how knowledge is owned and shared as well as how public-sector funding requires fair returns.
- Structural access considers how the delivery system brings a technology to those whom it may benefit – last-mile challenges. Availability of the products might be limited by lack of stock; access, by limits to local infrastructure, from the lack of laboratory facilities to shortages of human resources; and quality, by substandard or counterfeit drugs or thermal instability of the product. For the benefits of a technology to be realized, all three hurdles have to be overcome.

One area for future HPSR concerns how new technology can provide more public benefit, particularly for LMICs (e.g., socially responsible intellectual property rights), including testing innovative intellectual property arrangements (e.g., social-impact bonds, tiered pricing). Can HPSR be used to forge new systems for discovery, development, and delivery of transformative health technologies and institutions, particularly to overcome market failures and reduce health inequities?

## SYNTHESIZING AND ADAPTING KNOWLEDGE ACROSS A WIDE RANGE OF CONTEXTS

A further challenge will be to increase the capability to understand, interpret, and communicate the research that emerges from different sources and designs, hopefully with greater disciplinary variety than now, addressing cross-sectoral issues and involving broader sets of stakeholders. There will be a need to do more in real time and to synthesize evidence produced in real-world conditions – and co-produced – rather than that produced essentially by researchers alone. This will require



new and better tools to synthesize evidence across fields and disciplines. It will also require more refined meta-theories and tools than the systematic review, which is appropriate for simple and reproducible interventions and limited outcomes, and the realist review, which tries to unpack the complexity of interventions in different contexts to explain how different mechanisms may produce different health outcomes.

A strong feature of HPSR is the application of research methods to problems of relevance to different types of stakeholders, including proposing ways to co-create knowledge, synthesize evidence, and communicate knowledge to facilitate change. This facility will continue to be valuable, but to address the issues of the SDGs will need to extend beyond the more familiar stakeholders within ministries of health or health programmes, to include understanding, identifying, and addressing problems of relevance to citizens' groups, government stakeholders in other ministries or those having cross-cutting responsibilities (e.g., prime ministers' offices), non-governmental organizations and business entities working in spheres other than health care. New ways of listening to different stakeholders and facilitating co-production and application of knowledge should be a permanent agenda item for HPSR.

## **THE FUTURE ROLES OF THE ALLIANCE FOR HEALTH POLICY AND SYSTEMS RESEARCH**

The Alliance has always played a significant role in the development of health policy and systems research around the world and, although the field is on much firmer ground now than when the organization was founded, it continues to be highly relevant for the future. Today, weak health systems are widely recognized as a critical obstacle to improving health. The role of research to generate knowledge and stimulate its application for health policy and systems improvements is generally appreciated. Now that health is positioned in the broader framework of the SDGs, the approach required to achieve the single health goal is integrative, linking with other development goals and consistent with a systems perspective, an approach pioneered in the health sector by the Alliance. The organization has advanced the development of a wide range of research in areas such as health financing, social participation, and political analysis, which have been used to inform efforts to strengthen health systems and thus improve health. The Alliance was a key player in the formation of Health Systems Global (HSG) as a membership organization intended to support health systems researchers and also promote the field. The Alliance and HSG have established a strategic partnership, which allows the Alliance to focus more of its energies on convening policy-makers, researchers, and institutional partners, acting in the following main roles:

- as an agenda setter: linking health systems and the SDGs, including relevant new or neglected stakeholders into the research and policy cycles
- as an innovator of new frameworks and theories: building on its leading-edge work on systems thinking and implementation research to develop new ways of co-producing and using knowledge across sectors to improve health
- as a convener: increasingly bringing together policy-makers and civil society leaders with other actors both within the health sector and, increasingly, across sectors to address the SDGs

- as a facilitator of capacity development and use in HPSR: introducing new ways of embedding research into programmes and fostering institutional capacity-building with links to policy-makers.

To fulfil these roles, a number of challenges will need to be addressed. Open debates and challenges from different perspectives and stakeholders are essential. The field would move backwards if single definitions and methodologies of work were to be favoured. This could lead to “group think”, with a narrowing of questions and methods, such as was documented in the field studying the diffusion of innovations, where methods and questions became too similar, leading to a decline of innovation and relevance of the research [22]. The scope of work for the Alliance may also need to change to reflect new global realities. Whereas there are increasingly important connections between the local and the global, the Alliance will increasingly need to address issues affecting both high-income countries and low- and middle-income countries (e.g., climate change, food and nutrition systems, anti-microbial resistance, the health of refugee populations). At the same time, many of these global issues have a local dimension (local health exposures, locally provided public-health and primary-care services, community capabilities). The Alliance will need to find the right balance. Whatever its new strategies will be, the Alliance will need to be poised to find the right balance in the future through its wide set of partners and legacy of collaboration and innovation.

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# CHAPTER 5

## NEXT BIG LEAP

The world has changed dramatically since 1997, as has the landscape for HPSR. The preceding chapters have highlighted how HPSR activities and influence have grown around the world, particularly in LMICs. Two decades ago, confidence that solutions to health-systems challenges could be identified, and that their implementation would be widespread, was stronger than it is today. These days, the very concept of universally relevant policies and strategies would be hotly contested. We now have a better understanding of the need for rigorous comparative analyses to provide insight into the interventions that work best in specific contexts; these same analyses also fuel shared learning across countries.

There is also now greater recognition that health systems are dynamic, perhaps partly thanks to the growing understanding of systems thinking and the relevance of complexity science to health-systems research. Intervention in such dynamic systems is likely to produce counter-reactions that are not always predictable, but do always engender further adjustment and intervention. This growing appreciation that health systems are dynamic and adaptive may reduce the clamour for universal magic bullets. This does not mean that generic policy proposals are useless, but rather that each country and sub-national jurisdiction needs its own analytical capability to track changes to the health system and adapt interventions as needed.

The world is more connected and inter-dependent than ever before. This creates a challenge to the traditional concept of a health system, since people's health and the systems and institutions that affect health extend well beyond the boundaries of health-care systems and health programmes. National governments have agreed to Agenda 2030, including a set of Sustainable Development Goals (SDGs) that recognize the interdependence of various sectors for development (United Nations 2015). Navigating this increasingly complex reality requires new thinking and different ways of working, already a strong attribute of HPSR. To realise its powerful potential, HPSR must address several important issues.

Increased international funding for HPSR is slowly trickling down to researchers in LMICs and in some cases national funding is available. But more domestic funding is needed if institutional capacity for HPSR in LMICs is to be strengthened, and to ensure that research is more relevant to local challenges. Domestic funding for research at all levels of the health system must be sustainable. This is particularly true for funding used to support research that is embedded within health-systems decision-making processes, given the time that it takes to build appropriate institutional capacity.

Although the role and relevance of evidence in informing efforts to strengthen health systems has been recognized, demand for evidence has not followed suit – nor, indeed, has its use. Strategies for increasing both the demand for evidence and its use include collating, developing and communicating new knowledge; supporting the development of capacity to demand and use evidence; and providing forums that bring researchers and policy-makers together to strengthen their mutual engagement.

Such forums are critical, for example, for setting research priorities and enhancing understanding of the systems processes that are conducive to demand-and-use behaviour. Bold, innovative strategies for encouraging demand-driven research should also be considered. For example, embedding research within health-systems decision-making is a model that needs testing in multiple contexts. Embedded research also needs to be applied by a broader range of relevant stakeholders (e.g., citizen groups, non-governmental organizations) who can contribute to the co-production of knowledge.

While research funders appear increasingly attuned to HPSR, this is not the case of journal editors; getting HPSR published in high-quality journals remains challenging. Although the most prestigious journals do publish opinion and commentary on health policy, their research papers continue to be heavily dominated by biomedical and clinical studies. This reflects the stated “medical” focus of many such journals and editorial policies that value randomized control trials over other study designs. The lively debate that unfolded in 2016 around journal policies on qualitative research is pertinent to much of the mixed methods and qualitative research conducted within the HPSR field.

A set of core indicators for tracking progress in knowledge generation, funding flows and capacity for HPSR must be developed and this report may serve as a benchmark. If the field is to continue advancing, decision-makers and researchers must collaborate with global players, applying their minds collectively to identify a set of feasible, robust and useful indicators for tracking the field in the future.

This report has described the parallel evolution of health-services research in HICs and health policy and systems research in LMICs. Although there is now substantial overlap between the scope of these two fields, there is still relatively limited engagement between researchers who focus on high-income and those whose work addresses low-income countries. There have recently been some efforts to bridge this divide, for example by AcademyHealth, and Health Systems Global was constituted with the aim of serving the entire global community of health systems researchers. But so far, little exchange has materialized. This is really a missed opportunity. Classification into country-income groups focuses on similarities of countries within these groups (e.g., LICs) and their difference from other groups (e.g., MICs) whereas experiences in different countries represent a continuum of realities and situations. Moreover, countries at all levels of development are facing many similar challenges. These include growing burden of non-communicable diseases, the need for more people-centred care, rapidly increasing demands for greater health-system resources, and the imperative of increasing efficiency. The fact that country responses often rely on different strategies provides a major opportunity for HPSR into the future.

After twenty years of existence, health policy and systems research is now recognized as an important multiple disciplinary field that is essential for strengthening health systems globally and nationally. This report shows how the field has evolved. It still needs to be more widely embraced by the broader health research community and national policy-makers. It still needs a critical mass of support from the research community. There are still many challenges ahead, as described here, which will require changing mindsets and opening of boundaries to policy-relevant research supporting health systems. The field is ready, with innovative science and new multidisciplinary partnerships, for the next leap forward towards achieving the Sustainable Development Goals. At a minimum, this will require a paradigm shift in the use of HPSR to guide policy and programmes and a phase shift in the quantity and quality of HPSR produced.





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