What is health systems research? A provincial guide

WHY THIS DOCUMENT?

Health systems research (HSR) focuses on the performance and problems of health systems. A health system is the sum of the structures, people and processes that together provide the vehicle for the delivery of health care and achievement of better health. The Western Cape Provincial Health Research Committee has set as one of its goals the promotion of HSR in the province.

Health system research is particularly important in the context of Health Care 2020, the long-term strategy of the Department of Health to increase wellness and achieve patient centered quality of care. This long-term strategy has seven principles: Patient centred quality care; Health outcomes approach; Primary health care philosophy; Strengthening of the district health system model; Equity; Affordable health service; and Strategic partnerships. Understanding the root causes of barriers in the system and documenting successful interventions are essential to making these principles realizable in practice.

The aim of this briefing note, compiled for the Provincial Health Research Committee, is to inculcate a greater understanding of HSR amongst providers, managers and clinical researchers. It outlines the nature and content of HSR, a field of growing importance but one that is under-served.

WHY HEALTH SYSTEMS RESEARCH?

Interest in how to design, fund and manage health systems in the most efficient, equitable and sustainable fashion is not new. However, the ‘scaling up’ of new HIV, TB and other interventions and slow progress towards the Millennium Development Goals has exposed health systems as the weak link in the chain of implementation, particularly in developing countries. In South Africa, addressing system wide weaknesses are at the heart of new health sector policy initiatives such as National Health Insurance (NHI) and PHC re-engineering. As policy makers and practitioners across the globe grapple with the challenges of strengthening health systems, a community of health systems and policy researchers has emerged to provide insight into and knowledge of how best to do this.

However, health systems research does not exist solely to resolve implementation ‘bottlenecks’, but is a field of research in its own right focusing on a complex array of system structures and processes.

Although few would disagree with the importance of health systems research, it is still a relatively new area of scholarship. In November 2010, the first Global Symposium on Health Systems Research was held in Montreux, Switzerland (see: http://www.hsr-symposium.org). Preceding this were a number of international meetings, the establishment of the Alliance for Health Policy and Systems Research, and the publication of a WHO health systems framework in 2007. These processes have enabled greater international agreement (while still the subject of some debate) on the definitions, boundaries and the conceptual and methodological foundations of health systems research, as well as the related area of health policy research.¹

WHAT IS HEALTH SYSTEMS RESEARCH?

The Alliance for Health Policy and Systems Research (AHPSR) defines it as “the production of new knowledge to improve how societies organise themselves to achieve health goals. It encompasses how societies plan, manage and finance health services as well as investigation of the role and interests of different actors in the health system.” ([http://www.who.int.alliance-hpsr/en/](http://www.who.int.alliance-hpsr/en/)).

This definition encompasses goals, structures and processes. One of the most common representations of a health system that spells out these various dimensions is the WHO Health System Framework\(^2\), summarised in Figure 1.

**THE WHO HEALTH SYSTEM FRAMEWORK**

<table>
<thead>
<tr>
<th>SYSTEM BUILDING BLOCKS</th>
<th>OVERALL GOALS / OUTCOMES</th>
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<tbody>
<tr>
<td>SERVICE DELIVERY</td>
<td>IMPROVED HEALTH (LEVEL AND EQUITY)</td>
</tr>
<tr>
<td>HEALTH WORKFORCE</td>
<td>RESPONSIVENESS</td>
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<tr>
<td>INFORMATION</td>
<td>SOCIAL AND FINANCIAL RISK PROTECTION</td>
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<tr>
<td>MEDICAL PRODUCTS, VACCINES &amp; TECHNOLOGIES</td>
<td>IMPROVED EFFICIENCY</td>
</tr>
<tr>
<td>FINANCING</td>
<td>QUALITY</td>
</tr>
<tr>
<td>LEADERSHIP / GOVERNANCE</td>
<td>SAFETY</td>
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Figure 1: Health system building blocks and goals/outcomes (Copied from WHO, 2007, page 3\(^2\))

The ultimate goals of a health system are not only improved health, but also greater responsiveness to citizens and household protection from social and financial risk. In this framework, six health system ‘building blocks’ – including service delivery (hospitals, clinics etc.), various inputs (financing, human resources etc.), and systems of governance/leadership – form the basis of ensuring access to effective health interventions (personal and non-personal).

Each health system block represents a potential area of research, and can also be examined in relation to other blocks. For example, a common measure of overall health system performance is the plot of health expenditure against health outcomes (e.g. life expectancy) by country. The general trend is for improved health outcomes with increased investment – however, at any given level of expenditure, individual countries will vary enormously, suggesting different degrees of system efficiency.

As with all other types of research, HSR can fulfill a number of purposes, from descriptive to evaluative. One of the challenges it faces is the interconnected nature of systems elements and the complex pathways and non-linear processes through which change is achieved. For example, policies such as the Occupation Specific Dispensation and Rural and Scarce Skills Allowances which seem straightforward on the surface, have had contradictory effects – promoting retention and redistribution of workers on the one hand, while also falsely raising expectations and diminishing trust in government, on the other hand. HSR highlights the central place of ‘people’ – patients, providers, managers – as individuals and as groups embodying cultures, norms and values, through which all health system processes are filtered. Health systems thus have both ‘hardware’, financing,

human resources and other building blocks, and ‘software’ elements.\(^3\) A growing area of interest in HSR is how to capture this complexity in research methodologies.

HSR is closely related to health policy research, which considers the social and political context of decision-making in systems, and the two are often referred to together as “Health Policy and Systems Research”.\(^3\)

### WHAT IS HSR NOT?

HSR builds historically on the field of health services research, which has as its starting point the service delivery component of health systems, sometimes in relation to other components. Health services research may, for example, study the patient-provider relationship and interventions to improve uptake of clinical guidelines by health care practitioners. However, HSR is broader in scope and includes but is not limited to a focus on service delivery. It may begin from a completely different building block, such as governance, leadership or financing, without directly addressing the frontline of service provision during the research process.

HSR is thus more concerned with the generic structures and processes through which interventions are implemented, rather than specific disease (e.g. HIV/TB) or programme (e.g. maternal-child health) evaluations. A health system research perspective asks questions that are somewhat different from those of programme research (see Table 1). However, it is not uncommon for HSR to investigate a specific disease or programme:

- as a tracer for a systems issue e.g. the impact of district strengthening on child health outcomes
- because it has system wide implications and effects e.g. provision of antiretroviral therapy

Finally, HSR shares features with, but is not necessarily the same as operations research. Operations research tends to have an instrumental purpose, seeking to provide solutions, in short time frames, to the problems facing the practice environment. Examples would be evaluating the management skills of hospital CEOs in order to plan a capacity building programme; or assessing effects of interventions under “field” conditions, such as retention in care in scaled up nurse-based anti-retroviral services. HSR would be interested in these questions, but does not always have to be of immediate relevance, i.e. instrumental in nature. It can also take a longer-term perspective on systems, involve researcher (rather than practitioner)-generated questions, and seek to examine the underlying dimensions of health systems such as accountability relationships.\(^4\)

### WHAT KINDS OF QUESTIONS DOES HSR ASK?

Health systems research asks questions at macro, meso and micro levels depending on the scale and complexity of relationships being examined.\(^3\)

Macro-level HSR questions describe or analyse the system as a whole, for example:

- To what extent has the policy of decentralised governance through the district health system been achieved in South Africa?

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How does the efficiency (health expenditure vs outcomes achieved) of South Africa’s health system compare with that of other middle income countries?

Meso-level HSR questions focus in a holistic fashion on a particular delivery unit or system function, for example:

- What strategies achieve the greatest improvement in quality of care and patient safety at district hospitals?
- What factors in the drug procurement and distribution system explain drug stocks out in health facilities?

Micro-level HSR questions look at the individual in the system, for example:

- What is the impact of support/supervision on community health worker performance?
- What are the access barriers to chronic disease care experienced by households?

In general, identifying HSR questions, whether macro, meso or micro involves a shift towards thinking that is: broad, cross-cutting, at scale and systemic in nature. This is illustrated in Table 1 that contrasts how a health programme research perspective differs from a health system research perspective on TB control.

| Thinking broad (beyond the disease) | INH prophylaxis | Secondary prevention for other common diseases |
| Thinking cross cutting (underlying functions) | Implementing a TB register | Improvement in information systems |
| Thinking up/scale (facility to district, province etc.) | Facility DOTS support systems | District community based services |
| Thinking systems | Running a TB service | PHC system that is available, affordable and acceptable/responsive |

Table 1: Programmatic and health system perspectives on TB research

WHAT METHODS ARE USED IN HSR?

"By nature [HSR] is inter-disciplinary, a blend of economics, sociology, anthropology, political science, public health and epidemiology that together draw a comprehensive picture of how health systems respond and adapt to health policies, and how health policies can shape – and be shaped by – health systems and the broader determinants of health" (http://www.who.int/alliance-hpsr/about/hpsr/en/index.html)

As an applied field, health systems research starts with a problem or theme, and selects a research strategy and data collection methods, whether qualitative or quantitative, that address this in the most appropriate manner. HSR thus treats study design in a “flat” rather than hierarchical fashion, i.e. without regarding some designs as inherently better than others. The most appropriate method is selected depending on the study purpose and nature of the question. Health systems research generally does not, for example, hold the classical experimental design as its gold standard. Multi-method approaches to HSR are not uncommon.
Table 2 outlines the range of HSR strategies and published examples of each strategy.

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<tr>
<th>Research strategy</th>
<th>Example</th>
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<tr>
<td>Case study</td>
<td>The use of formal information by managers in different ‘cases’ of decision-making (Mutemwa et al, 2006)</td>
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<td>Cross sectional</td>
<td>Surveys to assess factors attracting nurses to rural areas (Blaauw et al, 2010)</td>
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<tr>
<td>Longitudinal</td>
<td>Following households to assess barriers to health care access as they experience episodes of ill-health (Goudge et al, 2009)</td>
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<tr>
<td>Experimental</td>
<td>Assessing the impact (health service use and outcomes) of making information in the form of facility score cards available to community members (Bjorkman &amp; Svensson, 2009)</td>
</tr>
<tr>
<td>Ethnographic</td>
<td>In-depth study of the culture of accountability in one district health system through participant observation and interviews (George, 2009)</td>
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<tr>
<td>Action-research</td>
<td>Involving practitioners in research on how to improve use of patient records (Khresheh &amp; Barclay, 2007)</td>
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<tr>
<td>Mixed method and</td>
<td>Understanding the factors associated with poor malaria control from different perspectives within a particular health system context (Morrow et al, 2009)</td>
</tr>
<tr>
<td>Multi-method</td>
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POTENTIAL ROLE OF SERVICE MANAGERS IN HSR

Health service managers have an important role to play in promoting HSR in the province. They can do this by:

- Informing themselves about the nature of health systems research
- Identifying short and long term HSR questions, based on their insider knowledge and everyday experience of the challenges of the health system
- Encouraging their staff members to develop skills and interest in HSR so that they can conduct small scale in-house HSR
- Engaging and developing partnerships with health system researchers in the province to undertake HSR in their facility or geographical area of focus.

ACKNOWLEDGEMENTS

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ADDITIONAL REFERENCES


George, A. (2009) By papers and pens, you can only do so much: views about accountability and human resource management from Indian government health administrators and workers. International Journal of Health Planning and Management. 24(3): 205-224


