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About the Abridged version

This is an abridged version of the Reader. It does not include the primary research articles for which we received permission to reprint electronically, which are part of the full text version of the Reader that can be accessed through the following link:
http://www.who.int/alliance-hpsr/resources/publications/9789241513357/en/
Foreword

Health workers are the day-to-day providers of preventative, curative and palliative health care. They, and all those who constitute human resources for health (HRH) - managers, supervisors, support staff and human resources in allied social sectors - sustain health systems. In addition to operationalizing health systems, these multiple actors are the ones who ultimately implement health policies, thereby interpreting and shaping policy. Evidence and policy relevant research is critical for understanding and supporting these key dynamic actors at the heart of health systems.

The current commitment to achieving Universal Health Coverage and Sustainable Development Goal 3 (Ensure healthy lives and promote wellbeing for all at all ages) presents an opportunity for the global community to direct attention and energy towards HRH as a key part of resilient, people-centred health systems. The Global Strategy on Human Resources for Health: Workforce 2030 and the United Nations High-Level Commission on Health Employment and Economic Growth represent bold and unprecedented calls to action advocating for increased investments in the health and social workforce and intersectoral collaboration. In the coming years, they importantly signal two key priorities for action on the part of the global community of HRH stakeholders, comprising a diverse group of policy-makers, planners, practitioners, civil society and professional associations. These include strengthening health workforce contributions to improved health and sustained development and addressing outstanding challenges, such as the severe health worker shortage and maldistribution more acutely experienced in low- and middle-income countries.

The need for innovations in HRH policy and practice at the global, regional and country level requires robust, timely and relevant research evidence. However, there is a paucity of methodological guidance on the scope and conduct of health policy and systems research approaches and methodologies relevant for supporting HRH in the Universal Health Coverage and Sustainable Development Goal era.

The Health Policy and Systems Research Reader on Human Resources for Health responds to this gap. It is a global public good relevant to both practitioner and researcher communities. It covers a diverse range of topics, ranging from health workforce boundaries, metrics and modelling; the social relations and organizational contexts supporting effective training, supervision, motivation and performance of health workers; as well as broader governance dynamics.

Critically, the Reader showcases innovative research that examines HRH topics in a manner that recognizes the discretionary power and dynamism of health workers, contends with the power relations that drive health policy and practice, and accounts for the complexity and pluralism of low- and middle-income health systems. In addition and equally important, I believe that the Reader is an essential and timely resource that will in the forthcoming years be increasingly used for teaching and capacity development on human resources for health as a key component of health policy and systems for researchers and practitioners alike.

Dr Naoko Yamamoto
Assistant Director-General
Universal Health Coverage and Health Systems
World Health Organization
About the Reader

Why is this Reader needed?

There is wide recognition that human resources for health (HRH) are key to people-centered health systems, resilient economies and sustainable development. Progress on achieving these goals will depend on the effective deployment of capable and motivated health workers, where and when they are needed to provide a full range of high quality health services, whether promotive/preventive, curative or rehabilitative/palliative (WHO, 2016a; WHO, 2016b; WHO et al., 2016).

Yet HRH is also an area in which evidence has yet to catch up with the pressing policy decisions needed. This gap between HRH policy and research is particularly challenging given the increasingly complex social contexts in which health systems operate. This includes increasingly mobile populations, rapid social and technological change, acute and long-term humanitarian crisis, adaptive economic markets and shifts in power, growth and development pathways in the global political economy.

In the midst of these societal transformations and tensions, HRH as a field has not remained static. The past few years have seen a proliferation of research on HRH, drawing from a range of disciplines (i.e. public health, sociology, psychology, anthropology, organizational sciences, public administration, and management studies). Whereas the field traditionally focused on the medical professions, there is now increasing attention to a much more diverse set of HRH cadres, including nursing professions, auxiliary medical personnel, informal providers, community health workers and home carers. While HRH policy previously narrowly focused on training, recruitment and deployment, recent policy relevant research spans a broader range of issues related to migration, retention, dual practice, accountability, informal markets, gender bias and violence, as well as the need for HRH management and leadership in mixed and often poorly regulated health systems.

Given these research evolutions and outstanding policy needs, securing the foundations of HRH research is critical for improving and advancing policies and strategies for HRH as a vital element of health systems strengthening. Yet there is no resource that summarizes key HRH issues and the research approaches to address them, despite the resurgence in global HRH political prioritisation and the renaissance in HRH research. The Reader aims to address this gap by taking stock of HRH research, cataloguing its advances and identifying remaining challenges. With a strong health policy and systems research (HPSR) orientation, the Reader also promotes greater understanding of the varied disciplines, methodologies, study designs, methods and questions applied to researching HRH. It provides resources for capacity development of researchers and practitioners alike and aims to inspire innovation and investment to fulfill future HRH research agendas. In following these multiple aims, the Reader addresses the needs of researchers, teachers and students of HRH and those policy-makers and funders making decisions about HRH research within the broader rubric of transformative health systems and inclusive economies.
What does this Reader offer?

The Reader builds upon recent efforts by the Alliance for Health Policy and Systems Research, World Health Organization (WHO) to strengthen health systems research approaches, through key research guides, including the Health Policy and Systems Research Methodology Reader (Gilson, 2012), the Implementation Research in Health: A Practical Guide (Peters, Tran, and Adam, 2013), and the Participatory Action Research in health systems: A Methods Reader (Loewenson et al., 2014). Previous HPSR Readers sought to establish new disciplinary ground by introducing new areas or types of research. In contrast, this Reader builds on and bridges two existing scientific and practitioner communities. The Reader speaks to the HRH community and its existing body of work, while also linking to the emerging field of HPSR with its multidisciplinary, people-centered focus.

People-centred HPSR is grounded in an “understanding that i) health systems are, as part of any fabric of society, social and political constructs that provide vital opportunities for tackling social injustice; ii) human agency, in interaction with broader societal structures, fundamentally shapes health systems; and iii) social science perspectives and approaches offer particular value to this area of trans-disciplinary research” (Sheikh, George, and Gilson, 2014, p. 2). The Reader will imbue this HPSR spirit by emphasizing where possible actor-oriented analysis, highlighting how health workers can be creative and dynamic agents best placed alongside with patients, community members, managers and policy-makers to address health system complexities (Figure 1.1).

Figure 1.1 Human resources for health: Multiple actors, interests and power

A key element of the Reader is building on previous Alliance Readers to appreciate the diversity of research methodologies and questions that are valuable to understanding HRH (Table 1.2). In contrast to the hierarchy of evidence that serves as a foundation for epidemiological sciences, HPSR argues for methodological fit dictated by the research question asked and its intended inference (Gilson, 2012). While descriptive research serves as a foundation for all research endeavours, HPSR also serves to understand underlying mechanisms by asking how and why, and by using theories to guide and test understanding through explorative and explanatory research.
HPSR is also about guiding change whether collaboratively through emancipatory approaches or through more researcher controlled intervention research that aims to test the adequacy, plausibility and probability of influence. Finally, HPSR is also about informing stakeholders about the consequences of certain decisions, and is therefore predictive through scenario building, which can involve participatory stakeholder engagement and computer modelling.

While each chapter will provide enough of an overview about HRH to situate the research done on that topic, the focus will be on the research (methodological significance in terms of HPSR boundary stretching, strengths, weaknesses and future areas for further attention) and not on providing a comprehensive review of that HRH topic. HRH topic already provided by others (Soucat, Scheffler, and Ghebreyesus, 2013; Scheffler et al., 2013). We do however provide references to classic texts, conceptual frameworks and reviews to help guide the audience. Similarly, while discussing how HRH research can be strengthened from an HPSR perspective, the Reader will not train the audience in specific HPSR methodologies. Instead, it provides references that help orient the audience about varied HPSR disciplines, methodologies and methods.

Lastly, while the Reader highlights in particular research from low- and middle-income country contexts, it is not restricted to this geographical context. While research funding, capacity and production in low- and middle-income countries needs to be prioritised, HRH concerns are global in nature and there are insightful, quality research articles from other contexts that are valuable to include for HRH concerns are global in nature and articles from other contexts are included when their insights and quality were deemed important for LMIC-oriented research.

*Figure 1.2 Multidisciplinary research inference*
<table>
<thead>
<tr>
<th>Research inference</th>
<th>HRH question</th>
<th>HRH studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Descriptive:</strong></td>
<td>What is the composition and geographic distribution of health workers?</td>
<td>Cross-sectional analysis from national labour surveys</td>
</tr>
<tr>
<td></td>
<td>How is supervision practiced?</td>
<td>Mixed methods study measuring the quality of supervision</td>
</tr>
<tr>
<td></td>
<td>What is the extent of gender based violence experienced by health workers?</td>
<td>Mixed methods study measuring extent of gender discrimination and violence experienced by health workers</td>
</tr>
<tr>
<td><strong>Exploratory:</strong></td>
<td>What drives corrupt practices by health workers?</td>
<td>Ethnography of informal norms in hospital wards</td>
</tr>
<tr>
<td></td>
<td>What are the gendered experiences of health workers in humanitarian contexts?</td>
<td></td>
</tr>
<tr>
<td><strong>Explanatory:</strong></td>
<td>How do global funding flows influence HRH policy?</td>
<td>Comparative mixed methods study of HIV funding on human resources for health policy</td>
</tr>
<tr>
<td></td>
<td>How has HRH policy evolved in humanitarian crisis?</td>
<td>Political economy analysis of HRH policy making in a country affected by humanitarian crisis</td>
</tr>
<tr>
<td></td>
<td>How does the context in which district managers work influence their ability to effect change?</td>
<td>Realist evaluation of capacity building for district managers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Historical analysis of district manager decision space</td>
</tr>
<tr>
<td>Research inference</td>
<td>HRH question</td>
<td>HRH studies</td>
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</tr>
<tr>
<td><strong>Emancipatory:</strong> How stakeholders jointly understand a problem, act on it, and learn from working collaboratively to contest power relations and effect change?</td>
<td>What are the root causes of disrespectful treatment within the district hospital staff team, and how can the staff construct more respectful norms?</td>
<td>Participatory quality improvement studies Participatory training initiatives addressing gender discrimination in the health workforce</td>
</tr>
<tr>
<td><strong>Influence:</strong> Studies that aim to explain the impact of one variable on another (adequacy, plausibility and probability analysis)</td>
<td>What are the determinants of dual practice among physicians? What aspects of organisational culture and management practice impact health worker motivation?</td>
<td>Labour market surveys Provider surveys that develop scales enabling regression analysis between groups of providers</td>
</tr>
<tr>
<td><strong>Predictive:</strong> Informing stakeholders about the consequences of certain decisions</td>
<td>What is the optimal allocation of doctors and nurses in response to the changing health care seeking patterns caused by a new health insurance policy?</td>
<td>Systems dynamics modelling to analyze various demand and supply scenarios and consider trade-offs in the allocation of doctors and nurses.</td>
</tr>
</tbody>
</table>
How is the Reader structured?

The Reader is divided in three parts, each containing topic-specific chapters.

**Part A: Who are included as health workers, where and why?**
- Chapter 1. Health worker profiles: boundaries, metrics and modelling
- Chapter 2. Social contexts and relations shaping health workers

**Part B. How are health workers supported to deliver services?**
- Chapter 3. Building health worker capacity through training and supervision
- Chapter 4. Health worker performance, practice and improvement

**Part C. How are human resources for health governed?**
- Chapter 5. Health worker motivation: individual, organizational and cultural factors
- Chapter 6. Health workforce leadership, management and organizational cultures
- Chapter 7. Brokering policies and politics for human resources for health

While the structure of the Reader is presented linearly due to the confines of being published in a book, we recognize that the research questions and themes are tightly interconnected in multiple ways (Figure 1.2). In our conceptualisation, we place health workers at the center: asking who they are, where they work, what they do, and how they are supported and governed. Motivation is seen as a mediating factor intervening at multiple instances: internally governing health worker behaviour, informing decisions on becoming a health worker, workplace location, and ability to perform, and influencing willingness to engage politically. While social-economic and political factors bookend the Reader physically (Chapter 2 & 7), we recognise that these broader determinants overlap across all the research questions and themes examined.

Each chapter has a background section that references classic texts, conceptual frameworks and reviews to provide a grounding in the HRH topic concerned. The chapters then introduce the key featured primary research articles, noting the rationale behind the selection and referencing other similar articles of relevance not included in the Reader for lack of space.
Figure 1.3 Visualisation of questions and themes structuring the Reader

How was the Reader developed?

The idea of the Reader emerged from a doctoral seminar initiated by Sara Bennett at the Johns Hopkins School of Public Health in 2013. Since then a core group of faculty and emerging scholars were involved in developing the Reader into its current form.

A team of editors, with guidance from a steering committee, convened and facilitated a writing and review collaborative of 18 researchers with extensive experience in HRH from various disciplinary and regional contexts. This collaborative drew inputs from a broader reference group of researchers and practitioners, who provided inputs to the outline of topics covered by the Reader and submitted articles to be considered. A list of those who provided technical support and those who provided invaluable administrative support to the Reader from start to finish is listed below.

The Collaboration for Health Systems Analysis and Innovation (CHESAI) and Health Systems Global (HSG) facilitated online community building for and awareness about the Reader through blogs. Fliers disseminated at the 2016 Fourth Global Symposium on Health Systems Research in Vancouver elicited recommended articles and HSG convened webinars eliciting further discussion and feedback. The core writing team met in Cape Town in May 2017, to finalize the structure and tone of the Reader, as well as the final selection of Reader articles.
Building on the course materials developed for the doctoral seminar, the writing team also reviewed submissions from crowdsourcing and from searches using the bibliography of key articles, relevant databases and search engines (PubMed, Google Scholar). Initial shortlists of ten primary research articles were selected by each chapter lead. The main criteria used to select the articles included diversity in region, health worker cadre, and methods, as well as the quality and innovativeness of the research. A group prioritisation process took place in person during the Cape Town meeting to further narrow the list to less than 50 articles. In prioritising papers, we purposefully chose not to repeat papers already highlighted in previous Alliance Readers, tried to redress geographical biases already apparent in the original database and initial selection, and sought to not repeat key authors. We recognize that the final listing can never be entirely comprehensive or representative of key HPSR approaches to HRH, but are confident that the breadth of participation in supporting the Reader helped to overcome potential weaknesses.

Given the emphasis on ensuring that the efforts in developing the Reader go beyond a printed publication, power point presentations aiding research uptake and teaching were also developed for each chapter. While the formal launch was at the 2017 Fourth Global Forum on Human Resources for Health, HSG webinars also served to raise awareness of the Reader and the materials developed.

Acknowledgements

We would like to thank the many contributors who supported the development of the Reader starting first with Sara Bennett from the Johns Hopkins School of Public Health. Subsequently, Abdul Ghaffar at the Alliance for Health Policy and Systems Research, WHO, generously supported the endeavour. James Campbell and his team at the Health Workforce Department, WHO, also welcomed the Reader and hosted its formal launch at the Fourth Global Forum on Human Resources for Health in Dublin. We are grateful to the WHO Collaborating Center for Research and Training on Human Resources of Health anchored by the School of Public Health at the University of the Western Cape and to the WHO Collaborating Center for Development of Human Resources in Nursing at Jordan University of Science and Technology. Finally, we appreciate the support in kind from Health Systems Global in providing a platform through which to foster a broader community engaged with raising the profile of research on human resources for health, while constructively revisiting its character and boundaries.

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We are grateful to the various publishers who granted permission to reproduce full text articles selected as exemplars at free cost or with a substantial discount. Where this was not possible we have only published the title page and abstract.
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Figure 1.4 Contributors to the Reader
Figure 1.5 Countries represented by the primary research articles highlighted by the Reader
Key for classifying research inference

- Descriptive
- Exploratory
- Explanatory
- Emancipatory
- Influence
- Predictive
Part A:
Who are included as health workers, where and why?
Chapter 1.

Health worker profiles: boundaries, metrics and modelling

Kerry Scott and Asha George

1.1 Defining the chapter

This chapter explores research on health worker profiles in three ways: definitional boundaries, measurement metrics and planning models. First we highlight research that sets, broadens or questions the boundaries of who is included in the health workforce. Next we explore the methodological complexity in generating metrics that describe health workforce characteristics, including dimensions of human resources for health (HRH) shortages, skills imbalance and maldistribution. Finally we draw attention to research that supports planning on how to meet future health needs through HRH modelling.

In describing health worker profiles and health workforce characteristics (who counts as a health worker, how to measure the health workforce, and how to plan for the future), this chapter links closely to Chapter 2, which examines the social dynamics underpinning health workforce characteristics, and to Chapter 7, which examines the underlying political forces that shape the health workforce.

1.2 Background on health worker profiles

Who is included in HRH? We may think first of doctors, and then other formally trained and recognized health professionals such as nurses, pharmacists and dentists. But what about those people who may or may not have formal training, such as community health volunteers, informal providers and traditional midwives? A woman or other family member caring for aging parents? People who do not provide health services directly, such as health managers and public health researchers? People who may be outside the health sector but are essential for good health, such as nutrition counsellors, and water and sanitation technicians? Once we have decided where to draw the boundaries that define health workers, how do we count them and plan for health systems that support them to excel?

In the 2006 World Health Report, the World Health Organization (WHO, 2006, p. 4) defined health workers as “all people engaged in actions whose primary intent is to enhance health”. This broad and inclusive definition aligned with efforts by the Joint Learning Initiative and Global Health Workforce Alliance, working with national governments, civil society, academics, international and regional institutions, professional associations and the private sector, to highlight the shortage and maldistribution of HRH, improve measurement, and expand the number of occupations tracked in global HRH databases. Despite these global efforts to expand and strengthen systems of counting and classifying health workers, many people who engage in health work (particularly unpaid work in communities and at home) are still excluded due to practical data limitations combined with political bias.
Against this backdrop, health policy and systems research (HPSR) brings to the fore the profile and experience of various health cadres previously neglected by HRH policy, such as informal health-care providers (Sudhinaraset et al., 2013), informal medicine sellers (Cross and MacGregor, 2010), children caring for sick adults (Skovdal et al., 2009), volunteer carers (Maes et al., 2011), traditional birth attendants (Sibley and Sipe, 2006; Sibley et al., 2012), and traditional, complementary and alternative providers (Lakshmi et al., 2015).

Beyond bringing forward new categories of health workers previously neglected by HRH policy, HPSR contributions have built on social science research to broaden and problematize our conceptual understandings of HRH categories.

Instead of taking for granted established health workforce categories (such as public versus private providers, and formal versus informal sectors), new work describes the fluidity of continuums upon which the health workforce can be considered “mixed” (for example, from formal to informal, and from biomedical to traditional and complementary) (Sheikh et al., 2017). McPake et al. (2014) (discussed in depth in Chapter 2) examine how physicians in Mozambique, Guinea-Bissau and Cabo Verde are conceived of as both public and private actors, a duality not captured in national and international health worker databases. Health worker plurality, which is particularly common in low- and middle-income countries’ health systems, poses a challenge to classification but must be better understood to enable realistic consideration of HRH shortage and distribution. Similarly, Olaniran et al. (2017) explain how the term “community health worker” can be categorized into three groups by education and pre-service training, and into four categories by remuneration. Their review draws attention to the political implications of definitions, wherein different actors may understand health worker categorizations differently, with consequences for policy and practice (such as selection criteria, training, and whether and how much a cadre is paid). Furthermore, this work suggests that additional research is required to interrogate local meanings of globally accepted terminology and highlights the complexity of developing tools that enable classification and international comparison.

1.3 Illustrative primary research articles

With this understanding of how HPSR contributes to advancing HRH profiles, we showcase six HPSR articles that review, describe and inform health worker profiles. These articles were selected from a pool collated from a doctoral seminar at the Johns Hopkins School of Public Health, a crowdsourcing exercise supported by Health Systems Global and subsequent searches using the bibliography of key articles and on relevant databases and search engines (PubMed, Google Scholar). The main criteria used to select the articles included diversity in region, cadre and methods as well as the quality of the studies based on standard guidelines.

The first two articles highlight nuances in HRH classification from two distinct methodological perspectives, discussing the framing of care work (Bedford, 2011) and how different metrics illuminate new aspects of health workforce migration (Arah, 2007). The next two articles present efforts to overcome data limitations and classification challenges to count and describe the existing health workforce in a robust manner (Ahmed et al., 2011; Rao et al., 2012). The final two articles discuss health workforce planning by presenting dynamic modelling tools and discussing the political processes that underpin health system decision-making (Crettenden et al., 2014; Jansen et al., 2014).
1.3.1 Research that affects our understanding of the dimensions of human resources for health profiles in low- and middle-income countries


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Family members providing care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Global</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: document review and in-depth interviews</td>
</tr>
<tr>
<td>Research inference</td>
<td>Explanatory</td>
</tr>
</tbody>
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As mentioned earlier, social science research has questioned the boundaries set around health worker profiles, examining who is served by the definitions, measurement strategies and policy efforts to identify, enumerate, regulate and support health workers. Feminist theory in particular has highlighted that the framing of an issue is a political act that influences the daily experiences of men and women, including their expected workload, access to income, opportunities for advancement, respect in society and physical safety. Along these lines, Bedford’s policy analysis focuses on how the 2009 United Nations 53rd Commission on the Status of Women framed caregiving in the context of human immunodeficiency virus (HIV) and how this framing influenced, both positively and negatively, gendered power relations, disability rights and heteronormativity/conservative “family values”.

Bedford finds that the Commission’s theme, “equal sharing of responsibilities between women and men”, received widespread support from diverse groups, including “those interested in radically changing gender relations” and “conservative parties interested in defending what they understand to be the natural family” (p. 199). The Commission’s success in bridging such a common consensus was achieved by drawing attention to the need to shift the burden of caring for sick people from unpaid, predominantly female, family and community members and on to government-run programmes, in a widely supported challenge to the free market economic order. Despite this positive outcome, disability rights activists noted that the Commission’s emerging consensus also framed people with disabilities as “burdens”, lacking voice and control over how they were supported, and re-entrenching the historical power of care professionals. Furthermore, female-headed households, extended family and kinship support, and lesbian, gay, bisexual and transgender family units were marginalized by the reification of traditional nuclear family formations.

Other excellent articles using qualitative methods to question HRH boundaries include Pigg’s (1995) ethnography from Nepal that questions how traditional medical practitioners and traditional birth attendants are defined and understood. Pigg (1995) shows that the terms “traditional medical practitioner” and “traditional birth attendant”, and associated strategies to train them in biomedical practices, are generated internationally but applied to a complex reality of vast variation in roles, identities and practices among shamanic healers and women who play a role in childbirth. The failure to differentiate across terms and roles has a range of unanticipated (and often undocumented) outcomes, including “producing” new traditional birth attendants among women who had no role in childbirth but decided to attend training, missing women who attend births but do not identify as midwives (because in some places this is a lower caste role), and suggesting that healers take up medical roles (such as promoting family planning or oral rehydration salts) when they are exclusively focused on spiritual issues. More recently, Maes et al. (2015) have argued that international praise for Ethiopia’s salaried female Health Extension Worker programme is at odds with the country’s reliance on a larger, unpaid cadre of female health workers called the Women’s Development Army.
They show that narratives about saving lives, empowering women and creating model citizens mask the economically disempowering, gender-regressive and potentially coercive nature of the Women's Development Army. In this sense, exploratory HPSR as exemplified by Bedford (2011), Pigg (1995) and Maes et al. (2015) serves to unearth the implicit implications and at times unintended consequences of HRH policy classifications.

Arah OA (2007). The metrics and correlates of physician migration from Africa. BMC Publ Health. 7:83

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<th>Health workers</th>
<th>Physicians</th>
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<tr>
<td>Geographical area</td>
<td>Sub-Saharan Africa</td>
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<tr>
<td>Research methods</td>
<td>Quantitative: ranking and correlational analyses on African health professional emigration database</td>
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<td>Research inference</td>
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Innovative health systems research can also reveal new dimensions of HRH phenomena – in this case, different facets of the HRH migration and maldistribution crisis. Arah (2007) quantifies physician out-migration according to three metrics: total number of physician émigrés; emigration as a fraction of potential physician pool that ends up working in destination countries; and physician migration density defined as the number of physician émigrés per 1000 population of the African source country. Arah found that no country retained the same rank with all three different migration metrics. For example, Algeria lost the most physicians in absolute terms, Mozambique lost the highest proportion of its physicians, and Mauritius had the highest physician migration density (number of doctors lost per 1000 population). Arah also examines these three metrics across nine major destination countries (including the United Kingdom of Great Britain and Northern Ireland, the United States of America, France and Canada), showing again that the top source countries of African physician immigrants into these settings vary according to the metric used. For example, South Africa lost the most physicians (3509) in absolute terms to the United Kingdom, Malawi lost the highest proportion of its physicians (38%) to the United Kingdom, and Seychelles had the highest physician migration density (0.36 doctors per 1000 population) with regard to the United Kingdom. This analysis highlights that “metrics tell tales and quite often different ones, depending on the perspectives adopted” (p. 3). The way we quantify physician out-migration depends on which metric we look at, and using multiple metrics enables better understanding of the degree of the problem for African countries.

The articles discussed above use diverse research methods to show that decisions about “what counts” in HRH illuminate different aspects of the health workforce. By critically examining globally agreed upon categories, strategies and issues (such as focusing on health-care work in the home, promoting an equal caring role among men and women in families, and concern with physician out-migration from Africa), researchers are able to unmask new dimensions of the issue. Strategies and terms that achieve global consensus (“equal care work”) may be at odds with the needs of marginalized people (such as by excluding people living in extended or non-traditional family structures or alienating people with disabilities). Applying different measurement strategies for HRH problems (out-migration) can shift our understanding of how extreme a problem is and which countries to focus on.
1.3.2 Descriptive studies of health worker profiles

How do we move from the complexity inherent to HRH profiles to the pragmatics of counting how many and which people are in the health workforce? Over the past decade, global health workforce data expanded from counting only five health professions (doctors, nurses, midwives, dentists and pharmacists) in the WHO Global Atlas of the Health Workforce in the early 2000s (Dal Poz et al., 2006) to considering up to nine categories of health workers in the 2016 updated Global Health Workforce Statistics aggregated set, and up to 18 categories in the disaggregated set (WHO, 2016). These categories include environment and public health workers (such as district health officers, and health, food and labour safety inspectors), community and traditional health workers, medical assistants, nutritionists, personal care workers, health managers (such as health policy lawyers and medical records technicians), and support workers (such as ambulance drivers and building maintenance staff).

To count these health workers in a manner that enables international comparisons, the United Nations and the International Labour Organization guide countries in developing or revising their national records systems to map on to the International Standard Classification of Occupations, the International Standard Classification of Education, and the International Standard Industrial Classification of All Economic Activities (WHO et al., 2009). These three classification systems attempt to harmonize definitions of health workers, managers and support workers in the health sector and in other sectors (such as nurses working in schools). In addition, the new database brings together all available data on health workers in all 192 United Nations Member States.

Efforts to build and maintain an expansive global database to count HRH highlight major data availability challenges: the lack of standard HRH definitions and challenges in bringing together different data sources, with highly variable information quality, collection methods and criteria for coding and categorization (Dal Poz et al., 2006). This section showcases two articles that have grappled with the challenges of which cadres to count; whether and how to capture informal and community-level providers; and how to reconcile varying data sources and definitions to determine health worker profiles, including equity of distribution and deficit both in terms of numbers and types of health worker.


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<th>Multiple public and private health workers including informal providers</th>
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<td>Geographical area</td>
<td>India</td>
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<tr>
<td>Research methods</td>
<td>Quantitative: National census and sample survey data</td>
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<td>Research inference</td>
<td>Descriptive</td>
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Rao et al. (2012) explain that routine sources of information on the health workforce in India are fragmented and generally unreliable. Professional councils in many low- and middle-income countries, including India, do not maintain live registers; there is a lack of standardization in measurement, definitions and even the existence of cadres across states; and certain categories of health worker, such as physiotherapists, medical technicians, rural medical practitioners (that is, unqualified allopathic providers) and faith healers, are not recorded in state-level registers. The absence of data on informal or unqualified rural medical practitioners is particularly concerning because these are often the first point of contact for medical care for the rural population.
To overcome the shortcomings of routine health worker data, Rao et al. (2012) applied the National Occupational Classification to 2001 Indian census data and to 2004 National Sample Survey data to quantify the size, composition and distribution of health workers in India. These efforts enabled the identification of many practitioners, including doctors, homeopaths, ayurvedic practitioners, medical assistants and faith healers. To avoid misclassifying rural medical practitioners, who commonly call themselves “doctors” but have no formal qualification or licence, Rao et al. extrapolated data from the 2001 census on self-reported roles and compared them with data on qualifications from the National Sample Survey to determine how many practising health workers were unqualified.

Overlapping job specifications prevented the authors from differentiating between nurses, midwives and traditional birth attendants. In addition, they could not capture community health workers because the census and sample survey data, which used National Industrial Classification and National Occupational Classification codes, did not have a separate classification code for them. Despite these limitations, Rao et al.’s analysis enabled them to quantify the overall shortage of qualified health workers in contrast to the high portion of unqualified providers (36%), geographical maldistribution, skewed nurse/doctor ratios (heavily in favour of doctors) and underrepresentation of women in the Indian health workforce.

More recent work has assessed the Indian health workforce, including the proportion of unqualified providers in India, using occupation and qualification data from the 2001 census alone (Anand and Fan, 2016) and from the 2011–2012 National Sample Survey alone (Rao et al., 2016). Rao et al.’s 2012 analysis took place before data on educational qualification from the 2001 census were available and before the 2011–2012 National Sample Survey was completed. Thus, the 2012 analysis is exemplary both for its detailed discussion on the strengths and limitations of various data sources and because it showcases how different data sources (2001 census and 2004 National Sample Survey) can be combined to produce timely information on health worker profiles despite data availability limitations.


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<td>Geographical area</td>
<td>Bangladesh</td>
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<tr>
<td>Research methods</td>
<td>Quantitative: Provider survey in a geographic area aided by community free-listing</td>
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<td>Research inference</td>
<td>Descriptive</td>
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In light of the dearth of comprehensive data in Bangladesh, Ahmed et al. (2011) undertook a nationally representative survey to determine the number and type of health workers in Bangladesh. The survey drew randomly from the nationally representative primary sampling units (a cluster of around 200 households) used by the Bangladesh Bureau of Statistics for its Sample Vital Registration System, enabling estimates to be made up to the district level. Because it was designed specifically to measure all active health-care providers in the formal and informal sectors, the survey included classification codes for typically overlooked or sometimes misclassified cadres, including community health workers, unqualified village doctors, medicines salespeople and others in the informal sphere.
A comprehensive list of all practising health-care providers was developed through accessing rosters from public and private health-care facilities and conducting free listing exercises with multiple community informants. Names provided by key informants were cross-checked to avoid omission or double-counting due to a provider using multiple names (such as nickname, family name or title); in cases of confusion, providers were visited on the spot. Ahmed et al.’s extensive efforts enabled them to detail more accurately the low density of qualified providers, even in comparison with other south Asian countries, the sharp increase in unqualified providers, the problematic ratio of doctors to nurses (2.5 doctors to every nurse), and the persistent overwhelming urban bias of formally qualified health-care practitioners.

Ahmed et al. (2011) and Rao et al. (2012) showcase two different strategies that health systems researchers can engage to overcome the dearth of routine health information data when seeking to describe the health workforce in low- and middle-income countries: re-analysing pre-existing sources of data, such as the census and sample surveys, (Rao et al., 2012) or conducting new surveys with innovative community-informant engagement and cross-checking (Ahmed et al., 2011). Both have advantages and drawbacks. Re-analysing existing data can be cost- and time-efficient but places researchers at the mercy of the initial dataset’s quality and classification systems. As Rao et al. (2012) note, they were unable to differentiate between some cadres such as nurses, midwives and traditional birth assistants because the original data showed overlapping job functions. In addition, in many countries, census and survey data are out of date or inaccessible to the public. Although new surveys such as that conducted by Ahmed et al. (2011) can provide highly specific information, such as on community health workers, they require extensive financial and human resources, which may not be available in struggling health systems, and in some cases fail to achieve national representation.

1.3.3 Strategies for estimating health workforce requirements to assist with planning for the future

Beyond describing the health workforce, countries must plan how best to distribute their existing health workers in the short term and cultivate a workforce for the longer term. The Workload Indicators of Staffing Need (WHO, 2010a, 2010b) software and user manual support health planning based on measuring the specific population needs per health centre and have been used in many countries, including South Africa (Daviaud and Chopra, 2008), Uganda (Namaganda et al., 2015) and Namibia (Wesson et al., 2015), to model and plan their workforces. Instead of using standardized staffing norms, the Workload Indicators of Staffing Need estimates workforce need based on workload and is customized to the country context by defining workload components, setting activity standards (time it takes for a trained, well-motivated member of a particular cadre to perform an action to standard in the country’s context), available working times, and existing staffing statistics. Theoretical models can also determine ideal health workforces for specific cadres, such as physical therapy (Jesus et al., 2016) or for evolving disease profiles, such as interdisciplinary chronic disease management (Segal and Leach, 2011) or HIV/AIDS (Bärnighausen et al., 2007).
To illustrate cutting-edge work in planning, we first showcase Crettenden et al.’s (2014) research on dynamic stock and flow modelling for Australia’s workforce. We selected this article because it highlights how health workforce planning must take into account the dynamic and complex nature of health systems, rigorous predictive modelling, and also political will, consultation and validation.

The article presents national-level workforce planning for doctors, nurses and midwives in Australia, using scenario analysis and national-level data to project the impact of various policy options. The researchers modelled how the workforce’s ability to serve the population would be influenced by a range of future scenarios, including improved productivity through innovation, improved workforce retention of nurses, different levels of reliance on immigrant health professionals, increased and decreased population demand for health care, and capped working hours for doctors to reduce their working time per week. They projected the future supply and demand for each of the three health professions across the various scenarios, using national data on the current labour force, training capacity of schools, immigration and population demand. What makes this manuscript exemplary is not only the presentation of these prediction models but also that the research team engaged in extensive consultation and review processes.

While typical workforce modelling and planning tend to be top-down and focused on the technical details of prediction (and often on only one profession or disease), this exercise engaged a technical working group, the public, workforce participants and clinical leads across the three professions to validate the modelling strategies, understand the context of workload capacity and generate alternative scenarios. These stakeholders commented on the appropriateness of the assumptions underpinning the research (such as the nature of possible changes in population demand) and how to ensure best practice in quantifying education and training capacity and workload measures. For example, consultation and review from nurses flagged the fact that the recent rate of exit from the profession was markedly lower than earlier rates (probably because of the impact of the tighter economic environment on superannuation savings), and that higher exit rates should be assumed for the model rather than carrying forward the most recent rates. These consultations strengthened the models and also bolstered stakeholder trust and support across sectors, enabling the results to be “accepted as an evidence base upon which policy decisions are made” (Crettenden et al., 2014, p. 6).

The models produced enabled policy-makers to identify the most important policy levers that could be adjusted to achieve change and led to evidence-informed policy recommendations. For example, improving workforce retention of nurses had the greatest impact on minimizing potential future workforce shortages, leading to the development of a retention plan that coordinated action by government, industry, the higher education sector and national nursing organizations. Overall, this article provides an exemplary description of the integration of technical modelling with actor engagement to inform workforce policy development to best match community health needs. The emphasis on complexity, iteration and consultation with a range of stakeholders to develop technically robust and politically actionable models makes this an excellent example of HPSR for health workforce projection.

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<tr>
<td>Geographical area</td>
<td>Guinea</td>
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<tr>
<td>Research methods</td>
<td>Mixed: needs based and health sector demand and supply based modelling; policy dialogue</td>
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<td>Research inference</td>
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Another excellent example of HPSR modelling and political engagement is Jansen et al.’s (2014) work on HRH requirements in Guinea. Jansen et al. explain that while countries that have already achieved universal health care can use service demand modelling, which predicts future demand based on prior utilization, needs-based modelling is more appropriate for countries such as Guinea with a high current unmet need. Instead of predicting HRH requirements based on utilization, Jansen et al. developed a model based on estimated need for health care, and further combined this method with deterministic modelling of future health sector supply and demand to account for projected mismatch between population needs, health worker availability (supply), and budgeted positions available (demand). Jansen et al. engaged in policy dialogue and discussions between stakeholders from various levels within the health system and from non-health sectors in order to select interventions for further analysis. In their rich discussion of the process, they note that “improving the evidence-base does not necessarily imply that workforce decisions and investments are made in a more rational way from a technical point of view” (p. 229) because of political sensitivity around prioritizing regions, health needs or cadres, and bureaucratic limitations on reorganizing budget items.

1.4 Research challenges, gaps and future directions

1.4.1 Accounting for plurality in human resources for health

There is increasing recognition that the health workforce is plural and complex. Local understanding of health worker functions are diverse, and health workers change roles and move geographically over their lifespans, while carrying multiple simultaneous identities (such as across the public and private sectors, or across allopathic and traditional medicine). Researchers must consider how to measure and account for this plurality, and how to reconcile this complexity with the need for standardization and pragmatism. New conceptual models and theoretical frameworks are needed to enable low- and middle-income country-centred understanding of health worker profiles in rapidly changing plural health systems.

Despite the fact that global health workforce databases have expanded the range of people included as HRH, national data availability, quality and compatibility in low- and middle-income countries have not caught up. Descriptive data on the health workforce in low- and middle-income countries remain concentrated on the “main five” health workers (doctors, nurses, pharmacists, dentists and midwives). Many men and women engaged in actions whose primary intent is to enhance health continue to go uncounted, including the health system management, clerical and administrative workforce, which is estimated to make up almost a third of the total health workforce (WHO et al., 2009). Defining, describing and planning for the health workforce involves political processes wherein health workforce problems are agreed upon and potential solutions prioritized and implemented. When some health workers go uncounted, they are also excluded from official counts and discussions.
1.4.2 Improving routine data quality and use

The scope and quality of routine data should be improved through bolstering country-level technical and financial capacity to capture internationally standardized data on the wide range of health worker occupations, sectors and educational classifications. Census and sample survey data often overlook or misclassify informal providers or lack the specificity to distinguish between separate cadres (such as nurses, midwives and traditional birth attendants). Even for the health worker cadres that are commonly counted, such as doctors and nurses, routine datasets maintained by governments or professional bodies are often unreliable, as they lack transparent classification standards, fail to remove people who leave the workforce, or miss people working in the private sector.

In addition to improving quality, researchers and policy-makers must ensure existing statistics on the health workforce in low- and middle-income countries are used to measure and understand HRH profiles, including census and survey data, professional and educational registers, routine administrative rosters, facility assessments, and health-care-seeking surveys (WHO et al., 2009). Public access to and analysis of existing data must be bolstered.

1.4.3 Creating a more inclusive foundation for human resources for health planning

Developing boundaries or deriving new metrics can enable invisible health work to be seen or highlight new dimensions of a problem, thereby improving health worker well-being or generating support for new political strategies. It can also, however, delegitimize forms of health work (such as the caring work done within non-traditional families or by unqualified practitioners) or define a problem in ways that limit possibilities for radical change or equity. Health policy and systems researchers must ask: Who benefits from boundaries, metrics and models? Who is illuminated or made invisible? What problems are constructed and prioritized? And whose interests are served by health workforce models and plans?

HPSR can showcase methodologies for amplifying the voices of overlooked workers, highlighting their role in the health system, and improving health policy and planning to account for their needs and contributions. In addition, HPSR approaches can push health workforce planning beyond a techno-centric focus on supply and demand and changing disease burdens. HPSR can highlight the power dynamics inherent to identifying priorities and allocating resources for the future, thus enabling potentially divergent stakeholder interests to be understood and more productively engaged towards equity-oriented health workforce planning.

Acknowledgements

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Part A. Who are included as health workers, where and why?

References


Chapter 2.
Social contexts and relations shaping health workers

Asha George, Ligia Paina, Kerry Scott and Seye Abimbola

2.1 Defining the chapter

Health workers, in addition to working for health, are first and foremost human beings. Their empathy, intuition and ingenuity, alongside their technical skills, are critical in negotiating the social contexts that shape their work environment and professional practice. This emphasis on human agency and social context is a key characteristic of people-centred health systems (Sheikh et al., 2014). While this reader highlights health workers as active agents in multiple places, this chapter in particular focuses on the social relations and social systems that embed and are negotiated by health workers. These include the broad social norms and structural forces that foster equity and solidarity or, conversely, that constrain livelihoods and survival. These social dynamics also shape and are shaped by the markets in which health workers practise or to which they are compelled to move.

In foregrounding these social relations and contexts, this chapter closely mirrors Chapter 1 on health worker profiles by describing the social forces that underpin who health workers are and where they work. The influence of social relations and context also cuts across Chapter 4, covering performance, and Chapter 5, covering motivation. Our chapter focuses on macro-level social dynamics, while those that manifest at the meso-level are covered in Chapter 6 on management, leadership and organizational culture. This chapter also complements Chapter 7 on policies and politics, which emphasizes the political processes, including health reforms and donor initiatives, involved in shaping policies and health worker practice. Finally, while we review social relations and contexts in this chapter, we do so illustratively, as it is beyond the scope of this reader to comprehensively document health policy and systems research (HPSR) on every facet of social contexts and relations shaping health workers.

2.2 Background on social forces

Research on human resources for health (HRH) has focused on technical inputs, such as the content of enabling policies, the nature of training and supervision, and other determinants of health worker performance (Kok et al., 2015a). The link between macro-structural context and health worker profiles, experiences and capacities is rarely examined in depth (Kok et al., 2015b; Schneider and Lehmann, 2016; Sheikh and George, 2010). Ideally, responsive health workers working within progressive health systems generate trust and well-being that can redress social inequalities (Gilson et al., 2007). At the other extreme, whether related to extreme humanitarian crises or more normalized everyday stress, discrimination and insecurity, detrimental social contexts and relations curtail professional opportunities, increase vulnerability to violence and diminish livelihoods.
Humanitarian crises due to conflict, natural disasters or unanticipated disease outbreaks are increasing across the world, with extreme consequences for the most marginalized people. Attention to health workers in such circumstances, characterized by problems of donor coordination, coupled with weakened government capacity, and in certain places strong informal and unregulated private provision, is relatively recent (Durham et al., 2015; Fujita et al., 2011; Miyake et al., 2017). While some have argued that these crises can provide opportunities to create new HRH policy trajectories (Fujita et al., 2011), recent reviews have been more cautious about state-building claims (Witter et al., 2015) or windows of opportunity for change (Witter et al., 2016). With health policy and systems researchers calling for the prioritization of HRH as a critical research area for fragile and conflict-affected states (Woodward et al., 2016), we hope for additional in-depth research that will enable rich contextualized understanding of the dynamic complexities of HRH in such settings.

While targeted violence against specific ethnic groups or nationalities is a feature of conflict and post-conflict settings, gender-based violence is experienced in all settings and largely victimizes women. Gender-based violence is particularly relevant to HRH given the predominantly feminized profile of the health workforce, particularly at lower levels (George, 2007; Newman, 2014). Prior research has indicated that female health workers not only experience higher rates of violence but also suffer greater physical and psychological harm from such violence (Di Martino, 2003). This reflects both their more vulnerable status in the health workforce and their internalized coping mechanisms due to the lack of effective public acknowledgement and redress (Chaudhuri, 2010; George, 2007).

Gender-based violence and harassment is one extreme form of the broader pervasive gender discrimination faced in the health workforce. While studies point to female physicians working fewer hours than their male counterparts, confounding variables related to physician age, family responsibilities, practice characteristics and patient profile are often not examined sufficiently (Hedden et al., 2014). In contrast, there is consensus that women are systematically paid less even in the same cadre (Tijdens et al., 2013; Vecchio et al., 2013). Women’s gendered professional and personal needs are often not considered by policy-makers (Daniels et al., 2010), and multiple negotiations must be brokered within professionalized cadres (Nair, 2007; Wildschut and Gouws, 2013) or when embedded in communities (Mumtaz et al., 2013). More recent research uses an intersectionality lens, to understand how gendered discrimination is layered with social class and other social determinants (Jones et al. 2009; Tlaiss, 2013).

With regard to social class and income, while vocation is a key motivating factor for health workers, this does not discount the importance of remuneration and, for those at the lower levels of the health workforce, secure livelihoods (McCoy et al., 2008; Tijdens et al., 2013). Health worker pay and incentives, along with other factors, shape recruitment and retention in both the public and private sectors (Bertone and Witter, 2015). Pay and incentives also influence job satisfaction and motivation and therefore play a key role in supporting responsive care. Finally, when working in poorly regulated and dysfunctional services, low and unpredictable payment can be seen to justify informal fees and moonlighting (McCoy et al., 2008; Tijdens et al., 2013).

From a macro-level viewpoint, while aggregate health worker pay can dominate government health expenditure, particularly in low- and middle-income countries with low government health spending, at a global level it represents on average 34% of total health expenditure, is set to increase over time, and is rising faster than in other sectors (Hernandez-Peña et al., 2013). While wage ranking is relatively consistent at the extremes of the spectrum (typically with doctors at the top and care workers at the bottom), the wage ranking of nurses and midwives varies considerably by health system, as does the wage disparity between health cadres (Tijdens et al., 2013). In reviewing health workforce development in western Europe, Pavolini and Kuhlman (2016) note that despite an overall shortage of health workers and
increasing future demand, many basic- to middle-level health workers have flexible contracts, work part time or are looking to leave the sector. While the numbers of health workers are increasing, working conditions for those at lower levels are not improving. Furthermore, the heterogeneity of these changes across cadres and countries eludes neat categorization by health workforce theories aligned with the professions, the welfare state or labour markets (Pavolini and Kuhlmann, 2016).

In terms of understanding health labour markets, McPake et al. (2014a) provide a comprehensive review of the application of economic thinking to HRH, with insight on why they fail and how an understanding of market forces and social institutions can help guide government intervention. In understanding how social institutions structure economic exchanges (Ostrom, 2010), including those related to health workers, formal rules refer to regulations, policies and guidelines, while informal rules refer to social norms, unwritten codes of conduct, and shared strategies. From a top-down perspective, a government may put in place or respond to rules that determine the production (for example, relative to market exit through emigration, alternative careers or death) and overseeing (regulation and supervision to ensure performance) of health workers. From a bottom-up perspective, community norms and collective action may promote certain types of health service and determine the profile and behaviour of available health workers (George and Iyer, 2013; Sieverding et al., 2015). These top-down and bottom-up influences interact and, when they are not aligned, may lead to labour market failure (Abimbola et al., 2014). In making demand and supply decisions, health system actors (such as government officials, public- and private-sector players, and health workers and individuals who may demand and use their services) are confronted with information and motivation problems and influenced by geographical and socioeconomic contexts that may constrain or enable their choices and performance.

The structural, economic and social forces introduced above drive the movement of health workers across rural/urban, public/private or national/international boundaries of health systems. The phenomenon of internal and international migration has given rise to a body of research and practice aiming to understand why and how health workers move, whether and how this movement affects health systems and health outcomes, and how to manage the push and pull factors for health workers (Kroezen et al., 2015; Labonté, 2015). Internal migration can contribute to shortages of health workers and can exacerbate weaknesses in rural health systems and inequities in health-care access, particularly in underserved areas. Huicho et al. (2010) provide a helpful framework for conceptualizing internal migration and for evaluating interventions that aim to increase access to health workers in underserved communities. Others have estimated the cost-effectiveness of policy measures to retain workers in rural areas (Keuffel et al., 2016; Lagarde et al., 2012). At the global level, the past decade has seen the emergence of the World Health Organization (WHO, 2010) Global Code of Practice on the International Recruitment of Health Personnel, which aims to strengthen data on international recruitment and migration and to support strengthening local health systems to promote retention and research to document the early implementation of the Code (Tankwanchi et al., 2014; WHO, 2016).

Various disciplines can highlight the implicit assumptions underlying existing regulatory health workforce migration policies and their effects on health (Clemens, 2007). Using economic theory, Clemens (2014) challenges researchers and policy-makers to rethink the language used to label skilled migration and its effects, and how best to manage these, while ensuring skilled migrants have the opportunity and freedom to work abroad. He argues for moving beyond coercive taxes and quotas or recruitment bans and to think about who bears the cost for skilled training and reforming the education system. His findings indicate the importance of undertaking research that addresses the multisectoral determinants of health worker migration, and research that critically examines our assumptions about the pathways through which health worker migration policies are intended to work.
2.3 Illustrative primary research articles

We present eight primary research articles that build on this background to showcase how social relations and contexts influence health workers. These articles were selected from a pool collated from a doctoral seminar at the Johns Hopkins School of Public Health, a crowdsourcing exercise supported by Health Systems Global and subsequent searches using the bibliography of key articles and on relevant databases and search engines (PubMed, Google Scholar). The main criteria used to select the articles included diversity in region, cadre and methods, and the quality and innovativeness of the studies.

In highlighting the social agency of health workers and their embeddedness in broader social relations and systems, we selected articles that review their resilience through conflict in Uganda (Namakula and Witter, 2014) and the context of gender-based violence in the health workforce in Rwanda (Newman et al., 2011). We then review how labour markets and their dynamics impact on the livelihoods of health workers, through the exclusion of volunteers in Ethiopia struggling with survival (Maes et al., 2011), the multiple strategies pursued by primary health-care workers in the Democratic Republic of the Congo to secure adequate incomes (Maini et al., 2017), the drivers of dual practice in Mozambique, Guinea-Bissau and Cabo Verde (McPake et al., 2014b), and how dual practice influences physician location in Viet Nam (Vujicic et al., 2011). The last set of articles highlights innovative approaches to understanding the drivers of migration through the experience of health workers emigrating from Ireland (Humphries et al., 2015) and the social connectedness of rural auxiliary nurse midwives in Mali (Hurley et al., 2014).

2.3.1 Violence as a structural and gendered driver of inequality


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<th>Health workers</th>
<th>Public and private sector health workers</th>
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<tr>
<td>Geographical area</td>
<td>Uganda</td>
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<tr>
<td>Research methods</td>
<td>Qualitative: Life histories</td>
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<tr>
<td>Research inference</td>
<td>Exploratory/Emancipatory</td>
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Namakula and Witter (2014) use life histories to understand why Ugandan health workers stayed on during Uganda’s 20-year conflict and how they coped during and after the conflict. This article showcases the powerful potential of participatory methodology, wherein the interview involved asking health workers to draw a line representing their lives and then indicating and discussing important life decisions and events along it. Life histories enabled the researchers and health workers to reflect on important experiences, including traumatic incidents during the conflict, in a sensitive, participant-led manner and created space for health workers to identify and claim their agency and resilience. In gaining deep understanding of health worker experiences, coping mechanisms, frustrations and incentives, this study generates insight into policy levers that could support health worker motivation and retention in post-conflict settings. For instance, the authors note that being from the region in which one served was an important retention factor, as was loyalty to one’s first facility and opportunities for incremental career advancement through in-service training. Equally important, this work takes seriously the actor-centred ethos of HPSR, wherein health workers are seen not only as technical inputs to the delivery of care but also as human beings in their own right, whose perspectives and dignity are valued as an end in themselves and as an integral part of a responsive health system. Further reflections on the use of life histories as a methodology within post-conflict and crisis settings are elucidated by Witter et al. (2017).

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<th>Health workers</th>
<th>Multiple public and private sector facility health workers</th>
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<tr>
<td>Geographical area</td>
<td>Rwanda</td>
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<tr>
<td>Research methods</td>
<td>Mixed: provider survey, facility audits, key informant interviews, in-depth interviews, focus group discussions, stakeholder engagement</td>
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<tr>
<td>Research inference</td>
<td>Descriptive</td>
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Newman et al. (2011) combined a range of methods to explore the link between workplace violence and gender among health workers in Rwanda. Qualitative formative research (interviews with policy-makers, a focus group with health personnel, and a review of national labour and gender policies) enabled the researchers to develop culturally appropriate descriptions of workplace violence and gender discrimination. These phenomena were then examined through a health worker survey, key informant and facility manager interviews, and facility audits. Newman et al. found that violence was experienced by 39% of the health workers sampled, with similar rates of verbal abuse, bullying and physical violence among men and women, and higher rates of sexual violence among women. Gender inequality at work (unequal treatment and unequal access to jobs) was associated with increased odds of workplace violence. Gender-based violence at work emerged as one component of wider gender discrimination that reduces women’s employment opportunities, penalizes them for their biological reproductive role, and limits their economic freedoms.

Newman et al.’s research dissemination was informed by utilization-focused evaluation (Patton, 1997). This involved wide consultation with government and civil society to identify what information about workplace violence and gender would be most valuable to inform decisions and improve conditions for health workers. The article presents an analysis of changes to workforce policy arising from the research. This attention to policy impact and stakeholder engagement, in addition to the authors’ mixed-methods examination of gender and workplace violence, is what makes Newman et al.’s (2011) research stand out as exemplary HPSR.

While violence in the health workforce and its gendered dimensions have been noted earlier (Di Martino, 2003; George, 2007), further research has been limited, despite ongoing incidences of rape and murder of female health workers, for example as reported by the press in India (Gangotri et al., 2016). While there is increasing recognition of the risk of workplace violence for health workers in emergency departments (Hamdan and Abu Hamra, 2015; Mirza et al., 2012), this research is largely descriptive and, although disaggregating by sex, does not apply a deeper gender lens. The research by Kim and Motsei (2002) remains a landmark study in detailing the gendered lived experience of nurses in South Africa and how violence normalized in their personal lives must be recognized before they can be expected to respond to other victims without replicating conservative gender ideologies.
2.3.2 Labour markets: economic livelihoods and dynamics


Maes et al. (2011) combine longitudinal ethnography and cross-sectional survey methods to examine the sustainability and human rights implications of health worker volunteerism in the context of urban food insecurity and scale-up of treatment for human immunodeficiency virus (HIV). The ethnographic methods involved 20 months of participant observation, focus group discussions and interviews with a sample of 13 volunteer carers, who the authors re-interviewed up to 7 times to explore themes of carer motivation, food insecurity, relationships, costs and benefits, and well-being. In addition, a sample of carers was surveyed to gather demographic and household data and to assess food insecurity using the validated Household Food Insecurity Access Scale. Following a mixed-methods design, the survey questions and analysis were informed by the ethnographic work, which suggested that the role of the volunteers in the household food economy was an important factor in household food access.

The study links high rates of chronic food insecurity among volunteer carers with their distress, demotivation and changing demographics. Despite a strong desire to serve, volunteer carers described internal ambivalence about volunteering when they could not access enough food for their families and increasingly strained relationships within their households. Moreover, food insecurity impaired care relationships that were already fraught because of HIV-related stigmatization, since volunteers could not address patient needs for food to support adherence to antiretroviral treatment. Newer volunteers tended to be younger people who could not find paid work and who lived as dependents in higher-income households, suggesting that these marginally better-off families were broadly subsidizing HIV care. This paper is exemplary in its use of mixed-methods, attention to an often undervalued and overlooked cadre of health workers, and analysis of how structural forces affect the capacity and livelihoods of volunteers and the sustainability of health programmes.


Another approach to understanding health worker livelihoods is illustrated by Maini et al. (2017), who studied the different sources of income for primary health-care workers in the Democratic Republic of the Congo, where poor remuneration of public sector health workers encouraging a diversification of income sources. The authors used regression models to examine the determinants of income source and level, and used qualitative data to explore the perception of health workers on each income source. With less than a third of health workers...
receiving government salary, which even when received was often irregular and insufficient, most health workers sought income from “private” sources such as user fees, gifts, informal payments, private clinical practice, non-clinical activities, per diems, and performance payments from nongovernmental organizations implementing externally financed health programmes. Contextual factors such as provincial location, presence of externally funded programmes and local user fee policy also influenced the extent to which nurses received many income sources. Notably, this study used mixed-methods to explore how adaptations within local health care markets, in the form of health worker remuneration, partially and suboptimally fill the space left by the lack of governance institutions to ensure the reliable provision of public goods.


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<th>Health workers</th>
<th>Public and private sector physicians</th>
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<td>Geographical area</td>
<td>Mozambique, Guinea-Bissau, Cabo Verde</td>
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<tr>
<td>Research methods</td>
<td>Quantitative: two-stage estimation model with propensity score-matching</td>
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<td>Research inference</td>
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Another market-driven adaptation to insufficient levels of health worker remuneration is the blurring of the public and private sectors as health workers engage in dual practice. McPake et al. (2014b) used regression models to identify predictors of doctors choosing to engage in dual practice and, for those who do so, to identify predictors of how doctors choose to allocate their time between the public and private sectors in three Portuguese-speaking African countries: Mozambique, Guinea-Bissau and Cabo Verde. They found that higher hourly wages in the private sector, greater number of dependents, competing priorities that limit the number of hours physicians are able to devote to work, working outside the city and higher level of demand for private services were associated with increased likelihood of a physician engaging in dual practice and increased allocation of time to the private sector. In this rare quantitative exploration of the processes involved in dual practice, McPake et al. (2014b) examined the economic theory that suggests that by restricting supply in the public sector, health workers can increase demand and price in the private sector; however, the limited ability to pay for private-sector services in the studied populations constrains health workers’ ability to migrate entirely to the private sector.

While the level of public-sector salaries was not associated with dual practice in McPake et al.'s (2014b) study, another study by the same group in the same three countries found that it was the institutions governing health markets in these countries that significantly shape the patterns of dual practice (Russo et al., 2014). In Cabo Verde, where rules exist to govern dual practice and the rules are monitored and enforced, the public characteristics of public services are protected, forcing private activity to the private sector, where it is formally regulated and recognized as dual practice. In Guinea-Bissau, where such rules do not exist, physicians offer private services within public facilities, where they may escape regulation altogether. In Mozambique, where the rules are both “patchy” and “patchily” applied, there is a mix of both regulated and unregulated private services within public facilities, and poorly regulated high-cost services in private facilities (p. 780). As in the study by McPake et al. (2014b), Russo et al. (2014) highlighted the role of bottom-up market forces in shaping dual practice, albeit in the form of low demand due to limited ability to pay, which limits the viability of standalone private facilities, leading to the delivery of private services in the public sector.
Integrating a discrete choice experiment within a labour market survey, Vujicic et al. (2011) explored how geography and the potential for dual practice influence health worker labour market dynamics in Viet Nam. In a random sample of physicians in three regions in Viet Nam, they found that dual practice is prominent, as 35% of physicians hold a second job, and that the significant wage premium associated with working in an urban area is driven by much higher earnings from dual practice (on average, 90% of official income) rather than official earnings in the primary job. In addition, physicians working in higher-level health facilities located in urban areas earn significantly higher official income (up to 71% higher) than those working in rural primary health-care facilities. There is a counterintuitive market behaviour in the pattern of mobility, however: few physicians move across facility levels (primary, secondary or tertiary) and geographical areas (rural or urban), and few physicians change jobs more than once during their career; when job movements do occur, they tend to be within the same geographical setting and the same level of facility. Notably, this study incorporates discrete choice experiments, an innovative method that provided a quantitative estimate of the relative value physicians place on different job attributes. The experiments showed that physicians from rural areas and low-income families are more willing to work in rural areas, and that creating opportunities for long-term education and improving equipment are the most effective strategies to recruit physicians to rural areas. These findings show again that markets are shaped by institutional, geographical and socioeconomic contexts.

### 2.3.3 Social drivers of migration and retention

Humphries N, et al. (2015). “Emigration is a matter of self-preservation. The working conditions ... are killing us slowly”: qualitative insights into health professional emigration from Ireland. Hum Resour Health. 13(1):35

Staff retention remains at the core of attaining a sustainable health workforce in high-, middle- and low-income contexts alike. Humphries et al. (2015) explored the perspectives of emigrant health professionals from Ireland, innovatively using social media as a platform for data collection on this topic. The authors targeted emigrant health professionals, who, like other emigrants, are a difficult-to-reach group because there is no representative sampling frame to draw from. Through Facebook, the authors drew from a diverse convenience sample of doctors, nurses and a few midwives to elicit responses to an online survey.

Unlike other articles on migration in high-income settings, the focus of this article is on Ireland, the source country, rather than on the health professionals’ destinations. Based on the analysis
of responses to open-ended questions, the authors found two main drivers for emigration: unsatisfactory working conditions, such as long hours, and a perceived lack of respect for health professionals within the Irish health-care system. While many expressed a desire to return for personal reasons, the unsatisfactory working conditions persisted as an important disincentive. The authors emphasize that health system and retention reforms must be responsive to the perspective of health professionals who have emigrated, and that country health workforce planners must base their decisions on more comprehensive, updated routine data.

On a topic where a representative sampling frame is more often than not impossible to obtain, the authors presented an important example of how to use social media to reach emigrants. Furthermore, while social media has been used by researchers before - for example, to understand how health workers network with one another (Rolls et al., 2016) or to understand how to enhance career development opportunities (Roman, 2014) - this is one of the very few times that social media has been used as a data collection avenue for health workforce research. An article based on the same survey and reporting quantitative data is recommended as further reading (McAleese et al., 2016).


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<th>Health workers</th>
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<td>Geographical area</td>
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<td>Research methods</td>
<td>Mixed: semi-structured interviews and social network case studies with midwives and village women</td>
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Much work has been done to understand the factors and strategies that promote the retention of health workers, particularly in rural and difficult areas (Dolea et al., 2010). Hurley et al. (2014) present an interesting analysis on the social role of rural health practitioners, in this case rural auxiliary midwives, who represent the main providers of maternal and neonatal health services in Malian communities. Poor social relationships and working environments contribute to workforce turnover and dissatisfaction. Understanding connectedness would shed light on how to better target support to improve retention, job satisfaction, motivation and efficacy. In Mali, half of the midwives are not originally from the communities they serve but are from urban communities and move to rural areas seeking work. The authors attempt to highlight entry points to support such health professionals better and to understand how they are integrated and supported in their working environment within a community. The authors found that rural auxiliary midwives held central and influential social positions, regardless of whether they were originally from that community. These findings have implications for planning maternal and child health interventions and more broadly about the type of support that would be needed to ensure a strong health workforce in rural areas. Midwives effectively create provider–patient bridges, through which behavioural health interventions could be diffused to mothers. Furthermore, well-connected midwives could draw additional health workers to support maternal and health services.

On a topic where neither qualitative nor quantitative methods alone can adequately explain the drivers of migration and retention, this article provides an important example of how qualitative research and social network analyses can be used to obtain a richer picture of a context and to try to understand the social capital, social fabric, connectedness and belonging to a community that may influence rural retention. Nevertheless, this article is one of the few using social network theory and analysis to better understand health workforce behaviour. Existing network studies in health most often focus primarily on physicians or nurses in high-income settings (Bae et al., 2017a, 2017b; Yousefi Nooraie et al., 2017).
2.4 Research challenges, gaps and future directions

2.4.1 Better data

Despite the importance of social dimensions of health workers, numerous data gaps exist, limiting our ability to understand HRH social relations and contexts. Humanitarian crises settings challenge data collection in multiple ways, including non-existent or unconventional sampling frames, difficult data collection logistics, rapid change and weakened research capacity (Woodward et al., 2017). With respect to gender, data on health workers is more likely to be reported by cadre than by sex, eliding the possibility of a gender analysis (George, 2007). Moreover, certain gendered experiences such as sexual harassment and gender-based violence within HRH may remain invisible due to social norms that inhibit reporting. With regard to labour markets, as McPake et al. (2014a) highlighted, analyses are limited by the lack of data, for example on formal and informal earnings or income of health workers within and across countries. Previous efforts to estimate the income of health workers across countries include those of Hernandez-Peña et al. (2013), McCoy et al. (2008) and Tijdens et al. (2013). For McPake et al. (2014a, p. 78), improved datasets will help “move beyond counting the health workforce and some of its basic characteristics, to understanding the determinants and solutions to labour market disequilibrium”. With regard to migration, difficulty in tracking health workers across borders makes migration and mobility a difficult phenomenon to understand. Information about annual outflows of health providers, especially of non-physician staff, remains unreliable in both high- and low-income settings, limiting our understanding of the impact migration might have on source and destination health systems and populations (WHO, 2014).

Not only is further research required about the social characteristics of health workers, as highlighted above, but certain national and subnational contexts are underrepresented, failing to reflect the diversity of national and subnational contexts in low- and middle-income countries. For example, labour market analyses can inform not only national but also subnational plans and policies. Tools already exist to conduct these studies, including guidelines, case studies and software (e.g. Dal Poz et al., 2007; Fields and Andalon, 2008; Scheffler et al., 2012; WHO, 2015), but they have yet to be used at the subnational level or at the national level beyond demonstration case studies.

Comparative research across health systems contexts in low- and middle-income countries should also be encouraged. For example, discrete choice experiments can help policy-makers understand how health workers value different job attributes, but the findings of such studies vary widely, depending on context. Further research and comparative analysis could better account for how each country’s unique contexts, policies and systems shape the preferences and challenges unique to various cadres of health worker.

2.4.2 Further depth

Another challenge is the overly descriptive nature of existing research, with poor reference to social theories and little use of multidisciplinary research. For example, despite the existence of landmark reviews (George, 2007; Standing, 1997), research examining gendered dimensions of HRH rarely builds on previous research and theory, failing to capture the richness of lived experience. Our research also needs to go beyond surface descriptions to understand why and how social relations and market forces influence health workers. Such evaluations require theory-informed multidisciplinary collaborations that bridge both qualitative and quantitative approaches to better understand the dynamics of health worker behaviour within local healthcare markets and their movements within and outside countries.
We also need further depth in our analysis of how multiple social and market forces and their contextual determinants (such as class, gender, formal and informal institutions, internal and external migration, remuneration, geography, motivation, and information and power asymmetry) combine and interact in different ways to influence the profile and performance of health workers in diverse settings. Indeed, given that these social and market forces, and their determinants, are all connected, analytical approaches such as intersectionality that ensure they are not examined separately from one another need further application (Larson et al., 2016).

2.4.3 Further innovation

Researchers in HPSR can contribute methodologically through novel ways of producing and accessing information. For example, the use of social media and technology should be explored further in studies on migrating health professionals, as should engagement and mobilization of the diaspora. Social network theory and analysis could contribute further to understanding the dynamics of the formal and informal networks formed by health professionals locally and internationally. Furthermore, available data can be used better, for example by developing and using dynamic models for health workforce planning that could help decision-makers better understand the pathways through which migration and retention factors are related. Simulation models focusing on exploring health worker dynamics could be particularly useful in cases where there are limited data.

Moving from methods to broader philosophies and social relations underpinning research, feminist and participatory action research methodologies should be encouraged to express and understand health worker voices and to transform the social relations framing health worker agency. Central to these approaches are efforts to build capacity, foster trust and address the power relations between various stakeholders engaged with HRH research. These issues of research governance are relevant to all settings but are particularly important in humanitarian crises settings (Woodward et al., 2017).

Acknowledgements

The authors thank Uta Lehmann and Veloshnee Govender for their inputs.
References


Part A. Who are included as health workers, where and how?

55


Part A. Who are included as health workers, where and how?


Part B.

How are health workers supported to deliver services?
Chapter 3.

Building health worker capacity through training and supervision

NS Prashanth and Timothy Roberton

3.1 Defining the chapter

A frequent topic in human resources for health (HRH) literature is the design and implementation of training and supervision programmes. Beyond their connection to capacity-building, the two concepts are not easy to define. Both are described in the literature as multidimensional and cover a range of activities. For training, some studies focus on the skills development of newly recruited health workers; other studies look at maintaining skills through, for example, the introduction of job aids, or efforts to expand and upgrade skills of existing health workers (Dieleman et al., 2009). For supervision, some studies examine supervisor–provider interactions specifically (Frimpong et al., 2011; Tavrow et al., 2002), while others investigate health worker supports more broadly, including, for example, changes to management structures and organizational environments (Bradley et al., 2013; Callaghan-Koru et al., 2013).

In selecting articles for this reader, we took a wide view of training and supervision that included routine activities or add-on initiatives to improve health worker skills, knowledge or attitudes, and activities related to capacity-building, support and oversight of health workers by other health system staff or community actors. We included papers that sought to (i) characterize how training or supervision are implemented; (ii) measure the quantity or quality of training or supervision; (iii) understand stakeholder perspectives and felt experiences of training or supervision; (iv) identify barriers and facilitators to effective training or supervision; (v) examine the influence of training or supervision on health worker performance; and (vi) situate training or supervision as a part of a larger development strategy within health systems or health-care organizations. While most of the papers in this chapter concern facility-based workers, other studies examine training and supervision of informal providers, lay health workers and community-based volunteers (Daniels et al., 2010; Das et al., 2016; Singh et al., 2016; Suh et al., 2007). Despite substantial contributions from the private sector to training and service provision in certain contexts, the studies in this chapter mostly concern health workers in the public sector. Little research has been conducted on processes or effects of training or supervision in the private sector.
3.2 Background on training and supervision

The literature on training and supervision draws upon the wider body of knowledge on human resources from management and organizational sciences (Salas and Cannon-Bowers, 2001; Simmonds, 1989). The disciplinary underpinnings of such research are in educational psychology (adult learning, workplace learning, learning organizations), sociology (goal-setting and performance in organizations), organizational and management sciences (high-commitment management, organizational commitment and culture), and social learning and emancipatory approaches such as participatory action research (Buchan, 2004; Chávez et al., 2006; Marchal et al., 2014; Nel, 2014; Salas et al., 2012). Human resource management literature across disciplines has contributed analytical frameworks that researchers have extended to health care, such as the Kirkpatrick framework on the evaluation of training programmes (Kirkpatrick and Kirkpatrick, 1998).

With regard to the health sector, training, supervision and other supports appear prominently in literature on health worker performance (e.g. Callaghan-Koru et al., 2013; Scott and Shanker, 2010). One of the first attempts to understand what works, for whom and under what conditions with respect to interventions to improve health worker performance is the realist review by Dieleman et al. (2009), which highlighted many studies on training and supervision. Research papers describing and evaluating capacity-building programmes within health systems in low- and middle-income countries have provided useful frameworks and emphasized the context-dependent nature of training and supervision programmes (LaFond et al., 2002; O’Malley et al., 2013; Prashanth et al., 2012; Strasser and Neusy, 2010). The multidimensionality of capacity-building in health is captured by the framework proposed by Potter and Brough (2004).

Building on this strategic, contextualized and multidimensional understanding of capacity-building in the health sector, the Lancet Commission on the education of health professionals argued that training must move beyond information (transfer of information and skills) and formation (socialization into professional norms). It prioritized transformation with an emphasis on leadership and critical thinking to support the interdependence and teamwork across health cadres needed to solve the complex health problems of the future (Frenk et al., 2010).

Despite this broader framing, many studies continue to approach training in a more instrumentalist way, wherein training programmes are seen as delivery structures for knowledge, skills or attitude transfer (especially the literature on in-service training). These studies on training are in niche journals, often with limited system-wide application or reflection, for example in disease control programmes (such as HIV/AIDS or tuberculosis literature) or in other related literature (such as quality improvement or leadership training, e.g. Mery et al., 2017). Literature on reorienting health workforce pre-service education towards more people-centred approaches and competencies (Milen, 2001), including those related to gender equality (Allotey et al., 2011; Fonn, 2003), is limited mainly to niche medical and nursing education literature (e.g. Bratt et al., 2014; Burns and Poster, 2008; Cockerham et al., 2011). Further attention to the broader aims of training and capacity-building in the health sector is needed.

With regard to supervision, the first major review of “supervision in clinical practice settings” was by Kilminster and Jolly (2000), who sought to define supervision and lay out a hypothesis for its effect on health worker performance. The review mostly included studies from high-income countries and defined supervision as “the provision of monitoring, guidance and feedback on matters of personal, professional and educational development in the context of the doctor’s care of patients” (p. 829). A later review by Moran et al. (2014) addressed supervision in “rural and remote contexts” and included studies from low- and middle-income countries.
Part B: How are health workers supported to deliver services effectively and equitably?

Recently, several specific models of supervision have come to the fore and been the focus of interventions and research. One model, known as “supportive supervision”, has achieved prominence as a type of supervision that emphasizes the human interactions involved in supervision, with supervisors working in partnership with health workers to solve problems and overcome challenges. This term was described in detail by Marquez and Kean (2002), who outlined a framework for supportive supervision and contrasted it with previous models of supervision. Other models of supervision involve community leaders as part of the supervision process. Although such models have not been articulated in any standalone articles, they have been explored in studies (Roberton et al., 2015; Suh et al., 2007).

Clements et al. (2007) challenged some dominant assumptions of the supervision literature, arguing that the supervision models espoused for low- and middle-income countries have not been successful, have fundamental flaws, and indeed do not exist in high-income countries in the same way. Whereas supervision in low- and middle-income countries typically involves an external supervisor from outside the health facility, the authors suggest that in high-income countries, “the ‘boss’ is in the same building as the employees carrying out the service ... thus there is a day-to-day, even moment-by-moment supervision where the boss is an integral part of the team” (p. 22). This divergent definition of supervision has implications for evaluation.

Bosch-Capblanch et al. (2011) offered the first Cochrane review of the effectiveness of supervision in improving the quality of primary health care in low- and middle-income countries. The review included only nine eligible studies, and the authors concluded that, due in part to the low quality of evidence, it was “uncertain whether supervision has a substantive, positive effect on the quality of primary health care in low- and middle-income countries” (p. 2). While acknowledging these findings, these types of systematic review are also not able to include the substantial body of qualitative literature on supervision and its felt effects. Furthermore, the diverse settings in which supervision is performed, the different tasks included in supervision packages, and the difficulty of measuring supervision quantitatively present significant challenges to generating conclusive, generalizable evidence.

3.3 Illustrative primary research articles

We selected nine articles to highlight diverse research on training and supervision from a health policy and systems perspective, highlighting different methodologies and country contexts. The selected articles include descriptive studies describing implementation and context, studies that measured the influence or effects of training and supervision, studies that explain training and supervision initiatives, and studies that give voice to the health managers and workers involved. These articles were selected from a pool collated from a doctoral seminar at the Johns Hopkins School of Public Health, a crowdsourcing exercise supported by Health Systems Global and subsequent searches using the bibliography of key articles and on relevant databases and search engines (PubMed, Google Scholar). The main criteria used to select the articles included diversity in region, cadre and methods, as well as the quality of the studies based on standard guidelines.

The first three articles provide an in-depth understanding of implementing training and supervision, whether in Zimbabwe (Tavrow et al., 2002), leading to success in Egypt (Ruck and Darwish, 1991) or rejection in an unnamed east African country (Gladwin et al., 2002). We then provide examples of testing the effects of training and supervision in Benin (Rowe et al., 2009) and in Ghana (Frimpong et al., 2011). Two health policy and systems approaches to understanding training and supervision are highlighted: a realist evaluation in India (Prashanth et al., 2014) and a participatory action intervention in multiple countries (Onyango-Ouma et al., 2001). We close with two studies that highlight the perspective of health workers and managers in Malawi and the United Republic of Tanzania (Bradley et al. 2013) and in Guatemala (Hernández et al. 2015).

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<td>Research methods</td>
<td>Case study</td>
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<td>Research inference</td>
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This is a case study of a collaborative training project for establishing the roles of primary health centre staff in nutrition and training them to fulfil these roles. In the first phase, lasting three years, a pilot intervention identified roles for health workers in nutrition drawing from multiple stakeholder engagement, including health service managers, health workers and community representatives. In the second phase, lasting four years, the activities were extended in a wider geographical area after incorporating lessons from the pilot. The case study offers a detailed description of the intervention process, appreciating the role of local context, multiple stakeholder involvement, and the rigour of implementation needed to study the effects of training programmes. The study seeks to explain the various health services and population outcomes in relation to the training and other support offered. Role clarity and supervision in improving the motivation of health workers (and hence possibly improving health worker performance) is identified as the possible driver of the intervention. The involvement of multiple levels of the health system, starting from the federal level and moving downwards, was crucial to the outcomes. The study directly links health worker motivation and training and situates the possible change from training within a given health service context and its integration into health system management structures.


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<th>Public sector primary health care information system designers and users</th>
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<td>Geographical area</td>
<td>East African country</td>
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<td>Research methods</td>
<td>Qualitative: ethnographic case study</td>
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<td>Research inference</td>
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There are few published studies that systematically document and analyse failures (in terms of a programme or project objectives not being met). This study is an interesting example of analysing responses of systems to innovations drawing from a case where externally developed training materials were used to strengthen management of primary health centres by improving the informational basis for decision-making using management information system tools for primary health care managers, in an unnamed east African country setting. The case study analyses the reception of the innovation and describes the complex and decentralizing organizational setting that shapes the outcomes of the intervention. The designer/implementer perspective of the intervention as a management training package contrasts with that of several recipients of the intervention, who saw it primarily as an organizational change tool. Despite engaging various stakeholders working at different levels in the health system (as in many successful training programmes) and drawing from a good evidence base for the training materials in other settings, the authors describe and explain the possible reasons for rejection of the innovation by invoking explanations at the level of the alignments (or lack of) between the training programme strategy, the individuals and roles within the system where it was implemented, and existing management styles, organizational structures and processes.

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<td>Geographical area</td>
<td>India</td>
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<tr>
<td>Research methods</td>
<td>Mixed: realist evaluation using qualitative data (interviews and observation notes) and quantitative measures of commitment, self-efficacy and supervision style</td>
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<td>Research inference</td>
<td>Explanatory</td>
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This paper is an evaluation of a capacity-building programme for local health system managers in a southern Indian district. The acknowledgement of health workers’ agency in steering the change agenda introduced through training and capacity-building programmes is considered an important starting point for the evaluation. The authors also assess capacity across individuals, teams and local health systems in line with a systems approach (see other papers in the series on advancing the application of systems thinking in health, summarized in Adam (2014), and other papers acknowledging the need to apply multilevel analysis of capacity in health policy and systems research, e.g. Lê et al., 2014). The study uses the realist evaluation approach wherein the focus is on developing an explanation for why the capacity-building intervention seemed to have worked in some settings and not in others. The authors describe the different outcomes at the subdistrict level and use organizational frameworks to theorize on the mixed successes or failures in relation to the ambitious nature of outputs and outcomes of capacity-building programmes, which often seek change at the systemic level (beyond individuals and teams). By critically comparing cases (within their study) where the intervention worked and others where it did not, and analysing this in relation to the particular individual and organizational attributes in these cases, the authors develop an explanation of how training programmes could contribute to organizational change in the particular local health system context in southern India.


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector primary health care health workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Argentina, Nigeria, Ghana, United Republic of Tanzania, Kenya</td>
</tr>
<tr>
<td>Research methods</td>
<td>Mixed: pre &amp; post test, IDIs, group interviews, FGDs, time use, observation, records review</td>
</tr>
<tr>
<td>Research inference</td>
<td>Explanatory/Emancipatory/Influence</td>
</tr>
</tbody>
</table>

This paper is an evaluation of a health worker training (and other supports) programme from several settings (six settings in four African countries and one setting in Latin America). The training was delivered in a participatory workshop mode called Health Workers for Change. Given the diversity of country settings, the authors began with a common core protocol at a workshop to design a pre-test/post-test study, and then met again at the data analysis stage to learn from each other’s experiences, identify commonalities and disagreements, and consolidate their analysis. The Health Workers for Change study conceptualized change at three levels (community, facility, system) and used a range of data-collection tools (including quantitative survey tools and qualitative observational tools, interviews and focus groups) to
assess change. The authors triangulated and explored contradictions that arose from data generated by these different tools to improve confidence and deepen the results. The authors discuss how health facility staff likely experienced the ongoing data collection as part of the intervention itself, resulting in the research influencing the intervention’s outcomes. The study stands out for the reflexivity of the researchers in implementing a common protocol across diverse country settings in a participatory way and the discussion on the methodological challenges involved.

Other interesting papers that detail pedagogical and technological innovations on training health workers include those by Chávez et al. (2006), Greenhalgh et al. (2004) and Strasser and Neusy (2010). Additionally, Yousafzai et al. (2014) provide a synthesis of several studies of capacity development of health workers to build partnerships with families as a part of care provision. Another interesting paper is by Downing et al. (2011), which maps various studies, largely from Australian and other high-income settings, on cultural sensitivity training for health workers on indigenous health.


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector facility based health workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Benin</td>
</tr>
<tr>
<td>Research methods</td>
<td>Quantitative: observation and re-examination of consultations, structured interviews with health workers and caretakers, facility assessments</td>
</tr>
<tr>
<td>Research inference</td>
<td>Influence</td>
</tr>
</tbody>
</table>

This paper describes a pre-test/post-test study, with randomized intervention and control groups, to assess the impact of integrated management of childhood illness training and a package of supports (job aids, non-financial incentives, supervision) on facility-based health workers in Benin. The study is notable for its robust study design (randomized control trial with three study arms) and longitudinal data collection involving four health facility surveys over six years (1999–2004). Few studies have followed up over such a long period after initial training. The data collection methods to assess care quality were rigorous and diverse, including silent observation of consultations, gold standard re-examination, exit interviews with caretakers, health facility assessments and health worker interviews. The paper also stands out for its policy-relevant critique of the utility of training programmes when not accompanied by well-designed supports. The authors note issues brought about by initially weak implementation and the need for researchers to intervene and share findings with the programme implementers. The discussion of these real-world limitations adds to the paper’s value, and the study stands out as a robust example of implementation research.

A closely related study to this in both its approach and question is that by Huicho et al. (2008). For other examples of randomized control trials that assess the influence of training or supervision on health workforce outcomes, see Das et al. (2014), Djibuti et al. (2009) and Singh et al. (2016). An interesting application of this methodology to assess the role of training informal care providers in India is found in Das et al. (2016). Using mystery patients and blinding of trainers and informal providers, the authors found that a multi-topic medical training increased correct case management for three selected conditions but did not affect prescription practice.
Part B. How are health workers supported to deliver services effectively and equitably?


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Multiple public sector supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Zimbabwe</td>
</tr>
<tr>
<td>Research methods</td>
<td>Mixed: qualitative evaluation criteria development, quantitative ratings and time use</td>
</tr>
<tr>
<td>Research inference</td>
<td>Descriptive/Emancipatory</td>
</tr>
</tbody>
</table>

This study was one of the earliest to describe and assess in detail what happens during supervision interactions. The study explores the supervision of nurses and midwives in primary health facilities in Zimbabwe, dissecting in detail the activities that supervisors are expected to undertake, and the extent to which they actually do. Given the lack of national supervisory guidelines in Zimbabwe, the authors worked with past district-level supervisors to develop their own tools to examine supervisor–provider interactions, identifying 11 categories of supervision practice. They collected data in multiple ways: by audiotaping supervisory visits, taking minute-by-minute notes on supervisors’ activities, conducting individual interviews with supervisors and supervisees, observing and ranking supervisor interactions with a structured guide, and reviewing supervisors’ checklists. The authors measured the time supervisors spent performing each practice, and created scores and rankings for the quality with which they undertook these practices. The results give a comprehensive scan of what supervisors do and how well they do it, offering insight into how to improve supervision and providing a baseline from which to measure future progress.

Bradley S, et al. (2013). District health managers’ perceptions of supervision in Malawi and Tanzania. Hum Resour Health. 11:43

<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector district and council supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Malawi and United Republic of Tanzania</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: semi-structured interviews</td>
</tr>
<tr>
<td>Research inference</td>
<td>Explanatory</td>
</tr>
</tbody>
</table>

Like Tavrow et al.’s (2002) study, this study sought to characterize the nature and quality of supervision, although in this case from the perspective of supervisors. The authors undertook semistructured, in-depth interviews in Malawi and the United Republic of Tanzania with district health staff responsible for supervising mid-level nurses and midwives in health facilities. Five major thematic areas emerged: “the current supervision paradigm, why supervision is important, supervision in practice, assessing performance, and challenges to implementation”. As in Tavrow et al.’s (2002) study, Bradley et al. found that while supervisors articulated a need for supportive supervision involving meaningful personal interaction, the reality was often one of detached inspection and assessment.

The methodology used by Bradley et al. is not revolutionary but highlights the power of qualitative research to understand the attitudes and ethos of respondents charged with carrying out an activity, such as supervision. Hearing the views of supervisors revealed the challenges and barriers felt by supervisors, and highlighted ideas for change from the participants. The multiple study sites enabled comparison across countries. Similar methods were used in a study on training (Hawe et al., 1998), in which the authors use focus group discussions to synthesize health worker perspectives on capacity-building and adopt clear operational definitions for training-related terms, which in other studies can be jargon-laden and a cause for confusion.

<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector regional and district managers, primary and secondary health care workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Guatemala</td>
</tr>
<tr>
<td>Research methods</td>
<td>Concept mapping (mixed methods)</td>
</tr>
<tr>
<td>Research inference</td>
<td>Exploratory/Emancipatory</td>
</tr>
</tbody>
</table>

This study used another methodology to examine participants’ perspectives on health worker supports: concept mapping, a structured data collection and analytical technique designed to “integrate the input of multiple stakeholder groups, and produce maps that depict the composite thinking of organizations or systems” (p. 2). The goal of the study was to develop a normative model of supervision – not what is happening, but what should happen – and to use the results to identify future priorities. Regional and district managers (supervisors) and primary and secondary health-care workers (supervisees) in rural Guatemala were asked to name actions that “could be taken or are being taken” to support nursing staff, and were later asked to sort and rank the suggested actions. The rankings were analysed using statistical methods and represented in maps that were further interpreted with the participation of respondents. The study is remarkable for using an otherwise complex methodology to develop concrete, actionable results that represent a consensus of multiple stakeholders. Rarely do studies integrate the views of stakeholders at different levels of the health system, or examine the social dynamics between those stakeholders. Although concept-mapping can be resource-intensive and requires qualitative and quantitative expertise, it has great potential for extracting consensus ideas for health system improvement.


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector community midwives, nurses and extension workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Ghana</td>
</tr>
<tr>
<td>Research methods</td>
<td>Quantitative: Time-use and provider survey</td>
</tr>
<tr>
<td>Research inference</td>
<td>Influence</td>
</tr>
</tbody>
</table>

Many studies of supervision seek to characterize supervision itself, implicitly assuming that supervision improves health worker performance; few studies have quantitatively measured the effect of supervision on performance. This paper describes a time-use study in Ghana to investigate the relationship between supervision and the productivity of midwives, community health officers and health extension workers. Using direct observation to collect quantitative data, and a logistic regression model for statistical analysis, the authors concluded that “supportive supervision was associated with increased productivity” (p. 1225). The study highlights the challenges associated with measuring the influence of supervision. One challenge is how to obtain a meaningful measure of health worker performance that can be used for statistical analysis. This study takes “productivity” as its outcome measure and used direct observations of provider interaction to measure the time spent by health workers on patient care. Another challenge is how to quantify supervision itself. This study used two binary measures: first, whether the health worker was visited by a supervisor in the past month; and second, whether the health worker self-reported feeling “supported” by the supervisor. Other studies (such as those above) have used more nuanced measures for the quantity and quality of supervision,
although not, as in this case, to investigate the effect of supervision on performance. For other examples of studies that examine the influence of supervision on health worker performance, see Das et al. (2014), Singh et al. (2016), Stanback et al. (2007) and Uys et al. (2005).

3.4 Research challenges, gaps and future directions

Training and supervision are often components of a larger support package for health workers to improve their performance or motivation. Disentangling the specific effect of training and supervision on outcomes of interest is challenging both methodologically and operationally. A specific challenge for quantitative assessments of the effect of training or supervision is choosing which measures to use for training or supervision. Both the quantity and quality of training and supervision are potential factors, as are other factors, such as the cultural and hierarchical relationship of supervisors to health workers and the community and organizational environment. Isolating the effect of training or supervision, and measuring its various attributes, requires extensive data collection and analytical effort. Likewise, as explored in Chapter 4, the outcome of health worker performance is multifaceted and difficult to characterize as a dependent variable. Single indicators of performance are likely too simplistic, and more nuanced, multidimensional measures require resource-intensive methods such as observation and re-examination.

Another challenge is situating training and supervision within their health system context. Many articles that discuss training and supervision are beyond mainstream public health or health systems literature and are found in discipline-specific journals. They often do not have sufficient analysis beyond very specific contexts, and more importantly they lack a health systems lens in terms of the question asked or the context under consideration (for example, literature in nursing and medical education journals, and studies in experiential learning literature).

We must also acknowledge the difficulty in standardizing training and supervision approaches and tools, given the variety of settings where they are implemented. We need to move beyond generic or globally defined tools and approaches towards greater focus on context-specific approaches, and to more participatory approaches that improve health worker ownership over the change agenda. The authors of several of the papers in this chapter developed their own tools for assessment, with criteria and benchmarks specific to the programmes they studied. The increasing use of implementation research and participatory action research approaches may be able to address some of these challenges. We should encourage comparative work that builds on context specificity rather than seeing this as a limitation.

There is also a need to further understand the perspectives of trainers and supervisors, and those of the health workers they are training and supervising. The increasing focus on building capacity within the health researcher community to undertake more long-term participatory action research with health workers, and the increased focus of research funders to involve implementers in research, could help in addressing this gap.

To address any of the above gaps, we need methodological innovation: advances in information and communications technology to improve the accuracy and feasibility of measuring training and supervision; participatory action research to promote the ownership and views of implementers and health workers; and triangulation and synthesis of multiple data sources to ensure a system-wide understanding. Methodologies drawn from research in organizational sciences and psychology could help to improve our understanding of how training, supervision and other supports could achieve organizational change. The application of approaches and theories from these fields into HRH will require collaboration across researchers and interdisciplinary engagement.

Acknowledgements

We are grateful to Uta Lehmann, Asha George, Kerry Scott and Veloshnee Govender for their input in this chapter.
References


4.1 Defining the chapter

Health worker performance is a complex and contested concept. The World Health Report defines health worker performance as a composite function of health worker availability, competence, productivity and responsiveness (World Health Organization (WHO), 2006). A well-performing health workforce is thus one that “works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given the available resources and circumstances” (WHO, 2006, p. 67). This inclusive definition factors in both technical and relational aspects of health worker performance and forms a touchstone for this chapter’s examination of different approaches to performance measurement and evaluation. Nonetheless, this chapter clearly distinguishes health worker performance from the related concept of quality, viewing quality of care as the product of concurrent and synergistic actions to ensure effective, efficient, equitable, patient-centred and timely care (Institute of Medicine, 2001). Health worker performance is thus a critical and necessary – but not sufficient or always dominant – component of overall quality of care (Table 4.1).

Although a large body of performance literature focuses on clinicians’ (mainly doctors’) performance in high-income settings (Chan et al., 2017; Chauhan et al., 2017), this chapter focuses on the different epistemologies and methodologies that shape health worker performance research in low- and middle-income countries. In particular, it explores the differences between research that aims to quantify and map trends in health worker performance (labelled here as performance evaluation literature); research that aims to explore and expound on health worker decisions, actions and interactions in a given context (labelled here as performance as practice literature); and research that aims to examine strategies for improving health worker performance (labelled here as performance improvement literature). While recognizing that motivation is both a driver and a consequence of health worker performance, this chapter does not deal directly with motivation as a theme, since it is afforded a deeper exploration in Chapter 5.

Table 4.1 Key definitions for performance, practice and quality of care

<table>
<thead>
<tr>
<th>Performance</th>
<th>Composite of an individual’s or team’s degree of competency, productivity and responsiveness (WHO, 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance as practice</td>
<td>Contextualized decisions, behaviours and relationships that influence human resources for health performance and overall quality of care</td>
</tr>
<tr>
<td>Quality of care</td>
<td>Capacity of a health system to deliver safe, effective, patient-centred care in an efficient, timely and equitable manner (Institute of Medicine, 2001)</td>
</tr>
</tbody>
</table>
4.2 Background on performance and practice

The literature on health worker performance is broad, drawing on disciplines and associated methodologies that include clinical sciences, health economics, management sciences, anthropology and policy analysis (Rowe et al., 2005). Such diversity is warranted given the different geographies, systems, cultures and polities within which human resources for health (HRH) operate globally. Table 4.2 provides a non-exclusive summary of some of the major bodies of performance literature and the constructs and indicators used. Bodies of work are grouped broadly according to a “performance evaluation”, “performance as practice” or “performance improvement” focus.

Table 4.2 Performance literature groupings adapted from Dieleman et al. (2006)

<table>
<thead>
<tr>
<th>Literature grouping</th>
<th>Construct</th>
<th>Examples of indicators/concepts</th>
<th>Key disciplines</th>
<th>Exemplar references</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competencies</td>
<td>Knowledge, training</td>
<td>Quality improvement, public health epidemiology</td>
<td>Das and Sohnesen (2007)</td>
</tr>
<tr>
<td></td>
<td>Adherence</td>
<td>Adherence to clinical or practice-related (e.g. communication) rules or standards; proxies include readmission rates, case fatalities, measures of “effort” (e.g. patient satisfaction, non-task performance)</td>
<td>Public health and clinical sciences, health economics</td>
<td>Boquiren et al. (2015) Jayasuriya et al. (2014) Leonard and Masatu (2005) Leonard and Masatu (2010) Namuyinga et al. (2017)</td>
</tr>
<tr>
<td></td>
<td>Productivity</td>
<td>Patient contacts per worker per day, cost-effectiveness, pro-social organizational behaviour</td>
<td>Health economics</td>
<td>Frimpong et al. (2011)</td>
</tr>
</tbody>
</table>
### Table 4.2 Performance literature groupings adapted from Dieleman et al. (2006) continued

<table>
<thead>
<tr>
<th>Literature grouping</th>
<th>Construct</th>
<th>Examples of indicators/concepts</th>
<th>Key disciplines</th>
<th>Exemplar references</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Governance</td>
<td>Accountability, posting and transfer, power dynamics, resilience</td>
<td>Governance theory, sociology, management sciences</td>
<td>George et al. (2016) Gilson et al. (2017)</td>
</tr>
</tbody>
</table>
4.2.1 Performance evaluation

Performance evaluation research mixes descriptive research and economic theory to quantify aspects of HRH availability, competency, adherence and productivity (Schleffer, 2016). While acknowledging the potential influence of structural conditions on health worker actions, performance evaluation literature typically focuses on individual-level determinants such as clinical competence, adherence to guidelines or demonstration of pro-social values, and the interventions (behavioural, education or material) that might improve these individual health provider factors. Notable examples of this approach have been carried out in India (Das and Hammer, 2004), Paraguay (Das and Sohnesen, 2007) and the United Republic of Tanzania (Leonard and Masatu, 2005). With a few exceptions, performance evaluation research is conducted within a positivist knowledge paradigm.
4.2.2 Performance as practice

Research that views performance as practice has pushed the boundaries of our understanding of performance by drawing on theories of governance, anthropology, sociology and management sciences to explore the ways in which proximate and broader social and health system contexts influence health workers’ practices. Invoking a traditional sociological focus on the intersecting roles of structure and agency, for example, one branch of this literature explores the way in which vertical and horizontal governance arrangements intersect with micro-level power dynamics to influence frontline health workers’ decisions and practices in different settings (Isosaari, 2011; Topp et al., 2015). Informed by anthropological traditions, another facet of enquiry examines the intersection between health workers’ and patients’ social identity and health workers’ behaviours (Campbell et al., 2015; Gross et al., 2012). A further contribution of the performance as practice literature has been to expand performance evaluation beyond the traditional focus on nurses and physicians, to include community health workers, district managers and many other non-clinical cadres (Vareilles et al., 2017), and to flag the importance of understanding health workers’ performance from patients’ perspectives, invoking concepts of “patient satisfaction” (Boquiren et al., 2015), “cultural competence” (Kendall and Barnett, 2015) and “person-centred care” (Mead and Bower, 2000; Scholl et al., 2014), among others. This latter body of work has been instrumental in uncovering widespread experiences of disrespect and abuse among women in low- and middle-income countries and in highlighting the intersection between poverty, gender norms and social stigmas and the way these shape health workers’ responses to female clients (Amroussia et al., 2017; Freedman and Kruk, 2014; Kim and Motsei, 2002).

Although highly heterogeneous, research on performance as practice is typically conducted from a relativist or critical realist perspective, enabling researchers to invoke varied epistemologies and methodologies to generate important knowledge that takes account of different levels and types of performance and of patient expectations and experiences regarding those practices. This approach does not preclude more traditional and quantitative approaches to performance evaluation, but it does help to promote a deeper understanding of performance as the product of a range of decisions and actions, networks and relationships that influence the delivery of services.

4.2.3 Performance improvement

A third grouping of performance literature, albeit diffuse, focuses on performance improvement. Some of the most frequently used performance improvement strategies include supportive supervision, mentorship and tools and aids (Vasan et al., 2017). This section highlights five types of performance improvement literature with diverse epistemological and philosophical bases.

At one end of the spectrum are empowerment-based performance improvement approaches, of which participatory action research is a key example. Participatory action research seeks to transform the role of people usually participating as the subjects of research (such as health care providers) and involves them instead as active researchers in an agenda for change. Participatory action research involves developing, implementing and reflecting on actions as part of the research and knowledge-generation process and is informed by, and rooted in, processes of social empowerment defined as “people’s ability to act through collective participation, strengthening their organizational capacities, challenging power inequities and achieving outcomes on reciprocal levels” (Loewenson et al., 2014, p. 11).
At the other end of the spectrum lie various types of quality improvement (including Six Sigma, Continuous Quality Improvement and Lean Thinking) that use adaptations of the improvement cycle, involving a series of steps from data collection, problem description and diagnosis to the generation and selection of potential changes for implementation (Walshe, 2009). Most quality improvement approaches acknowledge the importance of engaging and involving frontline staff and the need for supportive leadership and organizational commitment. Compared with participatory action research, however, quality improvement adopts a more instrumental lens linked to organizational management, and consideration of what drives or motivates HRH to behave in certain ways tends to be weak.

Three other discrete and identifiable bodies of work exist on the quality improvement continuum. One is performance improvement literature that focuses on remuneration and incentives, of which performance-based financing and pay for performance are examples (Basinga et al., 2011; Kalk et al., 2010). The centre piece of performance-based financing interventions is payment based on performance, defined as “outputs verified for certain quality measures” (Renmans et al., 2017). The literature highlights a fierce debate over the potential for performance-based financing to have unintended consequences on the intrinsic motivation of HRH and, increasingly, health systems researchers argue that performance-based financing should be viewed as a package of reforms rather than just a payment mechanism for discrete (service) outputs (Renmans et al., 2017; Witter et al., 2011).

A smaller body of work focuses on social accountability, which draws on theories of governance and social psychology to promote various forms of collective action as a way to realize citizen rights (Fox, 2015). Social accountability literature suggests that HRH performance can be strengthened through a combination of social pressure and threat of public exposure or embarrassment and mechanisms to build trust and enable joint problem-solving (Berlan and Shiffman, 2012; Lodenstein et al., 2013; Molyneux et al., 2012; Schaaf et al., 2017). Although experimentation with a range of social accountability approaches is fast expanding, rigorous evaluation of the impact of social accountability interventions on the health sector or HRH performance is in its infancy.

Finally, a small body of work relates to social franchising. A social franchise is a network of private health-care providers linked through an agreement or contract to provide certain services under a common brand (the franchise). The model posits that performance of previously unregulated or poorly regulated private providers is improved via provision of training in clinical and business management practices, a contractual obligation to follow protocols and meet standards, and various mechanisms of quality oversight. To date, however, evidence of the performance-strengthening effect of social franchising – as opposed to more commonly documented improvements in service coverage and access (Aung et al., 2017; Chakraborty et al., 2016; Koehlmoos et al., 2009; Munroe et al., 2015) – remains weak (Sieverding et al., 2015).

4.3 Illustrative primary research articles

This section showcases seven articles across the three major areas of performance evaluation, performance as practice and performance improvement literature. These articles were selected from a pool collated from a doctoral seminar at the Johns Hopkins School of Public Health, a crowdsourcing exercise supported by Health Systems Global searches of relevant databases and search engines (PubMed, Scopus, Google Scholar) and subsequent searches using the bibliography of key articles. The main criteria used to select the articles included diversity in region, cadre and methods, and the quality of the studies based on standard guidelines.
4.3.1 Performance evaluation


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public and private sector medical officers, assistant medical officers, clinical officers, clinical assistants and nurses</th>
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</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>United Republic of Tanzania</td>
</tr>
<tr>
<td>Research methods</td>
<td>Quantitative: protocol checklist completion through direct clinician observation and clinician testing using vignettes</td>
</tr>
<tr>
<td>Research inference</td>
<td>Influence</td>
</tr>
</tbody>
</table>

Leonard and Masatu (2010) provide a detailed description of their use of case-study patients (vignettes) to gather data on different aspects of clinician performance in the United Republic of Tanzania. Using data gathered from repeated case-study interactions, they measure the clinical performance of different categories of clinician (for example, those operating in public versus private clinics) and explore how that performance is influenced by skills and knowledge and the practice values and goals of the individual clinicians involved. Their elegant use of regression analysis to ascertain the determinants of the know–do gap (such as the degree to which peer scrutiny influences the application of skills and knowledge), and highlighting of the role of intrinsic motivations in provider performance, underpins their assertion that multilevel performance measurement is essential for developing more sophisticated and effective performance improvement interventions. Other researchers who have used similar approaches to performance evaluation notably include Das and Hammer (2004) and Das and Sohnesen (2007). Huicho et al. (2008) provide an important example of comparing clinical performance across different cadres of health-care workers and across countries.


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Rural public and private health extension officers, nurses and community health workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Papua New Guinea</td>
</tr>
<tr>
<td>Research methods</td>
<td>Quantitative: Provider survey administered during national training</td>
</tr>
<tr>
<td>Research inference</td>
<td>Influence</td>
</tr>
</tbody>
</table>

Jayasuriya et al. (2014) use survey data and multilevel analysis from a large sample of primary health workers in Papua New Guinea to examine the effects of organizational culture and climate on “non-task” behaviours (defined as behaviours not specified as service outputs, such as treating clients with respect and working effectively in a team). Incorporating concepts from organizational management and psychology, this article is unusual in its application of quantitative methodologies to measure non-task behaviours. The article demonstrates a pragmatic approach to data collection, leveraging a national competency training for a new malaria diagnosis and treatment protocol that was provided to all health workers nationally, to conduct a self-administered survey, with results collected in person by provincial-level trainers present at the training. In low- and middle-income country settings with geographically
disparate health services, pragmatic approaches such as these can generate research evidence that informs more equity-oriented reforms. The article additionally provides a strong example of the use of regression modelling to measure and test the relationship between individual factors (such as age, sex and professional background) and health-centre-level factors (for example, governmental versus church-run, or catchment population) on health workers’ performance.

4.3.2 Performance as practice


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sectors nurses and midwives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>South Africa</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: ethnographic non-participant observation, in-depth interviews, focus group discussions with women, nurses and midwives, along with historical analysis</td>
</tr>
<tr>
<td>Research inference</td>
<td>Exploratory</td>
</tr>
</tbody>
</table>

In this classic article, Jewkes et al. (1998) provide an in-depth qualitative examination of the way social factors (including gender and other power dynamics) influence South African nurses’ treatment of patients. The authors showcase an approach that is historically and culturally attuned and that cuts across political, sociological and health systems issues, demonstrating the interconnectedness of factors influencing nurse (and, by implication, most HRH) behaviours and choices. The article serves as an important example of the way ethnographic methods can create space for new, unexpected findings. Acknowledging that patient abuse was not an initial theme of their research, the authors demonstrate how minimally structured interviews, focus groups and non-participant observation facilitated an in-depth exploration of the emergent theme of patient abuse. The presentation of findings according to “grounded” themes acts as a useful guide to younger researchers seeking to develop an approach to data synthesis in the absence of a broad, deep literature. This article is a forerunner of what has become a more substantial body of work documenting various aspects of disrespect and abuse by health workers in low- and middle-income countries.


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector hospital emergency ward providers and users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Niger</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: ethnography; five months participant observation</td>
</tr>
<tr>
<td>Research inference</td>
<td>Exploratory</td>
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This exploratory account produces “thick” descriptions of the co-production of practical norms (with perverse and protective outcomes) that guide the decisions and behaviours of health workers in a busy hospital department in Niger. The author uses ethnographic methods, embedding himself in the day-to-day routines of a large teaching hospital to develop deeper insights into the reasoning and rationales for seemingly corrupt or uncaring behaviours by health workers that frequently leave patients destitute. In so doing, Hahonou provides a nuanced explanation for health worker performance, and demonstrates the value of questioning
dominant theories or explanations of common practices. Such “thick” descriptions of the inconsistencies and perceived irrationalities in health worker practices have a long history in health systems and policy research, with notable other examples including Aitken’s (1994) and Justice’s (1990) work in Nepal, and George’s (2009) work on accountability in the Indian public sector.


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<tr>
<th>Health workers</th>
<th>Public and private primary health centre doctors and nurses</th>
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<tr>
<td>Geographical area</td>
<td>South Africa</td>
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<tr>
<td>Research methods</td>
<td>Mixed: Focus group discussions with younger and older women; provider open-ended interviews and self-administered questionnaires</td>
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<td>Research inference</td>
<td>Exploratory</td>
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This seminal article from Gilson et al. (2005) develops a conceptual framework for exploring the intersecting role of workplace and patient–provider trust in health worker performance and service responsiveness. The article reflects on the multilayered nature of health workers’ performance, which is simultaneously influenced by their trust in employers, supervisors and colleagues, and their expectations of and relationships with patients. The authors demonstrate how these multiple human relationships (collegial, supervisorial, patient–provider) are at the centre of understanding health worker and health system behaviours. Further, the use of mixed methods to build and then critique the framework in the South African setting provides an example of how to carry out exploratory research and apply the principles of qualitative validation.

4.3.3 Performance improvement


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<th>Multiple public sector facility based health workers</th>
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<td>Geographical area</td>
<td>United Republic of Tanzania</td>
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<tr>
<td>Research methods</td>
<td>Qualitative: description of long term participatory process</td>
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<td>Research inference</td>
<td>Emancipatory</td>
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Bradley et al. (2002) describe an emancipatory, participatory action research project designed to evaluate and strengthen health worker performance and service quality in the reproductive health units of Tanzanian primary health centres. The article describes a range of strategies used in a long-term participatory quality-improvement project. These strategies include defining quality of care, identifying problems in health facilities, developing locally owned solutions, and monitoring and evaluation methods. In the course of describing these strategies, the article stresses the importance of building relationships at the subnational level, which in turn enable iterative adjustments to health workers’ mindsets, and evaluation approaches that support more flexible and arguably more sustainable approaches to service delivery. The authors suggest that the participatory action research approach, although slower, is more effective than more traditionally technocratic, target-oriented methods of performance improvement. The article provides one example of a useful and accessible introduction to the concept and logic of participatory action research and its relevance to HRH management and performance. A number of other excellent examples, including Peacock et al.’s (2011) exploration of how lay health workers can contribute to participatory evaluation, may be found in Loewenson et al. (2014).

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<td>Geographical area</td>
<td>Pakistan</td>
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<tr>
<td>Research methods</td>
<td>Mixed: health management information system data, financial records and project documents; qualitative interviews and focus group discussions with providers and community members</td>
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<tr>
<td>Research inference</td>
<td>Explanatory</td>
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Witter et al. (2011) make use of a pragmatic, wide-ranging, mixed-method study to develop a rich picture of the historical and contextual contingencies surrounding a performance-based financing project in Pakistan. The authors demonstrate how performance-based financing programme theories often make “black box” assumptions about the motivational mechanisms in play; they provide an example of how other researchers might expand the parameters of traditional performance improvement evaluations to explore the multilayered and intersecting factors influencing the success (or otherwise) of similar interventions. This study, among others (e.g. Paul et al., 2014), builds on earlier important work by Ssengooba et al. (2012), which sought to challenge the assumptions of many emerging performance-based financing evaluations and to explore the reasons for variable success of performance-based financing policy and programmes.

4.4 Research challenges, gaps and future directions

Health policy and systems research (HPSR) draws on a range of disciplinary perspectives and embraces a wide range of understandings about social and political reality (Gilson, 2012). The following reflections on the methodological and definitional challenges in performance measurement and evaluation draw from the critical realist and relativist knowledge paradigms within HPSR.

Overall there is significant blurring between the concepts of “performance” and “quality” in the broader performance literature. This blurring is problematic as it places implicit responsibility for overall quality of care on (typically) frontline health workers; and yet at the individual, service or system level, quality is necessarily dependent on a range of intersecting health system functions (Hanefeld et al., 2017; Topp, 2017). Indeed, much of the literature on health worker performance focuses on the difference between whether health workers “can do” and “will do” certain tasks (for example, performance research focused on measurement of competency and adherence; see Table 4.2), often assuming the gap between the two relates primarily to individual motivation (Das et al., 2016). In fact, as discussed above, basic conditions and other important social, organizational and cultural cues necessary for health workers to be effective may be lacking (Gilson et al., 2017; Hou et al., 2016; Jaskiewicz and Tulenko, 2012).

Performance measurement provides a critical gauge for policy-makers, programmers and managers to plan and respond to. But efforts to improve health outcomes and strengthen health systems in many low- and middle-income countries still rely to a large degree on globally defined standards and indicators of health worker performance, with many studies selecting only one or two dimensions of focus (although some attempts have been made to bring together more dimensions, albeit with limited empirical data (Asabir et al., 2013)). Globally accepted indicators (such as rates of maternal or infant mortality, or numbers of births attended by skilled attendants) can and do provide important information (Mace et al., 2014; Rowe, 2013). But intentionally or unintentionally, such measures decontextualize and oversimplify aspects of health worker practice (Spangler, 2012), are punitive in approach, and
focus on negative indicators such as absenteeism. Focus on such internationally accepted indicators may also overshadow locally acknowledged need for investment in other aspects of health system operations (Storeng and Béhague, 2017). Closer regard for the ethics and cost of performance evaluation methodologies, in particular the use of mystery patients without disclosure to health workers, is also required (Rhodes and Miller, 2012).

To date, based on the search done for this Reader, self-identified health worker performance research, including health economic evaluations, has been dominated by public-sector hospital-based studies focusing on measures of clinical performance among nurses and doctors. Although some low- and middle-income country work investigates performance of health workers in the private sector (Coarasa et al., 2017; Lindelöw et al., 2003) and performance of non-clinical cadres and non-allopathic practitioners (Jaskiewicz and Tulenko, 2012; Vareilles et al., 2017), examples of such research remain less common and methodologically less evolved. Partly as a result of widespread reliance on globally accepted performance indicators, examples of theory-driven performance evaluation remain comparatively rare, with efforts to improve performance typically directed towards “tactical” interventions – that is, interventions that target localized behaviour and decision-making among frontline health workers – rather than “strategic” actions taking place at the policy or institutional governance level (Fox, 2015). Yet, as illustrated by Gilson et al. (2005), knowledge derived from theory-driven research is important not only as a basis for more appropriate understanding of the way performance is constituted in context but also for its contribution and advancement to understanding of performance and performance improvement more broadly.

HSPR views performance as the product of contextualized decisions, behaviours and relationships. Recognizing such, this chapter has sought to highlight the importance of HSPR researchers embracing the concept of performance as practice, and investing far more in exploratory and explanatory work to improve the state of knowledge about the contexts in which health workers live and work. Improved understanding of these contexts should in turn inform the development of performance measures more sensitive to the resource-constrained realities of many low- and middle-income country service settings and to locally applicable improvement strategies (Pawson, 2013; Storeng and Béhague, 2017). The examples of participatory action research and social accountability interventions alluded to above, which often rely on longer timeframes and theory-driven design, provide two examples of such an “embedded” approach to performance evaluation and improvement – an approach that aims to produce locally meaningful indicators in the context of deeper systemic changes to health system relationships or resourcing (Bradley et al., 2002; Schaaf et al., 2017). To deliver on the promise of such methods, however, HSP researchers are challenged to place the voices of health workers, clients and patients at the centre of enquiry (Sheikh et al., 2014).

Acknowledgements

The author sincerely thanks Sophie Witter, Luis Huicho, Asha George, Kerry Scott and Veloshnee Govender for their input in this chapter.
References


Part B. How are health workers supported to deliver services effectively and equitably?


Part C. How are human resources for health governed?
Chapter 5.

Health worker motivation: individual, organizational and cultural factors

Aarushi Bhatnagar

5.1 Defining the chapter

Motivation is both a driver and a consequence of health worker performance (Bhatnagar, 2014; Borkowski, 2009). Motivated health workers are likely to attend to their clients and provide better care, and their improved performance affirms and drives them to achieve their goals further. This relationship between motivation and performance is influenced further by the organizational climate and social context within which health workers are positioned. The objective of this chapter is to present innovative health policy and systems research (HPSR) carried out to understand what motivates human resources for health (HRH). It aims to describe research that has used different theoretical and methodological approaches to measure motivation among various health worker cadres. In particular, this chapter describes research that has studied the role of organizational and social environments within which health workers perform in affecting their motivation, including specific interventions such as performance-based financing. Finally, it seeks to collate research carried out to understand job preferences for and retention in remote and rural areas, because these in turn are influenced by motivation to serve in such conditions. This chapter excludes primary research on the role of meso-level determinants such as leadership, management, governance, and the policy and political environment in motivating HRH, because these themes are covered in other chapters of this reader.

5.2 Background on health worker motivation

Motivation can be understood as a psychological process aimed at achieving both personal and organizational goals, developed among workers due to a combination of their personal needs and desires, the organizational context within which they work, and the community of which they are a part (Bhatnagar, 2014). Motivation has been studied extensively in a variety of disciplines, including psychology, organizational behaviour and economics, particularly in high-income countries. In the context of organizational psychology and behaviour, motivation is generally explained by two sets of overlapping theories classified as content and process theories. Classic textbooks in these fields by Borkowski (2009) and Burns et al. (2012) provide a rich summary of these theories and their inception, and also present empirical evidence from the health sector that supports them. Content theories of motivation postulate that people are motivated by the desire to satisfy their inner needs and values. On the other hand, process theories of motivation focus more on the cognitive processes underlying motivation, including factors that initiate, direct, sustain and halt behaviour. These cognitive processes shed light on the overall context, highlighting practices and interactions in which work is done and the reactions of employees to work (Burns et al., 2012). While the empirical evidence presented in these textbooks is predominantly from high-income countries, Dolea and Adams (2005), in their review of motivation theories, highlight their application in several low- and middle-income countries.
Motivation is a complex construct, closely interrelated with the concepts of job satisfaction, retention and performance. While motivation in the context of work is typically defined as “willingness to exert and maintain an effort towards organizational goals” (Franco et al., 2002), job satisfaction is referred to as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experience” (Locke, 1976, p. 1300). Although highly related, and often used interchangeably, motivation and job satisfaction are distinct constructs (Cummings and Bigelow, 1976). While the former pertains to a person’s intention to achieve organizational goals, the latter is a reference to his or her attitude or emotional state related to that organizational setting. Despite these differences, the two concepts, fundamental to any human resource, are interdependent and hence influenced by a similar set of individual, organizational and sociocultural factors (Dolea and Adams, 2005; Franco et al., 2002). Given that motivated individuals are likely to remain in their jobs for longer and perform better, determinants of retention and performance of health workers are also associated closely with factors influencing motivation.

The seminal work carried out by Franco et al. (2002) was one of the first to apply various theories of motivation to develop a conceptual framework for understanding determinants of motivation for the health workforce, especially people working in low-resource settings. As described above, Franco et al. (2002, p. 1255) defined motivation in the work context as the “willingness to exert and maintain an effort towards organizational goals”. The key attribute of their conceptual framework, however, was the postulation that motivation develops in individuals as a result of the interaction between individual processes, immediate organizational work context and cultural dynamics. Individual processes pertain to a person’s goals, values and expectations along with self-efficacy. The framework further characterizes organizational factors into organizational resources (infrastructure, medicines, supplies, human resources, monetary funds), structures (hierarchies, autonomy, management, feedback), processes (communication, procedures of work) and culture (set of shared norms, leadership). The broader cultural factors include association between existing social norms and functioning of an organization as well as societal values and expectations manifested as relationships between clients and health workers. Most of the subsequent research on health worker motivation has adapted and used Franco et al.’s framework.

Many economists have also applied psychological theories of motivation to better understand labour markets. The most common postulation pertains to “crowding out” of intrinsic motivation due to extrinsic incentives (Frey and Jegen, 2000). It is assumed that individuals are motivated from within and by external stimuli of different kinds (Gagné and Deci, 2005); and while higher motivation from intrinsic and extrinsic factors results in greater efforts exerted for a task, there could also be certain instances in which the two types of motivation may not move in the same direction (Frey, 1997). This has relevant application for the health workforce as well, especially in the context of low- and middle-income countries, where low wages are systemic. Several performance-based financing schemes have been initiated to improve performance of service delivery indicators, and these affect motivation of health workers. While performance-based financing has typically been criticized for crowding out intrinsic motivation of health workers, an article by Lohmann et al. (2016), by applying the self-determination theory of motivation, argues that performance-based financing does not necessarily have an adverse effect on intrinsic motivation but could in fact affect both intrinsic and extrinsic motivations, depending on how it is designed, implemented and evaluated.

Several reviews and international agency reports have attempted to collate research carried out on understanding what motivates health workers in low- and middle-income countries. Willis-Shattuck et al. (2008), in their review of primary research articles based in low- and middle-income countries, concluded that financial rewards, career development, continuing
education, facility infrastructure, resource availability, facility management, and recognition and appreciation were some of the main motivating factors among health workers. Similarly, Mathauer and Imhoff (2006) synthesized studies that have explored the role of non-financial incentives in motivating health workers across African countries. More recently, Okello and Gilson (2015) carried out a review to ascertain the role of trust relationships between health workers and their supervisors, managers, employing organizations, co-workers and patients in directly or indirectly motivating health workers. Hongoro and Normand (2006) and Singh et al. (2015) have studied community health worker programmes in various contexts to review organizational factors, including incentive schemes, for motivating community health workers. Given that community health workers across low- and middle-income countries typically come from a different socioeconomic background than professional health workers such as doctors, nurses and midwives, and have a different mandate in terms of the services that they provide, understanding their motivation to work warrants special attention and efforts.

In addition, several reviews have been carried out to synthesize evidence on retention and job preferences of health workers. Dieleman et al. (2011) conducted a realist review to collate findings on factors that influence health workers to remain and work in rural and remote postings. Similarly, a systematic review of discrete choice experiments, a technique to elicit stated job preferences, particularly in the context of rural and remote postings, concluded that bonus payments and postgraduate training opportunities were the most sought after choices, typically among doctors and medical students (Mandeville et al., 2014). While these reviews do not directly address the question of what motivates health workers, they do provide a comprehensive understanding of various individual, organizational and cultural factors that influence job preferences of health workers. Many of these factors in turn are closely interlinked with motivation of health workers and drive them towards achieving their professional goals.

As complex as it may be to define and measure, motivation is an essential ingredient for determining the performance of health workers and is key to any effort towards strengthening the health workforce. While several reviews and studies have gathered evidence on factors influencing motivation of health workers, this chapter aims to describe selected primary research on health worker motivation carried out in recent years across different low- and middle-income countries and pertaining to various cadres of the health workforce. These articles were selected from a pool collated from a doctoral seminar at the Johns Hopkins School of Public Health, a crowdsourcing exercise supported by Health Systems Global and subsequent searches using the bibliography of key articles and on relevant databases and search engines (PubMed and Google Scholar). The main criteria used to select the articles included diversity in region, cadre and methods, as well as the quality of the studies based on standard guidelines.

5.3 Illustrative primary research articles

This section describes the seven articles selected for this reader that demonstrate innovative research carried out to understand motivation of health workers over the past decade. An attempt has been made to showcase articles using different quantitative and qualitative methodologies, focusing on various types of health provider working in low-resource settings across different geographical regions. The first two articles (Chandler et al., 2009; Smith et al., 2013) illustrate different techniques to measure motivation, while the next two articles (Huicho et al., 2015; Razee et al., 2012) focus on factors that inspire health workers to serve in rural and remote areas. The fifth article (Shen et al., 2017) describes an impact evaluation of a specific intervention, namely performance-based financing, designed to improve health service delivery and motivation of health workers. The final two articles (Aberese-Ako et al., 2014; Choi et al., 2016) highlight the role of meso-level determinants such as leadership and organizational justice in creating a more enabling environment for health workers.
5.3.1 Measuring health worker motivation


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<th>Health workers</th>
<th>Public sector non-physician clinicians</th>
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<td>Geographical area</td>
<td>United Republic of Tanzania</td>
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<tr>
<td>Research methods</td>
<td>Mixed: ethnography in two district public hospitals over 6 months and Likert scale development with clinical officers in 13 public hospitals and assistant medical officers in other smaller public hospitals</td>
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<td>Research inference</td>
<td>Exploratory</td>
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This article adapted the Franco et al. (2002) framework to measure motivation among non-physician clinicians working in district hospitals with poor-quality service delivery in two regions of the United Republic of Tanzania. Using a combination of ethnographic research to understand the working environment of non-physician clinicians and quantitative measurement of motivation constructs, the authors distinguished between intrinsic and environmental factors of motivation. The ethnographic research included interviews with clinicians and observations of clinician–patient consultations, meetings attended by clinicians, and clinician daily routines. Based on these qualitative findings, and using existing quantitative questionnaires, the authors developed a scale, with 62 items on a five-point Likert scale, to measure various constructs of motivation for non-physician clinicians. While various studies attempting to measure motivation have used context-specific scales (Mbindyo et al., 2009; Peters et al., 2010; Purohit et al., 2016), this study is distinctive in its adaptation of the Franco et al. (2002) conceptual framework and subsequent application of the measurement scale, given the rich ethnographic research carried out to validate the above-mentioned framework. Additionally, the article focused on motivation of non-physician clinicians, a cadre rarely studied, especially given its relevance to task-shifting in low- and middle-income countries.


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<th>Health workers</th>
<th>Nursing students</th>
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<td>Geographical area</td>
<td>South Africa, Kenya, Thailand</td>
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<tr>
<td>Research methods</td>
<td>Quantitative dictator games</td>
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<td>Research inference</td>
<td>Exploratory</td>
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This article describes the use of economic field experiments to measure intrinsic motivation of health workers, thereby contributing to evidence on the role of personal values such as altruism in encouraging health workers to work in the public sector. This study was based in three low- and middle-income countries (Kenya, South Africa, Thailand) and used a standard dictator game, where nursing students were given a real financial endowment to split between themselves and others in order to detect “the presence and power of altruism in decision-making” (p. 165). Each nursing student was asked to split the endowment between him- or herself, a patient and a poor person. In general, the study found nursing students demonstrate greater altruistic behaviour compared with other professionals, although there were variations across countries, genders and age groups. The innovative techniques used in this study to measure altruistic behaviour allow for greater consideration for personal values, rather than only job characteristics, in order to understand determinants of motivation. The cross-country comparison also reveals the significance of
socioeconomic contexts for influencing altruistic behaviour. For example, the authors conclude that the relatively lower levels of altruism exhibited by respondents in South Africa and Kenya compared with Thailand could be due to higher inequalities and lower solidarity existing in those societies.

5.3.2 Social factors of motivation and job preferences


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<th>Health workers</th>
<th>Public and private sector health extension workers, community health workers, nurses</th>
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<tr>
<td>Geographical area</td>
<td>Papua New Guinea</td>
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<td>Research methods</td>
<td>Qualitative: in-depth interviews</td>
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<td>Exploratory</td>
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This article describes the social environment and its interactions with health worker motivation and performance of health extension workers, community health workers and nurses in Papua New Guinea. Using a qualitative research design, Razee et al. (2012) carried out in-depth interviews with and observations of several types of primary health-care provider serving in rural Papua New Guinea in both government and private facilities. The article concludes that the identity of health workers and perceptions of the community about them are important factors contributing to their motivation. In particular, the article highlights how respect received from the community and community ownership of health service delivery are significant enablers. The authors also describe the process of building trust and cooperation between health workers and the community. The article explores the role of health worker gender and family life, shedding light on the dual burden of managing work and family responsibilities, particularly among female health workers. Furthermore, this study describes how violence in the workplace and in the community at large results in demotivation of female health workers. On the whole, this article provides a rich narrative on the social context and interactions affecting health worker motivation in a very diverse country, where the evidence base for HRH is limited.


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<th>Health workers</th>
<th>Medical, nursing and midwifery public university students</th>
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<td>Geographical area</td>
<td>Peru</td>
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<tr>
<td>Research methods</td>
<td>Qualitative: in-depth interviews and focus group discussions</td>
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<td>Research inference</td>
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This article focuses on a similar topic as above but uses a different methodological approach. The authors interview medical, nursing and midwifery students to understand reasons behind their career choices and their preferences for rural postings in Peru. Using a rich qualitative study design, from two distinct regions in the country, the article describes career choices among medical, nursing and midwifery students to be driven mostly by vocation and for the opportunity to improve the health of their communities. Interestingly, medical students also considered that their profession would improve their socioeconomic status in the society, a belief not validated by labour market conditions in Peru, as noted by the authors. In addition, the study found a mixed reaction to rural postings. While medical students understood the
importance of such postings, both from the point of view of serving people most in need and as valuable professional experience, they expressed reservations about difficult working environments and in general had a stronger predilection for working in urban areas. Nursing and midwifery students, however, especially those from rural backgrounds, expressed a stronger willingness to serve in rural areas.

Although preferences of students are likely to be different from people who are actually serving in remote areas, this article opens a discussion for policy-makers and medical education institutions to acknowledge these preferences and incorporate them in HRH policies and interventions to attract students to work in difficult-to-serve areas. A study conducted in a rural Indian setting aiming to understand why doctors have stayed on to serve in remote areas finds some similarities to the above findings, namely geographical and ethnic tribal affinities, rural origins and personal values of service (Sheikh et al., 2012); however, it also sheds light on a host of other factors, including benefits to family life (location of spouse, availability of school for children), relationships with co-workers and surrounding communities, and “acclimatization over time to rural life” (p. 192).

5.3.3 Evaluating the impact of motivation interventions


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<td>Geographical area</td>
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<td>Research methods</td>
<td>Quantitative: randomized control design for pre-post changes</td>
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<td>Research inference</td>
<td>Influence/Explanatory</td>
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Shen at al. (2017) describe a quantitative impact assessment of a performance-based financing scheme on the motivation of health workers in Zambia. While several studies have tried to assess the effectiveness of performance-based financing on service delivery and quality of care outcomes (Basinga et al., 2011; Binyaruka et al., 2015; Engineer et al., 2016), very few have attempted to measure its impact on health worker motivation, although a few studies have aimed to understand the mechanisms through which performance-based financing affects motivation (Bertone et al., 2016; Bhatnagar & George, 2016; Witter et al., 2011). This article is one of the first to measure impact of performance-based financing on motivation, job satisfaction and retention and to understand the pathways that explain the changes in a low- and middle-income country setting. This study, based on a quasi-experimental design, used existing theoretical frameworks and instruments, albeit not developed originally in a low- and middle-income country setting, to measure motivation and job satisfaction of health workers receiving performance-based financing compared with those who are not. The study subsequently carried out qualitative interviews to explore the channels through which incentive payments affected motivation, thereby filling in an obvious lacuna in the performance-based financing evidence base. The authors found that performance-based financing had a positive impact on job satisfaction and a negative impact on attrition, although it did not have “marked effects on motivation” (p. 10). The qualitative study corroborated not only these findings but also more recent postulation that performance-based financing could improve both extrinsic and intrinsic motivations by providing a better platform for serving the community and opportunities for professional development and professional dedication.
While the previous article demonstrates the role of financial incentives in bringing about a change, a case study by Ruck and Darwish (1991) (described in detail in Chapter 3) explains how the introduction of a training programme for improving nutrition services increased motivation and lowered absenteeism among health workers in Egypt. The training programme not only was didactic but also included regular feedback and reinforced supervision, thereby appreciating the value of health workers’ efforts to a greater extent.

In addition to the articles above, two articles included in Chapter 6 on leadership and management explore the role of meso-level organizational determinants in motivating health workers (Aberese-Ako et al., 2014; Choi et al., 2016). These are described briefly below.

5.3.4 Meso-level determinants of motivation


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<td>Geographical area</td>
<td>Ghana</td>
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<td>Research methods</td>
<td>Qualitative: Ethnography; participant observation, conversation and in depth interviews over 16 months in two public hospitals</td>
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<td>Research inference</td>
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Aberese-Ako et al. (2014) conducted an ethnographic study including direct observations, conversations and in-depth interviews to understand the level and nature of perceived organizational justice and its implications on motivation and responsiveness of health workers in Ghana. The authors found that health workers perceived procedural, distributive and interactional injustice at the national policy level in terms of poor conditions of service, and inequitable distribution of incentives, lack of respect and protection at the organizational level. The authors described that while those who were intrinsically motivated were able to overcome their discontentment with these attributes in their working environment and respond to the needs of their clients, there were some health workers, especially those on the front line, who were not as responsive. The authors argued that health workers should be considered internal clients of a health system, and their perceptions of fairness and justice in organizational and governance structures should be given importance.


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<td>Geographical area</td>
<td>Malaysia</td>
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<td>Research methods</td>
<td>Quantitative: provider Likert survey and regression analysis</td>
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<td>Research inference</td>
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Choi et al. (2016) measured the role of transformational leadership and employee empowerment in improving job satisfaction perceived by nurses in Malaysia. The authors hypothesized and subsequently proved, using data from a cross-sectional survey, that transformational leadership enhances empowerment, especially among the nursing cadre, which is considered
to be of relatively low status. They also found that transformational leadership has a positive association with job satisfaction. Moreover, they showed that there was a partial mediating effect, suggesting that employee empowerment explained at least some component of the positive association between transformational leadership and job satisfaction. The contribution of this article extends from using innovating and rigorous methods to measure these complex constructs, to explaining that transformational leadership must be encouraged among managers of nursing staff while empowerment among the nursing cadre should be simultaneously inculcated.

5.4 Research challenges

The main difficulty faced in selecting articles for this chapter was the complexity of how motivation is defined, given its various theoretical underpinnings and influencing factors. Similarly, various theories of motivation have their own definition of what constitutes intrinsic versus extrinsic motivation, or what determinants are from within the individual and what belong to the broader context within which he or she is working. This also made it difficult to compare and contrast studies that used different theoretical paradigms for understanding motivation. In addition, it was difficult to select among studies that used similar methods, albeit in varied contexts and for different cadres of HRH. For example, most studies measured motivation using qualitative or ethnographic methods, or descriptive quantitative techniques using self-reported responses on structured scales.

In addition, this section attempted to put forth research from across all regions but did not succeed in generating a pool of good-quality articles that were equally representative of all parts of the world. A large proportion of research on the issue of health worker motivation was based in sub-Saharan Africa and south Asia, with a smaller regional focus on other middle-income country settings such as those in Latin America and eastern and central Asia. Although contributions from all languages were invited during crowdsourcing of articles for the reader, all subsequent searches were carried out among articles published in English, resulting in excluding those in, for example, Spanish, Portuguese and Russian. Similarly, the bulk of the current evidence base focused on medical doctors and nurses; there is an emerging body of work on community health workers, but less on other cadres of the health workforce. Additionally, most of the research on health worker motivation uses cross-sectional study designs. Longitudinal study designs, such as following a cohort of students over a period of time to see how their attitudes and choices evolve, would enable research to account for the dynamic and complex nature of human behaviours.

5.5 Future research directions and gaps

As mentioned above, there is no agreement in the literature on the correct course for defining and measuring motivation. Moreover, to date no study has critically examined the existing methods, especially in the context of low- and middle-income countries, used for doing the same. As researchers in the field of HPSR, it is necessary for us to take a step back and question whether we are using appropriate methodologies, drawing adequately from theoretical disciplines and understanding motivation of health workers as a set of human behaviours and not only as organizational processes. In this regard, future endeavours for measuring motivation of health workers should be critical of existing methods and strive continuously to develop more innovative techniques to measure this complex construct. For example, further experimentation could be done with existing techniques to elicit choice, building on classic dictator games, to understand motivation for performing different tasks. In addition, measures such as speed, accuracy and persistence with which tasks are completed could also be used to gauge motivation of health workers (Touré-Tillery & Fishbach, 2014). It is also important to
move beyond descriptive studies on what motivates health workers to assess effectiveness of different interventions for improving motivation. Future research of this nature should use a mixed-methods approach, aiming not only to assess interventions but also to understand why and how changes are taking place.

As described above, most of the evidence base for health worker motivation studies, using quantitative methods, is based on self-reported responses on structured scales measured at a given timepoint. Very few of these scales, however, have been validated using appropriate statistical methodologies or measured with advanced techniques such as structural equation modelling (Lohmann et al., 2017). For future researchers attempting to design context-specific scales for measuring motivation, it is essential to follow a theoretical framework and validate the scale against that framework using appropriate techniques. It is also important to note that these ratings are likely to be influenced by social desirability bias as well as events that have taken place just before the conduct of the study (such as an altercation in the workplace or a positive patient outcome) and may not necessarily reflect the true opinions of the respondents. Similarly, the rigour in qualitative methods for measuring motivation needs to be strengthened, with studies demonstrating various ways in which the trustworthiness, namely credibility, dependability, transferability and confirmability (Jensen, 2008), of their findings were assessed.

As mentioned above, most of the literature on health worker motivation includes studies exploring determinants of motivation, but very few studies have aimed to measure the impact of specific programmes carried out to motivate health workers. This is particularly puzzling as there have been many initiatives, especially in low-resource settings, targeted at improving motivation and performance of health workers, such as but not restricted to performance-based financing and performance management interventions (Dieleman et al., 2006; Shen et al., 2017). While impact evaluations are methodologically difficult for social science research, time-consuming and resource-intensive, there is a need to expand the current evidence base for such studies and hence an area for future investigation and investment.

Acknowledgements

The author is grateful to Marjolein Dieleman, Asha George, Kerry Scott and Veloshnee Govender for guidance and inputs in writing this chapter.


Part C. How are human resources for health governed?


Chapter 6.

Leadership, management and organizational cultures

Aku Kwamie, Aarushi Bhatnagar and Uta Lehmann

6.1 Defining the chapter

Leadership, management and organizational cultures are key concepts and practices in human resources for health (HRH), with very substantial bodies of literature not only in the field of health policy and systems research (HPSR) but also in organizational and management sciences, public management sciences, sociology, and neighbouring fields such as education. The objective of this chapter is to explore the concepts of leadership, management and organizational cultures relevant for HRH, and how these have been innovatively researched. Specifically, this chapter attends to the topics of organizational and managerial cultures, including manager and frontline staff relations, change management, and leadership and management development and capacity-strengthening, from the perspective of HPSR.

This chapter acknowledges the influence of leadership, management and organizational cultures on health worker performance, motivation, training and supervision, but these themes are covered more deeply elsewhere in the reader. This chapter does not address change management issues of task-shifting or organizational conflict issues, such as industrial action and the dynamics of unions in health-care settings as they relate to leadership, management and organizational cultures, because these are beyond its scope.

6.2 Background on leadership, management and organizational cultures

While there are variations in the definitions of leadership and management and the similarities and differences between them, most sources agree that there is substantial overlap and that both are central for the functioning of organizations. The World Health Organization (WHO, 2007b, p. 1) suggests that “while leaders set the strategic vision and mobilize the efforts towards its realization, good managers ensure effective organization and utilization of resources to achieve results and meet the aims”. This means that a key distinction between leadership and management is the former’s stronger focus on developing, nurturing and achieving organizational vision, whereas the latter is oriented more towards operationalizing organizational function. The definition of organizational culture is largely agreed to be about the pattern of values, beliefs, traditions and assumptions that organizational members share (Mansour et al., 2005).

Current academic debates about leadership and management in (primarily public) health systems have many antecedents. Of note in low- and middle-income countries are bodies of literature focusing on human resource management in the context of health sector reforms of the late 1990s (represented prominently in the early volumes of the journal Human Resources for Health; see, for example, work by Buchan (2004), who draws lessons on human resource management from other, mainly private-sector literature; Kohlemainen-Aitken (2004), who
focuses on the mechanisms and impacts of decentralization on human resource management; and Bossert (1998), who describes the decision space of managers in decentralized health systems. Leadership and management have also been considered in the context of complex adaptive systems; for example, see Plsek and Wilson (2001), who point to the importance of viewing organizations as complex adaptive systems in order to bring about more innovative management styles in health. Leadership and management, then, both have a role in shaping organizational cultures and in turn are shaped by them.

In 2007 WHO issued a series of working papers on strengthening leadership and management in low- and middle-income countries as a way of supporting overall health system strengthening (WHO, 2007a, 2007b), resulting in a framework to answer the question “What conditions are necessary for good leadership and management?” (WHO, 2007b, p. 2). The framework points to the interaction of four main organizational factors (adequate numbers of managers; adequate competencies; functional support systems; enabling working environments) as necessary for good leadership and management to emerge, which in turn can lead to improved health services and health goals (Figure 6.1).

Figure 6.1 Leadership and management in health systems


Since then, as the appreciation for the complexity and interconnectivity of health systems has deepened, so too has our understanding of leadership, management and organizational cultures. Gilson and Daire (2011), for example, highlight the importance of leadership as the enabler to allow actors within organizations to face challenges and yet still achieve results despite complex contexts. This involves creating vision and strategic direction for the organization, and then communicating, inspiring and maintaining the attainment of that vision. Key is the notion that leadership is not found only in particular positions or at the organizational apex but is distributed throughout the organization. Bradley et al. (2015) focus on a definition of management that brings human, financial and technical resources to bear on achieving predetermined objectives, supported by a suite of core competencies. Kwamie (2015) stresses the need to view leadership and management as interactive and emergent,
and argues that weaknesses in leadership and management are linked to organizational challenges beyond individual competencies alone. Taken together, these three papers point to (i) the capacity for leadership and management reforms to challenge traditionally hierarchical organizational structures and cultures that characterize most health-care settings in low- and middle-income countries; (ii) the dual nature of leadership and management being both an individual and systemic capacity, which has implications for the transformative power of capacity-strengthening interventions; and (iii) the need for more policy and practice research on leadership, management and organizational cultures.

The 2016 flagship report of the Alliance for Health Policy and Systems Research on participatory leadership for health echoes these notions and further presents “the role of context, the reciprocal influence actors have upon one another’s interests and priorities, and the enabling environment within the health eco-system [as] important considerations in understanding, supporting and creating leadership that addresses the needs of the population in future-thinking health systems” (WHO, 2016, p. 8). This suggests a need for greater research to understand the effects of these dimensions on leadership, management and organizational cultures.

6.2.1 Research approaches for investigating leadership, management and organizational cultures

Diverse methodological approaches have been used to investigate the domains of leadership, management and organizational cultures. Some critical examples are presented here, mainly conducted within districts and hospitals, the operational “grounds” of much leadership and management practice, and where organizational cultures and structures are experienced by managers and staff.

Employing the use of theory has been important in deepening understandings of leadership, management and organizational cultures. Lipsky’s (1980) “street-level bureaucracy” theory has shed much light on how frontline public servants use discretion in enforcing their mandates in light of organizational contexts (and particularly when the lack of resources can cause them to shorten decision-making routines, which can affect policy intent). As another theory on discretion, Bossert’s decision-space theory has been applied (e.g. Kwamie et al., 2015a) and combined with complex leadership theory (Uhl-Bien et al., 2007), which conceptualizes organizations as complex contexts with unknowable futures that leaders cannot control. Instead, those in leadership and management draw on, and are part of, the interactions within organizational structures, giving rise to adaptive leadership and management patterns that seek to enable the future. The authors’ findings from Ghana demonstrate that top-down policy implementation constrained local managerial decision space, thereby giving rise to a local leadership type that was less responsive to local-level challenges and more geared towards serving the health system bureaucracy.

Theories of organizational trust have also been applied to health-care and hospital settings to effectively unwind complexities of the discrete elements at play within the organization (Gilson, 2006; Kramer, 1999). Trust, operating at individual and institutional levels, exists as an organizational mechanism of coordination and cooperation and is bound by perceptions of risk, uncertainty and vulnerability, and individual motivation, expectation and responsibility. The degree of organizational credibility will depend on how much the visible structures of the organization (vision, mission, operating policies) align with the invisible structures of the organization (individual needs, interpersonal and power relations). For example, Cogin et al. (2016) investigate hospital management in Australia through the use of a commitment-versus-control theoretical framework and in-depth interviews. They find that management controls designed to regulate staff behaviours (including standardized jobs, rules and close staff monitoring) are used more to manage nurses, allied health professionals and junior doctors, while more commitment-based approaches (such as goal-setting, socializing staff to organizational values and greater staff discretion) are used to manage senior physicians. Such
transactional forms of leadership focused on supervision, performance, role differentiation between staff cadres, and compliance through reward and punishment lead to negative job attitudes, staff frustration and operational inefficiencies. This is in contrast to theories on more transformational forms of leadership, which focus on motivating staff to perform beyond expected levels by helping them identify with organizational goals and interests, and engaging with individual staff values to encourage innovation and shape organizational context (Sarros et al., 2008).

Many qualitative research methods have been used in low- and middle-income countries to probe the human interactions that underpin these dynamics. For example, Aitken (1994) uses ethnography and organizational theory to study district health managers in Nepal. She finds the coexistence of two value systems underpinning the district health system – one official (based on the quality and number of health services delivered) and one actual (based on receiving and accounting for funds through progress reporting and providing staff with an income). These value systems have divergent aims and expectations and yet thrive together owing to a lack of organizational clarity; their existence explains managerial decision-making that may appear outwardly irrational but follows an internal logic. George (2009) also uses an ethnographic approach to explore issues of supervision and disciplinary action as they relate to managerial accountability in a district in India. The findings demonstrate the ongoing negotiation processes of accountability mediated by social relationships to the benefit and detriment of the health system at various times.

In highlighting the role of key actors that are often underrepresented, O’Meara et al. (2011) assess community participation and accountability as part of local budgeting and planning processes in Kenya. They find that lacking established community-planning units created challenges to realizing comprehensive community representation, and furthermore caused mismatch between evidence-based and demand-based planning.

The application of realist approaches is also useful in explicitly seeking causal explanations by linking the observed outcomes of interventions to the contexts in which they are deployed. From a realist perspective, especially with regard to interventions (whether policies or programmes), intended and unintended outcomes arise not only because of intervention design but also as a result of the interactions between the people engaging with the intervention and the overarching context into which the intervention is introduced. Marchal et al. (2010) use realist case studies to demonstrate how high-commitment practices (that is, bundles of balanced management practices, sound administration and participatory decision-making) work in two hospitals in Ghana. Dieleman et al (2009) use realist synthesis and find that globally, combining interventions that consist of participatory training and health system strengthening successfully lead to improving health worker performance through increasing health worker knowledge and skill, improving motivation, and encouraging health worker obligations to change.

Action learning – that is, the application of cycles of reflection and action to solve real problems – has proven a particularly suitable methodological approach to examining leadership, management and organizational cultures. An exemplar in this regard is the long-term District Innovation and Action Learning for Health Systems Development (DIALHS) project in South Africa, which partnered researchers and managers in cycles of action learning and systematic reflection to examine leadership typologies within district health systems. In particular, the project team was interested in understanding the challenges of centrally initiated interventions that aim to strengthen local-level leadership and management. Gilson et al. (2014) argue that new forms of leadership are needed to support systemic organizational change, and that managerial sense-making is important in mediating health worker discretion; Scott et al.’s (2014) findings determine that dissonance in organizational cultures at central levels can affect local-level leadership, governance and organizational relationships.
Several efforts have been made to measure leadership, management and organizational culture using quantitative techniques. These methods have been applied for testing different theoretical propositions and typically include creating composite indices for these latent constructs with reliable and validated psychometric properties. For example, Cummings et al. (2010) conducted a multidisciplinary literature review to collate several measurements of leadership styles and their association with various performance measures in nursing job satisfaction. They found that relational leadership styles were associated with higher nursing job satisfaction, whereas leadership styles focused on tasks alone do not achieve optimum satisfaction outcomes. Similarly, Scott et al. (2003) carried out a systematic review of quantitative questionnaires designed to measure organizational culture and change; they found 13 such instruments, varying in their underlying theory, scope, length and scientific properties. A low- and middle-income country example is found in the work of Jayasuriya et al. (2014), who examine the impact of organizational culture and climate on staff attitudes towards behaviours that build organizational citizenship (treating colleagues respectfully, and being helpful, efficient and effective). Using a self-administered questionnaire of a national sample of rural health workers in Papua New Guinea and multilevel regression analysis, their key finding is that an enhanced work climate results in higher levels of organizational citizenship (this article is highlighted in Chapter 4 on health worker performance).

Research on leadership, management and organizational cultures has usefully incorporated the use of theory, and spanned diverse research methods, both qualitative and quantitative. There do exist evidence gaps in both research topics and methodology, however; for example, there are few empirical articles on leadership and gender in low- and middle-income countries and community-level leadership (see section 6.4).

6.3 Illustrative primary research articles

Seven state-of-the-art primary research articles are included in this section. These articles reflect innovation, rigour and illuminating findings across the breadth of the above-noted methods and diverse geographical regions. These articles were selected from a pool collated from a doctoral seminar at the Johns Hopkins School of Public Health, a crowdsourcing exercise supported by Health Systems Global and subsequent searches using the bibliography of key articles and on relevant databases and search engines (PubMed and Google Scholar). The main criteria used to select the articles included diversity in region, cadre and methods, as well as the quality of the studies based on standard guidelines.

The inherent hierarchical and authoritative nature of public services in many countries, and how this filters into health leadership and management, is a theme that emerges in the work of Rocha et al. (2014) and Kwamie et al. (2015b). Rocha et al. (2014) and Choi et al. (2016) reflect on broader social and historical trends in Brazilian and Malaysian society, respectively, and how the embeddedness of organizational cultures within broader societal values in turn affects the health workforce. The ongoing implications of decentralization processes, particularly as they relate to power, resources and governance, and how these affect district- and facility-level leadership and management, are themes that emerge from the work of Nyikuri et al. (2015) and Kwamie et al. (2015b). Both papers demonstrate the complexities of decentralization as a critical health system reform that directly affects leadership and management, although its implementation may be varied. The social relations and negotiations involved in accountability emerge through Aberese-Ako et al.’s (2014) work on frontline staff perceptions of organizational fairness. Lehmann and Gilson’s (2015) methodological reflections and Prashanth et al.’s (2014) research strongly present how new and different approaches to capacity-strengthening can support sustainable organizational change. The balance and duality of organizational versus individual capacities for leadership and management is an overarching theme that emerges from all the articles, signalling the interplay of actors and their behaviours and decisions within organizations, and how the structures and procedures of organizations shape actors’ choices.
These seven articles have been defined broadly under the following three headings: understanding and measuring management, leadership and organizational cultures; effects of management and organizational cultures on health workers; and initiatives to improve leadership and organizational cultures.

6.3.1 Understanding and measuring management, leadership and organizational cultures


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Hospital-based nurses and auxiliary staff</th>
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<tbody>
<tr>
<td>Geographical area</td>
<td>Brazil</td>
</tr>
<tr>
<td>Research methods</td>
<td>Quantitative: provider survey</td>
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<tr>
<td>Research inference</td>
<td>Descriptive</td>
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Rocha et al. (2014) in Brazil use a cross-sectional study design to survey nurses and auxiliary staff in a public hospital to describe its organizational culture. The article uses a conceptual framework of the embeddedness of organizational cultures within broader social and historical contexts, and seeks to describe organizational culture in terms of the shared beliefs and values, collective identity and process of construction, and how these in turn influence workplace functioning. The findings point to the presence of hierarchical rigidity and power centralization, and insufficient recognition of staff well-being, satisfaction and motivation, although there is cooperation between staff. The authors argue that such process- and work-oriented organizational cultures reflect the broader Brazilian authoritative administrative cultures seen across several public organizations and that are historical in nature. This analysis usefully pushes understandings of HRH forward from the health policy and systems view that health systems are social and historical constructions, and thus the knowledge, standards and behaviours that give rise to organizational cultures are learned and transmitted through the prevailing values and beliefs.


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<tr>
<th>Health workers</th>
<th>Public sector primary health care managers</th>
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<tbody>
<tr>
<td>Geographical area</td>
<td>Kenya</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: Learning site collaborative research based on in-depth interviews and observation</td>
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<tr>
<td>Research inference</td>
<td>Explanatory/Emancipatory</td>
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In Kenya, Nyikuri et al. (2015) collected data from a “learning site” – a long-term collaborative research process between health managers and researchers in a set geographical location. Through cycles of action learning, which included formal and informal interviews and observation of managers’ daily routines over a 12-month period, and the analytical use of a framework examining the “hardware” (infrastructural, technological and financial inputs) and “software” (values, norms and behaviours), the authors address issues of primary health-care managers and their multiple accountabilities, daily routines and coping strategies amidst changing contexts of devolution. These changing contexts include the transfer of health facility ownership from national to county levels, and the simultaneous removal of user fees from public primary-level facilities and maternity services from public hospitals. The authors highlight the resilience and
adaptability needed by primary health-care managers to cope with resource scarcity and change; and they comment on the importance of relationships and governance as “micro-processes” – the ongoing, daily negotiation of power and decisions between local actors.


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<th>Health workers</th>
<th>Public sector district managers</th>
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<tr>
<td>Geographical area</td>
<td>Ghana</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: historical analysis based on literature review and key informant interviews</td>
</tr>
<tr>
<td>Research inference</td>
<td>Explanatory</td>
</tr>
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</table>

Using a theory-driven historical case study, Kwamie et al. (2015b) examine the historical processes and critical junctures between the development of the district health system and broader democratic governance developments as a way of explaining current configurations of district manager decision space in Ghana. In particular, the authors discuss the importance of the sequencing of decentralization processes (administrative, fiscal and political) in the actual shift in power to local levels, and the self-reinforcing centralizing tendencies of government decision-making over time that affect local leadership and management. Similar to Rocha et al.’s (2014) findings on the influence of social and historical forces on organizational cultures, this article forefronts historical patterns at both the macro- and micro-level on leadership and management capacities to perform their mandated functions. Additionally, this article highlights the complexities of decentralization for local managers and the challenges in translating the rhetoric of power transfers into practice. From a methodological perspective, this article uses an explicitly historical analysis, which remains an underused methodology in both HRH studies and HPSR.

6.3.2 Effects of management and organizational cultures on health workers


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<tr>
<th>Health workers</th>
<th>Multiple public sector hospital based health workers</th>
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<tr>
<td>Geographical area</td>
<td>Ghana</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: Ethnography; participant observation, conversation and in depth interviews over 16 months in two public hospitals</td>
</tr>
<tr>
<td>Research inference</td>
<td>Exploratory</td>
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Aberese-Ako et al. (2014) use hospital ethnography in two public facilities in Ghana to examine how frontline health workers perceive the fairness of the organizational support they receive, and how this in turn influences their motivation to be responsive to clients’ health-care needs. The authors find that frontline staff perceptions of unfairness and mistreatment by the management of their facilities hamper their own ability to deliver good-quality, people-centred care to clients; in essence, there exists a discontinuity of organizational values between what is expected to be delivered to external clients and what is being received by internal clients (that is, staff). Intrinsic motivation among some frontline staff, however, does appear to be a factor...
to support responsive care despite the organizational culture. This article importantly makes
the case for organizational credibility as a means of supporting health workers in meeting their
prescribed duties. As with the other articles in this section, the interplay of various elements of
the organizational context on health worker decision-making and behaviour is detected.

Choi SL, et al. (2016). Transformational leadership, empowerment, and job satisfaction: the
mediating role of employee empowerment. Hum Resour Health. 14(1):73

<table>
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<tr>
<th>Health workers</th>
<th>Public and private sector nurses</th>
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<tbody>
<tr>
<td>Geographical area</td>
<td>Malaysia</td>
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<tr>
<td>Research methods</td>
<td>Quantitative: provider Likert survey and regression analysis</td>
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<tr>
<td>Research inference</td>
<td>Exploratory</td>
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</table>

Choi et al. (2016) in Malaysia conduct a quantitative survey with a five-point Likert scale
investigating the constructs of transformational leadership, empowerment and job satisfaction
with nursing students in private and public facilities. The authors discuss hierarchical structures
within hospitals that position nurses beneath physicians, commonplace across clinical settings,
and suggest the need for new forms of leadership and empowerment to increase nursing
job satisfaction. This study adds a key finding that employee empowerment mediates the
relationship between transformational leadership and job satisfaction. The role of employee
empowerment has been little explored previously, and the authors convincingly argue for
transformational leadership and employee empowerment as effective human resource
practices to improve management and enhance job satisfaction among staff.

6.3.3 Initiatives to improve leadership and organizational cultures

Prashanth N, et al. (2014). Advancing the application of systems thinking in health: a realist
evaluation of a capacity building programme for district managers in Tumkur, India. Health Res
Policy Syst. 12:42

<table>
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<tr>
<th>Health workers</th>
<th>Public sector primary health care facility managers</th>
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</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>India</td>
</tr>
<tr>
<td>Research methods</td>
<td>Mixed: realist evaluation using qualitative data (interviews and observation notes) and quantitative measures of commitment, self-efficacy and supervision style</td>
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<tr>
<td>Research inference</td>
<td>Explanatory</td>
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In two districts in India, Prashanth et al. (2014) conducted a realist case study with both
qualitative and quantitative methods to explain the observed outcomes of a district manager
capacity-strengthening programme over time. The authors examine the individual, institutional
and contextual influences for arriving at the outcomes of interest based on exposure to the
programme (for example, manager intention to make positive change, seeking opportunities
to make positive organizational change, and improved annual action planning), and find that
responses to the same intervention differ by subdistrict. Variations in manager commitment,
self-efficacy and supervision style are highlighted as mechanisms that affect the programme
outcomes. Alignment of existing relationships between individual managers and their
Part C. How are human resources for health governed?

The authors demonstrate how the individuality of health managers, organizational factors in which they are embedded, and guiding contexts interact and influence the ability of a training programme to bring about change. (This article is also highlighted in Chapter 3 on health worker training and supervision.)


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<th>Health workers</th>
<th>Public sector district managers</th>
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<tbody>
<tr>
<td>Geographical area</td>
<td>South Africa</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: action learning on routine district health operations through document review, in-depth interviews, observation, review of notes from field researchers, presentation and workshops notes, and meetings</td>
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<td>Research inference</td>
<td>Emancipatory</td>
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From the DIALHS project, Lehmann and Gilson (2015) write up a methodological reflection on the utility of long-term action learning and co-production – that is, the collective and collaborative development of research questions and articulation of evidence between researchers and practitioners (in this case, health managers). Specifically, their article highlights the central focus of HPSR on people and their relationships within the health system, the challenges of interdisciplinary work as a way of studying these interactions and the embedded nature of HPSR research. They discuss the themes of working with diversity and managing the complexity of researchers and practitioners in co-production; theorizing relationships of co-production; and characterizing co-production evidence. For example, both practitioners and researchers in this learning site had to grapple with the complexities of transcending distinctions and hierarchies of the researcher–practitioner divide (along with its differing knowledge bases and power dynamics), had to work at forming mutual learning (instead of assuming that it would occur naturally), and had to agree on the nature of evidence. These insights point to the value of new (shared) forms of seeing and understanding leadership and co-creating interventions for leadership development.

6.4 Research challenges, gaps and future directions

While the literature reviewed was rich in management capacity-strengthening, organizational change, organizational cultures and workforce planning (drawing from the classic HRH literature as well as from studies that locate themselves explicitly in the HPSR literature), there exist some challenges in this topic area. These relate mainly to methodology gaps and research topic gaps.

6.4.1 Methodology gaps

While most of the literature on leadership, management and organizational cultures in the context of low- and middle-income countries uses qualitative methods, in high-income country contexts and in non-health sectors such constructs are also measured using quantitative techniques. The insufficient degree of quantitative research in this domain presents a challenge because it potentially limits the understandings of leadership, management and organizational
cultures in low- and middle-income countries. There may be a gap in the low- and middle-income country evidence base because existing theoretical and measurement frameworks either are not valid (hence the need to develop them) or are not applicable (that is, the political economy of primary health care services in low- and middle-income countries differs from that in tertiary hospitals in high-income countries or other profit-making sectors). There is a need for more innovation and adaptation for quantitative research techniques to measure leadership, management and organizational cultures and their influence on HRH performance more suited to the context of low- and middle-income countries.

6.4.2 Research topic gaps

A limitation in the current literature is a leanness of empirical articles on gender and leadership, especially in low- and middle-income countries. This is in stark contrast to the “feminized” nature of health-care work and the fact that the literature on gender and HRH tends to focus on frontline nursing or community health work, while issues of gendered leadership and management remain an area of further research. Exceptions are a study from Lebanon that describes the macro-, meso- and micro-level barriers and enablers to women advancing into managerial health-care roles (Tlaiss, 2013), and research that undertakes an exploratory cross-country case study investigating four large-scale European academic health centres to understand institutional support to advancing gender equality at mid- and top-level leadership (Kuhlmann et al., 2017). Clearly, further research on gender and leadership, management and organizational cultures, particularly in the context of low- and middle-income countries, is required.

There also appears to be a gap in evidence on community-level leadership – that is, leadership and management at the community outreach level. Research to date on community governance has focused on the role of community health workers, community voice and participation, and the functioning of health facility committees (see, for example, the body of work developed on accountability, trust and health service performance by the Consortium for Research on Equitable Health Systems, e.g. Macha et al., 2011; Uzochukwu et al., 2011). While this work has discussed the challenges of unclear member roles, questions around true representativeness and power dynamics, and linkages to formal governing structures, this literature has not to date delineated meanings of community leadership and management, and thus raises questions about the forms community leadership takes: how does it manifest, how is it recognized, how is it fostered, and how can it be measured and assessed? This represents a rich gap worthy of further research.

Acknowledgements

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References


Chapter 7.

Brokering policies and politics for human resources for health

Veena Sriram

7.1 Defining the chapter

Policy-making is a critical component of human resources for health (HRH) governance, concerning the development and implementation of rules and regulations that shape the health workforce (Dieleman et al., 2011; Fryatt et al., 2017). Significant normative and technical work supports the content of HRH policy, such as rural retention of health workers (World Health Organization (WHO), 2010a), task-shifting (WHO, 2007) and international recruitment (WHO, 2010b). Policy-making pertaining to HRH remains highly uneven, however, with many policies often unadopted or inadequately implemented (Fieno et al., 2016). From a research standpoint, scarce attention is given to the process of policy-making, including the role and interests of stakeholders (Buse et al., 2005). Politics and power often lie behind these phenomena, and, therefore, examining policy-making through these lenses is critical for a more holistic and realistic understanding of health workforce policy-making in low- and middle-income countries (Buse et al., 2005; Dieleman et al., 2011; Mitchell and Bossert, 2013).

This chapter highlights exemplary research on HRH policy-making and politics in low- and middle-income countries, with a particular focus on policy development and its underlying power dynamics (Table 7.1). Research that informs the technical basis of HRH policy or that evaluates HRH policies is found throughout the reader. For example, Shen et al. (2017) in Chapter 4 review the impact of performance-based financing on health worker motivation in Zambia; and Kwamie et al. (2014) in Chapter 6 assess the implementation of a decentralized management and leadership initiative in Ghana.
Table 7.1 Key definitions for governance, policy, politics and power

<table>
<thead>
<tr>
<th>Governance</th>
<th>“… governance entails transferring some decision-making responsibility from individuals to a governing entity, with implementation by one or more institutions, and with accountability mechanisms to monitor and assure progress on decisions made” (Fryatt et al., 2017, pp. 1-2) “Governance is about the rules that distribute roles and responsibilities among societal actors and that shape the interactions among them” (Brinkerhoff and Bossert, 2008, p. 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy</td>
<td>“Broad statement of goals, objectives and means that create the framework for activity. Often take the form of explicit written documents, but may also be implicit or unwritten” (Buse et al., 2005, p. 4)</td>
</tr>
<tr>
<td>Politics</td>
<td>“The art or science concerned with guiding or influencing governmental policy” (Merriam-Webster) “Who gets what, when, how” (Lasswell, 1936)</td>
</tr>
<tr>
<td>Power</td>
<td>“The ability or capacity to do something or act in a particular way” (Oxford Dictionaries) “The capacity or ability to direct or influence the behaviour of others or the course of events” (Oxford Dictionaries)</td>
</tr>
</tbody>
</table>

7.2 Background on politics and policies

Policy-making is an inherently political process, characterized by ambiguity, competition, limited windows of opportunity and decision-making, interests, incentives and disruption (Fieno et al., 2016). Underlying any policy-making are clear political dimensions – the relationships of stakeholders involved in the policy process, their interests and negotiating positions, and the broader political system in which these interactions occur. This section reviews key characteristics of HRH policy-making and the social science approaches that have been used to examine this topic.

HRH policy is differentiated from other forms of health policy-making by the direct involvement of various organized forms of professions and occupations, the implicit and explicit hierarchies within and across health worker cadres, and the interests, skills and social positioning (gender, class, ethnicity, sexuality and race) of these groups (AbuAlRub and Foudeh, 2017; Blaauw et al., 2014; Daniels et al., 2012; Ditlopo et al., 2014; Pick et al., 2012). Beyond representatives of the health workforce, several other state and non-state actors are involved (Table 7.2), including ministries, central government agencies, local government, educational institutions, international agencies and civil society (Fieno et al., 2016; Martinez and Martineau, 1998; Mitchell and Bossert, 2013). The role of power in stakeholder engagement is also deeply intertwined in the policy process. Further, the influence of these stakeholders is driven by context, including regime type, political and economic stability, and nature of reform (Healy and McKee, 1997; Mitchell and Bossert, 2013; Witter et al., 2016).
Table 7.2 Stakeholders impacting on human resources for health policy (adapted from Martinez and Martineau, 1998; Mitchell and Bossert, 2013)

<table>
<thead>
<tr>
<th>Government</th>
<th>Health (national, regional, local government)</th>
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<tbody>
<tr>
<td></td>
<td>Executive leadership (president, prime minister, cabinet)</td>
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<td></td>
<td>Legislative bodies</td>
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<td>Finance</td>
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<tr>
<td></td>
<td>Education</td>
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<td></td>
<td>Labour</td>
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<td></td>
<td>Defence and military</td>
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<tr>
<td></td>
<td>Civil service agencies and commissions</td>
</tr>
<tr>
<td></td>
<td>Statutory professional councils</td>
</tr>
<tr>
<td>Employers</td>
<td>Private for profit businesses</td>
</tr>
<tr>
<td></td>
<td>Public-private partnerships</td>
</tr>
<tr>
<td></td>
<td>Voluntary or non-profit-making organizations</td>
</tr>
<tr>
<td>Representatives of health workers</td>
<td>Professional and occupational associations</td>
</tr>
<tr>
<td></td>
<td>Professional and occupational unions</td>
</tr>
<tr>
<td>International stakeholders</td>
<td>Bilateral and multilateral agencies</td>
</tr>
<tr>
<td></td>
<td>Philanthropic organizations</td>
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<tr>
<td></td>
<td>Professional and occupational organizations</td>
</tr>
<tr>
<td>Civil society</td>
<td>Community-based organizations</td>
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<tr>
<td></td>
<td>Patients’ rights organizations</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>Media</td>
</tr>
<tr>
<td></td>
<td>Pharmaceutical and medical device companies</td>
</tr>
</tbody>
</table>

The diverse stakeholder interests that drive HRH policies mean there are various overlapping spheres of policy content – health policy, health workforce policy, broader civil service policy, and other social policies (Figure 7.1). Most health policies have implications for the health workforce (Dussault and Dubois, 2003; Rigoli and Dussault, 2003). For example, introducing new financing mechanisms, integrating health services and enforcing standards of care all have a direct impact on health workers and therefore require HRH considerations during the policy-making process. Next are those health workforce policies that impact directly on entry (recruitment, selection and induction), training, supervision, promotion and performance (Dussault and Dubois, 2003; Vujicic et al., 2009). Such policies might be specific to public-sector employees but could also involve the regulation of health workers in the private or non-profit sectors. For example, while ministries or departments of health might coordinate or set policy pertaining to remuneration, supervision, performance and dual practice for public-sector workers (De Geyndt, 2017; Kiwanuka et al., 2010; Pierantoni and Garcia, 2011), professional councils might set training or ethical conduct policy for both public-sector and private-sector health workers (Hongoro and Kumaranayake, 2000). Following this are civil service policies that apply to central, state or local government employees, such as policies pertaining to recruitment, remuneration, benefits, posting and transfer and ethical conduct (De Geyndt, 2017; Vujicic et al., 2009). Finally, broader social policies strongly influence the development of the health workforce, including education, emigration and decentralization (Clemens, 2014; Martinez and Martineau, 1998).
One way of trying to understand the policymaking process, and its underlying politics, is to view the process as a series of phases, otherwise known as the stages heuristic: agenda-setting, formulation, implementation and evaluation (Walt et al., 2008). This framework has been criticized, however, for assuming a linearity in policy-making that is rarely found in practice (Walt et al., 2008). Some studies have examined HRH policy-making during the agenda-setting phase, when certain policy issues rise to the top of decision-makers’ agendas – for example, the development of a lay community health worker programme in South Africa (Daniels et al., 2012) or the initiation of pay for performance in the Tanzanian health sector (Chimhutu et al., 2015). Other studies have examined the agenda-setting and formulation phases in conjunction; examples include nursing education reform in South Africa (Blaauw et al., 2014) and overtime allowance for public-sector health workers in Ghana (Agyepong et al., 2012). Strikingly, despite their centrality to the policy process, research on the perspectives and involvement of frontline health workers in agenda-setting and policy formulation is more limited (AbuAlRub and Foudeh, 2017; Agartan, 2015; Ditlopo et al., 2014; Scott et al., 2012).

A greater proportion of HRH policy studies have explored the implementation of particular HRH policies. Some studies have examined the perspectives of health workers in interpreting and implementing policy objectives. Relevant examples include participation in a new community health worker programme in Ethiopia (Maes et al., 2015), implementation of a health financing intervention in South Africa (Walker and Gilson, 2004), and experiencing decentralization policy in Uganda (Kyaddondo and Whyte, 2003) and South Africa (McIntyre and Klugman, 2003). Others have used systems thinking to explore the intended and unintended impacts of decisions taken during the policy process, such as around overtime allowance for Ghanaian public-sector health workers (Agyepong et al., 2012). In addition, researchers have examined how health workers develop informal mechanisms for addressing policy-deficient human resource issues, such as posting and transfer in the Nigerian health sector (Abimbola et al., 2016).

Finally, a variety of social science approaches have been applied to various research questions concerning HRH policy, allowing us to broaden the discourse from the “technical” nature of policies to the complex factors underlying policy-making at each stage, and the intended and unintended consequences that emerge as a result (Fieno et al., 2016). The stages heuristic emerged from political science, and other theoretical frameworks rooted in that discipline allow
Part C. How are human resources for health governed?

For further depth in examining policy-making (Berlan et al., 2014; Erasmus, 2014; Kingdon, 1995; Shiffman and Smith, 2007; Walt and Gilson, 1994). Closely related are those studies drawing upon political economy frameworks to understand HRH policy-making by exploring the interplay between structure (institutions and context) and agency (actors, incentives and behaviours) (Bertone and Witter, 2015; Chimhutu et al., 2015; Fieno et al., 2016). Sociology provides an array of theories by which to understand professions and occupations, shedding light on how these groups interact and organize, and how they use their power to engage in policy-making (Freidson, 1970; Saks, 2016), although such analyses in low- and middle-income countries are less common (Jeffrey, 1977). Finally, historically grounded analyses have helped trace the evolution of HRH policy, for example in Brazil, India, Sierra Leone and Mexico (Bertone et al., 2014; Buchan et al.; 2011; Maru, 1985; Nigenda and Solorzano, 1997).

7.3 Illustrative primary research articles

The six articles presented below illustrate health policy and systems research (HPSR) methodologies that unpack the politics involved in brokering HRH policy-making. These articles were selected from a pool collated from a doctoral seminar at the Johns Hopkins School of Public Health, a crowdsourcing exercise supported by Health Systems Global and subsequent searches using the bibliography of key articles and on relevant databases and search engines (PubMed and Google Scholar). The main criteria used to select the articles included diversity in region, cadre and methods, as well as the quality of the studies based on standard guidelines.

7.3.1 Historical and political analyses of human resources for health policy-making


| Health workers | Physicians |
| Geographical area | Mexico |
| Research methods | Qualitative: Historical and political analysis using historical data, document review and interviews |
| Research inference | Explanatory |

Nigenda and Solorzano (1997) provide a rich analysis of the development of the medical profession in Mexico, vis-à-vis its relationship with the state. The dynamic between the medical profession and the state strongly influences issues of health worker training, performance and quality. A key dimension of this dynamic is the organization of the medical profession – the degree to which doctors are organized into associations or unions, their lobbying power with the state, and the state’s control over key health workforce issues, such as medical education and licensing. Critical explorations into these aspects of the medical profession remain underresearched in the context of low- and middle-income countries. In this article, the authors describe the shifting interactions between the state and the profession during three time periods from 1917 to 1988, finding that efforts taken by the medical profession to influence medical education, licensing, market forces or workplace policies were met with “continuous and systematic interference by the state”, resulting in the fragmentation of the profession into multiple, relatively weak organizations with minimal power and cohesion. Their findings are a notable departure from the dominant literature on the topic from high-income settings, where organized medicine has a major, often unified role in influencing policy. Drawing on historical data, available literature and select interviews, the authors carefully construct a case study of each of these time periods, detailing the interests and power base of each stakeholder involved in the process. Their research helps shed light on more contemporary issues facing
the profession, such as intraprofessional class imbalances and high rates of unemployment or underemployment. This study is therefore a strong example of using in-depth longitudinal case studies, grounded in historical analysis, to explain the current scenario of a particular health workforce by tracing its evolution through time.


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Multiple health workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Sierra Leone</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: political economy, stakeholder mapping workshop, document review, key informant interviews</td>
</tr>
<tr>
<td>Research inference</td>
<td>Explanatory</td>
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</tbody>
</table>

Bertone et al. (2014) address a key gap in the HRH policy literature - the evolution of HRH policy in post-conflict settings. In this comprehensive, in-depth case study of the HRH “policy story” in post-conflict Sierra Leone, the authors explore the period between 2002 and 2012 to understand the nature of decision-making and the factors and actors influencing these processes. Importantly, this paper seeks to deepen our understanding of whether HRH policy in post-conflict Sierra Leone developed due to path dependency or due to windows of opportunity. This study was also part of a comparative assessment of post-conflict HRH policy-making with three other countries – Uganda, Cambodia and Zimbabwe (Witter et al., 2016). The study is qualitative in nature and uses policy analysis to examine the dynamism between contextual factors, such as the political system and historical factors, the actors involved and their power bases, and changing formal and informal institutional contexts. To do this, the authors draw upon varied sources of information, including a stakeholder mapping workshop, document review and in-depth interviews. The authors helpfully describe the iterative use of these three data sources, noting that each source builds upon the other and allows for both comparison and triangulation, important particularly due to lack of available documentation and the difficulty of participants in recollecting details about the period. The findings are structured by time period, allowing readers to immerse themselves in the details of the case, before delving into the intricate analysis. A weakness of some policy analyses is the lack of interpretive analysis of data; this article represents a strong example of looking deeper into the data and connecting threads to hypothesize why policy scenarios evolve in certain patterns, and what this might tell us about existing theories of policy development in post-conflict settings.
A good example of HRH policy analysis is a comprehensive qualitative case study pertaining to the development of a nursing profession practice law in Lebanon conducted by El-Jardali et al. (2014). The authors use the Walt and Gilson (1994) triangle to outline key facets in the 13-year development of the law and build on the framework by examining multiple stages of the law’s development, the role of power, and issues such as the role of gender and sectarianism in policy-making. This study represents an excellent example of applying policy analysis in the context of a legislative process, detailing the interests and positions of a variety of stakeholders (ministries, professional orders, educational institutions, private hospitals and parliamentarians) in a manner that explains the basis for current inaction and delay in passing the law. The case study is also strongly grounded in context, with richly detailed information on the political and health-care systems. The authors are also reflective on their own position as researchers, particularly on how their insider status may have facilitated access to high-level stakeholders. To address potential resulting biases, they involved “outsiders” and those from other disciplines. Finally, the use of a stakeholder panel discussion as a methodological technique appears a useful validation technique. Other studies using similar qualitative policy analysis of HRH policy making processes include research by Daniels et al. (2012) and Blaauw et al. (2014), both on health worker policy in South Africa.

### 7.3.2 Contemporary human resources for health policy dynamics


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Multiple health workers</th>
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</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>China, India and Viet Nam</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: comparative case study analysis of policy coherence across countries and between policy spheres</td>
</tr>
<tr>
<td>Research inference</td>
<td>Explanatory</td>
</tr>
</tbody>
</table>

This study involves comparative analysis of coherence between health policy and human resource strategy. Using data from a comparative analysis of maternal health policy across Viet Nam, India and China, the authors examined the level of coherence between the development and implementation of maternal health policy and human resource strategy in each country. The authors also explored the various factors that influenced coherence in the cases. The analysis is anchored by a framework from Torrington et al. (2002) that categorizes the relationship between organizational and human resource strategy (separation, fit, dialogue, holistic, human resource-driven). Drawing upon country reports that used semistructured interviews, document review and participatory stakeholder workshops, researchers on the team analysed human resource data pertaining to human resource planning and workforce deployment, training and financing, continuing professional development and performance management. The authors present a comparative analysis based on the Torrington framework during both
the policy development and implementation stages, and then they discuss the various factors that could explain the reasons for the levels of coherence found in the analysis. This paper represents an excellent example of using analytical frameworks from diverse disciplines, in this case from human resource management, to provide a robust comparative analysis. The authors also make a compelling case for integrating human resource questions into broader health systems and health policy studies.


<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector frontline workers and district managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Malawi, Zambia</td>
</tr>
<tr>
<td>Research methods</td>
<td>Mixed: cross-country comparative analysis using health facility data and in-depth interviews</td>
</tr>
<tr>
<td>Research inference</td>
<td>Influence</td>
</tr>
</tbody>
</table>

This study represents a solid example of using a mixed-method comparative approach to understand the impacts of policy shifts on health workers, specifically the impact of global health initiative funding for human immunodeficiency virus (HIV) services. The authors hypothesize that countries with more coordinated global health funding would experience fewer barriers to a coordinated national human resource strategy compared with countries with a more crowded global health funding landscape. To test this hypothesis, the authors compared Malawi, with HIV funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), and Zambia, with funding from both the Global Fund and the United States President’s Emergency Plan for AIDS Relief (PEPFAR). The careful use of health facility data in this study demonstrates the value and also “messiness” of using routine data, strengthened by extensive interviews with a range of frontline and district staff. The intent behind the mixing of methods is evident, as the qualitative data were used to deepen the quantitative findings, highlighting the issues and challenges perceived by health workers regarding scale-up of HIV services. In doing so, the authors bring forward clear evidence for the different impacts of Global Fund and PEPFAR funding on human resources for health, suggesting that the power dynamics emerging from more contested policy environments have direct consequences on governments’ abilities to coordinate human resource policy more effectively. Other HPSR studies exploring the impact of global health initiatives on the health workforce include qualitative policy analysis (Chimhutu et al., 2015; Hanefeld and Musheke, 2009), systematic document review (Vujicic et al., 2012) and comparative case analysis (Witter et al., 2016).

Purohit B, Martineau T, Sheikh K (2016). Opening the black box of transfer systems in public sector health services in a Western state in India. BMC Health Serv Res. 16(1):419

<table>
<thead>
<tr>
<th>Health workers</th>
<th>Public sector physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>India</td>
</tr>
<tr>
<td>Research methods</td>
<td>Qualitative: interview and document review, contrasting policy architecture with practice</td>
</tr>
<tr>
<td>Research inference</td>
<td>Explanatory</td>
</tr>
</tbody>
</table>

A key governance challenge impacting health workers in low- and middle-income country settings remains the ambiguity around their posting and transfer; however, the deeply sensitive nature of these issues makes research efforts challenging (Abimbola et al., 2016; Schaaf and Freedman, 2015). Purohit et al. (2016) make a valuable contribution to the literature by opening
up the “black box” of posting and transfer policy in one Indian state. Specifically, the authors set out to unpack the linkages between human resource policy as intended, human resource policy as practised, the perceptions of frontline medical officers regarding these policies, and the connection between these policies, staff behaviour and organizational policies. The authors use a two-step approach. First, they developed a “systems map” consisting of existing transfer policies; second, they conducted a “systems audit” through in-depth interviews with medical officers. The interview data were used to construct job histories to examine how posting and transfer policy is actually implemented. The findings as presented are compelling, indicating considerable ambiguity in terms of transfer policy, and even further ambiguity and dissonance in their actual practice. Specifically, the information provided on the interplay between Public Service Commission policy and the Health Department is illuminating, given the scarcity of research on civil service agencies in HPSR. The findings are interwoven with numerous quotes, giving readers insight into how medical officers perceive and experience the system. The authors also engage with highly sensitive issues of political and financial influence during postings and transfers. Finally, the multifaceted nature of the issue comes through clearly, including the complicated hierarchies of health workers in the public sector, and the myriad push and pull factors underlying decision-making on postings and transfers.

7.4 Research challenges, gaps and future directions

Despite growing recognition regarding its importance, research on HRH policy-making and its underlying politics in low- and middle-income country settings remains sparse. The following methodological challenges in conducting this type of research were noted in the articles reviewed in developing this chapter.

Researchers focusing on national- and state-level processes that require input from high-level policy-makers might also run into obstacles in gaining access and obtaining permission for interviews, document review or observation. Related ethical challenges include respondents possibly revealing highly sensitive data, necessitating that researchers adhere to the strictest standards of confidentiality in their reporting. These sorts of challenges also lead us to question the positionality of researchers working on policy and politics (Walt et al., 2008), and one could argue that researchers who are junior or who do not belong to elite institutions might face unfairly disproportionate difficulties in accessing possible informants. Similarly, senior researchers with good access to, and trust with, policy-makers or other stakeholders might be challenged in reporting findings that could negatively impact these relationships.

Studies on this topic are primarily qualitative and often rely solely on in-depth interviews as a data source. While such an approach may be valuable, and sometimes the only feasible way forward, the studies in this section suggest that thinking innovatively about complementary data sources can lead to richer findings and analysis through triangulation across data sources. Broadening data sources is particularly important, as respondents do not always recall or reveal key details about HRH policy-making. In addition to triangulating interview sources (due to the issue of stakeholders often having divergent and competing perspectives), triangulating interview data with a robust document review, media reports, routine staffing data, auditing data, stakeholder panels or non-participant observation can greatly strengthen data quality and trustworthiness (Bryman, 2004; Gilson et al., 2011). Such approaches may also be used iteratively, adaptively building on one another to sharpen research questions and analysis, and could be strengthened further by prolonged engagement, contextual analysis and other techniques to improve rigor (Gilson et al., 2011).

The importance of the social sciences to research on HRH policy-making has been discussed previously; from a methodological standpoint, expanding the use of social science theory and methods will be critical to strengthening the knowledge base in this area. For example, ethnography might be valuable in determining the underlying parameters for decision-making actions.
in policy-making or understanding the institutional and organizational contexts in which health workers are situated (Maes and Kalofonos, 2013; Ruddock, 2016); sociology can help us examine the interests and interactions of various health worker organizations, groups and associations; and political science can unpack the linkages between political systems, regulatory systems and HRH policies (Fieno et al., 2016).

Finally, using mixed-method approaches may also be highly appropriate for many research questions. Quantitative or mixed-methods approaches can add critical perspectives. For example, social network analysis is increasingly being applied to questions of policy-making, strengthening our understanding of the positioning and relative power of various stakeholders (Jessani et al., 2016). Data pertaining to more latent performance variables, such as satisfaction, stress and burnout, can contribute to examining impacts of policy implementation on health workers. Mixed-method approaches, such as studies by Brugha et al. (2010) and Bowser et al. (2014), can qualify quantitative indicators, such as those measuring service delivery or financing, with the perspectives of key policy actors, including frontline health workers, managers and policy-makers, in order to make inferences about the broader policy environment.

From a thematic perspective, further research on the politics of HRH policy-making could proceed in several exciting directions.

HRH policy represents several policy spheres (as noted in Figure 7.1), and research on policy-making in each of these domains is vastly underrepresented in the literature, particularly health worker policy, civil service policy and social policy. Researchers can make significant contributions by conducting studies that examine policy-making in these spheres from a range of perspectives – civil society organizations, patients’ rights organizations, professional associations and unions, a multitude of government agencies, and multiple types of cadre (informal to formal, lay to specialized, public to private, allopathic to non-allopathic) (Sheikh et al., 2017). Applying an approach that is grounded in a people-centred understanding of health policy and systems would also allow us to integrate questions of power (Sheikh et al., 2014), a driving force in policy-making of any kind.

Regulation is a key aspect of health workforce policy but remains understudied in low- and middle-income country contexts. The nature of health worker regulation involves critical questions around the involvement of the state, the role of professions and occupations, and the nature of formal and informal regulatory mechanisms. For methodological guidance, researchers may look towards the rigorous work of Hongoro and Kumaranayake (2000), in their research on regulating private providers in Zimbabwe; Sheikh et al. (2013), in their mapping of health sector regulation in two Indian states; and Doherty (2015), in her document review of regulatory legislation from southern and eastern African countries.

Finally, studies concerning accountability and transparency in the policy process are important but often sensitive topics for empirical work. For example, examining the ways in which health workers, community groups or patients’ rights advocates are involved in HRH policy is poorly understood, perhaps reflecting the relatively exclusive and elite nature of these policy-making processes (Daniels et al., 2012). As another example, studies regarding corruption in HRH policy-making are still largely untapped due to the highly sensitive nature of the topic (Rispel et al., 2016; Vian, 2008). Such studies, while challenging to implement, are essential to providing a more accurate and grounded understanding of the power dynamics embedded within policy-making and to facilitating improved accountability and transparency in health policy-making.

Acknowledgements

We are grateful to Sara Bennett, Tim Martineau, Asha George, Kerry Scott and Veloshnee Govender for their guidance and inputs for this chapter.
References


Part C. How are human resources for health governed?


Epilogue:

Reflections on health policy and systems research contributions to human resources for health

Asha George

Health policy and systems research (HPSR) advances understanding of the varied ways in which societies organise themselves to achieve better health (WHO, 2017). In addition to focussing on policy and systems issues like human resources for health (HRH) as a content area, HPSR also encourages a philosophy of science that is embedded, multidisciplinary and multi-stakeholder in nature to ensure policy relevance and influence (Sheikh, et al., 2014). In this epilogue, we reflect on how the Reader illustrates HPSR contributions to strengthening HRH by expanding the breadth and depth of research enquiry and policy engagement. We reflect on the geographic spread of the research highlighted, the issues covered and the methodological contributions made.

HRH issues are simultaneously local and increasingly global in nature. They are critical to health systems world over, within the borders of low-, middle- and high-income countries alike. In addition, HRH is also deeply affected by globalisation and how it skews the distribution of health workers within and across the national borders of diverse health systems. Thus there are no geographic limits to HRH research. Yet the political economy of research funding and capacity is highly weighed against low- and middle-income countries.

The importance of building research capacity in low- and middle-income countries was emphasized in the 1974 World Health Assembly and re-affirmed since (UNESCO 2010, WHO 2013). Nonetheless, UNESCO’s 2010 Science Report indicates that 62% of researchers and 75% of scientific research publications were from high-income country institutions (UNESCO 2010). With regards to HPSR, it is only since 2014 that low-and middle-income country based first authors began to produce more low-and middle-income country research than high-income country based colleagues. However, this was largely driven by those based in upper middle-income countries with low- and lower middle-income countries lagging behind (WHO, 2017).

Given this background, for pragmatic and strategic reasons, we mainly reference high-income country HRH research as important background material and proactively highlight low- and middle-income country HRH research articles for the Reader. More than half of the Reader articles are from sub-Saharan Africa and a significant number are from Asia. Yet despite our call for contributions in all languages, few quality HPSR articles on HRH were found from Central Europe and Asia, the Middle East or from Latin America and the Caribbean. Furthermore only four articles (Martineau, et al., 2015; McPake, et al., 2014; Onyango-Ouma, et al., 2001; Smith, et al., 2013) undertook comparative research across geographic regions. Substantial investments are required to strengthen HPSR on HRH in neglected geographic regions, as well as in the collaborative HPSR networks that can sustain HRH research across geographic regions.
The Reader illustrates innovative research on doctors (Arah, 2007; McPake, et al., 2014; Nigenda and Solorzano, 1997; Purohit, et al., 2016; Vujicic, et al., 2011) and nurses (El-Jardali, et al., 2014; Jewkes, et al., 1998; Smith, et al., 2013; Tavrow, et al., 2002), but also highlights research on a broader range of health workers. Several studies focus on non-physician clinicians, whether exclusively (Chandler, et al., 2009), or alongside other health workers (Choi, et al., 2016; Leonard and Masatu, 2010). Numerous articles also give voice to health care managers leading to greater understanding of their co-production of knowledge in South Africa (Lehmann and Gilson, 2015), the historical evolution of their decision space in Ghana (Kwamie, et al., 2015), their resilience under devolution in Kenya (Niyikuri, et al., 2015) and the contextual factors that support their capacity building in India (Prashanth, et al., 2014).

With a keen eye on community level providers, the Reader highlights the community embeddedness of midwives in Mali (Hurley, et al., 2014) and of rural health workers in Papua New Guinea (Razee, et al., 2012), alongside other organisational factors that impact on community cadre performance in Ghana (Frimpong, et al. 2011), Guatemala (Hernández, et al., 2015) and Papua New Guinea (Jayasuriya, et al., 2014). The framing of global policies on caregivers is critically examined (Bedford, 2011), as is their lived experience amid sustained poverty and hunger in Ethiopia (Maes, et al., 2011). Informal providers are often discounted, but included in the Reader through efforts to enumerate the total workforce in India (Rao, et al., 2012) and in Bangladesh (Ahmed, et al., 2011).

Despite such a range of health providers covered by the research articles highlighted in the Reader, it is impossible to comprehensively include the full myriad of people involved in human resources for health. However, the Reader does call to attention the importance of research that examines where the boundaries are drawn, by whom and with what implications for the health workers involved, as well as research efforts that try to count health workers in a more inclusive manner.

With regards to institutional affiliation, almost half of the selected articles in the Reader are exclusively dedicated to better understanding and supporting public sector health workers. While no research article exclusively focussed on private sector health workers, several included and compared private health workers to public sector workers in their research. Research articles also recognised the porous boundaries between public and private through for example dual practice (McPake, et al., 2014, Vujicic, et al., 2011). While research supporting public sector health workers as the backbone of health systems is of vital importance, further comparative or stand-alone research with the private sector is also warranted.

As is common across HRH research, the kinds of health workers analysed in these articles were not always reported consistently or in a way that facilitated comparative analysis. Improved reporting about health worker type and gender, health system level, institutional affiliation (public/private) and geographic location is vital to contextualize research and enable more appropriate generalisation for decision-making. Routine databases that track the availability and distribution of health workers need investment to improve their quality, so that they can be more agile in capturing and tracking the nuanced and dynamic nature of an increasingly mobile and globalised health workforce.

For instance, a key social relation, often neglected in HRH due partially to the lack of sex-disaggregate data, is gender. The Reader highlights how gender bias filters into the framing of global policy on caregivers (Bedford, 2011) and the lived experience and family roles negotiated by caregivers in Ethiopia (Maes, et al., 2011) and community cadres in Papua New Guinea (Razee, et al., 2012). Gender discrimination also underpins workplace violence in Rwanda (Newman, et al., 2011), income levels in the Democratic Republic of the Congo (Maini, et al., 2017) and opportunities for upgrading in Uganda (Namakula and Witter, 2014). Efforts to
recognize and address gender bias in the Reader include transformative training initiatives, such as Health Workers for Change (Onyango-Ouma, et al., 2001). The Reader also noted certain gaps in research. For example, while research in high-income countries is addressing gender and leadership in the health sector (Kuhlmann, et al., 2017), no comparable research was found in low- and middle-income country contexts.

Apart from broadening the geographic scope and health worker diversity considered in HRH research, HPSR supports greater depth in understanding and addressing the key social relations that underpin HRH by recalibrating the different contributions that research can make. In contrast to the hierarchy of evidence that serves as a foundation for epidemiological sciences, HPSR argues for methodological fit dictated by the research question asked and its intended inference (Gilson, 2012). In the Reader, we distinguish between research that is descriptive, exploratory, explanatory, emancipatory, influence directed and predictive. These inferences can overlap and accommodate diverse study designs and methods. They are valuable in raising the bar for how research can contribute to greater understanding and decision-making in HRH as detailed below.

**Descriptive** research serves as a foundation for all research endeavours and provides the basis for contextualising research findings. The overwhelming nature of HRH research reviewed for the Reader was descriptive in nature. We sought to highlight efforts that used novel approaches or different data sources to better count the distribution of health workers, whether in India (Rao, et al., 2012) and Bangladesh (Ahmed, et al., 2011) or across sub-Saharan Africa (Arah, 2007). We also selected descriptive research that more systematically measures under-represented aspects of health workers lives such as workplace violence in Rwanda (Newman, et al., 2011) and how health worker livelihoods depend on different sources of income in the Democratic Republic of the Congo (Maini, et al., 2017). Finally, descriptive research is also valuable in communicating health worker perspectives, which are often missing and overlooked from high level policy discussions. The Reader showcases how descriptive research helps to convey health worker insights on key performance mediators such as supervision in Zimbabwe (Tavrow, et al., 2002) and organisational culture in Brazil (Rocha, et al., 2014), as well as their preferences for workplace location in Viet Nam (Vujicic, et al., 2011).

Building on descriptive research, HPSR also serves to understand underlying mechanisms driving health worker behaviour and human resources for health policy-making and implementation by asking how and why, using theories to guide and test understanding through explorative and explanatory research. Given its importance in HPSR, more than half of the articles highlighted in the Reader showcase research that is exploratory and/or explanatory in nature. This includes **exploratory** research that reveals health worker world views whether related to livelihoods of volunteer caregivers in Ethiopia (Maes, et al., 2011) or the community embeddedness of community cadres in Papua New Guinea (Razee, et al., 2012) or in Mali (Hurley, et al., 2014). Exploratory research is critical in uncovering the complexity underpinning health worker motivation, eliciting nuances in health workers perceptions of altruism (Smith, et al., 2013) and organisational justice (Aberese-Ako, et al., 2014). It can also reveal the reasoning behind health worker decision making related to dual practice (McPake, et al., 2014) and migration (Humphries, et al., 2015). Finally, exploratory research is vital in developing new framing and conceptualisation of key social factors underpinning health worker behaviour, such as trust (Gilson, et al., 2005) and its abuse through health worker violence (Jewkes, et al., 1998); the normalisation of corrupt practices and other detrimental coping mechanisms (Hahonou, 2015), as well as how transformative leadership and employee empowerment can be engines for change (Choi, et al., 2016).
A key contribution of HPSR is how it conceptualizes important aspects of social relations that may otherwise be hard to recognize, measure and address. Explanatory research can further test and advance theories about the job preferences for rural deployment across various types of health workers in Peru (Huicho, et al., 2015) and the decision-space that supports district managers in Ghana (Kwamie, et al., 2015). Such research is critical in understanding why reforms work or why they fail. For instance, explanatory research unpacks why health workers reject innovations in health information systems (Gladwin, et al., 2002), the contextual determinants of capacity building efforts for district managers in India (Prashanth, et al., 2014) and supervision in Malawi and United Republic of Tanzania (Bradley, et al., 2013). It explains how health workers negotiate transfer systems in India (Purohit, et al., 2016) or pay for performance initiatives in Pakistan (Witter, et al., 2011).

While the instrumental needs of HRH decision making focusses at the micro-level on the determinants of health worker behaviour, and expands to meso-level analysis of the organisational factors that affect health worker motivation, HPSR also enables us to critically understand at a macro-level how HRH policies are negotiated and brokered among the various stakeholders involved. The Reader highlights explanatory research about the policy processes that shape doctors as a profession in Mexico (Nigenda and Solorzano, 1997), nurses in Lebanon (El-Jardali, et al., 2014) and caregivers at a global level (Bedford, 2011). Policy analysis can also explain what drives coherence between various aspects of HRH and maternal and child health policy (Martineau, et al., 2015) and the political economy driving HRH policy in humanitarian contexts such as in Sierra Leone (Bertone, et al., 2014).

While doing research to understand how and why change occurs, HPSR can also guide change collaboratively through emancipatory approaches. Participatory action research (Loewenson, et al., 2014) is an under-utilised research strategy in HPSR, but one that is highly valuable as it aims to empower participants in analysing, reflecting and acting upon their context (i.e. co-producing), thereby potentially transforming it. It inherently also shifts the power relations that conventionally structure research. The Reader includes research articles that reflect on these power dynamics and the meaning of co-producing research in learning sites with district managers in South Africa (Lehmann and Gilson, 2015), as well as how it better enables understanding of resilience among managers in Kenya (Nyikuri, et al., 2015) and supervision in Zimbabwe (Tavrow, et al., 2002). Innovative examples of how to use participatory research methods with health workers include the use of life histories in Uganda (Namakula and Witter, 2014) and concept mapping in Guatemala (Hernández, et al., 2015). Finally, research articles also highlight how collaborative approaches with health workers are key to supporting performance, whether through better role definition in Egypt (Ruck and Darwish, 1991), or improved problem solving teamwork (Onyango-Ouma, et al., 2001) that supports quality improvement over time (Bradley, et al., 2002).

Even if not directly collaborating with health workers and managers in the process of setting the research questions, undertaking the research or analysis, HPSR values engagement with policy-makers. The Reader showcases how policy dialogue processes were critical mechanisms to validate research findings and inform policy responses whether related to workforce planning in Australia (Crettenden, et al., 2014) or Benin (Jansen, et al., 2014); understanding HRH policy-making in Lebanon (El-Jardali, et al., 2014) and Sierra Leone (Bertone, et al., 2014); or in responding to sensitive issues such as workplace violence and gender discrimination in Rwanda (Newman, et al., 2011).

A key question for policy-makers is whether an intervention or reforms works or has intended or unintended effects, which makes up the bulk of evaluations that aim to test the adequacy, plausibility and probability of influence. The Reader highlights innovative approaches to measuring effects of the work environment on the responsiveness of health workers in Papau New Guinea (Jayasuriya, et al., 2014), the effects of professionalism in United Republic of Tanzania (Leonard
HPSR is also about informing stakeholders about the consequences of certain decisions, and is therefore predictive through scenario building, which can be participatory or modelled by computers. Rather than highlighting the multiple examples of workforce modelling that exist in HRH research, the Reader purposefully selected examples of workforce modelling that engaged policy stakeholders in the process, whether in Australia (Crettenden, et al., 2014) or in Guinea (Jansen, et al., 2014). An important methodology for policy-makers is cost-effectiveness studies which can also be predictive in nature. While not featured in the Reader, cost-effectiveness studies for ensuring retention in South Africa (Lagarde, et al., 2012) or in Malawi (Mandeville, et al., 2017) or for supporting community based cadres in Ethiopia, Kenya and Indonesia (McPake, et al., 2015) are an emerging field of evidence of vital importance.

Other key HRH methodologies that are featured in the Reader include experiments involving discrete choice (Vujicic, et al., 2011) or dictator games (Smith, et al., 2013); time use studies (Frimpong, et al. 2011, Tavrow, et al., 2002); Likert scales and other types of scale development for measuring latent concepts such as motivation and job satisfaction (Chandler, et al. 2008; Choi, et al., 2016; Gilson, et al., 2005; Prashanth, et al., 2014); and vignettes to measure health worker performance (Leonard and Masatu, 2010). In addition, the Reader supplements HRH research through a range of social science methodologies. These include numerous examples of ethnography (Aberese-Ako, et al., 2014; Chandler, et al., 2009; Gladwin, et al., 2002; Hahonou, 2015; Jewkes, et al., 1998; Maes, et al., 2011), case study research (El-Jardali, et al., 2014, Martineau, et al., 2015) and historical analysis (Kwamie, et al., 2015; Nigenda and Solorzano, 1997). Innovations include social network analysis (Hurley, et al., 2014), realist evaluation (Prashanth, et al., 2014) and using social media (Humphries, et al., 2015).

Despite showcasing such strong contributions of how HPSR strengthens HRH, the Reader also signals numerous areas for improving the quality of HRH research. Despite the emergence of quality checklists for various study designs, we found research methods to be inconsistently reported. Research articles at times failed to report an explicit research question or aim. Despite notable exceptions (El-Jardali, et al., 2014), researchers should be more reflexive about their own positionality and how it shapes the research process, participants and findings.

In conclusion, health workers’ identities and motivation, daily routines and negotiations, and training and working environments are at the centre of successes and failures of health interventions and broader health system functioning. The past decade has seen a proliferation of research and, as demonstrated in the Reader, of methodological approaches on HRH, draw from a range of disciplines, including public health, sociology, psychology, organizational and management sciences. While HRH research increasingly leans to multidisciplinary approaches alongside recent advances in health systems research, these have not been documented in a cohesive fashion. The idea for this Reader emerged from the need for guidance on and examples of excellent and innovative HRH research, embracing health workers as creative and dynamic agents best placed alongside with patients, community members, managers and policy-makers to address contemporary health system complexities. In doing so, the Reader promotes greater understanding and appreciation of the varied HPSR approaches that can be applied to HRH and provides resources that can be used for teaching and capacity development on HRH for researchers and practitioners alike.
Works cited


WHY WE NEED THE READER

Health workers’ identities and motivation, training and working environments, and their daily routines and negotiations are at the centre of successes and failures of health interventions and broader health system functioning. The past decade has seen a proliferation of research on these and other topics related to human resources for health (HRH), drawing from a range of disciplines, including public health, sociology, psychology, organizational studies and management sciences. While HRH research increasingly leans to multidisciplinary approaches alongside recent advances in health systems research, these have not been documented in a cohesive fashion. The idea for this Reader emerged from the need for guidance on and examples of excellent and innovative HRH research, embracing health workers as creative and dynamic agents who work alongside patients, community members, managers and policy-makers to address contemporary health system complexities. The Reader promotes greater understanding of the varied health policy and systems research approaches that can be applied to HRH and provides resources that can be used for teaching and capacity development on HRH for researchers and practitioners alike.