Collective sensemaking for action: researchers and decision makers working collaboratively to strengthen health systems

Lucy Gilson and colleagues draw on experiences from Kenya and South Africa to consider the practice, benefits, and challenges of research co-production for strengthening health systems

Health policy and systems research has gained traction in low and middle income countries over the past few decades. It seeks to understand and improve "how societies organise themselves in achieving collective health goals, and how different actors interact in the policy and implementation processes to contribute to policy outcomes."[1][2] "Getting health research into policy and practice," also promoted by global funding agencies, is a central concern.[3] However, the mechanisms proposed for doing so can assume a linear pathway from research to policy change, overlooking the power and politics entailed in knowledge generation and use.[4] Limited attention may also be given to the important role that knowledge gained through experience can have in health system decision making, as distinct from research evidence.[5]

By contrast, research co-production is based on the understanding that knowledge mobilisation is the "activation of available knowledge within a given context" by those who will use it.[6] It supports intentional and systematic learning from action, valuing both formal and experiential knowledge. While research processes, particularly participatory approaches,[5] are one way of stimulating such learning, other stimuli of knowledge mobilisation include co-design approaches[6] and workplace based training activities.[7]

Co-production of knowledge supports collective sensemaking—the generation of shared understanding about problems or new initiatives, for example—that supports learning and health system strengthening.[8] This aligns well with recent calls to institutionalise knowledge use within health systems[9] and to develop learning health systems that innovate and adapt over time.[10] It also links to embedded research approaches where researchers work inside or alongside a host organisation to support collaborative research and learning processes.[11][12] All these approaches recognise that the distinctions between knowing and doing and between research and practice are false binaries. Health system decision makers are curious and reflective, as are researchers. Researchers seek to bring about change, as do decision makers. Each group brings valuable and necessary knowledge resources to enrich decision making and action.

Decision making within health systems entails collaboration between many groups.[5] These can include patients and families; frontline, mid-level, and senior decision makers within public health sector hierarchies; as well as non-state actors such as managers of community based health structures and organisations. In this paper, we consider our experiences with five co-production initiatives focused on engaging researchers and public health decision makers in Kenya and South Africa (box 1). All aimed to strengthen decision making practice within the health system, but only two entailed formal research activities.

Co-production principles and practice

Despite differences in country context and health system setting, two key principles of engagement and a core set of collaboration practices are common to all initiatives (box 2).[7][11] The first principle is that power is shared between researchers and decision makers by valuing and actively drawing on their different perspectives and experience. For example, understanding that solutions to challenges lie within the health system, researchers working within the Kenyan clinical information network facilitate practitioner problem solving for hospital paediatric care. The process encourages peer learning and peer accountability around the use of hospital data to inform paediatric care decision making.[13-15]

In the Kilifi county and Sedibeng district health system learning sites, joint reflective engagements between researchers and managers deepen shared understanding of governance and leadership experiences.[16] Managers bring their lived experiences of working with constant policy reform and resource constraints to these engagements, and researchers bring systematically collected insights and understanding of relevant academic literature. Similarly, within the Western Cape provincial emergency medicine service in South Africa the embedded researcher has drawn on arts based approaches to support reflection among managers about organisational processes, the lived experience of frontline staff, and emergency medicine service and community linkages.[18] Finally, within the Western Cape HPSR Journal Club research papers stimulate collective thinking among managers and researchers about health system complexity and how to work with it.[17] The researchers purposively initiated these engagements by inviting partnership from decision makers, and have then, in some cases, continued to steer or coordinate activities by agreement with their partners.

The second principle builds on the first and is that trusting relationships are developed and sustained. In the five initiatives discussed here, trust was founded on years of prior organisational collaboration and on sustained personal relationships. Trust was also nurtured by having, or negotiating, shared goals

KEY MESSAGES

- Research co-production supports the mobilisation of multiple knowledge sources within a given setting.
- Co-production re-imagines the power dynamics of knowledge production.
- Long term collaboration and trust based relationships support co-production.
- Co-production processes can support improved health system decision making practice.

Box 1: Five co-production initiatives

Clinical information network: a hospital network, Kenya[13-15]

Based on a 10 year history of engagement and collaboration, the clinical information network emerged in 2013 to improve the quality of hospital paediatric care. The clinical information network is a collaboration between the Ministry of Health, Kenya Paediatric Association, KEMRI-Wellcome Trust Research Programme, the University of Nairobi, and, as of July 2020, 22 county hospitals. The network facilitates real time collection of routine data on admission, care, and outcomes in paediatric wards, as well as data analysis, generation of performance reports, and feedback to hospitals. It has become a community of practice supporting paediatric quality of care improvement.

Kilifi county health system learning site, Kenya[16]

Collaboration between KEMRI-Wellcome Trust Research Programme and the Kilifi county health system has evolved over many years and was formalised with the establishment of a health policy and systems research learning site focused on health system governance. It is supported by the Resilient and Responsive Health Systems consortium. Learning site work comprises cycles of research and regular, reflective engagements between researchers and decision makers around decision making challenges and research findings. Researchers have also been invited to participate in various county structures and initiatives, to support decision making.

Leadership development in the Sedibeng district health system learning site, Gauteng province, South Africa[16]

Weak leadership capacity among primary healthcare facility managers was identified as a health system challenge in initial rounds of action learning within the Sedibeng learning site. A workplace based leadership support intervention was therefore developed collaboratively. In monthly group coaching sessions, facility managers were introduced to a range of tools and skills to manage the daily challenges of interpersonal conflicts, organisational barriers to teamwork, resource challenges, and difficult relationships within communities. Managers were also encouraged to reflect on how they used their new skills to deal with challenges, while group reflection allowed for collective problem solving and peer support.

Western Cape Health Policy and Systems Research Journal Club, South Africa[17]

Since 2012, the Western Cape Health Policy and Systems Research (HPSR) Journal Club has brought together health system decision makers and researchers in Cape Town, South Africa, with a shared interest in understanding health system development and transformation through a complex systems lens. Selected papers reporting conceptual and empirical work are read and debated by participants at the bi-monthly journal club, with the primary focus on the papers' relevance to practice rather than on their methodological rigour. The journal club is a place of "collective sensemaking," generating shared understandings about health system complexity and how to work with it.

Embedded researcher position: emergency medical services, Western Cape Department of Health, South Africa

In 2018, a part-time "embedded researcher" staff position was established in the emergency medical services of the Western Cape Department of Health. The embedded researcher attended senior management meetings to learn, reflect with managers, and bring new ideas to decision making. In addition, a weekly two hour reflective session with the emergency medical services director was established as a sensemaking space, alongside less frequent engagements between the director, the embedded researcher, and other experienced health policy and systems researchers. Ideas relevant to current organisational processes and to the role of the health system in society have been discussed. A range of creative projects such as a documentary film, poetry collaborations, and a portrait series have also been undertaken to bring the lived experiences of frontline healthcare workers into conversation with managerial decision making.[18]

The last two initiatives were nested within, and founded on, the Collaboration for Health Systems Analysis and Innovation, a collaborative formed in 2012 of university based health policy and systems researchers and educators and public sector health system policymakers and managers in the Western Cape province, South Africa

of co-production. Examples include improving paediatric care in the clinical information network, strengthening the health system towards equity in the journal club, and enabling distributed leadership in the Western Cape emergency medicine service.

Showing respect and courtesy sustains these relationships and also helps to navigate power dynamics among the partners. Purposeful and active listening are important practices, together with generosity and acknowledgement of the other's experience. For example, in the HPSR Journal Club, sharing facilitation, reviewing, and commentary roles among researchers and decision makers acknowledges the experience of everyone present and, together with using first names rather than professional titles, flattens hierarchies. Constant, regular feedback about the clinical information network to

decision makers at various system levels has itself shown respect and courtesy for them. Moreover, wider engagements across initiatives have provided opportunities to show commitment to each other, enhancing trust. The KEMRI-Wellcome Trust Research Programme has, for example, supported the country covid-19 response in 2020 by offering testing services, knowledge synthesis, antibody surveillance, as well as clinical surveillance leveraging on the clinical information network. In other settings, researchers have provided strategic and management advice, while practitioners have supported postgraduate teaching programmes. Together these engagements represent webs of joint learning that spread the benefits of co-production.

Those involved in these initiatives value these principles and practices because they allow mutual and deep learning, feeding

into their wider work. Health system decision makers appreciate the opportunity to reflect with researchers, hear different perspectives, generate new understandings about their health system environments, and, ultimately, make decisions and act differently. For example, in the Kilifi learning site reflective practice sessions have provided a safe space for managers to think together about how to tackle the direct, and disruptive, involvement of local political actors in service delivery decision making. Working with existing guidelines and applying newly learnt communication skills, managers reported a reduction in disruptive engagements.[16] At the same time, the initiatives have given researchers unusual opportunities for close engagement with health system decision makers and their everyday realities. The insights generated from the learning site engagements have, for

> **Box 2: Practices to support co-production between researchers and health system decision makers**
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> - Be purposeful in identifying the partners with whom to engage
> - Negotiate, and re-negotiate over time, the purpose and goals, partnership parameters, and roles
> - Create "safe spaces" for engagement
> - Establish processes for "joint reflective practice"
> - Show each other courtesy and respect
> - Flatten hierarchies between people
> - Develop outputs relevant to both practice and research worlds (eg, new understanding relevant to decision making and formal published papers)
> - Deliberately connect projects and conversations into webs of embedded joint learning

example, contributed to formal knowledge production around the micro-practices of governance and everyday health system resilience,[19 20] and created opportunities to develop context specific leadership development interventions.[17] Across initiatives, the insights have also fed into researchers' policy advisory roles as well as new, collaboratively developed research projects.

Benefits of co-production

Each co-production experience indicates the ways in which knowing and doing, research and practice, are intertwined. They also show how co-production processes connected to wider webs of learning generate tangible consequences for the health system in which they are located. In South Africa, the shared understandings generated through the HPSR Journal Club have informed provincial policy documents, such as those focused on strengthening health system resilience and leadership development, and influenced senior managers' own leadership practices.[17] Researchers have also translated local level learning from the Kilifi learning site into wider sub-national and national level policy advice. The clinical information network has supported the revision, adaptation, and uptake of evidence based Ministry of Health paediatric protocols, contributing to improved hospital paediatric care nationally.[14]

In the South African emergency medical service experience, the embedded researcher has supported organisational conversations about the forms of leadership needed to problem solve around complex issues, such as delivering emergency care safely within community settings characterised by social instability and violence. Workplace leadership development activities have also been an important avenue of decision maker engagement and wider impact in the Kilifi

learning site. Through such activities the clinical information network has also supported the emergence of frontline service delivery leaders, who have realised workplace changes with researcher support.

The insights developed through co-production have also been fed back into the researchers' postgraduate training programmes. Ideas, cases studies, documentary films, and decision maker as educators have been brought into the classroom to stimulate learning by the next generation of health system leaders and researchers.

Finally, the experiences show how health system researchers can become embedded in the ecosystem of decision makers,[11] continuing to engage over time. This relationship represents a form of social capital that can support responses to new situations. For example, the emergency medical services embedded researcher collaborated with a group of community organisers and social activists to catalyse Cape Town Together, a self-organising, neighbourhood level community network responding to local challenges arising from covid-19.[21] Taking on the practices of co-production, the network draws on its collective energy and wisdom to respond to community needs.

Challenges of co-production

In our experience, long term collaborative engagements have to survive turnover among the decision makers and researchers concerned and constant attention is needed to sustain trusting relationships. The evolving nature of collaboration also brings its own demands. In the clinical information network, for example, researchers have faced multiple requests to take responsibility for new activities, such as expanding to other specialties and more hospitals. They have responded by reminding network members about ini-

tially agreed roles and responsibilities, and have supported members to build their own capacity to take responsibility for extending activities.

The boundary spanning work of co-production can have personal and professional costs for all those concerned. It is emotionally taxing to renegotiate relationships over time in response to changing personnel and changes in context, and to sustain trust.[22] The time demands of engagement may be seen as a burden for busy people, especially when relationship building is not considered a priority or they see limited value from it. Such activities are also not well recognised in the career development pathways of researchers or health system managers.

In the research world, the context rich insights gained through co-production have been criticised as having limited generalisability,[16] while embedded research is seen to threaten neutrality and independence.[22] The risk of becoming aligned to certain actors or perspectives within what can be politically charged and socially unequal contexts is also an ethical dilemma for researchers. Constant trust building through regular feedback and update meetings with key health system actors and ethical oversight approaches appropriate to health policy and systems research are important.[23]

Co-production initiatives must also confront the challenge of insecure resourcing. In the Kilifi learning site, new research proposals have been developed to sustain activities over time. In other initiatives, the co-production process has been institutionalised within health service practice. For example, in South Africa, health system managers allocate a few hours every two months to participate in the HPSR Journal Club, while the position of emergency medicine service embedded researcher was secured as a part time government post.

Finally, broader health system factors also affect these types of collaborative arrangements. For example, the clinical information network seeks to improve paediatric outcomes through better use of relevant data. However, achievement of these improved outcomes has been limited by inadequate medical supplies and equipment, insufficient human resources, and poor quality information systems. Managing the power dynamics within the health system can also be challenging. As experienced in Kilifi, health system decision makers working at different system levels do not always understand

each other's professional constraints. This has generated tension and impacted on collective problem solving. Disagreements about roles among higher level managers prevented the extension of the Sedibeng leadership development intervention to a wider group of managers.

Conclusions

These experiences illustrate various ways in which co-produced knowledge can be mobilised to support health system decision making. Researchers' roles go beyond doing research, to facilitating dialogue and debate, encouraging reflective practice by all, and harnessing the synergies of their own research and education activities. They must also pay attention to renegotiating partnerships over time as needed, sustaining the work of trust building and the wider challenges of co-production.

Co-produced knowledge spreads within health systems through multiple channels to impact on policies and wider decision making practices. Assessing the social impact and value of this form of embedded research must trace the full array of consequences over time.

The long term nature of these initiatives demands appropriate resourcing. In terms of staff time, decision making organisations could allocate established posts for this type of work, while research organisations could support researcher engagement by valuing these activities in career development pathways. Research funders must also be open to new research approaches and to supporting long term collaborations to strengthen health system decision making.

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