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The role of emergent champions in policy implementation for decentralised drug-resistant tuberculosis care in South Africa

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ABSTRACT

Objective Champions are recognised as important to driving organisational change in healthcare quality improvement initiatives in high-income settings. In low-income and middle-income countries with a high disease burden and constrained human resources, their role is highly relevant yet understudied. Within a broader study on policy implementation for decentralised drug-resistant tuberculosis care in South Africa, we characterised the role, strategies and organisational context of emergent policy champions.

Design Interviews with 34 healthcare workers in three South African provinces identified the presence of individuals who had a strong influence on driving policy implementation forward. Additional interviews were conducted with 13 participants who were either identified as champions in phase II or were healthcare workers in facilities in which the champions operated. Thematic analyses using a socio-ecological framework further explored their strategies and the factors enabling or obstructing their agency.

Results All champions occupied senior managerial posts and were accorded legitimacy and authority by their communities. 'Disease-centred' champions had a high level of clinical expertise and placed emphasis on clinical governance and clinical outcomes, while 'patient-centred' champions promoted pathways of care that would optimise patients' recovery while minimising disruption in other spheres of their lives. Both types of champions displayed high levels of resourcefulness and flexibility to adapt strategies to the resource-constrained organisational context.

Conclusion Policymakers can learn from champions' experiences regarding barriers and enablers to implementation to adapt policy. Research is needed to understand what factors can promote the sustainability of champion-led policy implementation, and to explore best management practices to support their initiatives.

WHAT IS ALREADY KNOWN ON THIS TOPIC?

⇒ Champions are recognised as important to driving organisational change in healthcare quality improvement initiatives in high-income settings.

⇒ Field-level champions have been identified as relevant actors for implementation of evidence-based policies and practices.

WHAT THIS STUDY ADDS?

⇒ Disease-centred champions have a high level of clinical expertise and place emphasis on clinical governance and clinical outcomes.

⇒ Patient-centred champions look at novel ways of improving patient access to care and develop solutions to meet the social and clinical needs of patients.

⇒ Emergent champions' efforts to implement new policies in resource-constrained contexts are highly contingent on organisational culture, relationship-building and their position in networks of influence.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY?

⇒ Emergent champions in low-income and middle-income contexts can play a vital role in implementation of strategies to improve access to high quality, patient-centred care; however, in order to address the gaps in resource-constrained healthcare systems, they require adequate support and buy-in from their organisational networks.

BACKGROUND

According to WHO, South Africa is among 30 countries with the highest burden of drug-resistant tuberculosis (DR-TB),[1] recording 13 199 laboratory-confirmed cases of DR-TB in 2018.[2] Prior to the introduction of decentralised care for DR-TB in South Africa, treatment outcomes were poor with up to 25% lost-to-follow-up among patients started on treatment and lengthy delays for patients to access hospital beds. In 2011, the South African National Department of Health (NDoH) introduced a policy framework for the decentralisation of DR-TB care, shifting care provision away from centralised control and specialist

facilities, by providing effective treatment closer to the patient's home.[3] Decentralisation was introduced to ease the burden on specialist hospitals and provide treatment that takes patients' social responsibilities into consideration.

However, despite this initiative, patients diagnosed with DR-TB continue to experience delays in treatment initiation and difficulties linking from testing to care.[4] There are differences in outcomes across health districts in South Africa and there is significant variability in the extent of decentralisation.[5] Insufficient funding for DR-TB policy directives, inadequate infrastructure and lack of provincial support have hindered the shift of responsibility,[4] however, it is notable that some South African districts were early adopters of decentralised care as a result of advocacy by specific actors within their respective facilities. These individuals may be considered emergent policy champions or policy entrepreneurs.

As described in the literature, policy champions or policy entrepreneurs have confidence in a particular policy solution and put time, energy and reputation into implementation.[6] They may occupy positions in governmental or non-governmental organisations, such as interest groups or research organisations[6] but are also found within healthcare organisations where they are also referred to as clinical champions. Clinical champions play an important role in the interpretation of policy and are committed to supporting, promoting and driving through an intervention, and overcoming potential resistance to change within the organisation.[7] They can serve as voices advocating for the implementation of policies that seek to address gaps within the healthcare system and raise awareness of human rights issues.[8]

Champions are particularly relevant in low-income and middle-income countries (LMIC) with a high disease burden and where human resources can be a major constraint to policy implementation.[9] However, there is a paucity of literature on the role and influence of the clinical champion role on health policy implementation in LMIC.[5] Studies note the role of champions in promoting the implementation of specific interventions, for example, hand hygiene in Cape Town, South Africa.[10] A benefit of fully understanding the champion role is that it encourages critical examination of variables that may be important for organisational change.[11]

In this paper, we examine the emergence of health policy champions during the implementation of decentralised DR-TB services in South Africa. We describe two types of emergent champions—distinguished by different emphasis on the goals of decentralised care—and the strategies they deployed. We further outline the contextual factors that enabled or hindered their implementation efforts as they negotiated the health system.

METHODS

Study design and participants

The aim of the overarching research project, within which this substudy was nested, was to identify interventions to optimise decentralisation of services for multidrug-resistant tuberculosis (MDR-TB)/rifampicin-resistant TB (RR-TB). The project used a stepwise realist approach to understand the policy context, implementation and working models of decentralised MDR-TB/RR-TB care in three provinces in South Africa (Western Cape, KwaZulu-Natal and Eastern Cape).

The overarching project entailed three phases of data collection conducted between 2016 and 2019: a key informant interview study (*phase I*, not described here); facility process-mapping and interviews in 13 districts in the study provinces providing decentralised DR-TB care (*phase II*) and an in-depth study of specific emergent models of decentralised care in selected districts in the study provinces (*phase III*). Patients were not involved in the design or conduct of research in these three phases. Following phase II interviews, we recognised that emergent champions were an important theme, particularly in sites that were further along in the process of implementing decentralised care. We therefore, in phase III, interviewed individuals identified as champions in phase II as well as other healthcare workers present at the facilities the aforementioned champions operated within, in order to identify the strategies, they deployed as well as contextual factors that enabled or hindered their efforts. All interviews were conducted in English, recorded and transcribed verbatim. Below, we describe procedures for phase II and phase III separately. Additional details of methods and Consolidated criteria for Reporting Qualitative research checklist are included in online supplemental data.

Data collection for phase II: in this phase, 34 interviews were conducted with a spectrum of DR-TB healthcare workers in 13 districts (34 participants), focusing on operational models for decentralised DR-TB care in each district, and enablers and obstacles to this care. Interviews were conducted in English, face-to-face (n=26) or telephonically (n=8) by experienced health policy and systems researchers, and recorded with consent of the participants. The topic guide included questions exploring the role of health systems actors in actively supporting the implementation of the policy. We asked: "Who is driving the programme for the decentralised management of DR-TB in your district/facility?" Participants were highly experienced and familiar with systems-level operations, and thus able to highlight the efforts of specific individuals identified as playing an important role in promoting decentralised care for DR-TB. Preliminary analysis of phase II interview transcripts helped to characterise these emergent champions as an important theme with respect to policy implementation. Champions were defined here as committed individuals occupying formal roles in the provision of health services who demonstrated a passion for the successful implementation of the decentralisation policy, and who were deeply immersed in the DR-TB programme.

Data collection for phase III: the data from phase II informed the topic guide used for the in-depth

semi-structured interviews in phase III, where 9 interviews (this includes two panel interviews with more than one participant present) were conducted with 13 participants who were either identified as champions in phase II or were healthcare workers in facilities in which the champions operated. Interviews were conducted face-to-face by a senior researcher and two research assistants. The in-depth semi-structured interviews provided flexibility to explore the strategies champions used to further their implementation efforts, as well as organisational barriers faced. They were recorded with consent of the participants, and transcribed by the same researchers.

Patient and public involvement

We sought to understand the role of DR-TB champions, the strategies they employ to optimise patient care and thus the healthcare professional was the focus of the study. Patients were not involved in the design and conduct of this research. The findings of this research have been shared at a NDoH stakeholder meeting, where delegates from participating study districts were given the opportunity to view our team's findings and consider its implications to optimise their decentralisation of DR-TB efforts going forwards.

Data analysis

We used a basic socio-ecological framework to distinguish between individual, interpersonal, community and organisational factors influencing the authority and capacity of champions to support the agenda of decentralised DR-TB care in different settings where they were identified. Interviews were read through multiple times by two researchers to gain familiarity and reach agreement on the themes identified. We followed a process of open coding initially to operationalise the framework through themes that emerged in relation to the legitimacy of champions in their respective settings and the implementation strategies employed (figure 1). Following refinement of the coding framework, we used NVivo V.12 (QSR International software) to organise and code the data. This helped us to identify *individual* characteristics of champions, their strategies (*interpersonal* and *community*) to promote implementation of decentralised care as well as the *organisational* factors enabling/constraining these strategies. Based on the characteristics of champions, case studies were created to illustrate the emergent champion types (box 1).

RESULTS

In phase II, nine individuals were recognised to be prominent in their efforts to promote decentralised care. We recognise these here as emergent champions. All DR-TB champions identified worked within decentralised DR-TB facilities in resource-constrained environments with varying levels of staffing, equipment and physical infrastructure. The identified champions were all males who occupied senior managerial posts and were accorded legitimacy and authority by their communities.

Box 1 provides brief case studies of three champions in selected districts to illustrate the interplay between individual, interpersonal, community and organisational factors as they bear on the role and capacity of identified champions to drive the policy forward within designated decentralised sites of care.

Types of champions: individual characteristics

Analysis of interviews conducted in phases II and III identified three domains for successful implementation outcomes[1]: facility experience—increased capacity to initiate treatment and shortened time to treatment initiation[2]; patient experience—reduced social and family disruption for patients and[3] clinician experience—particularly reduced clinician patient load at a decentralised site. Accordingly, we identified two broad categories of champion who could be characterised by their focus on a more traditional disease-centred approach or a patient-centred approach to achieving optimal outcomes of decentralised care (figure 2).

Disease-centred champions

Disease-centred champions were individuals, typically in a clinical service provision role, who possessed a particular interest and credibility in the field of DR-TB. Disease-centred champions were concerned about the quality of care rendered at PHC level. They were often initially sceptical that the disease could be managed effectively at lower levels of care due to a combination of issues such as high staff turnover and low DR-TB caseload that might present challenges to the continuity of DR-TB services.

> *We have change-over of staff all of the time in rural areas and MDR-TB has become so complex. If it was a standardised regimen then no problem but it is not and the doctors who don't work with this enough struggle to understand what is the correct regimen for which patient. So, and I think the reason why we didn't want to decentralise initially at [X hospital] because we had a full understanding of all of our patients in the area on a name basis and we had good relationships with them. We knew what we were doing was correct way of doing it in terms of treatment and follow-up. We didn't trust that anybody else outside could do the job as correct necessarily with the same passion and correct treatment that we were doing.* (Senior Medical Officer, Western Cape)

The disease-centred champion's main strength was their clinical expertise; they strived to ensure that patients were well cared for, stable and non-infectious on discharge. The disease was seen as best managed within the confines of the facility where staff could closely monitor patient adherence to treatment.

Patient-centred champions

Patient-centred champions strived to deliver holistic care; healthcare workers considered the patient's context to develop a pathway of care that would optimise recovery while minimising disruption in other spheres of the patient's life. They catered to the clinical and social needs of the patients and developed solutions that struck

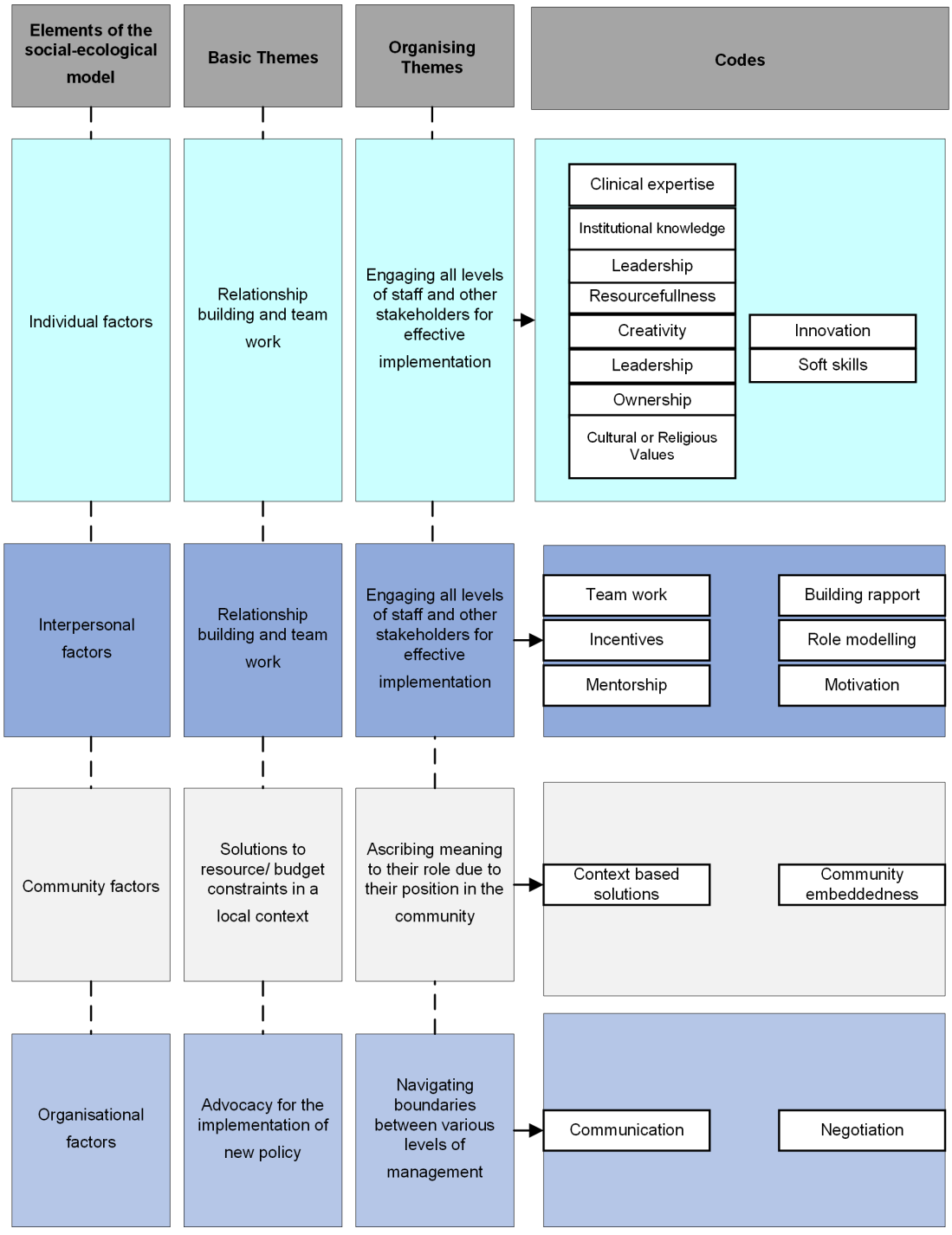

Figure 1 The conceptual framework underlying the study, identification of themes related to champions and coding used to operationalise this framework.

a balance between both. They were often prompted to think creatively about optimising resources to address needs of patient with DR-TB.

> *They [DR-TB ward staff] are part of a team and part of a culture where we are here to help people. You know MDR has got a lot of relationships in it, so you spend a lot of time talking to the patient, talking to the family and because I cannot speak isiXhosa fluently the nurses will help with translation and the social workers will come in and then the OT [occupational therapist] has something to say about rehab. It feels like this whole multi-team approach and I also feel that they are part of it. They also have a say and I am always trying to actively involve them…you understand the culture, you understand the context, do you think we can give this patient a pass out for the week? Why do you think he is defaulting? So, I think they also feel like part of a team and that they are contributing. They are not just serving me as a doctor.* (Senior Medical Officer, Eastern Cape)

Patient-centred champions saw the value of having a multidisciplinary team, as they could offer a package of healthcare services for the full rehabilitation of patients

Box 1 Case studies of the role of champions at three decentralised drug-resistant tuberculosis (DR-TB) sites

Champion A

Champion A was based at a district hospital, located in a rural area and historically characterised by a high turnover of management and clinical staff. The patient population has high unemployment and HIV burden. Patients struggle to access transport due to the difficult terrain, poor road infrastructure and travel distances. Prior to the decentralisation policy, participants indicated that patients with TB travelled about 300 km to the provincial referral hospital for DR-TB, to be admitted and initiate therapy. Patients were reported to have difficulty attending hospital initially and after their discharge due to travelling costs.

The burden of DR-TB disease in the community prompted the champion and their team to decentralise healthcare services prior to the introduction of the policy. Hospital management placed particular emphasis on patient-centeredness. Several participants described the hospital as well-known for creating a positive organisational culture based on teamwork, driven by a passion for delivering patient-centred care, where the patient's needs are understood and taken into consideration. Champion A encouraged development of staff and distributed leadership through inspiring all staff members to strive towards a common goal and to seize opportunities for growth and development.

Through mentorship of staff, the DR-TB champion ensured sustainability of the decentralised DR-TB programme. Facility resources were used creatively to respond to needs of patient with DR-TB and deliver a package of care that shortened hospital admission, providing sufficient time to stabilise the patient, screen household contacts and link the patients to social support grant services.

Champion B

Champion B was based at a specialised TB hospital in a rural area. The facility previously employed a centralised healthcare model in their region where the general pattern of care consisted of lengthy admissions for patients with DR-TB. The district had several challenges to the implementation of the decentralisation policy, including a shortage of doctors, high staff turnover at primary healthcare (PHC), limited public transport and a diverse population, including a many migrant seasonal workers.

Participants in setting B explained that the champion within their facility disseminated their clinical expertise and knowledge through mentorship. The champion was initially reluctant to decentralise the management of DR-TB due to concerns around quality of care, but realised that it was necessary to alleviate pressure on hospital beds at the specialised TB facility. They prioritised good clinical governance by ensuring the PHC was first fully capacitated to render DR-TB services, prior to decentralisation. Staff members noted that changes happened gradually and in an organised manner under watchful guidance.

As new policies were introduced, they prepared and supported their staff for and during change. Through mentorship of other staff, the DR-TB champion ensured sustainability of the programme. A database was developed to monitor patient location and strategies developed for targeted screening in high disease burden areas. Facility resources were used creatively to respond to needs of patient with DR-TB and deliver a package of care that shortened hospital admission, providing sufficient time to stabilise the patient, screen household contacts and link the patients to social support grant services. Champion B was well-placed and engaged with stakeholders at various levels of health management at policy forums. Their ability to build relationships extended beyond the confines of the facility, actively building rapport within the district and the neighbouring district to ensure continuity of care.

Champion C

Champion C was based at a specialist TB hospital in a densely populated urban district with a very high HIV prevalence. The facility previously only treated drug-sensitive TB but was established as a decentralised DR-TB site to alleviate an overburdened provincial referral hospital 25 km away which was characterised by long admissions and very ill patients.

The DR-TB champion arrived with an excellent reputation of both programmatic and disease management. They had previously implemented the decentralisation policy elsewhere and took it on themselves to bring care closer to patients' homes in order to address the social challenges of the disease. They initiated an outreach model to respond to the lack of planned patient transport, where clinicians from the TB hospital would travel to PHC clinics to provide clinicians and nurses with DR-TB management training, to capacitate them to start initiating DR-TB treatment. The DR-TB champion provided a supporting and advisory role once the clinics were established as treatment initiating sites.

with DR-TB that would otherwise be inaccessible. They fostered a sense of trust between staff and patients by ensuring that the patients' needs were understood in a context-sensitive manner.

> *We are trying to create a culture…we are trying to make a difference as a whole; let's work together as a team. So, a lot of the clinics don't have an established culture with common values and a common mission.* (Hospital Manager, Eastern Cape)

Champions' interpersonal and community-related strategic behaviours to achieve policy implementation goals

The primary goal of all champions was to influence ground-level staff and management to implement the new policy. Champions facilitated a positive organisational culture of learning through mentorship and relationship building within the decentralised facility and their counterparts at PHC level. All champions played a significant part in persuading and encouraging others to support the new policy, enabling skilled staff to perform outreach at PHC to reduce social and family disruption for patients. We identified four areas of champions' strategic behaviours that operated as mechanisms to achieve their objectives. These included: leadership and relationship building, flexibility and resilience, strength of influence and innovation.

Leadership and relationship building

Typically, champions had a high degree of institutional knowledge, work experience and technical competence that boosted their ability to influence change. Disease and patient-centred champions both shared a commitment to the field of DR-TB. They were equipped with specialised knowledge and skills necessary to navigate the

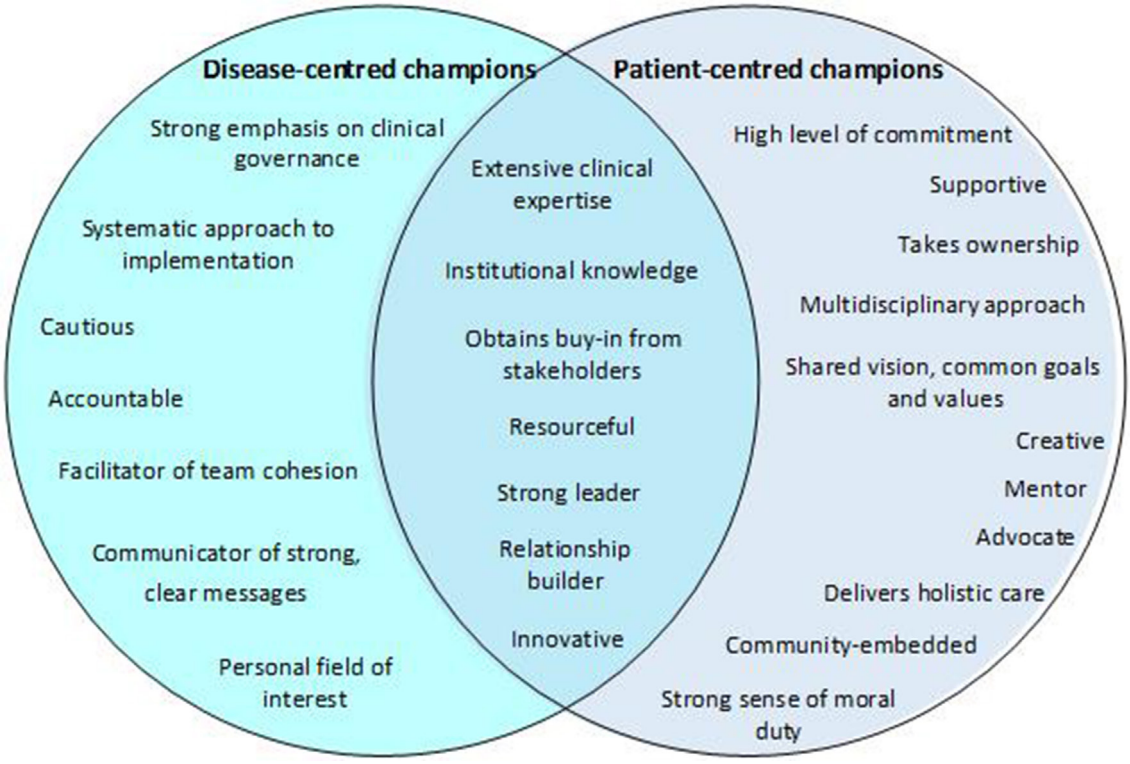

Figure 2 Features of disease-centred and patient-centred champions.

challenges in their local settings, but they presented with contrasting leadership styles.

Disease-centred champions displayed a strong commitment to their facility and emphasised strong leadership and a high level of organisation. As leaders, they fostered trust by providing staff with a greater sense of autonomy and rewarded sustained commitment. In contrast, patient-centred champions also displayed strong leadership skills, but their commitment was geared to the clients they served. There was less focus on hierarchy and they supported staff development, often adopting a side-by-side approach where staff were upskilled in DR-TB management through mentorship.

> *So, the manager of ours strives to give the best possible health care in a rural setting. He works really hard. He creates this culture of responsibility and pride and hard work. You hear these nightmare stories of other CMO's [Chief Medical Officers] at other hospitals that don't go in and are never on the ground as here; he's doing calls with you. And then it's your own motivation and core values to serve patients.* (Medical Officer, Eastern Cape)

Both disease-centred and patient-centred champions saw the efforts of their team as fundamental to materialising their long-term vision for policy implementation.

> *If we take people who care they would be able to make a commitment and you give them a certain amount of capacity…* (Senior Medical Officer, Eastern Cape)

Flexibility and resilience

Champions showed varying degrees of resilience. They developed this sense of resilience by learning from their experiences. They saw their failures as opportunities for growth and development and found innovative ways to solve problems within the limited resources available. One patient-centred champion repurposed and refurbished a room to create a small DR-TB ward.

> *There was a lot of initial resistance, they overcame the resistance. They got some buy in from the province for some renovations. Set up the process. They weren't given any other additional resources but still managed to do outreach. They still managed to run the clinics… If it wasn't for the champion, you can never say what would have happened but the speed at which it happened and how it happened was very much related to that particular person.* (Senior Medical Officer, Eastern Cape)

Obtaining buy-in from organisational networks was seen as key to the success of a champion. Despite initial resistance, one disease-centred champion continued to advocate for permanent medical officer posts for a DR-TB ward as he believed it would influence the continuity of care. Hospital management were convinced to convert a junior doctor post to a permanent medical officer post.

> *I wish we started decentralising earlier but we couldn't and my superiors didn't necessarily believe my idea but I said I don't want a community service doctor working in MDR. If Dr […] goes out a solid person must look after these patients. So, we've changed the community service post to a permanent medical officer post who helps with MDR.* (Medical Officer, Western Cape)

Strength of influence

DR-TB champions' strength of influence was determined, in part, by their position of seniority. Champions who occupied positions such as district or hospital manager had greater opportunities to engage with stakeholders

at various levels of health management, to obtain buy-in and negotiate additional resources, than those who only occupied a clinical role within the facility.

> *We have a history of working together, so that makes it much easier. So, we actually knew the people there, we knew the doctors, we knew the management…* (Senior Medical Officer, Western Cape)

Champions who held a position with limited oversight over the activities of others had less opportunity to innovate, network and negotiate beyond the boundaries of the facility, due to lack of support or resistance from management and allied departments. Those who worked in isolation were not able to bring about sustainable change.

> *The district coordinator as well and her supervisors… are the ones who usually present any changes, so for example there's a need to capacitate, there's a need to decentralise and down refer all those [patients] it is usually a directive that comes from the district. Thus far I think there are still discussions but nothing concrete… Other sites have been put in place but they still operate their sites independently without intermingling, without actually coming up with a system where there is roaming of the doctor maybe or the initiator from one site to the other to assist, to capacitate and so on. So, there are still those little boundaries that can only be broken by the district by them coming up with a model.* (Medical Manager, KwaZulu-Natal)

Innovation

DR-TB champions were often driven to introduce higher level implementation innovations to lower costs and increase efficiency. Disease-centred champions concentrated efforts on innovative practices to reduce time to treatment initiation. One disease-centred champion facilitated a telephonic consultation and script faxing system to address challenges such as doctor numbers and high staff turnover at PHC and limited public transport networks affecting the patient's ability to seek care. This virtual service bridged the gap between the specialised TB hospital and the PHC facility.

> *…what they do in the beginning they still send me the form so that I have all of the information about the patient and then they write the script. Then they also send the script to me so that I can just see if they were correct. In the beginning I saw a lot of mistakes that I corrected for them and let them know that they can change it but now the more they are doing I don't change anything anymore for these specific subdistricts.* (Senior Medical Officer, Western Cape)

In addition to higher level implementation innovation, patient-centred champions were also engaged in fine-tuning facility operations on the ground level. Patient-centred champions were highly sensitive to patient responsiveness and adjusted services to cater to the needs of the population. One patient-centred champion in a rural area wanted to improve patient access to care due to the difficult terrain, poor road infrastructure and vast distances. This champion initiated monthly outreach at PHCs and arranged for packaging of individual patient prescriptions and dispensing of treatment at the clinic.

> *…we pack the meds. Whatever's written there we pack it. So even when we order stock now, we take our clinic consumptions into account. We're like 'Okay, there's a high chance that A, B and C are going to want to loan or borrow some medication. Let's order 10% more'* (Pharmacist, Eastern Cape)

Organisational factors constraining champions' strategic efforts

We encountered several examples of champions whose efforts to innovate or improve care had been stifled by contextual barriers. These internal organisational barriers included, for example, the failure to engage and obtain buy-in from management, allied departments and the multidisciplinary team, or tensions between personal values and the orientation and culture of an organisation.

> *We tried to bring the treatment closer to the people. I know it was not easy because when you go to approach the hospital and you say you are going to open a clinic here, they will tell you that they don't have staff, they don't have space and infection control is a concern, who is going to be doing this and who is going to be doing that? So, there were a lot of issues …We trained nurses and we trained doctors but you know people don't stay especially in the rural areas. You won't see a doctor staying for more than two years in one rural hospital.* (Medical Manager, KwaZulu-Natal)

The organisational culture at the ground level played a role in the ability of a champion to implement a new policy and their level of motivation. The primary strategies previously used by a champion to successfully implement a change might not necessarily function in the same way in a new setting.

> *I realised that he was not going through management. He was just going through to the doctors and saying that there are patients that we need to see together, so it was not approached in a programmatic manner. You need to approach it in a programmatic way to ensure the sustainability and that there are resources that flows into supporting it. It is not all about the doctor and the patient, it is about those tools required for DR-TB…* (Specialist Family Physician, KwaZulu-Natal).

In facilities with a high patient-to-clinician ratio, resistance to change among staff and limited practical operational support and understanding from management, DR-TB champions were unable to obtain buy-in from various levels of staff through negotiation and networking. One champion wanted to expand decentralisation in a large urban area by performing outreach at PHC clinics but could not obtain support from senior management. He battled with logistic challenges such as unavailability of a government vehicles to perform outreach.

> *They said [you] can you go there and assist the nurse to initiate. I said which vehicle am I going to use, the government vehicle? What is the document that is covering me to take the government vehicle and go there? I do have a supervisor in the hospital, what am I going to tell my supervisor? I am going where? Where is the document? So, it can't be something that people are saying verbally without any finalized approved system that you can use.* (Medical Manager, KwaZulu-Natal)

These factors thwarted both the authority and capacity of champions:

> *…you need to be able to identify the right staff to train, somebody who's going to be dedicated and want to work there and if you can*

find those people your battle is half won. Just getting the right staff, getting buy-in from management, without the buy-in from the subdistrict management you will constantly be fighting to get things going (Subdistrict TB coordinator, KwaZulu-Natal)

A champion's inability to deal with stressors such as inadequate resources and poor support from their organisational network could be discouraging and result in the eventual abandonment of their champion role.

Some people will challenge and say 'no, our bed capacity has dropped—what is going to happen next?' There's a lot of speculation around that they may close the hospital, that they may reduce the staff. Now they try to make sure that this does not happen… that is why I left because I was seen as a person who wanted to shut down the hospital. They started fighting in all directions. To go and visit a satellite site, for example, I needed a vehicle to go, when they were aware of my roster that I was going to this place, Wednesday morning when you tell them that you want to go to [general location] they will tell you that there is no vehicle because they don't want you to go there. They want decentralisation to fail. They want to show that it can't work. When I saw that it was difficult for me to work there, I left them. (Medical Manager, KwaZulu-Natal)

DISCUSSION

This study expands on earlier research on the role of change champions in primary care,[11] by focusing on a particular change champion in the implementation of DR-TB care, the clinical champion in an LMIC setting. We examined individual, interpersonal, community and institutional factors that enabled or hindered clinical champions' strategic behaviours. We identified two types of emergent champions, referred to as patient-centred champions and disease-centred champions. Both types of champions displayed a strong interest in advocating for the implementation of decentralised management of DR-TB care, and used overlapping strategies to achieve success. This commitment of clinical champions to drive the implementation changes necessary to achieve desired complex care processes is analogous to that reported by Flanagan *et al* in the context of acute stroke care.[12] The two clinical champion types possessed the defining characteristic of policy entrepreneurs, including the investment of time, energy and personal resources. However, the two types of clinical champions were distinct in their value systems which informed the objectives and focus of their efforts, and the variable emphasis of their strategies.

Disease-centred champions focused on innovations to improve the efficacy of the facility to improve clinical outcomes of the patient whereas the patient-centred champions employed innovations with goal of improving the patient experience in a holistic manner. They optimised their particular programme by drawing on their personal strengths. Disease-centred champions made an impact through their clinical expertise, ensuring that patients were clinically well and non-infectious on discharge and placing emphasis on quality of care rather than patient social issues. Our analysis highlighted the tension between focusing on clinical outcomes and patient experience in DR-TB care service. Both champion types recognised the importance and potential benefits that would come from the shift from centralised to decentralised management of DR-TB care. Disease-centred champions were motivated to increase the number patients initiated on treatment while alleviating bed pressures at the facility. Patient-centred champions were often seen working within the community and responding to patient needs by using local resources to introduce flexibility to clinical care. Both roles were valuable for effective implementation of new DR-TB policy.

DR-TB champions were often under pressure to innovate to lower costs and increase efficiency. Despite the constraints, champions were able to optimise use of available resources by using their negotiation skills to navigate barriers and provide service without interruption. In facilities with insufficient medical officer capacity, high staff turnover and limited transport networks, champions implemented innovative practices such as telephonic consults and script faxing system to further the decentralisation process by using existing resources. These innovations increased capacity to initiate treatment at the primary care level and reduced the time to treatment initiation.

The extent to which DR-TB champions implementation efforts were successful depended significantly on their context, as previously noted.[12] Champions can have their creativity stifled by the bureaucracy of the health sector or by unrealistic expectations without sufficient support. Innovation in the public health sector can be challenging due to regulation, outdated systems and bureaucracy. While some champions continuously adapted their ideas to work around these barriers, others felt discouraged, and some stepped down from their implementation role.

Both disease-centred champions and patient-centred champions exhibited a diverse range of features that allowed them to further their policy implementation efforts. Clinical champions displayed a high level of resourcefulness to develop innovative strategies within resource-constrained health systems, displayed flexibility to adapt their ideas to the context and to work around barriers, fostered relationship-building and collaborative practices and possessed a level of seniority, that often determined their level of influence and effectiveness of implementation efforts. Champions can more effectively disseminate messages relating to the implementation of new initiatives if they have been previously considered to be esteemed decision-makers.[13] Although the champion's position in a structure was essential, it did not guarantee the acceptance of new policy by all stakeholders. In situations where the policy being promoted was not well received, champions used their seniority to negotiate terms and network across various levels of management to gain support for their ideas.

Thus, the two types of emergent champions identified share some strategies (figure 2) however appear to be driven by different motivations that are in turn, associated with their working relationships within

facilities, the composition of teams and their affinity with the surrounding community and its social norms. We observed that disease-centred 'champions' tended to work within a more hierarchical structure with emphasis on documenting and recording technical outcomes of care. In contrast, patient-centred champions, as we have designated them, operated in contexts where staff were closer-to-community in terms of their personal connections and familiarity with the social issues, and sometimes driven by religious motivation.

Collaboration and relationship building were central to the work of clinical DR-TB champions. Organisations in which relationships span various management levels promote relationship building, serving as a facilitative context for clinical champions.[14] DR-TB champions collaborative efforts extended beyond the boundary of the facility as they collaborated with PHC clinics to identify gaps and produce creative solutions. Initially, when a new policy is introduced, significant time is spent on countering staff resistance to change. As relationships and trust are fostered, the need for control is reduced, substituted by coordinative interaction.[15] The shared vision in turn positively influenced by team members' cognitive beliefs in the effectiveness of their team efforts.[16] However, relationship building with staff is a slow and particularly challenging process in rural areas where there is high staff turnover. In this setting, clinical champions found it challenging to build strong trust relationships.

Limitations

We did not set out to specifically examine the role of champions in decentralised DR-TB care, although the role of key individuals at both policy and programme levels became clear to the research team following analysis of our data early on in the project.[17] Accordingly, our paper has adopted an inductive, realist approach by focusing on one key theme emerging in our study of decentralised care models. We draw on a relatively small but in-depth set of interviews conducted in a context that the research team became very familiar with over the course of the 4 years.

We recognise nonetheless that we are unable to draw direct links between champion activity and outcomes of patients with DR-TB, since we did not set out to measure these association. Multiple factors (including patient-related factors, such as comorbidity, drug-resistance profile and support networks as well as health system-related factors) as well as the efforts of the team mobilised through a champion can impact on outcomes. Nonetheless, we believe that our analysis offers novel insights into the characteristics, strategies and opportunities for emergent champions to contribute to policy implementation in resource-constrained contexts.

CONCLUSION

Policy is created to share the goals of a particular organisation, but often lacks attention to detail and to the context in which it needs to be implemented. Local policy, at the district or hospital level, needs to offer room for flexibility and innovation. In our study, we observed that DR-TB champions were responsible for taking into account their specific contexts, looking at the availability of resources and access to funding in their districts and providing context-shaped mechanisms to meet the final objectives of the policy.

Healthcare organisations can maximise their chances of successful implementation of new initiatives by having as many facilitating factors in place as possible, an identifiable champion being one of them. The voices of champions are crucial for creating a strong culture of patient advocacy and identifying opportunities to shift resources to enhance patient care in their context. Champions can be nurtured by ensuring protected time and resources are available to them. Consideration should therefore be given to recognition and support of emergent champions to promote successful policy implementation. Champions should be recognised as valuable sources of information at various stages of policy implementation. Policymakers can learn from champions' experiences regarding barriers and enablers to implementation in order to adapt policy and improve operational plans. Further research is needed to determine the sustainability of champion-led DR-TB care implementation efforts in resource-constrained settings, the contextual factors that influence their ability to bring about sustained change and to identify optimal management practices to support their initiatives.

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Supplementary data: Further description of methods

Interviews were conducted by female researchers LDH, SLR and WJ. LDH and SLR were both social science degree majors qualified in the fields of medicine and teaching respectively. WJ is a medical doctor with a specialist qualification in public health medicine. SLR and LDH were employed full-time on the project. LDH had been employed as a clinician in the DR-TB, HIV and family medicine programs in two of the study provinces (KwaZulu-Natal and the Western Cape). Prior to the study SLR had been lecturing in Industrial Communication at a vocational college.

There was no formal relationship established prior to the study, except some familiarity between the clinicians. LDH and WJ had an informal relationship prior to study. The participants were aware of research aims and objectives and the names of the researchers and principal investigators. The participants were aware that the researchers were interested in health systems research around DR-TB disease in South Africa. WJ had a special interest in understanding implementation of the MDR-TB decentralisation policy in different contexts in South Africa.

The study intended to use a realist approach as a starting point to explore factors relating to champions, i.e., the strategies (mechanisms) they use and the contextual factors that influence the outcomes linked to the effective implementation of the policy for decentralised DR-TB care. This analysis included in-depth interviews with DR-TB stakeholders and healthcare workers involved in the DR-TB program to unpack their experiences. Data was re-examined and analysed through the lens of a realist approach by organising themes into contextual factors, mechanisms and outcomes.

The participants were purposively selected to include broad categories of health care providers in the multidisciplinary team working with DR-TB patients in each sampled facility. Participants were contacted via email. A total of 47 participants (34 in phase 2 and 13 in phase

3) were approached via email. There were no refusals to participate in the study and no withdrawals. Interviews were conducted at the workplace in person, except for eight interviews being conducted telephonically by WJ. Phase 3, included two panel interviews with more than one participant present Appointments were scheduled prior to the facility visit and only the researchers and participant/s were present during interviews. Participants included DR-TB clinicians, TB nurses, pharmacists, district and subdistrict coordinators and facility managers. There were equal numbers of males and females interviewed. Most participants had been working in DR-TB for more than 5 years. Interviews took place in 2018.

Questions guides were not provided by the authors. Only one participant was interviewed twice during the study. The participant was initially interviewed as part of 34 participants during the first phase of data collection. During the second data collection phase (13 participants) this participant was interviewed again to obtain further information.

Interviews were conducted in English, audio recordings were obtained, except in the case of a correctional services facility, where recording was not permitted and notes were made during the interview. The duration of the interviews ranged from 30-60 minutes, depending on occupational time constraints of participants and on data saturation. Transcription was done verbatim by a team member and was not returned for comment or correction.

SLR and LDH coded the data and described the data tree. Themes were identified from the data. Nvivo 12 software was utilised to manage the data. The participants were given an opportunity to comment on findings during stakeholder feedback sessions at the end of the study (not discussed in this manuscript).