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Incentives for health workers to stay in post and in rural areas: findings from four conflict- and crisis-affected countries

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Abstract

Attracting and retaining health staff in remote areas is a challenge for many countries. Areas which are crisis-affected face often more severe challenges. This article analyses interviews with a range of health staff who lived through crisis in four settings (northern Uganda, Sierra Leone, Cambodia and Zimbabwe) to understand the context, system and personal factors which helped to motivate and retain them in public or private not-for-profit service.

A conceptual framework was first developed to outline the elements which were expected to influence health worker incentives (broadly understood as mechanisms which aim to achieve a specific change in behaviour). 103 life history interviews over 2013-14 with staff who had remained in post through crises were analysed in relation to the different elements of the framework.

All factors emerged as significant, although some (such as political settlements) are more latent and therefore less liable to be discussed by health staff. Some factors were complex - relationships with the community, for example, were expressed as positive in most settings but also as constraining and demotivating in others. Personal factors also play a strong part, with service orientation, local origins and family ties all playing a significant and interconnected role in explaining why our sample had remained in service through a variety of shocks.

Our research suggests that in disrupted settings staff have similar aspirations as in more stable settings. However, the policy and wider contexts are often more hostile, while policies to support rural retention are typically poorly implemented, if they exist at all. The positive factors highlighted by staff point to the importance of local support mechanisms, selection of staff with strong service ethics and local ties, and a greater focus on lower cost but influential areas such as fostering improved communication with staff, along with supportive collegial and working conditions.

Background

Retaining health staff, particularly in remote or less attractive areas remains a challenge in many countries (1). A wide range of interventions have been proposed to improve retention (2). Conflict and crisis-affected settings pose particular challenges for the health workforce – often bringing rapid changes to the number and distribution of staff, their willingness to work in parts of the country, the landscape of actors supporting them, as well as the health needs they need to address in the population (3-5). In some post-conflict situations, psycho-social support may also be needed to address the trauma which health staff have experienced (6). Post-conflict interventions, often triggered by sudden availability of funds and technical expertise as part of rehabilitation efforts, may

be introduced without careful consideration of the long-term effects on the health system. Conversely, there is some evidence that post-conflict human resource practices – for example, reintegrating staff from across conflicted areas and non-partisan recruitment practices – can contribute to reconstructing state legitimacy (7).

The article reports on the findings of research into the changing incentives for health workers in four conflict-affected settings. Our understanding of incentives is broad, as mechanisms which aim to achieve a specific change in behaviour (8), including "all the rewards and punishments that providers face as a consequence of the organisations in which they work, the institutions under which they operate, and the specific interventions they provide" (9). The article aims to unpack the contextual, personal and workplace elements which are reported to have motivated and retained staff, especially in rural areas, to examine the similarities and differences in anticipated and unanticipated effects of the organisational practices across contexts, and to derive lessons for policies on retention of key staff in similar contexts.

Contexts

Northern Uganda. Uganda had experienced conflict most recently, running from the mid-1980s and ending only in 2006 but being confined to the north of the country. The general health workforce in Uganda is characterised by low numbers, poor skills mix and distribution disparities, particularly between rural and urban areas but also across regions for the key/critical cadres. For example; 71% of doctors, 64% of professional nurses and midwives, 76% of dentists, and 81% of all pharmacists work in the central region, which is predominantly urban (10). The health workforce situation in post conflict northern Uganda mirrors that of the whole country although with conditions exacerbated by conflict (11). During the conflict, many of the health workers died, others sustained physical injuries and others fled the region during the conflict in search of safety (12). Despite the end of conflict in 2006, most have not returned and policies to attract and retain staff in this region still face many challenges (13).

Zimbabwe. Zimbabwe presents an example of chronic economic crisis, which peaked in the mid-2000s and is still on-going today. The post-independence period in Zimbabwe (after 1980) was characterised by rapid expansion and improved access to health services for the population (14). In the early years of independence, international organisations seconded doctors and other specialists to Zimbabwe. In 1998, 65% of medical posts outside the major cities were held by expatriate doctors. However, economic conditions deteriorated from the late 1990s, leading to a brain drain of staff and deteriorating access and health indicators for the population. At the peak of Zimbabwe's socio-economic and political crisis in December 2008, the vacancy levels in the public sector were at 69% for

doctors, 61% for environmental health technicians, over 80% for midwives, 62% for nursing tutors, over 63% for medical school lecturers and over 50% for pharmacy, radiology and laboratory personnel (15). A shortage of 6,940 health workers was reported in January 2009, implying Zimbabwe's health system was just 57% staffed to capacity. There was an influx of health cadres from Zimbabwean rural areas to urban areas or to other countries. Due to health worker shortages, experienced senior staff in the public sector in underserved areas moved to fill in the vacant posts in large, mostly urban facilities. The country had the youngest facility-based workforce, with one quarter of health workers and half of physicians aged below 30 years (16). This situation has improved with the introduction of emergency retention schemes but these remain insecure and externally financed (17).

Sierra Leone. Sierra Leone had suffered a decade-long civil war ten years before the start of the research and was then hit by the Ebola epidemic during the study period (2014). In Sierra Leone, insufficient health workers is a historical challenge and a key barrier to a resilient and responsive health system. This was exacerbated during the civil war which lasted for more than a decade (1991 to 2002). In the immediate post conflict phase (2002 – 2009), efforts to address this inadequacy in terms of health workforce numbers were developed but with limited effectiveness (18). The introduction of the Free Health Care Initiative in 2010 brought about a number of HRH reforms, including a national wide recruitment drive, to increase the number of health workers to cater for the increased service utilisation and a significant increase in health worker salaries (19). The increase in numbers was however more prominent for specific cadres, including state enrolled community health nurses, the newly introduced maternal and child health aides cadre. Attrition rates of health workers also improved after the Free Health Care Initiative and generally increased with skill level. Currently, the inadequacy in available HRH is more pronounced for the higher cadres, particularly doctors, midwives and nurses. The 2014 Ebola Virus Disease claimed the lives of 257 health workers, which further depleted the health workforce (20,21). In addition, there is a geographical imbalance in the distribution of the health workforce, with the rural areas, where the need is greatest, underserved (22). Recent data collection in support of the on-going post Ebola recovery plan revealed that 70% of the workforce is concentrated in urban areas (which has 38% of the total population) and 30% of the total workforce is found in rural areas (which houses 62% of the total population.

Cambodia. Cambodia represented the longest lens on a post-conflict period. Cambodia experienced an almost-total devastation of its health workforce under the Khmer Rouge and has spent the last three and a half decades re-establishing security across the whole country alongside health and all other social institutions. Efforts focused initially on re-establishing production of health staff, later switching to a greater focus on quality of care (23). Considerable progress has been made. However,

gaps remain, as do challenges of securing adequate numbers of key staff, such as midwives, in rural areas, given the low salaries and unequal opportunities there.

Methods

A mixed methods study on health worker incentives was designed, using both retrospective and cross-sectional tools, one of which was life histories with health workers in four countries. The objective of the overall research was to understand changing health worker incentives and their policy implications in the post-conflict and post-crisis period (24). We have described elsewhere the evolution of human resources for health policies in these settings, where problems are well understood but core issues – such as adequate pay, effective distribution and HRH management – are to a greater or lesser degree unresolved (25). This paper complements that policy analysis with a focus on the health worker perspective, understanding which factors (formal and informal) had influenced their willingness to remain in service through crises. It draws primarily from the life histories, although we cross-refer to analysis from other study components (document review, key informant interviews, health worker surveys and human resource data analysis, described further in (3)), where these provide information on the factor under consideration.

Life histories were used to explore health workers' perceptions and experiences of their working environment, how it has evolved and factors which would encourage or discourage them from staying in post in remote areas and being productive. They were encouraged to produce visual aids, such as timelines. Through their lives and experiences we sought to obtain understanding of the evolution of the health system and the different processes related to the work environment. Their lived experiences provided us with a personal perspective on the effectiveness and intended as well as unintended consequences of human resource policies and their evolution (26).

These life histories were conducted with health workers meeting specific criteria (including type of staff and length of service in the area, to capture experiences of crisis and post-crisis periods) in selected health care facilities in the study areas using an open-ended topic guide. Interviews were conducted in a comfortable location and lasted 1-2 hours on average. The topic guide covered the following areas:

- How they became health workers
- Their career path since, and what influenced it, including the role of gender
- What motivates/discourages them to work in rural areas and across different sectors
- Challenges they face in their job and how they cope with them

- Conflict related challenges and how they coped
- Their career aspirations
- Their knowledge and perceptions of recent and current incentives.

The profile of the 103 participants is shown in Table 1. They represent the mix of staff actually found on the front-line in health centres, which tends to be dominated by mid-level cadres, who are largely female (20). All had experienced the crisis and post-crisis periods.

Table 1 Summary of life histories

	Cambodia	**Sierra Leone**	**Uganda**	**Zimbabwe**
Site selection	Six provinces (covering all four ecological regions) – one district from each, including urban, rural and those with more or less external support	Four districts (covering all main regions, including urban and rural/hard to reach and areas of varied socioeconomic status)	Three districts in Acholi sub-region – most conflict-affected area	Two provinces – one well served and one under-served; three districts including urban, mixed and rural
Sectors included	Public sector only	Public sector only	Public (17); PNFP (private not-for-profit - largely mission sector – 9)	9 from the government sector; 14 from the municipality; 2 from the Rural District Councils; 6 from the mission sector and 4 from the private sector (but these were public staff working part-time for private facilities)

Health workers interviewed Total: 103	Total: 19	Total: 23	Total: 26	Total: 35
	By cadre: 4 doctors ; 1 medical assistant; 8 midwives; 6 nurses	By cadres: 8 community health workers/ community health officers; 5 nurses; 7 midwives 3 medical officers	By cadres: 2 clinical officers; 15 nurses; 2 nursing assistants 3 midwives; 2 others	By cadres: 2 doctors; 21 midwives; 9 nurses; 3 environmental health practitioners
	By gender: 14 f; 5m	By gender: 12 f/11 m	By gender: 19f; 7m	By gender: 32 f; 3 m
	Age range: 24-53	Age range: 36 - 65	Age range: 30-60	Age range: 31-65

Source: (12,21,27-30)

Thematic analysis using manual coding, NVIVO (and ATLAS Ti in Uganda) was carried out on transcribed (and sometimes translated) texts. The analysis started from the themes of the question topic guide but was adapted to the content in each interview. Lifelines were also analysed for patterns, both at individual and group levels. Analysis was initially done by country, and later, for this article, compared across countries.

Ethical approval was gained from each country ethics board and the relevant UK universities. The interviews were tape recorded and noted after gaining permission from the participants. The interviews took place in a private place acceptable to the interviewee, such as their office.

Limitations

The health workers interviewed represent 'positive deviants' – those who stayed in service during difficult times for the country (or sub-region, in the case of Uganda) – and cannot therefore be taken to represent the wider health workforce. However, the auto-ethnographic method (31) can provide rich insights into experiences which can productively inform health workforce planning. A further limitation to note is that we only examined different sub-sectors in two countries (Uganda and Zimbabwe). The omission of the PNFP sectors in Cambodia and Sierra Leone was related to the

different market structures in those settings (with private not-for-profit providers less significant as care providers), but in retrospect reduces our ability to compare across different organisational settings across all four contexts.

Results

Analysis of findings is done according to the conceptual framework for the study (Figure 1) (24), which was developed by the team prior to data gathering, based on previous literature. The context features on the left will influence attraction, retention and performance in all settings, but we expected that some would be particularly acute in post-conflict settings. In particular, the absence of actual or perceived security, the fragility of political settlements, the possibly fractured relationships with the community (or conversely, the strong ones developed during a period of loss of central control) and the breakdown of organisational controls were all hypothesised to call for different responses in the post-conflict setting.

Figure 1 Conceptual framework

Framework for analysing health worker incentives in post-conflict areas
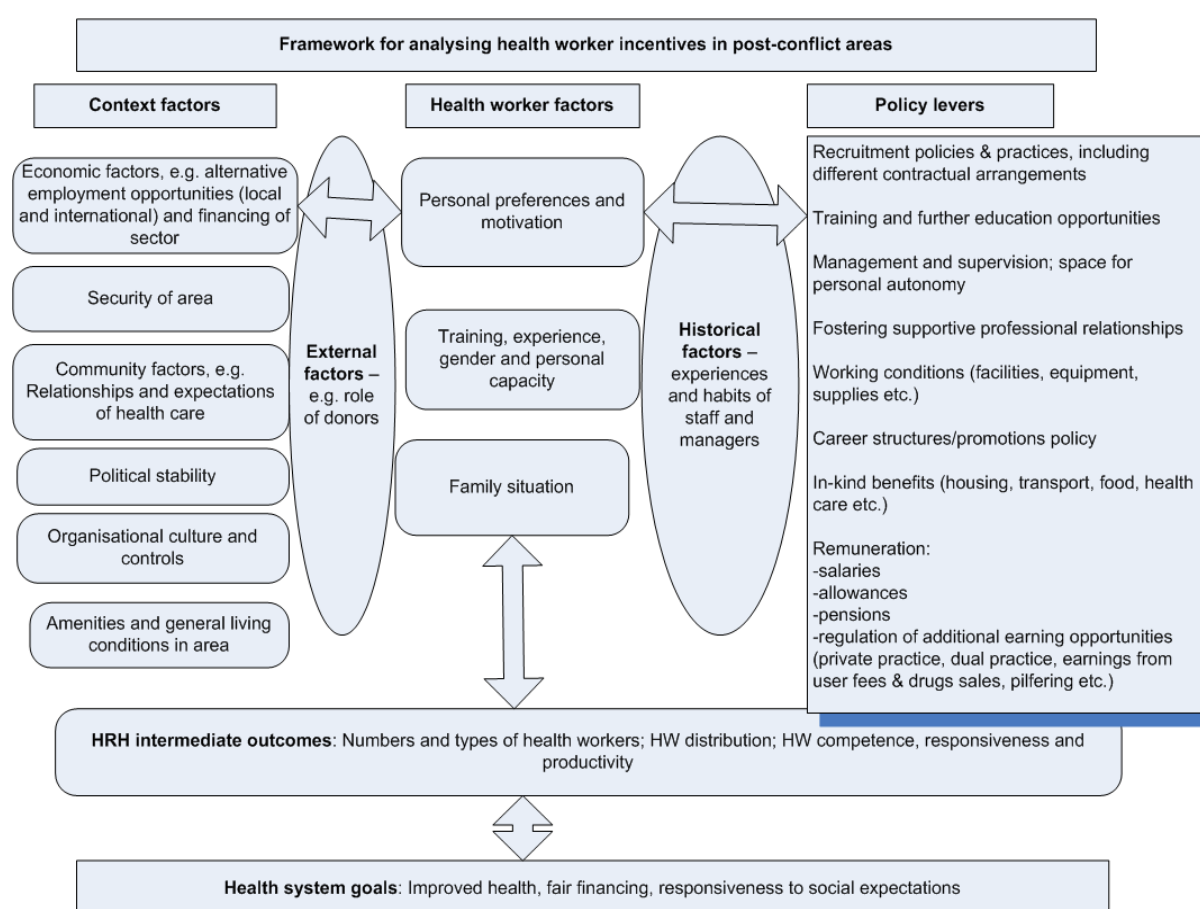
All of the factors are interconnected in a dynamic relationship, and all have a potential to impact on attraction, retention and performance (24). The 'policy levers' on the right represent a range of ways

in which the incentive environment can be actively engineered in some way. They include financial and non-financial measures, but this is represented as a continuum, with no hard boundaries, as some 'non-financial' activities such as training can provide current income (per diems) and also have knock-on potential income effects (in the form of increased future earning potential, for example).

Although the conceptual framework is presented as a cross-sectional picture, for the sake of simplicity, it is recognised that past experiences influence present expectations and behaviours. In addition, external factors will play an important part in influencing developments in relation to these various factors. The fiscal situation and the investment strategies of donors, for example, will be important in enabling or constraining the different policy levers, for example.

Context factors

Economic factors

Economic fluctuations, which strongly influence the health labour market, were of great importance for health staff, most clearly illustrated by the case of Zimbabwe, where the political/economic crisis from 1997 onwards led to hyperinflation, dramatic declines in health expenditure, emigration of health staff from the sector and the country, and a spiralling burden of disease and mortality (32)(33). As the economy improved under the National Unity Government in 2009-13, vacancy rates dropped (34), though they may be on the rise again now as Zimbabwe's economic fortunes are once again deteriorating.

Also underpinning the recovery in the health sector was an emergency response from international partners, who contributed to the retention allowances and later critical post allowances which succeeded, at least in the short term, in stopping the brain drain, especially for nurses (35).

Staff in fragile states are also particularly sensitive to changing labour markets in neighbouring countries, which may offer better conditions than fiscally-challenged home countries. For example, the improved pay in South Sudan, linked to donor investments in the post-independence period, had a negative effect on staff number in northern Uganda, as reported by our life history participants.

"Generally all health workers should have good pay. That is why in [...]Kitgum here, we have lost very many to South Sudan...Their pay is better than Ugandan Pay[...] Others are triple, there is a Clinical Officer who last from Orom, I think the guy is getting a basic pay of 5.2 million [equivalent of UGX] [...] He was even getting 780,000 UGX while in Uganda [...] a midwife get up to 1.2m[illion UGX] to 1.6m[illion UGX], others to 3 million [UGX] in Sudan, so people have left, and doctors are many also who have gone there" (LH, Uganda)

Security

Although many staff did remain in service in conflict-affected regions, showing courage and resilience, despite often being actively targeted by combatants (28,36,36), the return of relative peace was a critical factor in resumption of normal services by staff in all three of the conflict-affected settings. In Cambodia, the process was drawn out by continued Khmer Rouge presence in large parts of the country, meaning staff had to face daily dangers until 1999 when the last resistance ended (30). In northern Uganda, health staff moved out from camp settings or returned from other parts of the country (12). In Sierra Leone, health staffing numbers gradually increased post-conflict (37,38), though those working in rural areas continue to report insecurity as a demotivating factor (22). During Ebola, insecurity included the real health risks to staff of the epidemic, which combined with stigma and deteriorated trust between health staff and communities (21).

Community

Findings on health staff experiences of practical or psychological support by communities were mixed. In some contexts, such as during the conflict in northern Uganda, health staff reported the importance of both community support and practical assistance from the district. Community support enhanced the health workers' wellbeing, whilst the district and other agencies provided transport to strengthen referral systems and improve working conditions (12).

"In the first place I was motivated by community of Lira Kato, the present Apono sub-county. They were in total support of my well-being, they were able to provide food for me. Another motivation was the district which was able to provide for me means of transport" (LH, Uganda)

In Cambodia, community attachment was reported as a source of satisfaction but also as providing important security in a fragile post-conflict setting.

"I also know many villagers here, and they also know me. Therefore, I feel secure living here, so I decided to stay" (LH, Cambodia)

In Sierra Leone, as in other settings, community service is a key motivator, especially for staff who work in close-to-community settings, such as community health officers.

"…. well what I like most is when I see a patient walking in the hospital and going back with a smile and saying thank you, going back home, so I really love that" (LH, Sierra Leone).

However, tensions are also evident. Some health staff have had to deal with confrontation from family members of patients and community members. Others felt that they were being monitored by Monitoring and Evaluation Officers, who are selected from the community (29).

"'[…] well this monitoring, this community involvement […] I want it to be minimised because they are not here to police us, especially these monitors because sometimes they just act as policemen policing us all around the place, you see sometimes it is more demotivating because they are just handpicked from the streets and we are professionals and they want to supervise us" (LH, Sierra Leone)

Communities are expected to contribute to health services in many low income and fragile settings, which is not always forthcoming, adding to tensions with staff.

"Well the community participation was very, very poor. Like at one time Merlin built a covered roof for the patient to wait, it was covered with tarpaulin, the tarpaulins were damaged and all the sticks were rotten because of the rain. I ask the community people to help to renovate that one, they did nothing. I had to do everything by myself to actually reroof that end" (LH, Sierra Leone)

Some may perceive staff to be well-paid professionals, who do not require assistance, which is not how the staff see themselves, with salaries which are often inadequate to pay for the cost of living.

'However there are a lot of challenges with the job, most especially like the time I was in the community, the perception about the health staff, by some communities, that we well taken care of by government and which is not the case was sometimes discouraging; because even when you needed assistance from people within the community they thought you have everything, you are OK financially' (LH, Sierra Leone)

The introduction of policies to improve financial access, such as the Free Health Care Initiative in Sierra Leone, can also threaten the relationship between staff and the community, in terms of undermining their sense of professionalism and worth, even though these policies have also produced other direct benefits for staff (19).

'What I don't specifically like is that people that you expect should pay, they don't pay for their health, they have the means to pay but they just take it that the health profession is just like any other thing, anybody can just get into it; that's what I hate about people - you should value your health, you should pay for your health if you have the means to but people don't pay at all' (LH, Sierra Leone)

Political factors
Political stability underpins most of the other domains in our framework, including economic development and security, as well as the whole public and private sector employment context for

health workers. However, most staff and key informants are unwilling to discuss political issues so evidence on their perception of the influence of this factor on their decisions was limited, though some, in Cambodia in particular, reported political pressures from their superiors. Some workers reported not to have pursued progression in their career to avoid extra workload and having to deal with political networking.

"Talking about political party, I have no link to any party, but I was accused by my former director. I think regarding politics, people, a health care worker has their own right to make decisions" (LH, Cambodia)

"The more you become higher the more time and resource that you have to allocate for political attachment or networks or doing Chos Molathan [political services]!! That just creates another workload for me so I did not wish to get higher position than what I had now" (LH, Cambodia)

Organisational culture and controls

Reflections on organisational culture arose more in settings where we collected data across sub-sectors. For example, the service ethic of the mission sector often makes it a substantial service provider in remote and conflict-affected regions of the country, such as in northern Uganda. However, health staff reported that one of the reasons that they wished to move from PNFP to public sectors was because of the looser organisational culture, which is less hierarchical and more tolerant of dual practice, amongst other things (39).

Local amenities

As found in more stable regions, local amenities were an important factor in health staff decisions about accepting posts and staying in them. Participants reported that rural and remote areas lacked some basic services, what made them unattractive. Absence of good schools, in particular, creates additional costs for staff posted there, which are not compensated in the remuneration package.

> *"It is difficult when they live in the rural area. It is difficult for them to stay, not many things to buy in rural area etc" (LH, Cambodia)*

However, in times of crisis, the situation can change - during the economic crisis in Zimbabwe, for example, the cost of living rose with hyper-inflation, and staying in rural areas where costs are lower and subsistence living is more easily practiced became attractive (27).

Health worker factors

Personal preferences and motivation

The personal orientation of staff is an important factor attracting, retaining and motivating health staff in most contexts, and emerged strongly in our sample of health staff who had served through conflict and crisis in these four settings. Comparison of motivation to join the profession, for example, across the settings found a rich mix, including a strong influence of 'personal calling', the exhortations of family and friends (including positive role models but also the pressure of gendered expectations and the need to support family members), early experiences of the health care sector through family illness, and chance factors such as proximity to facilities (40). Desire for social status and high respect for health professionals was found to be influenced by factors such as smart presentation and uniforms. However, economic factors were also important – not just perceptions of future salaries and job security but also more immediate ones, such as low cost or free training, the ability to earn while learning, making savings on treatment of sick relatives and the availability of supportive allowances. These allowed low income participants to access the health professions, to which they are then often show considerably loyalty.

Community and family service, professional accomplishment, religion and also patriotism were amongst other factors which were cited as motivation health staff to continue working. The sense of contributing to reconstructing a nation after its devastation is common in these contexts.

"We could get by with these [problems] because we loved this country, and the government also tried to help a lot" (LH, Cambodia)

Gender and training experience

Gender plays a role in shaping the health workforce. In all four contexts women predominate in nursing and midwifery cadres, are under-represented in management positions and are clustered in lower paying positions (20). We found that gender roles, shaped by caring responsibilities at the household level, affect attitudes to rural deployment, and women in all contexts face particular challenges in accessing both pre- and in-service training. Coping strategies within conflict emerged as a key theme, with experiences here shaped by gender, poverty and household structure.

The area of origin and training history of health workers is also a significant factor, often creating loyalties to area and sector. Health workers who received their initial training in PNFP-owned institutions in Uganda, for example, tended to have their subsequent postings within PNFP facilities. This was similar for those who had been trained in government facilities (39). This is commonly

reinforced by deployment and bonding policies, which are common in countries with poor distribution of health staff, such as these.

"I had a contract which said: those who come from that province have to go back to the province" (LH, Cambodia)

Family situation

Families played a huge role, influencing research participants not just to join the health professions, but also over choices of location. Being near their home was perceived as a motivating factor, particularly for females and especially in some cultures (the theme emerged more strongly in Cambodia). Staying close to families was reported as a strong rationale to not move jobs.

"I never thought of leaving any longer. Moreover, my kids grow up and I may live with them to pursue their study" (LH, Cambodia)

"I do not have plans to change my job or workplace because it is my home here. I will always do the government job" (LH, Cambodia)

"After completing my study, I will come back here because it is my home place. My relatives and friends also feel happy to have me back, i think. So that I can help my people here" (LH, Cambodia)

As health workers' family situations changed, this affected their expectations of incentive packages. As they started families and their children reached secondary school age, staff more commonly noticed and responded to differences in pay and restrictions on earnings across institutions and sectors, as their household expenditures, especially on school fees, increased. As public sector salaries are low, respondents coped by carefully managing their resources; some went into agriculture or opened up side enterprises such as drug shops, secretarial bureaus and kiosks, whereas others had to undergo family separation to work in different jobs.

"[...] I already have six children [...] what the government is giving cannot sustain me and my children. So outside government work [...] i have already opened a drug shop selling some small items within the trading centre in Pader town. But there are lots of restrictions, the district comes with their policies and the government with their own also that we should not be having these drug shops or clinics. And if they are hardening on health workers not having other businesses out, then it means I am unable to continue with the district. I have to look for another job because the government job cannot sustain me" (LH, Uganda)

HRH policy factors

Recruitment

Recruitment practices varied across the settings, but one feature which health staff commented on was corruption. One respondent in Sierra Leone, for example, had to offer a bribe to fast track his Public Service Commission application (29). In Zimbabwe, where recruitment has been complicated by a recruitment freeze which is still on-going, complaints of nepotism arose.

'I made the application [...] the forms were there for over a year; I am sorry but what I am telling you is a reality. Then somebody told me: if you are going to leave this form there then you will not be employed. I came about once or twice and when you come down in Freetown ….. I was determined I should be interviewed. In 2007 [...] I had to bribe 300,000 Leones so that I could get an interview with the PSC' (LH, Sierra Leone)

"There is no transparency in the recruitment of students and workers. You will see a husband, wife and children working at the same place. You cannot control behaviour of people with power, they corrupt the situation and they are difficult to manage and supervise [...]" (LH, Zimbabwe)

Volunteering was a common pathway to employment in the health sector, especially in Uganda and Sierra Leone, and appears to support access for mid-level cadres, who more commonly remain in their local area of employment. Our findings support the importance of local recruitment to retention in harder to reach areas – this was endorsed by the experiences and recommendations of the participants.

Training

During the immediate post-conflict periods and due to an increasing demand for health services there was urgent need for health workers. In Cambodia, for example, students coming out of high school were trained for three months as basic health attendants and recruited to work in the newly established health facilities.

> *"Because there was no proper government system yet, new staff had to be recruited to work at the new established hospital to rescue patients. There were a lot of malaria cases, amputation cases, etc. So we highly needed medical care professionals who were trained from three months and went to work right away" (LH, Cambodia)*

During the immediate post-conflict some health workers were trained on-the-job by Vietnamese tutors but often they did not get any accreditation.

"I had another responsibility as an anaesthetist. We learnt this skill from the Vietnamese expert. This course was not organized by Ministry of Health so I did not have the certificate" (LH, Cambodia)

This changed over time as more professionalism was introduced, leading to some earlier cohorts being pushed aside in favour of younger, more formally trained staff (23).

Another important feature for many students in joining the profession across all contexts was that health training courses were free and often came with pay and allowances, which allowed young people from poorer backgrounds to join and train. In some cases, these policies have now changed, with fees charged even for paramedical and nursing training, for example in Sierra Leone and Uganda, though not in Zimbabwe.

In-service training opportunities were low in the post-conflict period but have expanded, with good access for most cadres now reported in most settings in the life histories and also health worker surveys (41,42). In some areas, some gender barriers and disadvantages to rural staff are noted (e.g. in Sierra Leone and Uganda); however, in Cambodia and Zimbabwe, this appears to be less the case. This is important as training is an important attribute motivating staff in all settings (12,27,29,30)

Management and supervision

Appreciation by supervisors is also cited as an important motivator in all settings.

"You know, motivation is not physical things only and that particular in-charge could motivate even through thanking you when you have done some work" (LH, Uganda)

"Nowadays, I receive the support from my director, to help, to motivate and to support me. He has never accused me, even I did something wrong. So this helps me to commit to work here" (LH, Cambodia)

Autonomy is also important: an environmental health practitioner in Zimbabwe, for example, reported his satisfaction with being able to plan and manage his own time.

"I actually go into the field and do more hands on work. I like it because you interact with the public. I like the fact that I manage myself and I am flexible to set my own schedule and set my own goals to be achieved in a set time" (LH, Zimbabwe)

Conversely, poor relationships with supervisors were a cause of dissatisfaction. Some of the respondents in Uganda reported leaving sectors as a result of this (12). Some also reported

absenteeism from managers and supervisors. Many of the health facilities, usually in more remote areas, were being managed by lower cadres, such as nursing assistants and registered nurses, while the in-charges were in urban areas working on their side businesses. Those left informally in charge were dissatisfied due to lack of recognition of their role.

This was echoed in Cambodia, where the differential training programmes for cohorts may have resulted in some younger staff being more educated than their superiors (30).

"I am a health officer, but the responsibility is like doctor's task. I always do instead of him. For pride, he always gets. For fault, I always get instead of him! [...] In reality, my task is more than director's task. Honestly, my boss has less education background than me, so I am responsible for everything... including management, meetings, and reporting" (LH, Cambodia)

Some of the junior staff in Sierra Leone also felt neglected and unappreciated and thought senior managers should do more to motivate them. There was one report of supervisors humiliating junior level staff, with the respondent describing the managerial structure as bad due to favouritism in the workplace and bureaucracy in accessing funds. Higher levels of management at the Ministry of Health were also seen as unresponsive to the needs of health staff on the ground.

"But what I don't like about the job is that we who are the cadre that is down there, who are seeing the bulk of these patients [...] we feel abandoned. We feel people do not care about us, when you raise eyebrows about certain things, people say you are poking your nose right into areas you should not poke your nose [...] nobody talks for you. That is the funny thing about the Ministry of Health, it is the expectation that if we raise issues that are bothering us in our health facilities, the administrative wing of the Ministry of Health, those people who are our supervisors must be taking these things forward and agitating so that these things will come, but this this does not take place" (LH, Sierra Leone)

Health workers in Sierra Leone were most vocal that they should be involved in the decision making processes that governed the management of the health facilities. There was no delegation of duties or teamwork, with administrators and doctors taking on senior managerial roles, without the involvement of others.

"'[...]one of the major challenges was there was no delegation of responsibilities to other cadre. What we observed it was only the doctor that was doing everything, even the finances, the budget, everything was just the doctor [...]" (LH, Sierra Leone)

Hierarchies between the professions were also problematic, with doctors seen as having a stranglehold over the activities of nurses, for example.

"Decisions that should be made by nurses were always changed by doctors to suit themselves even if it's their relations or friends[…]You sort of have to go along with this because like I say there is no autonomy, and if you do not like practically dance to their tune you do not even get the necessary logistics you need to work in your office, because at the end of the day whatever the nursing directorate wants a doctor has to sign. Sometimes they kept my papers there for a while, sometimes I will lose a whole quarter's subvention for the office simply because I spoke up at times" (LH, Sierra Leone)

Lack of adherence to written policies, such as the workers' rights to paid leave and the right to air their views, was also a source of dissatisfaction, and was a reason for people moving from the PNFP to the public sector (39).

"We were never given freedom of speech and whenever you talked something, they would say you are not respectful; they never wanted anyone to talk the truth about them" (LH, Uganda)

Professional relationships

Good personal and professional relationships were reported as a source of satisfaction by some participants.

"First I have friends, I have good working colleagues, I have good neighbours as we live with each other long times in this areas, they become as our relatives" (LH, Cambodia)

Good relationships rely on clear and fair work relationships and hierarchies, and, as highlighted above, these are absent in some post-conflict or crisis settings where changes in training policies and resource constraints cause tensions. For example, in Zimbabwe, there is a widespread sense that the newer cohorts are less well trained, and that this generates work for their supervisors and colleagues. They noted that the quality and skills level as well as the commitment of recent nursing graduates is unacceptably low. They observed that the municipality human resources system has been politicised and hence a lot of nurses are employed on political and partisan lines. The reduction in resources and general crisis conditions undermine confidence in colleagues.

"Even cleanliness, they now leave it to general hands. There is now no more privacy, even training has a lot of loop holes. And when you ask third year students you are supervising, they do not know some simple things; think there is a lot of favouritism during enrolment" (LH, Zimbabwe)

"The way of training nurses has changed, standards have gone down. Salaries have gone down because what we would achieve with pay before was more than now. Increase in-patients means people are not getting adequate nursing care" (LH, Zimbabwe)

Working conditions

Equipment and supplies

Having the necessary resources to work was reported as a very significant motivator (or de-motivator, where absent) in all contexts. In the immediate post-conflict period, this was often associated with the support of NGOs.

"We were happy with works and foreign doctors were also called to hospital around 1-2 am at night. There were lots of donated medicines and volunteer doctors from France and Belgium came to help us" (LH, Cambodia)

Even if staff felt over-worked, if they had resources available to deal with the cases they faced, they were still satisfied.

"Conditions are much better in municipal health departments. We have a reliable fleet of ambulances which are ready ferry patients to the next level of care. We also have doctors who come to deal with complicated cases one day a week. We also have the biggest infectious diseases hospital in the city" (LH, Zimbabwe)

By contrast, health workers in the public sector in Zimbabwe, particularly nurses, talked of gloom and disenchantment about their roles, linked to the crisis and consequent lack of resources and their inability to do their jobs effectively as a result.

"When I joined the nursing profession twenty six years ago it was satisfying to be a nurse. […]The dilapidated infrastructure and unavailability of resources makes one feel dejected. We feel hopeless as ambulances bring patients to the central hospital who require specialist help which we cannot deliver. We have become more of death traps" (LH, Zimbabwe)

Working hours

Complaints about working hours were common in Zimbabwe, linked to the staffing freeze instituted in 2010 and also to the fact that the staff establishment has not been changed since the 1980s, despite population growth, a growing burden of disease and new health programmes. Staff feel overwhelmed, and the situation is not assisted by the distortions in staffing between the sub-sectors, with more qualified staff clustering in better paid municipal facilities (34).

"Our job is good but we have problems with workload, it is too much for us here because we are short staffed. Nurse patient ratio has not changed since 1980 but the population is increasing daily,

we have so many registers and we end up working at night in order to finish the work (LH, Zimbabwe)

Working hours were raised as significant concern in the other contexts, but mainly in rural areas where shortages of staff are more evident. In Sierra Leone, for example, it is a common occurrence for newly recruited staff posted to these difficult terrains to not report for duty, which increases the workload of health workers already in post, especially those in supervisory roles who have to take on clinical and managerial roles.

'I don't have time for my own social activities, it's another big problem. Social activity, I don't have time, maybe at times I will be preparing for church service and then they will call me 'please come'[...]most of the time I will be in service" (LH, Sierra Leone)

"I feel depressed sometimes. Because lacking of staffs, I had to accommodate about 60 patients per day" (LH, Cambodia)

Promotion and career development

All staff highlighted the importance of professional development to their self-esteem and motivation.

"I have changed a lot since I work here. It reduces my fear, I have improved my communication skills, many customers know me, more confident and my mistakes are also reduced" (LH, Cambodia)

Older staff who worked during the end of the conflict or the immediate post-conflict had to take responsibilities beyond the scope of their cadre, which was a source of pride to them.

"I have a lot of experience; I am not exaggerating. At that time, we had no clinician, therefore medical staff became clinician. Because of my comprehensive experience, for example to do amputation, breast tumour operation while I was not a surgeon, so when the supervisor from ministry came here to see us, they decided to motivate staff to go for training" (LH, Cambodia)

"I liked my job because of the experience I got while in the children's ward because we were doing LP (lumbar puncture) which was supposed to be the work of a doctor [...] But in the absence of a doctor I did it. So working in the children's ward helped me gain a lot of experience and I knew a lot of things beyond my training" (LH, Uganda)

Self-actualisation was an important motivator for many, including those in relatively low-level posts. Health workers were eager for further training and certification to demonstrate their improving skill sets.

"Because you are there and sometimes you may not be allowed to do some things [...] for example, when a person comes like this, you are not allowed to do certain thing because from there they would put you as a nursing aide. So you don't have time to learn [...] In fact I was not happy. The little knowledge I had, if I did not use it, it would disappear" (LH, Uganda)

Timely promotion and improvements in salary also motivated health workers during and after the conflict in Uganda. Health workers attached more value to formal written letters of promotion than those offered verbally. Conversely, delayed promotion and promotion without a matching salary was a source of dissatisfaction in Uganda and Sierra Leone.

"Up to now I have not been promoted I must tell you. I am earning a salary of an enrolled nurse! I qualified in 1998 and up to now no promotion. So I feel that burden and it has discouraged me from doing the best of my capacity" (LH, Uganda)

In-kind benefits

In-kind benefits were particularly significant during the conflict and crisis periods, which reflects the absence and limitations of regular pay at that point. Post-conflict, the most common concern voiced across the settings was absence of accommodation, especially in rural areas. In Zimbabwe, for example, subsidised accommodation, which used to attract health workers to rural areas, is no longer available. Health workers bemoan the overcrowding and the intrusion of privacy due to sharing of accommodation, particularly in rural areas (27). The absence of accommodation was affecting the willingness of staff to take up posts in rural areas of Sierra Leone:

'[…]we don't even have enough staff. They can post nurses here but because of accommodation they will come and go and come no more because they don't have where to stay' (LH, Sierra Leone)

This was also seen as a security risk, especially for female staff having to travel longer distances in remote areas to get to work, including at night.

In Cambodia, the absence of accommodation located in more popular areas was also seen as a barrier for private practice:

"The main problem for the new comers is the accommodation. It is hard to find the accommodation now, when I first came here I could rent a house along the main road so that I do my private clinic. For the new comers now, they may not be able to rent house in the main road because it is very expensive, and they did not earn income, yet [even when] receiving the government salary. Thus, they have to rent the house that is far away from the main road, [and] *they can't do any private clinic, they may*

[have to] *depend* [exclusively] *on the income from the government salary and user fees,* [which] *it is not sufficient to cover their living costs"* (LH, Cambodia)

Remuneration

Salary and allowances

Pay has improved post-conflict and post-crisis, however, staff were unhappy about salary levels in all four contexts – in each case salaries are reported to be inadequate to cover the cost of living. This is particularly true, as stated earlier, when children reach secondary school.

"Currently, I've got less than 100$, just got 320000 Riels. Before it was not a problem, but now my daughter is going to college, so it's difficult now since we need to spend more. Have to pay for school fees, if including this, it is even more difficult on a really limited budget" (LH, Cambodia)

In addition, some workers reported delays in starting to get their salaries and in Cambodia, workers do not receive salaries during the probation period, which makes life very difficult during that period. In Sierra Leone, many staff are not on payroll – they are 'volunteers' – and it creates additional burdens for the managers and other staff, who often assist the volunteers from their meagre resources.

"It's not easy, sometimes we have to talk to them we will give them incentives, sometimes from our private purses or sometimes when Council budget is being released sometimes we will give them incentive can you imagine someone working a whole month without receiving salary, it's not easy not even easy for the management' (LH, Sierra Leone)

The introduction of piecemeal and crisis-management allowances which are not paid to all, which is typical of these contexts, also tends to create tension, as evidenced by the response to the retention and critical post allowances in Zimbabwe.

*"I feel very bad about my job especially the money side of it, the standards have deteriorated greatly. The years before the crisis the conditions were better**…** There was the introduction of the Health Transition Fund (HTF), this fund destroyed all the structures we used to have. It made junior nurses to get more money than us senior nurses, so it is difficult to supervise someone who is better paid than you"* (LH, Zimbabwe)

Similarly, in Uganda, there were reports of salaries being awarded in an arbitrary way in some mission facilities (or at least, that was the perception).

"The way they (referring to a PNFP in central region) were paying people the scale was not really the same. You find a nursing assistant getting more salary than an in charge of a department… It was maybe according to how you knew the people, those nuns, or how you are related to them - that one I cannot tell" (LH, Uganda)

The process to obtain salary increases was also reported as irregular and arbitrary in Cambodia, which is perceived negatively by health workers. The process appears opaque to them, which leads to suspicions of corruption.

"I don't know the reason, but some staff receive the increase, and some don't" (LH, Cambodia)

A large range of allowances are made, but generally these are small in amount, and sometimes irregular too. Performance-based financing, for example, was received by primary care staff in Sierra Leone and was appreciated but irregular (43). Allowances focussed on rural areas were particularly erratic and poorly understood by staff (29). User fees were only received by staff in Cambodia, not in the three other countries where fee exemption policies are in place.

One source which emerged as important for health staff in Zimbabwe was income from locum work, which provides one safety valve for the health system in the absence of being able to recruit enough staff.

"The government should use the money it uses to pay locums to pay salaries for more nurses though locums should continue as it cushions critical or urgent staff shortages" (LH, Zimbabwe)

Other income generation

The extent to which public service is conducive to private practice appears to vary across the contexts. In Uganda, one of the reasons why PNFP staff reported seeking employment in the public sector was that the management there was perceived to be more tolerant of dual practice (39). Similarly, in Cambodia, managers have to be tolerant of dual practice in the public sector as the salaries are too low to live on (23).

"I work as a government officer and I also can earn beside that by doing my own business (private clinic). My business is doing in a good way I am not cheating or corrupt my customers. I can say that we serve for poor and rich patients; that's why our customers always come to my clinic […]I just focus on my work and make my Pharmacy running. Yes, this illegal by law but we didn't care about it because we cannot survive with our salary" (LH, Cambodia)

While most participants reported investing time in private practice, they keep their government post as it is perceived to be more secure and also a means to attract patients to their own clinic.

"It is difficult to judge between my salary and clinical [private] salary which one is more important; however, income from clinic is more than salary, but take government job is also important for my job security and more people know me" (LH, Cambodia)

In all countries, private practice opportunities are focused in the towns. A wide range of other income-generating activities are reported across all countries and settings.

Gifts are valuable to health workers working in the provinces in Sierra Leone because of the difficulty of getting onto the payroll. For one respondent, gifts from patients were his main source of survival as he spends his entire salary on supporting his family in Freetown.

"[…]as I told you already I said I did not have salary within my training[…]from the time before I was employed had it not been for those gifts these people give us some of us should have been devastated at the PHU [peripheral health unit] level[…]The gifts I receive are most beneficial they are immediate. I see them, I feel them, I am not sure when this performance is coming right but these gifts keep me up every day right, these people appreciate me[…]'(LH, Sierra Leone)

Pensions

Pension was very important for health workers in all sectors in Zimbabwe and seemed the most important reason why the health workers remained in employment. Transient shocks similar to the crisis were seen as passing phases that could be quite destabilizing in the short term but one could be rewarded for a lifetime of commitment on retirement (27). The crisis disrupted numerous benefit schemes, including the pension schemes for mission hospitals, which were being administered by a private insurance organisation. Equally, in Uganda, the public pension scheme was reported as one of the factors drawing staff from the PNFP sector (39), while pensions were also cited as important in Sierra Leone, but not mentioned by staff in Cambodia.

Policies to attract staff to rural areas

Most countries have policies to attract staff to rural areas, at least in principle. In Sierra Leone, a rural area allowance was introduced, though this was not sustained in practice (18,29). In Uganda, a hard to reach allowance was intended to promote rural service, although, again, staff were not aware of receiving this in most cases (12). In Zimbabwe, an inadequate rural allowance was reported.

"I know of the rural allowance however, the rural allowance is too little, it is not attracting people to work in rural areas. It must be increased" (LH, Zimbabwe)

In Cambodia, access to housing and priority access to training were in theory made available to rural staff, although once again, practice and policy were not always reported to be hand-in-hand.

"There is already policy, but the practice is often different. For example, in the policy, it states that they will find place for staff who volunteer to work in rural areas to live, but in the practice it is not the same. Some staff often go and refer because he or she had support from their relative who is big guy out there to help them. You know there is no accommodation for staff in rural area. Salary is also same" (LH, Cambodia)

Participants had a range of recommendations for how to make rural service more attractive for health staff. In Sierra Leone, they requested improved health facilities, improved conditions of service, provision of decent staff accommodation or housing allowances, equal training opportunities, transportation allowance or transportation provided, improved salary scales, recruitment of more staff and regularisation of allowances pertaining to health workers in rural postings (22).

In Uganda, good equipment, accommodation, transport, and community relationships were highlighted to help retain staff (12), alongside good leadership, the creation of strong referral systems and allowing staff to supplement their salary with external income.

"I want to go to a place where the leader, the manager is good, a very conducive environment, within the working area and accommodation has to be there" (LH, Uganda)

Staff recognition is also of importance for motivation and retention. Promoting long-serving members of staff, paying them appropriately and ensuring that they are paid regularly would encourage staff, particularly those working at mid-level, to stay.

"[...] also top up their salaries and also be able to recognize – because actually the nurses are never recognized in spite of the work that they do" (LH, Uganda)

In Cambodia, a differentiated salary by area was suggested to boost rural retention, along with local recruitment or the provision of accommodation for out-of-area staff. Improving equipment and access to training were also suggested as possible incentives to retain staff in more difficult areas. In the most remote areas, improved roads and other basic infrastructure such as electricity were highlighted.

Discussion

Reflecting on our starting conceptual framework (Figure 1), all context factors emerged as significant, although some are more latent and therefore less liable to be discussed by health staff. For example, within the context domain, political stability was clearly of the greatest importance to stabilising the health system and thus affected all aspects of health workers' lives, but they were unlikely to express that. Other factors acquired additional layers of meaning, which had not been anticipated. Security of the area took on a health aspect during the Ebola epidemic, when risk of infection was added to other causes of physical insecurity, for example. Some factors were complex - relationships with the community, for example, were expressed as positive in most settings but also as constraining and demotivating in others, particularly Sierra Leone. Differences in organisational culture emerged as important to staff retention in settings where we were able to make comparisons across sub-sectors (in Zimbabwe and Uganda, where interviews included staff outside public sector employment).

Personal factors also play a strong part, with service orientation, local origins and family ties all playing a significant and interconnected role in explaining why our sample had remained in service through a variety of shocks.

In relation to areas which are more directly policy-amenable, access to training for students from poor households emerges as one factor – previously available but now being eroded – which created loyalty to the sector. Recruitment practices tend to be less varied but inefficiencies, delays and corruption appear to be more prevalent in these contexts and should be tackled urgently. They give bad signals just as health professionals are starting their careers. Task shifting has happened formally but more commonly informally in many of these settings, and with support and recognition (which are only patchily available from our evidence) can be motivating to health staff. Workplace relationships are important in all settings, and positive as well as negative examples of management and workplace hierarchies were provided. Working conditions are often poor, especially in rural areas, including high workloads – a situation which is self-perpetuating, as staff will not want to be posted to such areas, keeping workloads for available staff high. Promotions are another very important motivator, which are commonly blocked or lacking in transparency in crisis-affected areas. In-kind benefits can be crucial, especially housing, in retaining staff in remote areas. Financial incentives are also important, but need to be harmonised and sustained (many suffer from stop/start funding, patchy implementation and poor communication, all of which undermine their motivational effects for staff).

These findings build on the existing literature on health worker retention and performance, which emphasises the need for bundled packages of incentives (2), which must be tailored to context (44).

It is also recognised that disrupted settings present specific challenges (45). Although many of our findings on policy levers are shared with more stable contexts, the importance of the context factors is clear and highlights the way in which policies towards retaining health staff in crisis-prone settings might have to be adjusted. When national systems are disrupted, it becomes even more important to encourage stronger community linkages and more discretion to retain staff through local support for in-kind benefits, such as housing. National support for rural retention, for example through rural area allowance policies, has been poorly implemented in all contexts, perhaps because the political priority of these areas is not high. Local innovations have developed in countries like Zimbabwe and Cambodia which have allowed public services to continue despite under-funding. Without tolerance of dual practice within accepted limits by local managers in Cambodia, for example, doctors would not remain in rural areas (23).

Another common feature of crisis-affected settings is reliance on external support, which affects the kinds of policies typically adopted in relation to human resources for health (25). Financial incentives, for example, are easier to introduce and support for development partners than management reforms, which means that in some of these contexts the full range of 'levers', including some of the more potentially cost-effective ones such as fostering supportive professional relationships, remain arguably under-exploited.

Conclusions

Our research suggests that in post-conflict and crisis-affected settings staff have similar aspirations as in more stable settings. However, the policy and wider contexts are often more hostile, with more fragmented incentives policies – heavily reliant on external funding and commonly too skewed to financial incentives – while policies to support rural retention in particular are typically poorly implemented, if they exist at all. The positive factors highlighted by staff, who had remained in post through a variety of shocks, point to the importance of local support mechanisms, selection of staff with strong service ethics and local ties, and a greater focus on lower cost but sensitive areas such as fostering improved communication with staff, and supportive collegial and working conditions.

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