Understanding the organisation and delivery of health service following the repatriation of South Sudanese refugees from the West Nile districts in Uganda

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Abstract

Low-and-middle-income countries (LMICs) face overwhelming challenges providing health services to their populations, and even more for provision of health services to displaced populations. Little is known about how health services are organized and delivered to displaced populations in these countries especially following repatriation.

Objective

To examine the organization and delivery of health services following the repatriation of South Sudanese refugees in Uganda from three west Nile districts of Arua, Adjumani, and Moyo.

Methods

We conducted a qualitative case study in three West Nile refugee hosting districts of Arua, Moyo, and Adjumani. We used the World health Organization Health System Framework focusing on four blocks: health services, financing, medicines, and supplies and human resources. We conducted in-depth interviews with 32 purposefully selected respondents representing health service managers, district civil leaders, staff from local government and international aid agencies, and health service providers across primary, secondary, and tertiary levels of care. Content analysis was conducted.

Results

Following repatriation, the District Health Teams in the three districts assumed overall responsibility for planning, management, and provision of health services. Health service delivery was based on an integrated model. Health facilities provided comprehensive health services based on a decentralized framework in all the three districts. In addition, health services were available in most areas except for former refugee settlements where facilities were either closed or relocated. Post repatriation, the main source for health financing was government funding through the Primary Health Care grant with limited support from aid agencies. Districts, however, faced several challenges in health service delivery including shortage of medicines and essential supplies, inadequate health workers, and poor infrastructure.

Conclusion

The repatriation of refugees affected health services delivery in the refugee affected districts notably reduction in financial resources, availability of skilled human resources, equipment and as well as closure of some health facilities. Key stakeholders should plan and prepare for refugee repatriation and put in place mechanisms to support the continuity of health services delivery in refugee affected settings. Further research to examine health systems adaptability and resilience following repatriation is recommended.

Introduction

Globally, there were an estimated 86.5 million displaced persons in 2019. These included 20.4 million refugees and 43.5 million Internally Displaced Persons. Most, (86%) of displaced populations originate from and are hosted in low-and middle-income countries (LMICs) (World Bank 2017). Countries in Sub-Saharan Africa and Asia Pacific regions host an estimated 9.3 million refugees (UNHCR, 2018). The number of refugees in Sub-Saharan Africa grew from 2.2 million in 2010 to 6.3 million in 2019. This increase was mainly due to crises in several countries including South Sudan, Somalia, the Democratic Republic of Congo, and the Central African Republic. The countries hosting the highest numbers of refugees include Uganda hosting 1,400,000 refugees, Kenya hosting 471,300 refugees, Ethiopia hosting 536,000 refugees, and Sudan hosting 906,600 refugees (UNHCR 2020). A common key feature across these countries is that they are already struggling to meet the health needs of host communities mainly due to weak health systems and shortages of funding, making it challenging to provide adequate health services for refugees (Spiegel, Chanis et. al, 2020, Maystadt et.al 2019).

Ensuring effectiveness in the delivery of health services in refugee settings is a global concern for governments and humanitarian agencies. Health service delivery in these settings requires approaches that ensure that the needs of both refugees and host communities are met through effective and sustainable interventions. The organization of health services in refugee settings is influenced by several factors. First, the need to provide health services based either integrated or parallel structures. In addition, it is important to consider primary health care and emergency medical assistance (Van Damme, 2002). Second, the response capacity and adaptability of local health systems in refugee-hosting countries to providing health services following sudden and massive influx of refugees. Third, humanitarian aid is essential to enable local health systems to provide effective healthcare services to refugees. An

equally important and often unexamined question is how can host countries effectively organize health services throughout the different phases of the refugee emergency, particularly during the emergency phase of refugee influx and after repatriation of refugees and departure of aid agencies.

Uganda has been a host to refugees since the pre-independence period. From 1942 to 1944, 7,000 Polish exiles were settled in Nyabyeya in Masindi and Mukono districts (Gingyera-Pinycwa, 1998). The second biggest caseload was the influx of Sudanese refugees during the 1980s and 1990s following severe famine and civil conflict. By 1995, an estimated 210,000 Sudanese refugees had settled in various parts of the country (Merkx, 2000). In the period 2000–2009, Uganda hosted over 200,000 refugees (Merkx, 2000), from several countries including Sudan, the Democratic Republic of Congo (DRC), and Rwanda. Most, (80%) of the refugees settled in the West Nile districts of Arua, Yumbe, Moyo and Adjumani where they lived in designated settlements, interspersed amongst host communities (Kaiser, 2006). Following the cessation of the conflict in Sudan, between 2007–2009, an estimated 90,000 refugees were voluntarily repatriated to South Sudan (Kaiser, 2010). The refugees were repatriated from the three west Nile districts of Arua, Moyo, and Adjumani. However, an estimated 10,000 refugees remained under the care and protection of the government with the support of the United Nations High Commission for Refugees (UNHCR) (UNHCR 2009).

During various phases of a refugee emergency, the organisation of health services is crucial to address the immediate and long-term health care needs of the displaced population and nationals. In many refugee emergencies, emphasis is placed on interventions during the acute phases with the establishment of temporary and a gradual shift towards more comprehensive health service delivery structures. A defining characteristic is that health services for refugees are often delivered through different administrative structures, parallel to those of nationals. This can lead to poor coordination and duplication of services. The end of a refugee emergency and subsequent repatriation of refugees can have significant impact on the organization of health services in a country. The government will have an increasing role in planning, coordination, management, and delivery of health services that were previously provided by NGO's. The government may need to investments in health service delivery through the construction of health facilities, recruitment of health workers and provision of medicines and supplies.

Few studies have been conducted on the organization of health services in refugee settings. A study by (Porignon et al., 1998) in Zaire - now the Democratic Republic of Congo showed that despite pre-existing challenges and an influx of refugees into the country, the district health systems were resolute and continued to meet the health needs of the population at the end of the crises. This was attributed to the limited but sustained support from partners in building health facilities and supporting the district health system with material and financial resources. While (Goyens et al., 1996) revealed that while the local health systems were overwhelmed, it made substantial contributions in providing preventive and curative services and remained resilient during and after the refugee crises. Overall, limited evidence calls for in-depth analysis of the organization of health services following repatriation in refugee settings. The current study examines how health services were organized and delivered before and following the repatriation of South Sudanese refugees from three West Nile districts of Arua, Adjumani, and Moyo in Uganda. The findings are key for informing policy and practice, and development programs towards more effective organization and delivery of health services for both refugees and host communities.

Materials and methods

Study design

We carried out a qualitative case study (Yin, 2013). The design was considered appropriate where description, interpretation, and explanation of complex phenomena are pursued (Lee, 1999). This study drew on the World Health Organisation Health Systems Framework to explore the organization and delivery of healthcare services following the repatriation of refugees from the West Nile districts. Four components of the Health Systems framework were examined including the organization, service delivery, financing, and health workforce. This was informed by the study objectives and enabled the researchers to narrow the research scope, concentrate on the most relevant areas and delve into specific aspect of organization of health services in refugee settings. In addition, the organization of health service delivery in refugee settings presents unique priorities and challenges that require a tailored approach to produce relevant and impactful insights. This was considered key for enhancing the practicality and relevance of our findings for policy makers, practitioners, and other stakeholders.

Study setting

We conducted this study in three west Nile districts of Arua, Adjumani, and Moyo between October 2016 and February 2017. The three study districts were selected purposefully because of their history of hosting refugees for several decades and the establishment of health service infrastructures. The three districts have an estimated population of 1,916,298 people (UBOS, 2014). In 2020, there were an estimated total of 957,729 refugees in the West Nile districts of Arua, Moyo, and Adjumani (UNHCR, 2020).

This was a case study conducted in three districts. In all three districts, health services are provided based on a decentralized framework through the District Health Office (DHO). Health services were provided through a mixture of public and private providers. Health services for refugees and host populations were provided through two administrative structures: the integrated model and the parallel model. In the integrated model, health services are provided through established structures in the district health system. As such, refugees and host communities access health services using the same facilities and workers and are supported by matching resources. The District Health Team (DHT) is responsible for the planning, management, and administration of health services. Aid agencies assist the DHT to support service delivery in health facilities serving refugees. In the parallel model, health services are established primarily for refugees are managed and maintained by humanitarian organizations including United Nations agencies and international non-government organizations through separate structures often not available and accessible to host communities (Rowley et al., 2006). Health services for refugees are funded by the UNHCR and other aid agencies with several non-governmental organizations (NGOs) providers.

Study population, sampling and sample size

We purposefully recruited a diverse range of respondents to ensure wide-ranging perspectives. Initially, we consulted the DHO and the Chief Administrative Office in each district to identify potential respondents. Respondents were identified based on their knowledge, experience and roles in health service delivery in the three districts. We interviewed 32 respondents including district local government staff (civil leaders, managers, and administrators), health workers and project managers, and staff from aid agencies –NGOs and United Nations (UN) agencies. We approached potential respondents individually, by phone and email requesting an interview. In some instances, respondents referred the interviewers to others who they considered were knowledgeable about the subject matter. A total of 32 respondents were interviewed. These included health services practitioners, policy makers and district administrators.

Data collection

Data were collected using key informant interviews. A semi-structured interview format was developed stepwise (Nicky, B., 1995) based on the study objective and review of relevant literature. The interview guide was developed with the WHO health Systems Framework building blocks covering four of the six including the health services organisation, health services delivery, health workers, financing, and other features of service delivery. Questions in the interview guide included probes to ensure a sustained focus on pertinent issues during the discussions. The interview guide was piloted, and edits made based on the findings to improve the interview format. Follow-up interviews were conducted with the DHO and health workers to enable in-depth exploration of issues arising from earlier discussions. This allowed respondents to elaborate on key discussion points identified earlier or recurring in other interviews (Kvale, 1996). Interviews were conducted in English and lasted between 60–90 minutes. All interviews were audio-taped by moderators with field notes and memos written during and immediately after the interviews.

Data management

Interview recordings were transcribed verbatim by two research assistants and reviewed by the authors. Transcripts were checked by the researchers for accuracy to ensure that the actual meaning was not lost during transcription. Transcripts were anonymized and code numbers were assigned for identification purposes. Data were entered into Microsoft word processing and saved in password-protected files. All data files were saved with identifiers indicating the respondent type, location, date, and time of the interview.

We adopted the WHO Health System Framework building blocks to inform the assessment of organization of health services following refugee repatriation (WHO, 2007, WHO, 2010). The framework was chosen because of its applicability and adaptability to various settings. The framework provides a structure for describing the multifaceted aspects of health services in refugee settings. The framework is composed of the key components required for optimum health systems performance and has been adopted to inform the assessment of organization of health services in several settings (Qarani W., et al 2015, Jabeen, R., et al 2021, Other studies suggest that using the WHO health system building blocks has limitations especially in complex settings (Mounier-Jack et al. 2014, Sacks E., et al 2019).

Health systems building blocks are essential for informing health service delivery in refugee settings. Health Service delivery focuses on evaluating access to health care delivered efficiently to those who need it. Medicines and medical equipment (products, vaccines, technologies measure the availability, affordability and use of essential medicines, vaccines and technologies. Health workforce measures whether available resources of the system are adequate to respond to the health needs. Financing includes the mobilization, allocation and use of resources to provide health services. Health information systems involve the timeliness, accuracy of collection, analysis and use of health data to inform clinical and systems decision-making,

Data analysis

We used qualitative content analysis. The analysis process was iterative and ongoing throughout the study. The first author developed the first process of analysis from codes to categories. The first author and two research assistants and independently read and familiarized themselves with all the transcripts. The team met and the tentative codes, categories and themes were discussed and revised several times and applied to three transcripts. The team reviewed and resolved any differences in the coding. The codes were developed based on issues emerging from the data. A coding frame was developed based on the components of the health systems and applied to all subsequent transcripts. The coding frame was expanded as new issues arose, with those related grouped into broader categories. Once the coding was completed, subgroup analysis identified differences between respondent groups and each of the three study districts. The developed codes were merged into wider categories based on the relevance to the objectives of the study. This was followed by the development of the themes. The analysis of the organisation and factors influencing health services delivery in refugee-hosting districts produced several themes (Table 1). Findings are presented with the support of representative quotes.

Table 1
Themes emerging from the coding

General theme	Categories	Basic code
Organization	Planning of service delivery	DHO and UNHCR
	Management of service delivery	Management of health services by DHT
	Supervision body	Support supervision by Ministry of Health
	Coordination of health services	Administration of health services
	Model of service delivery	Parallel and integrated service delivery
Service delivery	Objectives of health service delivery	Provision of basic health services
		Focus on refugee health needs
		National health services objectives
	Framework for health service delivery	Decentralized service delivery
		Parallel refugee health services
		Linkage to public health facilities
		Emergency health services
	Health service availability	Temporary facilities
		Health facilities situated in and around settlements
		Emergency health services
		Referral services for refugees
		Free health services
		Lack of accreditation of health facilities
Health financing	Source of funding	Government funding through PHC grant
		Personal funds
		Limited funding by the UNHCR
		Reduced funding from aid agencies
Essential medicines and supplies	Pharmaceutical supplies	Government through NMS
		Limited support by UNHCR and other agencies
		Decrease in medicines and supplies
		Stock out in health facilities
Human resources for health	Health worker challenges	Shortage of health workers
		Uneven distribution of health workers
		Inadequate skill mix
		Increased workload
	Reorganization of health workers	Redeployment of health workers
		Recruitment of health workers
		Laying off unqualified health workers
		Training of health workers
		Limited specific support by UNHCR

Results

We interviewed civil administrators, managers, health facilities, and project staff. The sample consisted of 32 respondents from the three districts who represented different profiles. Overall, 23 males and 9 females were interviewed in each participant group with most having qualified with a degree or more. The respondent's demographics and location are shown in Table 2.

Table 2
Districts and participant profiles

District	N=32	Civil Administrator	Health Manager	Service provider	UN/INGO Project staff
District					
Arua	11	3	2	2	2
Adjumani	12	3	2	2	2
Moyo	9	3	2	2	0
Sex					
Male	23	9	3	3	3
Female	9	2	3	3	2
Age in years					
26 – 35	3	0	1	1	2
35 – 44	18	5	4	4	2
>45	11	4	1	1	0
Education					
Diploma	4	0	0	4	0
Degree	16	3	8	2	3
Post graduate	12	6	5	0	1

Health services organization

Based on the analysis, the most frequently discussed aspects of the organization of health services in this thematic area included; the model of health service delivery, planning, and management, and coordination.

Planning and management of health service delivery

Before the repatriation exercise, the District Health Team (DHT) and NGOs collaborated on planning and management of health services for refugees and host communities in all three districts. Following the repatriation exercise, the DHT assumed overall responsibility for health service delivery for refugees and host community (Table 3). These included planning and management, and allocation of resources for health services at all administrative levels. The DHT delivered health services based on national health policies. Health services were delivered by the DHT in collaboration with the UNHCR and other partners.

"As the DHT, we took over all health services in line with MoH governance structure at all levels including, sub-county, health facility and the community levels. These included primary health facilities previously managed by aid agencies. We ensured that all service delivery

including management and administration, disease management protocols and guidelines, service delivery, health workers and infrastructure were according to Ministry strategies".(District Health Officer)

While the DHT assumed responsibility for healthcare services, the UNHCR and other agencies continued to support health service delivery to refugees. This arrangement was apparent in Adjumani district where a considerable number of refugees remained following the repatriation exercise. In all three districts, the DHT utilized administrative and service providers in facilities at various levels to facilitate health service delivery for both refugees and host communities.

"The DHO continued to receive donations and capacity building from NGOs and other partners following the repatriation of refugees in the district. We also continued to make plans and discussion with the UNHCR regarding health services particularly for refugees.(District Health Officer)

Model of health service delivery

Health services for refugees and host populations are provided based on an integrated approach following the repatriation exercise in all three districts. Health facilities, equipment, ambulances, and other forms of support previously owned and managed by implementing partners were handed over to the DHT in all three districts. All forms of support by aid agencies were provided through the DHT.

"When the refugees were repatriated, and NGOs left all technical departments like DHO were in charge of service delivery. All assistance for service delivery and structures managed and operated by NGOs were absorbed by the DHO. NGOs only reinforced the districts with some financial support, drugs and supplies in a few areas and health facilities where refugees are present".(District planner)

"*As a district, we supported and facilitated the integration of health services for both refugees and host communities. Well, the integration started when the refugees were still here, but it became more rooted following the repatriation exercise."*(District Health Officer)

Coordination of health service delivery

Health services for both refugees and host communities in the three districts are coordinated by the DHO after the repatriation exercise. Respondents indicated that transferring coordination of health services to the DHO enhanced the process of integration, bringing together resources and technical expertise to ensure that the needs of all communities were met.

"It has not been easy but the DHO has been organizing health in the complexity of meeting the health needs of refugees and host communities because of many stakeholders… With the repatriation exercise, the district took over organization of health services ... The DHO ensured more structured system and personnel that made it easier to provide services. The health department is therefore in better position to respond to the health problems in the communities."(District Health Officer)

Planning, coordination, and management, of health services in Arua was mainly the roles of the District Health Office, while in Adjumani, implementing partners played a role during the pre-repatriation period in all the three districts (Table 3). In Arua, health services were integrated while in Moyo and Adjumani, a mix of both parallel and integrated models were used. Health Service delivery in all three districts were delivered based on a decentralized framework with a minimum basic package of health services. Health services were provided in Primary Health Care Facilities in settlements before the repatriation of refugees. Government funding through the Primary Health Care grant was the main source of funding for health services with additional support from humanitarian agencies.

Table 3
Health service delivery

Health system building block	Before repatriation			After repatriation		
	Arua	Adjumani	Moyo	Arua	Adjumani	Moyo
Health service delivery						
• Focus of health service delivery	Emergency, curative, and preventive health services for refugees.	Emergency, curative, and preventive health services for refugees.	Emergency, curative, and preventive health services for refugees.	Comprehensive health care services to address the health needs of both refugees and hosts communities.	Comprehensive health care services to address the health needs of both refugees and hosts communities.	Comprehensive health care services to address the health needs of both refugees and hosts communities
	Emergency medical assistance with shift to PHC	Emergency medical assistance with shift to PHC	Emergency medical assistance with shift to PHC	Focus of PHC in all health facilities	Focus of PHC in all health facilities	Focus of PHC in all health facilities
• Framework for service delivery	Decentralized health service delivery	Decentralized health service delivery	Decentralized health service delivery	Decentralized health service delivery	Decentralized health service delivery	Decentralized health service delivery
	Based on Uganda Minimum Health Care Package.	Based on Uganda Minimum Health Care Package.	Based on Uganda Minimum Health Care Package.	Health services integrated with other related sectors.	Health services integrated with other related sectors.	Health services integrated with other related sectors.
	Basic health services provided in first line health facilities HC II, III and IVs.	Basic health services provided in first line health facilities HC II, III and IVs.	Basic health services provided in first line health facilities HC II, III and IVs.	Health services provided in permanent health facilities.	Health services provided in permanent health facilities.	Health services provided in permanent health facilities.
Health service availability	Basic health services provided in first line health facilities HC II, III and IVs.	Basic health services provided in first line health facilities HC II, III and IVs.	Basic health services provided in first line health facilities HC II, III and IVs.	Health facilities serve a defined catchment of both refugee and host population.	Health facilities serve a defined catchment of both refugee and host population.	Health facilities serve a defined catchment of both refugee and host population.
	Health services provided in permanent structures.	Health services provided in intermediate – semi permanent health facilities linked to referral system.	Health services provided in intermediate – semi permanent health facilities linked to referral system.	Tiered network of primary, secondary, and tertiary levels of health facilities	Tiered network of primary, secondary, and tertiary levels of health facilities	Tiered network of primary, secondary, and tertiary levels of health facilities
	Strict referral system for emergency and specialized care for refugees	Strict referral system for emergency and specialized care for refugees	Strict referral system for emergency and specialized care for refugees	Health facilities providing an integrated continuum of health care.	Health facilities providing an integrated continuum of health care.	Health facilities providing an integrated continuum of health care.
	Secondary and tertiary health care provided by HC IVs and hospitals.	Secondary and tertiary health care provided by HC IVs and hospitals.	Secondary and tertiary health care provided by HC IVs and hospitals.	Secondary and tertiary health care provided by HC IVs and hospitals.	Secondary and tertiary health care provided by HC IVs and hospitals.	Secondary and tertiary health care provided by HC IVs and hospitals.

Health system building block	Before repatriation			After repatriation		
	Arua	Adjumani	Moyo	Arua	Adjumani	Moyo
Access to health services	Health facilities responsible for up to 50,000 or more inhabitants.	Health facilities responsible for up to 50,000 or more inhabitants.	Health facilities responsible for up to 50,000 or more inhabitants.	Health facilities responsible for up to 10,000 or more inhabitants.	Health facilities responsible for up to 10,000 or more inhabitants.	Health facilities responsible for up to 10,000 or more inhabitants.
	Health services provided free of charge to both refugee and host populations.	Health services provided free of charge to both refugee and host populations.	Health services provided free of charge to both refugee and host populations.	Health services provided free of charge to both refugee and host populations.	Health services provided free of charge to both refugee and host populations.	Health services provided free of charge to both refugee and host populations.
	Health service delivery supported by a strong referral system.	Health service delivery supported by a strong referral system.	Health service delivery supported by a strong referral system.	Referral systems weakened in former refugee health facilities	Referral systems weakened in former refugee health facilities	Referral systems weakened in former refugee health facilities
	Heath facilities located in and around refugee settlements < 5 km distance	Heath facilities located in and around refugee settlements < 5 km distance	Heath facilities located in and around refugee settlements < 5 km distance	Health facilities accessible to most populations within ≤ 5km distance.	Health facilities accessible to most populations within ≤ 5km distance.	Health facilities accessible to most populations within ≤ 5km distance.
Model of health service delivery	Integrated health services for refugees and hoists	Parallel and integrated health services	Parallel and integrated health services	Integrated health services for refugees and hosts	Integrated health services for refugees and hosts	Integrated health services for refugees and hosts
Management and administration	DHO with District Health Team (DHT) members	DHO and UNHCR implementing partners - NGOs	DHO and UNHCR implementing partners - NGOs	DHO for both refugees and host communities	DHO for both refugees and host communities	DHO for both refugees and host communities
Planning	DHO for both host and refugees' communities	DHO for host and UNHCR/NGOs for refugee communities	DHO for host and UNHCR/NGOs for refugee communities	DHO for both refugees and host communities	DHO in consultation with UNHCR	DHO for both refugees and host communities
Coordination	DHO and UNHCR/NGOs implementing partners	DHO for host and UNHCR/NGOs for refugee communities	DHO for host and UNHCR/NGOs for refugee communities	District Health Office	District Health Office	District Health Office

Table 4
Health Financing

Health system building block	Before repatriation			After repatriation		
	Arua	Adjumani	Moyo	Arua	Adjumani	Moyo
Health financing						
Source of health financing	Government funding through PHC grant UNHCR/WHO/UNICEF and other donors	Government funding through PHC grant UNHCR/WHO/UNICEF and other donors	Government funding through PHC grant UNHCR/WHO/UNICEF and other donors	Government financing through PHC grant	Government financing through PHC grant	Government financing through PHC grant
	Private out of pocket in private health facilities	Private out of pocket in private health facilities	Private out of pocket in private health facilities	Out of pocket payment in private health facilities	Out of pocket payment in private health facilities	Out of pocket payment in private health facilities
	Funding for service delivery provided by UNHCR and NGOs.	Funding for service delivery provided by UNHCR and NGOs.	Funding for service delivery provided by UNHCR and NGOs.	No additional support by UNHCR	Partial financial support by the UNHCR	No additional support by UNHCR
	Limited government funding for refugee health services	Limited government funding for refugee health services	Limited government funding for refugee health services	Increased government funding to former refugee health facilities	Increased government funding to former refugee health facilities	Increased government funding to former refugee health facilities

Table 5
Human resources for health

Health system building block	Before repatriation			After repatriation		
	Arua	Adjumani	Moyo	Arua	Adjumani	Moyo
Human resources for health						
Health worker availability	Health services provided largely by health workers in public facilities.	Health services provided by public and expatriate/contract health workers.	Health services provided by public and expatriate/contract health workers.	Health workers available in the health facilities	Inadequate and unevenly distributed human resources across former refugee health facilities	Inadequate and unevenly distributed human resources across former refugee health facilities
Skills mix	Appropriate skill mix among health workers	Inadequate skills mix among health workers due to transfers and laying off staff.	Inadequate skills mix among health workers due to transfers and laying off staff.	Appropriate skill mix among health care workers	Inadequate skills mix among health care workers.	Inadequate skills mix among health care workers.
Support for human resources for health	Health workers recruited and paid by Government and NGOs.	Health workers in refugee health facilities recruited and paid by NGOs.	Health workers in refugee health facilities recruited and paid by NGOs.	Limited support by UNHCR	Partial health workers support by UNHCR	Limited health worker support by UNHCR
	Training of health workers by government and NGOs.	Training of health workers by government and NGOs.	Training of health workers by government and NGOs.	Training of health workers by government	Training of health workers by government	Training of health workers by government
Health management	Recruitment and payment by the DLG	Recruitment and payment by DLG and NGOs	Recruitment and payment by DLG and NGOs	Absorption of NGO staff into local health service.	Absorption of NGO staff into local health service.	Absorption of NGO staff into local health service.
				Redeployment of health workers in health facilities	Redeployment of health workers in health facilities	Redeployment of health workers in health facilities
					Laying off non-qualified health staff	Laying off non-qualified health staff

Table 6
Medicines, supplies and equipment

Health system building block	Before repatriation			After repatriation		
	Arua	Adjumani	Moyo	Arua	Adjumani	Moyo
Medicines, supplies & equipment						
• Source of medicines and supplies	Government through National Medical Stores, UNHCR and other aid agencies - WHO & UNICEF.	Government through National Medical Stores, UNHCR and other aid agencies - WHO & UNICEF.	Government through National Medical Stores, UNHCR and other aid agencies - WHO & UNICEF.	Mainly government through National Medical Stores	Mainly government through National Medical Stores	Mainly government through National Medical Stores
				Limited or no additional support from humanitarian agencies	Additional support from the UNHCR	Limited or no additional support from humanitarian agencies
Availability of medicines and supplies	Medicines and supplies available with stock outs in most health facilities	Medicines and supplies available with stock outs in most health facilities	Medicines and supplies available with stock outs in most health facilities	Frequent stock out of essential medicines and supplies in former refugee health facilities	Frequent stock out of essential medicines and supplies in former refugee health facilities.	Frequent stock out of essential medicines and supplies in former refugee health facilities
					Rationing and sharing of drugs in health facilities	Rationing and sharing of drugs in health facilities

Health services delivery

The analysis revealed several features related to health service delivery including focus of health service delivery, framework for service delivery, and the availability and accessibility of health services.

Focus of health service delivery

In all three districts, the DHT provided comprehensive health services in all facilities (Table 3). Health services delivery focused on maintaining and provision of health (curative services) to both refugees and host populations. This contrasts with the pre-repatriation phase where health service delivery was dominated by the provision of curative services by NGOs that focused on emergency care services. The DHO and UNHCR/NGOs provided health services for both refugees and host communities with the available resources.

"The DHO provided health services to meet the health needs of both refugees and host communities, which is the goal of the decentralized health services. But also, while we did this, we ensured that the health needs of both communities addressed with the resources which were available." **(District Health Officer)**

Framework for health service delivery

Health service delivery is based on the decentralized framework in all three districts. Participants observed that while for several years' decentralization has been the overarching principle, the refugee emergency made its operationalization challenging. However, following the repatriation exercise, health services were organized by the DHT.

"As a district, we have been following decentralized structure for service delivery. So, health services have also been delivered following these guidelines even when the refugees were still here. But for the time we hosted refugees, the implementation of services using the framework was difficult, for example, the implementing partners would not disclose and share their budgets with the local authorities."(District Planner)

In all three districts, health services for refugees and host populations is based on national guidelines and standards. This contrasts with the pre-repatriation period where health service delivery by NGOs was focused on emergency health care. The NGOs used humanitarian standards and guidelines to support health service delivery. This was applied across all levels of care for both refugees and host communities.

"Health service delivery was based on the Uganda National Minimum Healthcare package at all levels of care post repatriation …. The focus was on providing priority health services using available resources to improve the well-being of the population, by promoting health, and responding to community health problems. The services were for both populations at referral hospitals, district hospitals, sub-district and lower-level facilities"(District Health Officer)

Availability of health services

Health services are provided for defined population in specific locations following the repatriation exercise in all the three districts. In several former refugee settlements, prior to repatriation, health services were available through a tiered network of lower-level health facilities with specialist care available in hospitals in the region. Health services are provided through a continuum of integrated facilities in all three districts. This is in contrast to the pre-repatriation phase which was characterized by the provision of health services in temporary facilities that exclusively served refugee communities.

Coverage of essential health services varied considerably from one health facility to another following the repatriation exercise in the three districts. Health services in most facilities in Arua district were available as most remained operational with health workers, drugs and supplies. While in Adjumani and Moyo districts, availability of health services in several facilities varied. In these facilities', coverage was affected by operational status of facilities, availability of resources including health workers, drugs and medical supplies.

"As the district health office, we observed differences in volume of services following repatriation and restructuring of health facilities. Lack of medicines and other supplies and health workers affected service delivery in facilities. Several facilities opened for only a few hours because staff were either laid off or posted to other facilities. We observed that few people were using the services."(Refugee health focal person)

Health service were delivered through a network of linked permanent facilities in all three districts. However, several facilities were in poor structural conditions in all three districts. The DHT inherited facilities from aid agencies that were operated in temporary structures. Many were not in line with the guidelines of the Ministry of Health. As such, a few facilities did not receive accreditation from the Ministry of Health. These facilities did not receive any public funding, and other forms of support.

"While services were available in all areas, it was also a challenge because of poor infrastructure. Up to the time of repatriation even after more than 10 years, some health facilities continued to be operated in semi-permanent structures and in a poor physical state and not recognized by the Ministry of Health. In fact, several facilities till now don't receive government funding and support because they were not approved by the ministry."(Refugee Health Focal Person)

The district health services reorganized and restructured health facilities to ensure they remained operational and minimized disruptions in all the three districts. Facilities were renovated and new ones were built in certain locations. In other instances, facilities that did not meet minimum requirements for a designated level were downgraded or even closed. In Adjumani district, two facilities were relocated to new locations. These included redistribution of health workers, rationing, and sharing drugs and other supplies to support and ensure the facilities remained operational.

Medicines, supplies and equipment

Government supplies through the National Medical Store was the main source of drugs and supplies for most health facilities. Health facilities accredited by the Ministry of Health were supplied drugs and other supplies. Adjumani district continued to receive some

support for medicines and other supplies through the UNHCR. This facilitated service delivery to refugees who remained in the district. However, there were shortages of drugs and supplies in health facilities. Shortages were more pronounced in Arua and Moyo districts where aid agencies withdrew completely affecting service delivery.

Human resources

From the informant's discussion, three aspects emerged about human resources; availability of health workers, skills mix in health facilities, support by aid agencies, and health worker reforms.

Availability of health workers

Health worker availability varied in several health facilities and in each of the three districts following repatriation exercise. Health workers were generally available in all facilities in Arua compared to Adjumani and Moyo districts. Respondents indicated that during the establishment of the refugee facilities in Arua district, the administration made efforts to ensure that staffing of all facilities was conducted according to MoH guidelines and with the involvement of the local government.

*"The repatriation affected the distribution and availability of health workers in refugee facilities differently. The district administrative and DHO engaged the UNHCR and its partners to ensure health facility staffing was guided by the Ministry of Health and Ministry of Public Service standards. Health workers were recruited and paid through the district services commission. In this way, repatriation did not affect health service through the would-be departure of contracted staff"***(District Health Officer)**

In Moyo and Adjumani districts, health service delivery was affected by inadequate numbers and skills mix following the repatriation exercise. Respondents indicated that health workers recruited and paid by the aid agencies were laid off following the repatriation exercise. Staffing levels were below the minimum standards required to ensure effective service delivery in several health facilities. Health workers who did not have the necessary qualifications in accordance with the guidelines of the Ministry of Health and Ministry Public Service were laid off.

*"The health facilities were affected by the reduction of number of health workers. Several facilities lacked staff to function according to established guidelines. Health workers employed by NGOs were out of contract could not continue working. However, we also laid off some because of lack of academic qualification according to the public service and ministry guidelines. There were also recruitment and transfer of health workers to beef up understaffed facilities".***(District Health Officer)**

Health worker reforms

To address the gaps, the administrators, and technical departments in Adjumani and Moyo, reorganized the recruitment and redeployment of staff to meet the service delivery goals. In Adjumani district, a few qualified health workers previously employed by aid agencies were absorbed by the district health office. The UNHCR facilitated the recruitment and supported salaries of health workers in selected health facilities serving refugees who had remained.

*"As the DHO, we had to ensure that the facilities are delivering services. We advertised, conducted interviews, and recruited health workers. Few qualified NGO staff were absorbed by the DHO. The UNHCR recruited and continued to pay four health workers, two midwives and two nurses in facilities where refugees had remained. Others were deployed to understaffed facilities."***(District Health Officer)**

Financing

Government funding, and partial support by the UNHCR were the main sources of health financing in all three districts. The Primary Health Care Conditional Grant (PHC-CG) disbursed by the central government to District Local Governments for the implementation of Uganda National Minimum Health Care Package (UNMHCP) in public and Private not for Profit (PNFP) health facilities was the main source of funding. Most (pubic and PNFP) health facilities in all the three districts were funded through PHC grants. Government

provides per capita based funding for the provision of the UNMHCP in all facilities estimated at US$41.2 in 2008/2009 rising to US$47.9 in FY2011/2012. These funds were used to cater for health service delivery for both refugees and host populations in all the three districts. Most refugee established health facilities that had been accredited receive the PHC grant to support health service delivery following the repatriation of refugees.

Cost-sharing was used to ensure service delivery in all three districts. The PHC grant and UNHCR funding were the main sources of health financing in Adjumani district. The UNHCR continued supporting the DHO to provide health services to host and refugee communities who had remained in the district. Funding for the few facilities established for refugees was challenging as they were never absorbed by the government, meaning these could not access PHC funding. The DHO and administrative authorities had to manage resources to support the facilities not supported by the PHC grant.

"The main source of funding for health services in the refugee hosting districts was the PHC grant and limited specific support by the UNHCR for service provision for refugees. For example, salaries for midwives and nurses in refugee established facilities and fuel and service for the ambulance were provided by UNHCR"(District Health Officer)

Discussions

The study identified and examined several features of the organization of health services prior to and following the repatriation of health services in the three West Nile districts of Arua, Adjumani, and Moyo. We found that the DHTs in all three districts took over the responsibility for planning, management, and coordination of health services based on an integrated model. Three issues emerged regarding health service delivery including the provision of comprehensive services by the DHTs for both refugees and host populations, the decentralized framework of service delivery, and availability of services for communities. The study showed that public health workers provided health services after the repatriation exercise. However, following repatriation health facilities lacked adequate staff and limited skills mix in former refugee settlements. The health services were mainly funded by the government through the PHC grant with limited support from humanitarian agencies for the districts that continued to host refugees. Many of the changes that happened during the repatriation process presented several challenges to the DHT in delivering health services mainly due to inadequate funding, drugs and supplies, and lack of human resources.

In this study, we examined the models of health service delivery following the repatriation of refugees. Our results show that health service delivery in the three West Nile districts, shifted from a parallel to an integrated model following the repatriation exercise. This meant that in all three districts there were no distinctions in the health services provided to either refugees or host population. Several stakeholders including humanitarian agencies supported the DHT or local health authorities to establish and maintain integrated health services to ensure sustainability of services in the three districts. Governments at national and sub-national levels need to strengthen policy, and legal frameworks to support and strengthen the health services in refugee settings and especially the integration of services.

Health services were funded primarily by the host government through the PHC grant in the three districts following the repatriation was provided. This is contrary to the notion that the departure of aid agencies would affect health system capacity to mobilize financial resources to ensure the continuation and sustainability, of service delivery. However, in order to enhance the continuity, sustainability and minimize disruption of health services provision, aid agencies and donors need to channel assistance through national and local financing systems and structures (Hart et al., 2015). Emphasis should be placed on ensuring that public financing remains the main source of funding to effectively address health disparities and social exclusion amongst refugees and host communities. This, will go a long way in guaranteeing national health sovereignty of developing countries rather than depending on humanitarian assistance (Abramowitz, 2016). It is noteworthy that owing to the weak health systems in developing countries, harnessing financial support from development partners to meet the health needs of both refugees and the host populations still is critical towards enabling the provision of quality and sustainable health services. Funding and other forms of support should be channelled through the national health system throughout all stages of the emergency. This will ensure both humanitarian assistance and development goals are met and health system is strengthened.

The findings show that all three districts were flexible and adapted to the challenges and changes brought about by the repatriation of exercise. In our study, the District Health Teams in the three districts took over the leadership and management of health services delivery following the repatriation exercise. This included the planning, administration, and provision of health services to both refugee and host populations. This transition originated from a process of planning and capacity building to ensure that the district health authorities were in position to provide leadership for management and delivery of health services (Rowley, 2006). The process may have likely helped ease the harmonization of the administration and management structures of humanitarian aid agencies and the district

health authorities with a greater focus on the integration of services. In many refugee emergencies, exit strategies and handover from humanitarian aid agencies to local administrators are fraught with several challenges including haste and lack of transparency. The transition process and transfer of responsibilities require greater engagement and coordination to mitigate any gaps in the governance and leadership of health services.

Our findings show that health services in all three districts were maintained and were available to host communities and refugees. The district health services provided comprehensive health services through the decentralized service delivery structure. This is despite the limited and reduced resources to support service delivery. The study shows that the district health system was able to “adapt” to the changes and maintain its functionality to provide for both refugees and host communities after the repatriation exercise. The three districts have hosted refugees for over three decades. As the refugee emergency continues to evolve, it is critical to monitor the health services in the refugee affected districts to ensure continuity and sustainability of health services following refugee repatriation in the refugee affected settings.

Strengths and Limitations

The major strength of this study lies in the use of in-depth qualitative methods to explore the organization of health services in a protracted refugee setting. In our study, we specifically targeted respondents with knowledge and experience in managing and providing health services to refugees and host population. The main limitation of this study is that the analysis did not include perspectives from the officials at central government who may have provided perspectives on policy issues. However, data collection technique adopted aimed for maximum variation of perspectives and saturation of emergent issues to describe the organization and delivery health service in the study setting.

Conclusion

The repatriation of refugees had significant impact on the health services delivery in the refugee affected districts leading to reduction in financial resources, availability of skilled human resources, equipment and as well as closure of some health facilities. Key stakeholders ought to adequately plan and prepare for refugee repatriation and put in place mechanisms to support the continuity of health services delivery in refugee affected settings. Further research to examine health systems adaptability and resilience following repatriation of refugees in low income countries is recommended.

Declarations

Ethical approval

Ethical approval was obtained from the Higher Degrees and Research Ethics Committee of Makerere University School of Public Health and the Uganda National Council for Science and Technology (SS 4199). Permission to conduct the study was granted by the district authorities of Arua, Adjumani and Moyo. Written informed consent was obtained individually after the researchers had explained the purpose of the study to the respondents. Consent included to anonymous use of their interview data in the study reports.

Consent for publication

Not applicable

Availability of data and materials

The anonymized dataset for the current study is available from the corresponding author Henry Komakech on a reasonable request at hkomakech@musph.ac.ug

Competing interests

All four authors declare that they have no competing interests.

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Authors' contributions

HK, CGO, and LA contributed to the study design, data collection and supervision, analysis and write up of the manuscript. HK and CGO, contributed to the data collection process, review of transcripts and development of the data analysis framework. FEJ contributed to the write up and review of the manuscript. All authors HK, LA, FEJ, CGO read and approved the final manuscript.

Declaration of conflict of interests

The authors declare no competing financial, professional or personal interests that might have influenced the conceptualization, implementation and presentation of the work described in this manuscript.

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References

1. ABRAMOWITZ S. What happens when MSF leaves? Humanitarian Depature and Medical Sovereugnity in Post conflict Liberia. In: SHARON A, CATHERINE P-B, editors. Medical Humanitarianism: Ethnographies of Practice. Pennsylvania: University of Pennsylvania Press, Incorporated; 2015. *In*:.
2. ABRAMOWITZ SA. Humanitarian morals and money: health sector financing and the prelude to the Liberian Ebola epidemic. Crit Afr Stud. 2016;8:319–34.
3. BURNHAM GM, ROWLEY, E. A., OVBEREDJO MO. Quality design: a planning methodology for the integration of refugee and local health services, West Nile, Uganda. Disasters. 2003;27:54–71.
4. GARIMOI ORACH C, DE BROUWERE V. Integrating refugee and host health services in West Nile districts, Uganda. Health Policy Plann. 2005;21:53–64.
5. GINGYERA-PINYCWA A. Uganda and the Problem of Refugees. Makerere University Press; 1998.
6. GOYENS P, PORIGNON D, MUGISHO SORON'GANE E, HENNART TONGLETR, P., VIS H-L. Humanitarian aid and health services in Eastern Kivu, Zaïre: collaboration or competition. J Refugee Stud. 1996;9:268–80.
7. HART T, HADLEY S, WELHAM B. 2015. Use of country systems in fragile states.

8. KVALE S. Interviews: an introduction to qualitative research interviewing. Sage Publications; 1996.
9. LEANING J, SPIEGEL P, CRISP J. Public health equity in refugee situations. Confl health. 2011;5:6.
10. LEE TW. Using Qualitative Methods in Organizational Research. SAGE Publications; 1999.
11. MAYSTADT J-F, VERWIMP P. Winners and losers among a refugee-hosting population. Econ Dev Cult Change. 2014;62:769–809.
12. MERKX J. Refugee identities and relief in an African borderland: a study of northern Uganda and southern Sudan. United Nations High Commissioner for Refugees; 2000.
13. OOMS G. Health development versus medical relief: The illusion versus the irrelevance of sustainability. PLoS Med. 2006;3:e345.
14. PORIGNON D, PORIGNON D, MUGISHO SORON 'GANE E, ELONGO LOKOMBE T, KATULANYA ISU D, HENNART P, VAN LERBERGHE, W. How robust are district health systems? Coping with crisis and disasters in Rutshuru, Democratic Republic of Congo. Tropical Med Int Health. 1998;3:559–65.
15. ROWLEY EA, BURNHAM GM, DRABE RM. Protracted refugee situations: parallel health systems and planning for the integration of services. J refugee Stud. 2006;19:158–86.
16. SPIEGEL P, SHEIK M, GOTWAY-CRAWFORD C, SALAMA P. 2002. Health programmes and policies associated with decreased mortality in displaced people in postemergency phase camps: a retrospective study.
17. TUEPKER A, CHI C. Evaluating integrated healthcare for refugees and hosts in an African context. Health Econ Policy Law. 2009;4:159–78.
18. UBOS 2014. National population and Housing Census 2014. Kampala: Uganda Burea of Statistics.
19. UNHCR. 2017. Refugees from South Sudan: Post 15 Dec 2013.
20. UNHCR 2018. UNHCR Global Trends 2018. Geneva, Switzerland: United Nations High Commision for Refugees.
21. VAN DAMME W, DE BROUWERE V, BOELAERT M, VAN LERBERGHE W. Effects of a refugee-assistance programme on host population in Guinea as measured by obstetric interventions. The Lancet. 1998;351:1609–13.
22. WORLD BANK GROUP. World development indicators 2014. World Bank Publications; 2014.
23. WORLD BANK. Forcibly displaced: Toward a development approach supporting refugees, the internally displaced, and their hosts. The World Bank Washington, DC; 2017.
24. YIN RK. Case study research: Design and methods. Sage publications; 2013.
25. Pavignani E. Human resources for health through conflict and recovery: lessons from African countries. Disasters. 2011;35(4):661–79.
26. MacKinnon J, MacLaren B. Human resources for health challenges in fragile states: evidence from Sierra Leone, South Sudan and Zimbabwe. The North-South Institute; 2012.
27. Chaitkin M, Blanchet N, Su Y, Husband R, Moon P, Rowan A, Gesuale S, Hwang C, Wilson P, Longfield K. 2019. Integrating Vertical Programs into Primary Health Care.
28. Ho S, Javadi D, Causevic S, Langlois EV, Friberg P, Tomson G. Intersectoral and integrated approaches in achieving the right to health for refugees on resettlement: a scoping review. BMJ open. 2019;9(7):e029407.
29. Jacobsen K. The forgotten solution: local integration for refugees in developing countries. UNHCR; 2001.
30. Van Damme WIM, Van Lerberghe WIM, Boelaert M. Primary health care vs. emergency medical assistance: a conceptual framework. Health Policy Plann. 2002;17(1):49–60.
31. Kaiser T. Dispersal, division and diversification: durable solutions and Sudanese refugees in Uganda. J East Afr Stud. 2010;4(1):44–60.
32. Qarani WM, Kanji SI. Health system analysis: Pakistan and Afghanistan. Int J Endorsing Health Sci Res. 2015;3(3):6–11.
33. Jabeen R, Rabbani U, Feroz A. Comparative analysis of healthcare system of Iran and Nigeria by Using WHO Building Blocks. Prim Health Care: Open Access. 2021;11(6):1–3.
34. Britten N. 1995. Qualitative research: qualitative interviews in medical research. *Bmj*, *311*(6999), pp.251–253. Spiegel, P., Chanis, R., Scognamiglio, T. and Trujillo, A., 2020. Innovative humanitarian health financing for refugees. Health policy and systems responses to forced migration, pp.35–52. (Maystadt, 2019 #1).
35. Maystadt JF, Hirvonen K, Mabiso A, Vandercasteelen J. Impacts of hosting forced migrants in poor countries. Annual Rev Resource Econ. 2019;11:439–59.