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ORIGINAL RESEARCH

The Challenges of Implementing a Health Referral System in South Africa: A Qualitative Study

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Introduction: Health system strengthening efforts also entails streamlining an existing referral system in a particular context to improve quality of health care offered to people. Conceptually, the referral system in South Africa, is seemingly sound. Nevertheless, gaps exist in its implementation. The aim of this study was to explore health care professionals' perceptions of referral system implementation in the Buffalo City Metropolitan Municipality (BCMM) in the Eastern Cape Province of South Africa.

Methods: This qualitative study included 12 health care professionals as participants. Each participant was interviewed using a semi-structured interview guide; with their consent, the interviews were audio recorded and transcribed verbatim. For data analysis, a thematic content analysis was used.

Results: The participants identified many impediments to the effective implementation of the referral system in BCCM. The main obstacles were deteriorating infrastructure, inadequate staffing, lack of transportation, and inadequate medical supplies and medications.

Conclusion: In mitigation, the participants proposed suggestions such as increasing the capacity of the health workforce, allocating personnel appropriately, increasing the availability of transportation, and providing essential medications to all levels of care. They also suggested involving all stakeholders in the referral process, providing education and training to health professionals on the referral system, and enhancing communication and feedback between the various levels of care. These challenges emphasised in this study highlight the need for targeted interventions to improve the referral system in this setting.

Keywords: health referral system, challenges, implementation, South Africa

Introduction

In accordance with the adage "health is wealth", the health of a nation's citizens is one of the most significant indicators of its prosperity. Efforts to enhance the health outcomes of individuals in various contexts are crucial for addressing a variety of health issues that impact mortality and mortality outcomes. A crucial aspect of addressing people's health requirements and concerns is creating a functional and efficient health system. Key to enhancing the health system would be to institutionalise and bolster an effective and supportive referral health system between the different levels of health facilities. In turn, this will increase accessibility to health services. Effective referrals include initiating the referral, transferring the patient to a higher or lower level of medical care, and evaluating the client at the recipient facility.[1]

According to the World Health Organisation (WHO), health services are one of the "building blocks" of the health system framework.[2] A functional, continuous referral system in health services would be feasible if a regulatory system for patient transfer to another health facility exists.[3] Referrals are prompted by the need for specialised care, additional investigation, inadequate equipment, and shortage of manpower,[4] as well as self-referral probably based on some of the above factors.[5,6]

In any given referral system, the referral process typically progresses from lower to higher levels of health care; however, there are variations in the structure of care across countries.[7] Nonetheless, a generalist model of the level of care entails the family/village/community, the healthcare centre, and the district/referral hospital.[7] Referral systems are

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intended to maximise the utilisation of all levels of health care and to prevent unnecessary overcrowding and waste of health resources at the most specialised levels of care.[3] Moreover, an effective referral network from the PHC is an essential framework for reducing wastefulness, boosting access to health care, and decreasing disparities,[8] which would assist in the achievement of Sustainable Development Goal 3 (SDG 3).[9]

The referral system model is implemented in the public health system to guarantee the efficient management of patient flow and provision of high-quality health care services. An effective referral system is characterised by synergistic operation and interaction between the various levels of healthcare. However, referral systems encounter several obstacles, including those posed by the healthcare system and the patient. In many resourced-constrained contexts, the health system-related system for referrals challenges includes inadequate transportation,[3,7,10,11,] lack of essential drugs and equipment,[12,13] lack communication,[7,10,11,14] lack standard and monitoring,[7,11] and network infrastructure.[7] In contrast, patient-related barriers to referral include poor environmental conditions,[10,15] long distance to health facility,[15,16] lack referral knowledge,[15] poverty,[17,18] and cultural beliefs.[15,19] There is a need to address these concerns as they affect not only referral but the entire health system, rendering it weak and ineffective.

The health system in South Africa is comprised of public and private health sectors, with the former being administered by various provincial government health departments.[20] Similar to many other nations across the world, South Africa has primary, secondary, and tertiary levels of healthcare. In South Africa, there are three levels of referral. The professional nurse or doctor must prepare a referral letter to the appropriate level of health care for continued management of the patient. The referral process begins at the primary health care (PHC) level, which includes a primary health care clinic, mobile clinics, community-based outreach teams, community health centres (CHCs), and district hospitals. This aligns with the World Health Organization's (WHO) Expert Committee on the Role of Hospitals, which emphasises comprehensive engagement of PHC clinics as the initial point of contact in a referral system.[21] The district hospitals provide level one (generalist) services to in- and outpatients referred by PHC clinics and community health centres.[14] The secondary level of health care includes regional hospitals that perform specialist roles for some district hospitals/receive referrals from them; they include emergency treatment, in-patient and out-patient care, paediatric and obstetric care services.[22] A prior study in South Africa found that lack of coordination of referral systems was one of the primary factors influencing service quality.[20]

Previous studies have recommended the training of health professionals,[3] improved communication and feedback between health facilities,[1,10] and involvement of the community in the health system[10] as part of the efforts to strengthen the health system and navigate the challenges of the referral system. There is a need to strengthen the referral system to optimise the effectiveness of quality healthcare in any setting. Reconfiguration of the health system based on evidence-based research that underpins the challenges of a specific health system context is required. Therefore, research is needed to understand the challenges of a given health system in each context to inform health decision-making regarding the development and implementation of policies and guidelines that can facilitate an effective referral system. We explored the perspectives of health professionals about challenges of implementation of the referral system in Buffalo City Metropolitan Municipality (BCMM).

Methods

Study Setting

The study was carried out in the Buffalo City Metropolitan Municipality (BCMM) in East London, Eastern Cape Province of South Africa. BCMM has two main hospitals, Cecilia Makiwane and Frere, which offers secondary and tertiary care, respectively. Three community healthcare centres and 58 clinics in East London and Mdantsane provide primary health care to the public.

Data Collection Procedure

Interviews with participants took place between March and June 2020. Participants were (1) medical officers and professional nurses from primary, secondary, and tertiary care hospitals, (2) specialists from secondary and tertiary care hospitals, and (3) pharmacists from secondary and tertiary care hospitals. The three groups of participants were

chosen using the purposive sampling method. In all, 12 participants were interviewed. These key stakeholders were chosen because of their active participation in the health care services and referral process. Semi-structured interview questions with open-ended responses, probes for clarification, and prompt responses were employed. The interview questions solicited the participant's responses to the main challenges encountered in the implementation of a referral system in terms of its effectiveness, procedure, and roles, as well as their suggestions for referral system improvement. The lead researcher or author (AM) conducted individual interviews with all participants for 45 to 60 minutes. The interviews continued until there was no more new emerging information or facts (data saturation point). AM took notes and compared them with every participant's audio-recorded interview to ensure accuracy. The direct quotations were captured. In addition, the participants were provided the opportunity to verify the accuracy of the interview transcripts.

Ethics

The study protocol was approved by the University of Fort Hare Health Research Ethics Committee (Reference: 2019=06=004=MatolengweA). The participants signed an informed consent form after receiving a comprehensive explanation of the study's nature, objectives, and procedures. Participants' anonymity, right to privacy, and confidentiality were maintained throughout the course of the study. The participant's identity was concealed, and none link to a health care facility. The study followed the procedure and principles outlined in the Helsinki Declaration. Participants informed consent included publication of anonymized responses.

Analysis

Periodically, the second author (DM), who supervised the research project, evaluated the accuracy of the data. Any property or condition that makes the referral system implementation process impossible, ineffective, difficult, frustrating, or unsatisfying was classified as a challenge. Strategies or ideas were characterised as any quality or circumstance that would make the referral system implementation process easier, more effective, less frustrating, and more fulfilling. The research team recognised common challenges and suggestions. Based on the interview guide themes, inductive coding framework was created. The inductive analytical method enables the utilisation of data-driven techniques by deriving codes from perspectives derived from the data itself.[23]

Results

Participants included four pharmacists, three physicians, two nurses, and three specialists with professional experience ranging from 10 to 25 years. The themes were based on several challenges: 1) infrastructure, 2) staff capacity, 3) equipment, 4) transportation, 5) drug supply, and 6) suggestions for strengthening the referral system.

Theme 1: Infrastructure-Related Challenges

Most of interviewees stated inadequate health-care infrastructure due to building deterioration. They stated that most clinics and old hospitals are undersized and have limited space to serve a large volume of patients, which has a negative effect on the referral system. They highlighted overcrowding and a lack of consultation space, which risked patients' privacy.

> The hospitals are overcrowded with patients. We had an older hospital that was larger than the one we have now. Even though it was large, it was nonetheless overcrowded. This one is much smaller, so you can imagine how crowded it is. So, the referral system is a concern because there is no place that can accommodate these patients. Doctor, Specialist 2

> The majority of the old clinics and hospitals are unable to accommodate the volume of patients. The infrastructure is ancient and in disarray. Pharmacist 2

> The outpatient department (OPD) is too small to accommodate post-medical patients. Specialist 1

> Small consulting rooms and few consulting rooms because we have around six professional nurses and myself. Patients' privacy is at risk. Professional Nurse 2

Theme 2: Staff Capacity-Related Challenges

Another issue mentioned by participants was a shortage of staff capacity at all levels of health care, which has an impact on staff routine duties. As a result, correct processes are not followed. Healthcare personnel are overburdened by their workload and patient volume, rendering referral systems difficult to implement.

> One of the main reasons why the system is now failing is a lack of implementation. Pharmacist 1

> Referral templates are confusing. There is up referral and down referral. It is simple with primary health care when they refer up as much as the patients skip, because they do not go to primary healthcare facilities or alternatively travel to secondary and tertiary healthcare facilities. Pharmacist 4

> I believe there are patients who are unfortunately seen at primary health care facilities that are less efficient at identifying sick patients and referring them appropriately, so there are patients who miss out on many months of appropriate treatments because they were managed inappropriately at a lower level. Specialist 1 and 2.

Work Force Deployment

Participants reported that the lack of primary care practitioners at all levels hindered the referral system. Many challenges, such as frequent deployment of primary care physicians, a shortage of in-service and continuing training, and the discontinuation of the referral system, have a detrimental influence on patient flow.

> Staffing is minimal, particularly at the lower levels. The medical officers are insufficient. I can't speak for the nurses, but from what I've seen, there aren't enough of them. Doctor 1 and 2.

> The issue with the referral system is that it places junior doctors in primary care. We also lack enough doctors and nurses. Specialist 2

> Given the number of patients, we lack sufficient staff. Professional Nurse 2; Pharmacist 2.

Lack of Staff Motivation

Participants expressed two significant concerns: a lack of worker motivation and a lack of feedback from health care professionals at referral health centres.

> Perhaps there is room for improvement in motivation. Perhaps it's due to a lack of workforce. Staff share additional responsibilities due to workload and time restrictions. Doctor 2.

> This leads to workplace apathy, and where there is apathy, workers have a lower threshold, so they will opt for referral rather than be completely involved in patient care. In those workplaces, new employees are likewise unmotivated. Doctor 3

Theme 3: Equipment-Related Challenges

Participants also highlighted that the referral system was hampered by an insufficient supply of medical equipment and a lack of maintenance, resulting in an appointment scheduling backlog. Even higher-level health care facilities may not always have the essential medical equipment.

> Some departments, such as orthopaedics, may lack the essential equipment to perform operations. Clearly, there is a backlog of patients. Doctor 1

> Medical equipment is essential for effective care. My workplace lacks ultrasound and x-ray. Doctor 2

> I believe we are not working smartly by letting our equipment to decay, and we cannot develop our equipment pool in this manner. If you keep it up, you can utilise it for a longer amount of time. Pharmacist 2

Theme 4: Transport Challenges

Participants also cited the lack of emergency medical service (EMS) and patient transport vehicles, which caused ambulance response times to be delayed. As a result, patients miss their appointments and must wait substantially longer to see physicians at the referral hospital. Furthermore, transport is only available on certain days of the week, such as Mondays and Thursdays. Participants stated that there are few ambulances and paramedics servicing a big geographical area. Medical workers must occasionally utilise their own vehicles to transport patients in need. The participants narrated thus:

> Ambulances are an issue. When we call an ambulance, it takes an eternity to arrive. In rural locations, the ambulance would not arrive for another 8 hours. The ambulance almost never shows up on time unless it's an emergency. Professional Nurse 2; Specialist 1 and 2.

> If the ambulance does not arrive, one of us must sacrifice either drive the patient or use a wheelchair, depending on the patient's condition. Professional Nurse 2.

Theme 5: Availability of Drugs

Participants stated that the difficulty of pharmaceutical availability, particularly at lower levels, has an impact on patient flow and their inappropriate use of higher levels of treatment. Patients seek higher levels of care without being referred to obtain the medications they require.

> The first point of contact is the clinic, and a patient should obtain primary health care drugs there. We are having challenges with some drugs. Some of our patients are, in fact, in danger. We do, however, try our best to get from other institutions. Pharmacist 2

> Many patients transfer from PHC to hospitals because some of the medications they require are not available at the lower level. Patients who do not have must sometimes take two or three taxis to the hospital. You know that most of the chronic medications are not accessible. Doctor 1; Pharmacist 4.

Theme 6: Suggestions for Strengthening the Referral System

The participants proposed various suggestions to improve the referral mechanism. These include infrastructure improvements, staff capacity training, particularly at the primary health care level, equipment, transportation, and medicines supply. They also emphasised the significance of investing in e-referral systems. Other suggestions included standardising referral policies and revising guidelines for referral system implementation, improving communication between all levels of care needs, increasing stakeholder engagement, and establishing feedback mechanisms between referral levels. The participants expressed the following sentiments:

> A well-planned referral procedure that involves input from all stakeholders, including the department, health care professionals, and the community, is required. There should be more knowledge and education about the referral system among health care providers and the public. Departmental willingness and political backing are needed to implement the referral system. Doctor 1

> We require instruction in all care levels. Facilities where there is a workflow are necessary. A diagram of the system's implementation is required. The communication gap between facilities about the referral system should be bridged. Pharmacist 1

> The department requires a paperless electronic system that can communicate between facilities and direct patients to the appropriate health facility. Pharmacist 2

> For our health-care workers to feel supported, they require continual training and education, as well as access to the resources they require. Doctor 3

> We require more health care workers, more training, and more equipment, particularly human resources. Professional Nurse 1

> I believe that the best way for the referral system to work is for these hospitals to get top doctors and nurses from the referral hospitals. Specialist 2

Set up a policy that guides the whole system. Train the people on the policy. Promote the issue. Try and reduce the need to referrals. Pharmacist 3

Continuous education and training of the health care workers. Doctor 2

It is important to educate both patients and the public about the referral sysyem. Professional Nurse 2

Discussion

This study explored the barriers to the successful implementation of the referral system in BCCM. From the perspective of health care providers, the main challenges include insufficient infrastructure, shortage of staffing, lack of medical equipment, transportation, and medications. Participants recommended ways for addressing these challenges, such as improving worker capacity, correctly assigning staff, increasing transportation availability, investing in e-electronic systems, and providing effective medicine availability. Participants also proposed integrating all stakeholders in the referral process, providing health advocacy and education on the referral system, policy, and guidelines, and enhancing communication and feedback amongst different levels of care. Our findings highlight the obstacles impeding the efficient implementation of a referral system, as well as the recommendations to strengthen it in this geographical context, which have implications for health policy action to improve the quality of health services.

The participants in this study were concerned about the dilapidated condition of infrastructure across all levels of care, at the primary healthcare level. They noted deteriorating infrastructural condition of the old building facilities, limited space to serve the large number of patients, or insufficient consulting rooms. The outcome of the overflow of patients with insufficient infrastructure creates overcrowding of spaces. These concerns could have a negative impact on the health system and the referral system. Our findings resonate with other studies that have highlighted similar scenarios regarding inadequate health infrastructure provision and lack of maintenance thereof, in addition to its related effects such as overcrowding and poor quality of health affecting referrals, especially at the primary level of health care.[12,24] Given that primary health care is the initial point of access to health care, adequate investment in its infrastructure is essential. Unfortunately, in many developing nations, including South Africa, the provision of quality infrastructural health facilities and services to support the cardinal objectives of primary health care is seemingly a challenge;[12] this is likely due to lack of political commitment and corruption. Understandably, the provision of excellent health facilities at the primary health care level would help to improve the referral system, as many people bypass this level of health care because of the lack of adequate facilities to meet their requirements. Ideal referrals should be made from the primary care level to the upper levels, without overburdening an already overburdened health care system.

Another difficulty affecting the successful referral system noted by the health professionals in this study was acute shortage of workforce. They affirmed that the number of specialists at the higher level of care and pharmacists at the PHC level, and family physicians/nurses remains grossly insufficient. Participants also cited disproportionate deployment and distribution of health care workers across health care levels, difficulties in scheduling appointments, and long waiting times at referral hospitals. These findings are not surprising; several studies have reported that the shortage of health care personnel is a barrier to the referral system, affecting a variety of health outcomes[12,13] Undoubtedly, a health system cannot operate effectively without adequate personnel, as the implementation of the referral system is contingent on staffing levels. Human resources are essential for policy implementation, administrative and clinical procedures, and attitude or behaviour towards patients and the public. However, lack of motivation, brain drain, excessive workload resulting in burnout, and a rural-urban imbalance in the health workforce are linked to shortage of health workforce in developing countries.[25,26] In South Africa, the health workforce capacity has been highlighted, indicating an acute shortage of health care professionals, particularly at the primary health care level.[27] As a result, implementing of a health referral system is hampered by delayed appointments for patients due to the shortage of health care providers.[27] For an improved health system, it is necessary to address the staff capacity issues, which have a direct impact on the referral system. Only a committed and motivated workforce can sustain and effectively implement an institutionalised referral system; therefore, motivating staff by empowering them with continuous education and training and other incentives

should be prioritised as an essential element to increase staff satisfaction and motivation. This will in turn, sustain staff morale about providing high-quality health care services within a referral framework.

Another significant barrier in implementing a referral system in this context, as indicated by participants in our study, was a lack of sufficient equipment and maintenance, which resulted in greater referrals to better resourced facilities. The lack of available healthcare equipment and supplies caused patients to wait longer to receive medical care, leading to queues in the appointment system, delayed diagnosis, and delayed surgery. Patients receiving oncological and haemodialysis services suffer the most from this terrible circumstance, as it worsens their health condition. As alluded to by Maphumulo,[12] the lack of medical equipment in South African hospitals is a worrisome public health issue contributing to significant delays in the delivery of essential and emergency health care services to patients who require them. Although medical equipment is maintained in South African health facilities, the participants recommend acquiring more advanced medical equipment technologies to provide more efficient and effective health services.

Inadequate transport or unavailability of ambulance services affecting accessibility to health care facilities and patients' mobility to referral centres was identified as one of the most challenging aspects of the implementation of the referral system in the setting. The availability of transport is critical in every health facility, as it is required for emergencies and moving patients across health care levels. Lack of mobility or functional transportation could cause delays in obtaining health treatment, as well as missed referral and or regular medical visits at health facilities. This obstacle is clearly discernible in the geographical enclave understudied, as participants stated that transportation to take patients to health facilities is only available on specific days: Mondays and Thursdays. Notably, most of the people in the Eastern Cape are impoverished, from rural-remote and difficult-to-reach areas, and so rely on government-owned transport, particularly after being discharged from the hospital. In many resource-constrained areas, one of the health system referral challenges is insufficient transportation.[7,10,11,14] Other studies, including ours, have found that the lack of transport facilities is a major impediment in the referral system, as most people cannot afford the cost of transportation because of poverty-related factors in order to access health facilities[3,15,16,28–30] Patients will have to wait longer to obtain health services at the facility if transport is unavailable. Participants in this study also raised the issue of a lack of ambulance staff to operate emergency transport services, which causes patients to wait for long periods of time or to make alternate arrangements to travel to the referral institution. Other research has found similar results[17,31–33] and in South Africa.[14] The availability of adequate transportation for patients seeking health care at all levels of care would facilitate timely provision of health services to avoid deterioration of health condition; thus, addressing transportation and ambulance service concerns is critical to strengthening the referral mechanism in this setting.

Another barrier noted by participants was the lack of medications in primary health care facilities. The unavailability of medicines has an impact on the quality of health care since patients are referred to other levels of treatment or, in some cases, turn to self-referral to obtain better health care. In addition, health professionals are uncertain as to which drugs should be made available at each level of care; this may be partially attributable to a lack of knowledge regarding guidelines for the availability drugs at all levels of care. Expectedly, this scenario could result in patients bypassing primary health care to obtain their chronic medication at the tertiary level without a referral. Our findings are consistent with other previous studies reporting inadequate supply of medicines or drugs affecting referrals,[12,13] and the subsequent action of patients in an effort to acquire better health services, particularly in developing countries, by-passing the primary level of care to a higher level.[34] The lack of drugs at healthcare facilities might impair equitable distribution, patient health, and referrals pathways.[13] Our study also identified improper patient flow as a barrier to the establishment of a referral system. While South Africa strives for universal health care coverage, lack of medicine supply is a serious issue in the country's public sector hospitals.[35]

Participants in this study recommended various ways that could assist address the plethora of obstacles identified as impeding effective referrals system's implementation in this region. Among these are the following: 1) development of a clear flow chart referral system in collaboration with all relevant stakeholders, including the department of health and the community; 2) education and training of health care professionals and the community on a referral system; 3) updating and approval of existing referral policies and guidelines; 4) capacity building, especially at the primary care level, in terms of adequate infrastructure, workforce capacity, drug availability, as well as the availability of necessary equipment and electronic systems; 5) enhancing the capacity of the EMS service and patient transportation facilities; and 6) boosting communication between health care levels through stakeholder meetings to facilitate feedback mechanisms among referral levels. These recommendations, if implemented, will assist with mitigating the challenges of the

referral system in this setting. Previous studies have recommended the training of health professionals,[3,11,14,36] improved communication, and feedback between the health facilities[3,10,11,14,37] improved patient-centred relationships,[14] and engagement of the community in the health system[3,10] as part of the attempts to reinforced health system and invariably navigate the obstacles of the referral system. Furthermore, developing a provision of referral guidelines or a policy is a critical component to improving the implementation of a referral framework, as such a document will provide clarity and standardisation of a referral across all levels of health care.[3] Finally, developing an enduring, sustainable collaborative behaviour or attitude among all levels of healthcare providers will aid in the desired referral health outcomes.[38]

Limitations

The findings of the study cannot be extrapolated to other Eastern Cape contexts due to the study's limited sample size. Furthermore, the obstacles faced by patients and carers were not explored; hence, we did not have a balanced perspective of the referral system's barriers. The study's goal, however, was to obtain insights rather than establish broad generalisations. The diversified selection of multidisciplinary health care professionals used to acquire a comprehensive perspective on the data is one of our data's strengths. Also, the findings highlight referral system constraints in a low-resource setting that require transformation to ensure high-quality care at all levels.

Conclusion

The main challenges impeding the effective implementation of the referral system in this setting were poor infrastructural health facilities, inadequate staff capacity, unavailability of transport, and insufficient medical supply and medicines. The need to improve on these hurdles were highlighted accordingly. In addition, stakeholder engagement in the referral process, education and training of health professionals on the referral system and improving communication and feedback between the various levels of care is stressed. It is crucial to ensure a functional health system at all levels. Also, the referrals should be closely monitored at all levels of health care to identify gaps and improve on them. Improving on the health facilities, the capacity of staff through training and workshops, adequate provision of medical supplies and transportation would strengthen the referral system within the context understudied, and, in turn, improve the quality of health services.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Disclosure

The authors declare no conflicts of interest.

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