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Health systems strengthening in rural Africa through improving population compliance with health services

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Abstract
Africa, with its weak health systems, experiences a higher number of non compliance with health services mostly in rural areas. Compliance is one of the most prominent issues in health care delivery globally and it is the best way to achieve desired outcomes in patients, hence promoting quality health services delivery which is the objective of a strong health system. Health systems in Africa face a number of challenges, of which resources constraint is paramount. Improving compliance with health services in rural Africa can help strengthen the actual service delivery building block leading to strong health systems. This study investigated methods of strengthening health systems in rural Africa through improving population compliance with health services. The study was carried out in two rural communities of Zambia, Southern Africa. Data was collected through Key Informant Interviews and Focus Group Discussion. Six Key Informant Interviews were done with key informants from the two communities who were either member of the Neighbour-Hood Committee or Community Health Workers. Two Focus Group Discussions with village headmen/women or village representative were done, each focus group comprised of 10 members. One focus group discussion was done in each community. A thematic analysis approach was used to identify, analyze and reporting patterns. The study found that health systems strengthening in rural Africa through improving population compliance with health services lies in increasing accessibility to health services, increasing service coverage, involving the community in decision making, engaging and mobilising the community with regards to health services provided, providing health education to the community and making health services be delivered in friendly environments. Improving patients' compliance with health services can improve the quality of health services and thus strengthening health systems in remote locations and rural parts of Africa.

Keywords: health systems strengthening, compliance, health services, rural, Africa

Introduction
Africa, with its weak health systems, experiences a higher number of non-compliance with health services mostly in rural areas [1]. Compliance is one of the most prominent issues in health care delivery globally [2]; and it is the best way to achieve desired outcomes in patients, hence promoting quality health services delivery which is the objective of a strong health system [3]. Desired health outcomes are the objectives in the management of the diseases and conditions of which the outcome might not be achievable if health services are not complied with [4]. Compliance with health services leads to good outcomes and health improvement which is the main goal of health systems [5]. On the other hand, non-compliance with health services produces unsatisfactory health outcomes and thus reduces user confidence in the health services provided [3]. Meanwhile, literature had shown that factors influencing non-compliance with health services in rural Africa are varied and complex [6].

Health systems in Africa face a number of challenges, of which resources constraint is paramount [7]. Resources for health systems in Africa, including finances, human resource and medical products are scarce, making it impossible to provide high quality health services to the population, especially in rural areas [8]. The situation is compounded by lack of reliable health information systems to guide in planning and evaluation [9]. In the same vein, the report of the regional conference "Health districts in Africa: progress and perspectives 25 years after the Harare Declaration" [10] showed that policy formulations for health governance ignores the health users and concentrate on health indicators, leaving out the community in health planning and decision making, and this further complicates the health systems in rural Africa as the users do not contribute much.

Services delivery in Africa, especially rural Africa, is not done in favourable criteria of accessibility, coverage, quality and safety[11], due to chronic resource constraints Africa has been experiencing in form of chronic shortage and misdistribution of human resources, inadequate health infrastructure and lack of high quality medical products [12]. Non-compliance with health services in Africa has been reported to be trending in societies with lower socio-economic status like rural areas [4]; as opposed to societies with higher educational level [13].

Service delivery, as one of the building blocks of health systems, needs to be strengthened as a way of strengthening health systems in general. Improving compliance with health services in rural Africa can help strengthen the actual service delivery building block leading to strong health systems. Henceforth, this study investigated methods of strengthening health systems in rural Africa through improving population compliance with health services.

Methods and Materials

Study site

To achieve our objective, we carried out an exploratory study. The study was carried out in two rural communities of Zambia, Southern Africa. According to the population and housing census carried out in 2010, the community in Western province had a total population of 58, 423, 7 wards and 11,370 households, while the other community in Eastern province had a total population of 68, 918, 13 wards and 13, 196 households [14]. According to the Zambia Ministry of Health 2012 list of health facilities, the community in Western province was serviced by one mission level 1 hospital and 6 rural health centres and 4 health posts. The health facilities in this community had a total of 97 bed spaces while the community in Eastern province had one mission level 1 hospital, 7 rural health centres with 3 health posts. The health facilities in this community had a total of 148 bed spaces [15].

The two communities were purposively chosen for this study due to their remoteness and underdevelopment [14]. The villages which took part in the study were randomly selected, 10 from each community making a total of 20 villages. Hence all Village headmen/women or their representatives, from the selected villages were purposively selected to represent the population. Three key health informants from each community who were either members of the Neighbourhood Health Committees (NHCs) or Community Health Workers (CHW) were conveniently selected and were therefore included in the study as a go between the population and the health facilities.

Data collection techniques

Data was collected through Key Informant Interviews and Focus Group Discussion. Six Key Informant Interviews were done with key informants from the two communities who were either member of the Neighbour-Hood Committee (NHC) or Community Health Workers (CHW). Three key informants were interviewed from each community. Two Focus Group Discussions with village headmen/women or village representative were done, each focus group comprised of 10 members. One focus group discussion was done in each community. The interviews were conducted by the first author together with the research assistants who had experience in qualitative methods. This author had prior experience in these rural communities and hence had created rapport and trust thereby facilitating data collection process.

Focus group discussions

Focus group discussions (FGDs) were conducted with village headmen/women or village representative. Two FGDs were conducted, one in each community sampled. Each focus group discussion had 10 participants who were village headmen/women or village representative. The rationale for the FGDs was to understand how to strengthening health systems in rural Africa through improving population compliance with health services from the population's perspective.

Key informant interviews

Key informant interviews were conducted with six members of the neighbourhood committees or community health workers. The objective of these interviews was to understand how to strengthen health systems in rural Africa through improving population compliance with health services from the perspective of "health workers" who are part of the community.

Data analysis

The interviews were recorded using a digital recorder and later transcribed into verbatim. Transcribing from digital recorders was done by independent transcribers. Transcribed data was coded according to the communities. Data was familiarized by reading and re-reading the material and taking notes of initial ideas of themes. A thematic analysis approach was used to identify, analyze and reporting patterns (themes) in the data which organizes and describes a dataset in detail and interprets different aspects of the topic [16]. When the scripts were read and re-read, interesting contents were grouped together into categories [16]. The coded data were then grouped into potential themes before arriving at the final themes.

Ethical issues

Ethical clearance to conduct the study was obtained from the University of Zambia Biomedical Research Ethics Committee (UNZABREC). Consent was sought from all study participants before conducting interviews and discussions using a consent form. Anonymity throughout the study was assured to the study participants.

Results

The study findings have been organized into six themes; accessibility; coverage; community in decision making, community engagement and mobilisation; friendly environment and health education. The section starts by outlining the characteristics of the study participants.

Socio-demographic characteristics

Eleven study participants were male while 7 were female. The respondents' average age was 32 years, and their age ranged between 27 and 51 years. All the key informants in this study were actively working in association with the nearest health centre or post.

Accessibility

Most of the respondents indicated that accessibility needed to be improved in order to improve compliance with health services as it was the main obstacle. They stated that accessing health serving is number step to compliance as one need to comply with a service they can reach.

"How can you comply with what you do not have? You have to walk about 4 hours to get a service? You can only do that once and the rest just use herbs…" {WP-FGD 3}

The respondents further reported that although health services are free in rural areas, they are not sufficient, only basic health care is found. More advanced services are found at bigger

hospitals and hence accessibility becomes an issue as one respondent puts it like this;

"*that you have to travel for long time and pay at the bigger hospitals where everything is found…"* {WP KI 2}

Coverage

The respondents alluded to the fact that the nearest health facilities do not cover all the people in its catchment area. The health workers at times try hard but the patients are just many as compared to few nurses who are working.

" *there are long queues at the clinic, its very difficult for nurses to finish off all the cases and so sometimes they have to send some away so be attended the next…but it is disease so it progressing. People complain that nurses don't want to work, but I myself I work with them so I see"*.

{EP KI 1}

Coverage of health services is a challenge especially when there are few health workers attending to patients. The problem of health worker shortage in Africa has now turned chronic as it has persisted over the years [12].

Community in decision making, engagement and mobilisation

The respondents felt that the community in general needed to be consulted when implementing some programmes, especially routes used for Child health week, as some centres used for Child Health Week were not the most accessible ones. Concerning Community involvement in decision making, some respondents had this to say;

"They need to consult the local people where to set up centres for child health week…" {EP FGD 9}

"They prefer making schools as centres for activities but some schools are still far away, and hence some people do not comply with the services".{EP FGD 4}

The community capacity need to be strengthened so that they become partners for analyzing their own health problems and for planning, implementing and assessing both their own health interventions and those delivered by health providers.

Engaging and mobilizing the community was suggested by the respondents as a way to increase compliance with health services. This was thought as a solution because most of the populations were unaware about the consequences of defaulting health services.

"*Community members sometimes are not aware of the services provided by the clinics. For example, when an NGO came to do circumcision, they just came silent, they were not telling us anything…. but expected people to go there. They had come with some flyers…but few people can read here. Its only when they left that when we learnt that circumcision is good but it was too late*" {WP KI 3}

The community needs to be mobilized and then engaged in an activity to see the goodness of complying with the services which can be done inform of "community dialogues" which serves "as mechanisms for information dissemination and mobilization of support [17].

Friendly environment

The respondents thought that, the attitude of health service providers could do much in the improvement of compliance with health services. They related that unsatisfied visits to the clinic make the patients unwilling to make a visit to the facility in the future.

"Nurses need to be friendly to the patients, when the patients are wrong as in defaulting…they need to be tolerated because most of them are ignorant of the consequences of defaulting." {WP KI 1}

Health providers attitudes contributes highly in the demand of health services in all set ups [7].

Health education

The respondents felt that it is the health workers' duty to educate the patients about the diseases in a group or individually.

"The patients need to be told about their illness because when they hear it from the nurse, they respect that." {WP KI 2}

The nurses need to tell them the result of non complying…if one does not adhere to treatment, they will not be cured."{EP FGD 10)

Patients need to be educated about their illness. The natural progress of the disease need to be communicated and what is expected of the population in order to maintain health should be discussed[18], although this is a challenge amid health worker shortage.

Discussion

Improving compliance with health services need to be patient-centred. Nevertheless, factors contributing to non-compliance with health services need to be given specific attention. Meanwhile, compliance issues do not arise due to patients' factors only, but also service providers' as well as the nature of services provided.

Increasing accessibility of health services improves compliance since the greatest gap in service delivery lies in accessibility [20]. Inasmuch as health services provided in rural Africa are mainly primary care and are mostly free, they are still woefully insufficient. It follows therefore that, lack of accessibility to primary health care [21], and long waiting time for clinic visits [22], affects compliance with health services. To increase health service accessibility, different strategies need to be employed such as mobile health services or outreach health services to support population compliance with health services, especially to those who live in inaccessible or remote areas especially rural areas [23, 24]. This would reduce on the travelling time needed for patients to access health services hence encourage compliance and thereby strengthening the health systems. This would be beneficial as transport as been noted as a major obstacle in remote rural areas [25].

Involving the community in decision making and planning is one way to improve population compliance with health services as services will reflect the needs of the community [26]. This will also include how the health services should be delivered from patients' perspective.

In improving service delivery in Africa, the African Regional Health Report [27] and the Ouagadougou Declaration on Primary Health Care and health systems in Africa [28] identified community involvement as key to success in this context. Communities need to be involved in service delivery at various stages from planning to evaluation. Therefore, community engagement and mobilization to building awareness of service availability, efforts to encourage health-seeking behavior in the population are essential. Crucial efforts include educating and informing people on the benefits of complying with health services, as well as ensuring that effective health services, ideally, are sought from regulated health service providers. An example would be educating the populations on the consequences of untreated cases of Malaria or unskilled labour delivery. Awareness campaigns on health services to increase social support networks has been the suggestion from developed countries, especially solidarity groups to improve delivery and compliance with service[29]. In rural Africa,

awareness campaigns should employ Community health workers and community-level care as they are important channels through which activities could be implemented for the populations. While health education increases access to information through educational programs and campaigns especially when targeted at vulnerable populations, education to conduct behavioral change communication campaigns to the population should be culturally sensitive and appropriate to improve services uptake and hence increase health service compliance [19]. In areas of low literacy, like rural Africa, a variety of channels must be used, including verbal or pictorial communications [20].

Although creating a friendly environment helps to increase compliance with health services [30, 31], this has been difficulty especially areas affected by shortage of human resources like rural Africa. Shortage of human resources in health service delivery results in staffs being overworked hence burn out and low motivation thereby reducing the chances of providing services relaxed and with a 'smile"[31]. Friendly environment are created usually by motivated health workers through friendly chats and explanation. This was underscored by a study [32] which showed that patient's satisfaction with clinic visits is most likely to improve their compliance with the treatment. This may prove to be very difficult when health workers are few and overworked [11].

To strengthen health systems in rural Africa through improving population compliance with health services, health services need to be accessible to the population and especially the target group. The health services coverage need to be increased to a large extent and the community should be involved in planning and decision making. Community engagement and mobilisation to build awareness of health services and health education is likely to make health care services more responsive to the target population's needs and therefore make them more compliant to the services. Creating friendly environment is equally paramount to health services compliance.

Study Limitation

The study limitation includes the nature of the design which is qualitative, and so caution must exercised when generalizing the study, not just outside Africa, but also to other settings beyond the study population. It is therefore important to conduct the study outside Africa and other settings beyond the study population.

Conclusion

The study set out to investigate methods of strengthening health systems in rural Africa through improving population compliance with health services. The study found that strengthening health systems in rural Africa through improving population compliance with health services lies in increasing accessibility to health services, increasing service coverage, involving the community in decision making, engaging and mobilising the community with regards to health services provided, providing health education to the community and making health services be delivered in friendly environments. Improving patients' compliance with health services can improve the quality of health services and thus strengthening health systems in remote locations and rural parts of Africa.

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Authorship

Both MM (MPH, BSc) and CM (MPH,BA) conceived, designed, analysed and interpreted study data, while MM prepared the manuscript for Publication.

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