

Knowledge About Leprosy Among Health Care Workers In Balaka District, Southern Malawi

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Abstract

Background

Health care workers (HCW) who are knowledgeable about leprosy can play an important role in promoting early case detection to prevent disabilities. Poor knowledge of leprosy leads to poor attitude about the disease and towards its sufferers. This study was done to assess knowledge and attitudes of health workers towards leprosy in Balaka district, southern Malawi.

Methods

This was a cross sectional study that included all HCW that do outpatient consultations in health facilities in Balaka district using a self-administered questionnaire. Statistical Package for the Social Sciences (SPSS) version 20 was used for analysis.

Results

Thirty five of the approached 38 HCW had heard about leprosy (21 nurses, 3 health surveillance assistants and 11 medical assistants). While 21 (60%) reported to ever have suspected leprosy in a patient, 13 (37%) HCW had never seen a case of leprosy before and 6 HCW (17%) had ever made a correct diagnosis of leprosy themselves. Twenty nine (83%) knew leprosy is an infectious disease, 1 (2.9%) thought it is due to witchcraft, 2 (5.7%) thought dirty environment causes leprosy. Six HCW (17%) mentioned inhalation as mode of transmission, 19 (54%) thought touching someone with the disease, 4 (11%) eating infected meat and another 4 (11%) uncleanliness can transmit leprosy. The skin and peripheral nerves were correctly mentioned by 32 HCW (91%) as organs which may be affected by leprosy. Whether leprosy is curable, 25 (71%) thought it is, 5 (14%) thought it is incurable and another 5 (14%) did not know. Seventeen HCW (49%) felt leprosy patients need isolation and 19 HCW (54%) were afraid they might catch leprosy at work. Of three diseases leprosy, HIV and diabetes, 26 (74%) HCW felt leprosy was the most dangerous as opposed to 4 (11%) and 3 (9%) that chose HIV and diabetes respectively. Only (16) 46% had learnt about leprosy during their training but 24 (69%) had read about leprosy out of self-interest and all the HCW felt they need on job or refresher training about leprosy.

Conclusion

There is a general lack of knowledge about leprosy. This may explain why many HCW have not had experience with leprosy patients even though it exists in their areas. Their fears about leprosy infectiousness and dangerousness are also based on this knowledge lack. Since such poor knowledge may lead to delayed diagnosis and stigma, education about leprosy to HCWs in Balaka must be part of any priority interventions to address challenges with leprosy control in the district.

Introduction

Malawi achieved leprosy elimination in 1994. Elimination was defined as less than 1 case per 10000 population by the 44th WHO Assembly in 1991. Years on, evidence from active case detection studies shows a higher burden of leprosy than that reported by the national program¹. Such studies have also revealed cases of leprosy in children and among other unsuspecting individuals who would otherwise not have gone for treatment earlier had they not been traced during these special non-program related active case detection exercises. This suggests presence of continued transmission and if undetected, such cases could develop disabilities and/or continue transmitting the disease to their close contacts. To totally eliminate leprosy as a public health problem, as recommended by the World Health Organisation (WHO) on realization that continued transmission is a global problem, national leprosy programs that have achieved elimination status must remain with the logistical and personnel capacity to continue regular surveillance to manage any new cases as they arise². In the absence of such capacity by the national leprosy programs, the important task to detect possible leprosy cases among those coming to access general medical care lies in the hands of health care workers (HCW)³. The small numbers of leprosy patients in non-endemic areas, however, deprive these HCW of the much needed experience to manage the disease better. Poor knowledge has been associated with delayed case detection, misdiagnosis and possible stigma towards leprosy by the HCW.^{4,5} Overall attitudes and skills of HCW with poor knowledge about leprosy have generally been shown to be equally poor.^{5,6}

In 2015, Balaka district reported increasing trends of new leprosy cases which the district medical officer cited delayed diagnosis due to lack of knowledge about leprosy among the HCW as the main reason contributing to the increase.⁷ The case detection rates over 6 years were 0.9 (31 cases detected) in 2010 and 2011, 0.7 (25) in 2012, 1.2 (41) in 2013 and 1.4 in 2014 (46). Of the 46 cases recorded in 2014, 44 were new. By the end of 2015, a total of 45 new cases had been recorded. Most of these diagnoses are made at the district hospital where a well-trained leprosy control assistant is based as the peripheral health centres lack such capacity. That means many patients have to incur transport and other expenses to get a leprosy diagnosis away from their nearest facility. Training many HCW across the district in leprosy was suggested as a key way of fighting leprosy better in Balaka. This study was therefore aimed at assessing knowledge and attitudes of HCW towards leprosy.

Methods

This cross sectional study took place in October, 2018 and involved Balaka district health office (DHO) through its leprosy control office. It included HCW who do clinical consultations in the outpatient departments (OPDs) in all health centres and the lone district hospital. These are likely to come into contact with patients seeking care for various reasons but with leprosy symptoms. The respondents were followed to their places of work and all gave a written informed consent. To minimize disruption to their work routine, exact time for visits were planned and agreed beforehand with health facility leadership. At the time, Balaka had 15 eligible health facilities. According to the DHO's office, OPDs of most facilities

would have at least one or two HCW present on duty. We had therefore estimated to recruit a minimum of between 15 to 30 HCW.

Data collection utilized a self-administered questionnaire that took about 10 minutes to complete (see additional file). Most question asked for a yes/no answer with options to explain. It had 4 main different thematic areas of focus: the HCWs experience with leprosy during their professional life; their knowledge about leprosy; their attitude towards leprosy patients and their interest in working with patients with leprosy. Statistical Package for the Social Sciences (SPSS) version 20 was used to calculate frequencies. The study was approved by the College of Medicine Research and Ethics Committee approval number P.06/16/1970.

Results

All the thirty eight approached HCW accepted to participate in the study. The first question asked whether they had ever heard about leprosy of which 3 said no and therefore did not complete the rest of the questionnaire. Two of these were a nurse and a medical assistant. Only 15 respondents recorded the years worked as a health worker. Their period of service ranged from 1 year to 26 years. Out of these 15, 5 were medical assistants, 1 health surveillance assistant, 7 nurses and the rest were other cadres.

Experience with leprosy

On whether they had ever seen a person with a confirmed diagnosis of leprosy made by someone else, 22 (63%) admitted having seen a case of leprosy. Eighteen of them (51%) had seen up to 5 leprosy cases and the remaining 4 (11%) had seen more than 5 leprosy patients. Thirteen (37%) participants had never seen any leprosy case. Twenty one HCW (60%) reported never having suspected leprosy in a patient, while the remaining 14 (40%) reported to have suspected leprosy in at least one person. Three of these (9%) had suspected leprosy in over 10 patients. When asked if they themselves had ever correctly diagnosed leprosy, 29 HCW (83%) reported to never having diagnosed leprosy in any patient during their professional life. However, one of the remaining 6 HCW (17%) that had ever diagnosed leprosy reported making a correct diagnosis in over 10 patients.

Knowledge about leprosy

Twenty nine HCW (83%) knew that leprosy is an infectious disease, compared to one person each (2.9%) who did not know what causes leprosy and another who thought leprosy is due to witchcraft. Two respondents (5.7%) thought a dirty environment can cause leprosy but none of them stated a curse from ancestors as a cause. For a question on ways how one might catch leprosy, only 17% correctly mentioned inhalation. Nineteen respondents (54%) stated that leprosy may be transmitted by touching someone with the disease with one respondent declaring that *'I believe that skin diseases generally spread to unaffected ones upon contact.'* While none of the respondents thought poor hand washing may result in infection with leprosy, one person expressed worry that *'lack of running water to wash hands after examining patients in our clinics'* increases their risk of getting infected with leprosy. Eating infected meat and general uncleanliness as causes of leprosy were chosen by 4 respondents each (11%). Thirty two respondents (91%) chose both or one of the skin and the nerves as body parts that are affected by

leprosy. The only other organ that was thought as being affected by leprosy was the heart (1 person) but no one thought the lungs and the intestines are affected by leprosy.

About whether leprosy is curable, 25 respondents (71%) thought it is, and 5 respondents (14%) thought it can never be cured but another 5 respondents did not know the answer.

Attitude towards leprosy and leprosy patients

On being asked whether leprosy patients should be isolated from uninfected people, 17 (49%) respondents answered yes and 12 (34%) answered no while 6 respondents (17%) did not know what should be done. As a justification to their stand to keep the patients isolated, one respondent observed that *'leprosy is easily transmitted from one person to another.'* Another person added they must be separated *'because the disease is airborne'* while another respondent thought *'they risk transmitting the disease to others and as such they must first be treated and must fully recover before being allowed out into the community'*. One respondent who thought leprosy patients should not be isolated observed however that doing so would make them *'feel neglected'*. Twenty people (57%) said they would work alongside someone with leprosy, but 9 people (26%) said they would not and 6 people were not sure. Nineteen HCW (54%) expressed fear they might catch leprosy at work while 13 (37%) did not have such fears. Twenty six people (74%) said they would freely share news of a leprosy diagnosis in their relative with someone else. Only 5 people (14%) would not do this while 2 of them were not decided. Of which disease is more dangerous among leprosy, HIV and diabetes the following were their options; 26 (74%) leprosy, 4 (11%) HIV and 3 (9%) diabetes.

Interest in leprosy

Only 16 people (46%) had learnt about leprosy during their formal training for their present professional position, and another 4 people (11%) had had on job refresher training about leprosy. Another 24 people (69%) had read some information about leprosy from a book or the internet out of self-interest. All of the 35 respondents (100%) felt it is beneficial for them to know about leprosy in their line of work and further said they needed regular refresher courses about the disease.

Discussion

For a district where leprosy cases continue to rise, there is less daily experience with leprosy among HCW as over a third of them have not seen any confirmed case of leprosy. Consequently these HCW may not think of leprosy when seeing. Patients. This is supported by many (60%) never having suspected leprosy in a patient nor correctly diagnosing one with the disease themselves (83%) during their professional life. In a Malaysian study, HCW that reported seeing less cases at work were also found to have less knowledge about diagnosis and management of leprosy which reduced their ability to detect cases⁸. The apparent lack of exposure to leprosy therefore may be a result of patients presenting with leprosy signs being missed and/or misdiagnosed by HCW than a true absence of cases in those areas. That would be a challenge in the fight against leprosy as undiagnosed cases might increase chances of disease transmission in their communities.

There was diversity in the level of knowledge about leprosy among the HCW. There was good knowledge about the infectious nature of the disease, the body areas it affects and its curability. Poor knowledge was however noted regarding mode of leprosy transmission as close to ¾ believed that body contact with an infected person, uncleanliness or eating some foods would result in one developing the disease. Education to these HCW is needed if they are to competently manage leprosy. Presently in Malawi, management of leprosy has been integrated with general health care services in line with WHO guidance, following closure of most leprosaria⁹. It is therefore imperative that HCW in primary care settings are knowledgeable of the disease so as to detect and treat cases early. Training that covers, at minimum, such areas as causation of leprosy, its mode of transmission, its diagnosis and its treatment would be a good start. Very few HCW in Balaka ever had formal training about leprosy but more than two thirds had made their own efforts to read about the disease. All of them felt the need to have regular refresher trainings about leprosy. Through these targeted trainings, the district may take advantage of the enthusiasm already shown by these HCW to learn about a health problem that affects their area and improve leprosy care in Balaka. Elsewhere, HCW empowered with such basic knowledge on leprosy have been instrumental in facilitating case detection in areas they practice¹⁰.

Some fears regarding leprosy infectiousness and dangerousness held by the HCW were solely due to their poor knowledge of the disease and these findings are comparable with those from a study in north western Botswana¹¹. Leprosy, a curable disease, was considered more dangerous than Human Immunodeficiency Virus (HIV) and diabetes. Fact is that, while Malawi does not have leprosy mortality data, globally, the WHO reports this to be very low¹². In a review of 12491280 deaths over a 12 year period in Brazil, a leprosy endemic country, leprosy was mentioned anywhere on the death certificate in only 0.1% of the deaths¹³. Most deaths in leprosy patients are, in fact, due to other concurrent, underlying but unrelated chronic medical conditions like stroke, malignancies and pneumonia.¹⁴ Compared to mortality related to diabetes and HIV^{15,16}, which are both incurable, the contribution of leprosy to mortality, if it occurs in Malawi, should equally be extremely low. Education about the disease would dispel these unwarranted fears and ensure good attitude towards leprosy and its sufferers as poor knowledge by HCW may lead to stigma⁴. As a means of providing education, posters and leaflets with messages about leprosy have been shown to be an effective mode of communication in South Africa for HCW providing general care.¹⁰ In addition, the national leprosy control program should have a leprosy training plan that must focus on provision of both pre-service and in service training in leprosy. In liaison with other leprosy training institutions and local experts to decide its contents, a brief but practical leprosy course could be formulated targeting HCW in general practice and for pre-service trainees.¹⁷ Such training would help sustain leprosy expertise within the health force. A targeted, specific training of a short duration to improve HCW skills to manage a neglected component of skin health care in an African setting showed successful results elsewhere and is encouraged.¹⁸

Conclusions

HCW in Balaka lack basic knowledge about leprosy which may negatively influence their ability to detect and manage undiagnosed cases. Education to the HCW about leprosy must therefore be considered highly among other priority interventions against the disease in the district.

Abbreviations

DHO
District Health Office (r)
HCW
Health Care Workers
HIV
Human Immunodeficiency Virus
WHO
World Health Organization

Declarations

Ethics approval and consent to participate

The College of Medicine Research and Ethics Committee approved this study, reference number P.06/16/1970.

Consent for publication

Not applicable

Availability of data and materials

The materials and original data set may be accessed with reasonable request to the corresponding author

Competing interests

The authors declare that they have no competing interests

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Author contribution

KM and CvH conceived and designed the study; KM and CvH wrote the grant application; KM analyzed the data and wrote the original manuscript; CvH reviewed and edited the original manuscript; KM, CvH, EL, RC, ED, DN, GA, LM reviewed data collection tools and collected data, all authors read, reviewed and approved final manuscript

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