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## **Performance of general health workers in leprosy control activities at public health facilities in Naini Prayagraj (UP).**

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### **BACKGROUND**

Leprosy is a chronic infectious disease of public health importance and one of the leading causes of permanent physical disability. Nevertheless, the drop in prevalence following multidrug therapy has resulted in the neglect of leprosy. The annual incidence of leprosy has remained the same in Ethiopia since decades with more than 76 % of the reported new cases coming from Mission Hospital **Naini Prayagraj (UP)**.

This study was aimed to assess the knowledge, attitude and skill of general health workers in leprosy control activities at public health facilities in **Naini Prayagraj (UP)**.

Health posts refer leprosy suspects to health centres. Health centres diagnose and treat leprosy patients and they serve as the main health facility for initiating MDT and follow-up. They are also supposed to treat and manage mild reactions and refer severe reactions and complications. However, steroids for treatment of reactions are only available at hospitals and the treatment of mild reactions at health centres remains as unmet goal. Leprosy referral hospitals provide referral services for diagnosis and treatment and provide in-patient services. These leprosy referral hospitals are quite few and deal only with complicated cases such as leprosy reactions. Drugs are supplied quarterly to health facilities based on the previous quarter registered number of patients. Regular assessment is done at the Naini Mission Hospital, zonal, regional and national levels where epidemiological and operational indicators for monitoring of the leprosy are calculated and compiled. Quarterly reports are completed according to the Mission fiscal year. Tuberculosis (TB), Leprosy and TB/HIV collaborative activities eventually integrated into the Health Management Information System.

World Health Organization (WHO) target of elimination of leprosy as a public health problem (i.e. a prevalence of < 1 in 10,000 to be achieved by 2000). On the other hand, actual numbers of people affected by the disease is likely to be far higher than statistics show as there still prevails lack of awareness about the disease, lack of skills of general health staff in leprosy diagnosis, inadequate active case findings, lack of inclusion of cases from private sector and presence of high stigma in the community [1].

The emphasis in leprosy control will remain on providing diagnostic and treatment services that are equitably distributed, affordable, accessible, acceptable and good standard of quality. However, diagnostic and treatment service can be challenged by the health workers' knowledge and skills in the recognition of the signs and symptoms of leprosy at an early

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stage of the disease [5–9]. Ignorance, lack of awareness, stigmatization, and poor interaction with the health service in the general population also prevent people from going to health facilities for taking health seeking action and treatment which leads to late diagnosis and nerve impairment among most leprosy patients [10]. The priority of national leprosy control program is to prevent the primary nerve damage which leads to disability. This can be achieved by early diagnosis and timely initiation of the correct treatment of leprosy by health workers [11–14].

Humayun Kabir(2019), conducted the study on Knowledge on leprosy and its management among primary healthcare providers in two districts of Bangladesh. The study findings demonstrated a significant increase of knowledge on types of leprosy, one cardinal sign, courses of MDT and drug use for the adult PB and MB cases and use MDT for leprosy treatment among primary and other service providers (community level service providers) at the end-line. This result indicates that the efforts of HSS project had a positive impact on knowledge about leprosy and its management among various types of service providers. Knowledge of service providers regarding types of leprosy, cardinal signs for diagnosis, treatment courses, and drug use for the diagnosed cases are essential to have an effective leprosy control program.(5)

**Christian Ewhrudjakpor (2008)** conducted study on Health Care Providers Knowledge as Correlates of their Attitudes towards Leprosy Sufferers in Nigeria. This study was aimed at relating health workers knowledge and consequent attitude towards leprosy patients. The study results shown that Pearson product moment correlation confirmed that health workers' above average knowledge of leprosy relates positively with attitudes towards leprosy patients. The researcher suggested that knowledge of health worker to be further improved in order to sustain positive attitudes of health workers towards sufferers of leprosy.<sup>14</sup>

**Ruth et al (2015)** conducted a cluster-randomized controlled intervention study in Cirebon District, Indonesia. Testimonies, participatory videos and comics given or made by people affected by leprosy were used as methods to facilitate a dialogue during so-called 'contact events' The contact intervention was effective in increasing knowledge and improving public attitudes regarding leprosy.<sup>15</sup>

Integration efforts should include on-job training for all providers during the implementation and phase out stages of integration to maintain the knowledge level, particularly during the current zero leprosy initiative and transition stage. This study demonstrated that training improved knowledge among all cadres of service providers though varied among those who provided direct services and those who are engaged partially. Retention of knowledge in the long run was not measured and remained to be explored in future researches.

Information on the performance of the general health workers engaged in leprosy control activities at public health facilities is important to increase the awareness of policy makers and stakeholders on how leprosy control activities are operating in the public health care system. It also measures the quality of health workers' performance.

The knowledge, attitude and skills of general health workers in leprosy control activities has never been addressed since the integration of leprosy control program into the general health service in Mission Hospital **Naini Prayagraj (UP)**. Therefore, this study was designed to address the level of knowledge, attitude and skills of general health workers engaged in

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leprosy control activities at different levels of health facilities and provide information to policy makers and stakeholders.

## **METHODS**

A cross-sectional study was conducted from September 2022 to February 2023 at different public health facilities in selected eight zones in Mission Hospital **Naini Prayagraj (UP)**. A multistage sampling method was used to obtain representative samples. High and low endemic zones for leprosy were included in the study of UP states. Data were collected from general health workers through a structured self-administered questionnaire and at on-site assessment of their performance. Baseline socio-demographic data, health workers' attitude towards leprosy and their knowledge and skill in the management of leprosy were assessed. Bloom's cut off point was used to describe the knowledge and practical skills of the respondents while Likert's scale was used for attitude assessment.

## **RESULT**

A total of 201 general health workers responsible for leprosy control activities at public health facilities were included in knowledge and attitude assessment and 83 of them were subjected to practical evaluation, with on-site observation of how they handle leprosy patients. These included medical doctors (4 %), health officers and nurses with Bachelor degree in Science (27 %), clinical nurses with diploma (66 %) and health assistants (2.8 %). The median age of the respondents was 26.0 years and females made up of 45 %. Generally the knowledge and skills of the respondents were found to be poor while attitude towards leprosy was positive for the majority of the respondents. The result showed that 119 (86.3 %) had poor knowledge. Overall 46 (25.8 %) of the respondents had positive attitude towards leprosy while 51 (34.1 %) had intermediate (mixed) attitude and 104 (40.1 %) had negative attitude to the disease. Among 83 respondents assessed for diagnosis of leprosy only 15(18.0 %) diagnosed leprosy correctly. Variation in knowledge and attitude indicated a significant difference ( $p < 0.05$ ) among different health institutions, professions, gender, in-service training and years of experience.

## **DISCUSSION**

Although leprosy control activities are integrated into the general health services in Ethiopia, the knowledge and skills of leprosy diagnosis, treatment and management of leprosy by general health workers were found to be unsatisfactory. This study showed that the majority of health workers had poor knowledge in recognition of the early signs and symptoms of leprosy, leprosy reaction and its management. The majority of them were unable to perform sensation and voluntary muscle testing. This may contribute to the prevalence of the relatively high proportion (14 %) of grade 2 disability in Ethiopia. The attitude of a significant proportion of health workers was also found to be unfavourable towards leprosy suspects and people affected by leprosy. This might discourage leprosy patients to self-report at public health facilities. They would prefer to go to holy baths and traditional healers or stay at home while their skin and nerve lesions worsen.

Our findings have shown that the performance of the health workers is associated with the level of qualification, in-service trainings and previous exposure to leprosy work. Almost

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86 % of the health workers had low-level knowledge which could be attributed to little attention given during formal training, lack of practice after training and low number of leprosy cases for practice per site which needs further confirmation. This implies that increasing level of awareness about leprosy through training of health workers working at primary health care level and incorporating meaning full leprosy education into the curricula of medical and paramedical courses are some of the tasks to be accomplished by the stakeholders [6].

The absence of high level of knowledge among general health workers working at district and zonal hospitals is probably due to the fact that most general health workers at these health facilities focused on other diseases and hence are not motivated to update themselves in leprosy. The relatively high percentage of positive attitude among general health workers working at health centres provides a good opportunity to improve through emphasis on in-service training since majority of leprosy cases are seen and treated at health centres.

As the years of service increased, it appeared that there is an increasing trend towards a lower level of knowledge and an increased negative attitude to leprosy care. Therefore, involving these health workers in leprosy control activities necessitates in-service training and additional refreshment courses to increase their awareness and improve their attitude.

## **CONCLUSION**

This study showed that the majority of health workers had poor knowledge in recognition of the early signs and symptoms of leprosy, reaction and its management. The attitude of health workers was also found to be unfavorable towards leprosy suspects and people affected by leprosy. The skills of general health workers was also found to unsatisfactory; the majority of them were unable to perform sensation and voluntary muscle testing. The study also showed that the association of the performance of health workers with the level of qualification, in-service trainings and previous exposure to leprosy diagnosis and treatment. In order to improve the skill, knowledge and attitude of the health workers, continuous training and health education on leprosy should be emphasized at pre-service and in-service levels.

The current finding underlines that although leprosy control activities are integrated to the general health services in the country, the knowledge and skills of leprosy diagnosis, treatment and management by health workers was unsatisfactory. Hence, attention should be given to develop training strategies that can improve health worker knowledge and promote better leprosy management at public health facilities. This could be achieved through pre-service and in-service training and giving adequate emphasis to leprosy related practical work and continuous follow- up.

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