

Zero Leprosy Best Practices

Best Practice: *Quality Screening of Contacts of Index Cases under the Leprosy Post Exposure Prophylaxis (LPEP) Feasibility Project in Dadra and Nagar Haveli (DNH), India*

Subthemes

- PEP / people at risk
 - Implementation phase

Target Audience(s)

- Policy leaders
- Program managers
- Trainers
- Health staff
- Donors
- Other partners such as NTD NGOs

Contributors

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Key Messages

To ensure the effectiveness of post-exposure prophylaxis (PEP) for leprosy prevention, proper eligibility screening of all contacts of index cases is essential. Through quality screening, large numbers of contacts of index cases could be covered (as per targets) for administration of single-dose rifampicin (SDR). Because of the quality screening of 42,333 total contacts in the leprosy PEP (LPEP) feasibility project, 141 suspected cases among contacts were referred, of whom 42 were confirmed as having leprosy. One case of tuberculosis (TB) was suspected and referred. Among the remaining contacts, those who met the eligibility criteria were given SDR.

Key Informant / Date Submitted

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August 2019

Description of the Best Practice

Introduction

As part of the routine leprosy control program of Dadra and Nagar Haveli (DNH), a union territory (UT) in the western part of India, when a patient is diagnosed with leprosy a paramedical worker (PMW) contacts the accredited social health activist (ASHA) in the village where the patient resides to do a

Zero Leprosy Best Practices

house visit together. The household and neighbour contacts of the patient are screened for leprosy. The selected mixed-contact approach in the LPEP feasibility project in DNH involved 1) the enumeration and screening of household contacts and neighbours of the index case as well as screening of social contacts/classmates for a child index case and 2) administration of PEP to contacts screened negative. The use of SDR was introduced in DNH in March 2015, and one of the key components of the project was screening of close contacts of index cases to assess their eligibility for administration of SDR. Examples of exclusion criteria for SDR included children under 2 years of years, pregnant women, persons suspected of having leprosy or TB, those sensitive to rifampicin, those with a history of any kidney- or liver-related illnesses, and those unwilling to take SDR. Properly following the set criteria was an essential first step in quality screening, which was of immense importance.

Through proper screening, new cases of leprosy among contacts were diagnosed, suspected cases of tuberculosis or renal/hepatic diseases were referred for further management, and contacts/community members were informed about the scientific process of PEP-SDR implementation to understand the significance of the LPEP project.

If not directly a leprosy practice, what is its relevance for leprosy control?

Quality screening during examination of contacts identified additional leprosy cases, ruled out contraindications, and ensured quality implementation of PEP through administration of SDR to the right contacts. These efforts helped to ensure the effectiveness of the drug and thereby break the chain of transmission of leprosy, resulting in DNH's annual new case detection rate (ANCDR) falling from 8.18 per 100,000 population in 2014 (baseline) to 5.4 cases per 100,000 population in 2018.

Which objectives were achieved?

Only eligible contacts were given SDR, and thus the effectiveness of SDR to reduce the ANCDR by 40%-50% was achieved.

Objectives and Methodology

The main goal of quality screening was to ensure that none of the contacts with contraindications received SDR and to find confirmed cases of leprosy and of TB.

Methodology used

Examples included organizing training of master trainers on PEP, ensuring screening was focused on eligibility criteria, involving patients with leprosy in the project, demonstrating motor and sensory tests to clinically suspect leprosy patients. These efforts were followed by organizing a series of structured training programs for general health care (GHC) staff that included training materials on screenings, checklists, manuals, etc., and provision of these handouts to trainees for their reference (see secondary materials below). The trainings were followed by actual field implementation by GHC staff under supervision of auxiliary nurse midwives (ANMs), PMWs, and project staff.

It was ensured that female GHC staff screened and examined female contacts, while the male contacts were screened and examined by male staff. As most of the houses in intervention areas were built in

Zero Leprosy Best Practices

the traditional style with poor lighting and low ceilings, screenings were undertaken either outside the houses (behind curtains) or inside with proper lighting through lamps or with availability of natural light throughout the process, which was also part of the monitoring checklists.

A proper monitoring plan and reporting system was in place and followed in practice. Technical support was provided by collaborative partners with regular visits to field sites and periodic review of documentations.

Was the design based on evidence?

Yes, as per previous COLEP studies in Bangladesh and another study in Indonesia, it was demonstrated that quality training and screening resulted in ensuring good coverage of eligible contacts for SDR and could thereby lead to a reduction in new cases.

Implementation of Practice

Main activities

- Development and printing of LPEP screening cards and other relevant training materials on screening (see secondary materials below)
- Checklists on signs and symptoms of leprosy and its contraindications
- Provision of these materials to health staff
- Structured training of master trainers and GHC staff and on-the-job-training, including information on exclusion criteria and on required screening conditions such as rules (gender specific/sensitive) and lighting conditions for examinations, etc.
- Constant and regular supervision in the field

Materials were developed during the preparatory phase followed by induction training from March-April 2015 at DNH. Induction and refresher trainings were organized in 2016, 2017, and 2018. On-the-job training during supervision was carried out throughout the project period.

Were persons affected by leprosy participating in the design and practice itself?

Since screening was more technical, persons affected by leprosy only helped in identifying the contacts and motivating them to undergo counseling and screening, etc.

Key implementers and collaborators

The key implementers were GHC staff from the Govt. of DNH and community volunteers. The state leprosy officer (SLO) and local medical officers (MOs) were involved in monitoring and supervision of the project. The collaborators were NLR India, GLRA India, NLR Amsterdam, and Erasmus MC, Rotterdam, and included persons affected by leprosy. Central Leprosy Division (CLD), Govt. of India, and Indian Council of Medical Research (ICMR), MoH, were involved in monitoring the project progress. NLR Amsterdam coordinated the project internationally, and Novartis Foundation was the funding agency.

Zero Leprosy Best Practices

Resource implications

Since the project was implemented by GHC staff, no major expenditure was incurred. Rifampicin was purchased by the local Govt. of DNH. Expenses incurred under the project fund pertained to human resources, mobility support, printing, trainings, and travels for monitoring and review, etc.

Results—Outputs and Outcomes

What were the concrete results achieved with regard to outputs and outcomes?

Due to quality screening of a total of 42,333 contacts, 141 suspected contacts were referred, of whom 42 were confirmed to have leprosy. One case of TB was suspected and referred. After screening, a total of 30,295 (93.9%) eligible contacts were administered SDR.

Were data management processes of the best practice consistent and transparent to draw conclusions?

Yes, data collection, review of collection processes, data entry into the systems, data analysis, and drawing conclusions were consistent and transparent throughout the project tenure. Data management, analysis, and reporting was supported by Erasmus University.

Was an assessment of the practice carried out?

Yes, assessment of the practice was carried out during the routine supervision and by external monitors (outside the govt. system) such as NLR India, GLRA India, and NLR international. The assessment was documented in monitoring and field visit reports.

Is the project completed or are some results still to be expected?

The project was completed in June 2018, and no further results are expected.

Lessons Learned

What worked really well?

The good quality of training on screening worked well, facilitated by the well-experienced trainers. The availability of the LPEP-screening card and checklists for each staff along with regular supervision and close monitoring and data checks contributed to the success of the best practice.

The acceptability of the implementation of the LPEP project was assessed in DNH and was done through a qualitative cross-sectional study using semi-structured interviews and focus group discussions with the main stakeholders of the intervention. A quantitative component of the study was the compliance rate of index cases and their contacts in accepting contact screening and SDR administration. The intervention was generally regarded as beneficial. Participants understood that SDR was distributed to prevent the development of leprosy. Permission for disclosure of the leprosy status of a patient was obtained. This was needed because the intervention was aimed at close contacts. This was not a barrier to the implementation of SDR PEP distribution in DNH. The trust in the health services and the health staff in DNH and the gender-sensitive approach contributed greatly to the high level of acceptability. The

Zero Leprosy Best Practices

compliance rate was 99.0% among leprosy patients and 98.6% among contacts. The study concluded that contact screening and SDR distribution was well accepted by the main stakeholders, which included index cases and their contacts as well as health workers and their supervisors in DNH.

What did not work?

There were a few contacts who could not be traced for proper screening.

Replicability and Scalability

Has the practice been implemented in more than one setting?

Yes, the practice of screening is a key component of LPEP implementation, and it is mentioned in the operational guidelines on LPEP that were issued and disseminated by the MoH, Govt. of India. The MoH rolled out LPEP nationally in October 2018 across all states and districts. Information on screening/eligibility inclusion and exclusion criteria and the importance of proper screening of contacts was emphasized in every training and session on LPEP, as quality screening is crucial for success of the program. In DNH, LPEP is already integrated in the routine NLEP.

What long-term effects can be achieved if the practice is sustained over time?

Only eligible contacts will be given SDR; there are possibilities of detecting TB and leprosy cases among contacts.

What are the requirements to sustain the practice over time considering contextual factors, institutional support, human resources?

Commitment of health authorities, availability of trained and well-motivated GHC staff, availability of materials, and support and acceptance by the community along with regular supervision and monitoring in the field are required to sustain the practice over time in any setting and intervention areas.

Conclusions

How have the results benefited the population?

Good practice of proper screening has resulted in giving SDR to eligible contacts, thus increasing the efficacy and acceptance of PEP-SDR.

For the success of PEP, the well-functioning health system and mechanism to train and manage the health workers' performance for screening activities resulted in good screening and detection of new cases of leprosy.

Why may that intervention be considered a "best practice"?

Proper screening of contacts for eligibility will be useful in detecting new cases of leprosy and TB and in reducing the risk of developing resistance against rifampicin.

Zero Leprosy Best Practices

What recommendations can be made for those intending to adopt the documented “best practice” or how can it help people working on the same issue(s)?

All LPEP projects or programs should adopt this best practice of screening contacts to achieve the desired results. If it is not part of LPEP, then we would miss confirmation of suspected cases of leprosy, TB, and other ailments.

Further Readings

1. Apte H, Chitale M, Das S, Manglani PR, Mieras L. Acceptability of contact screening and single dose rifampicin as chemoprophylaxis for leprosy in Dadra and Nagar Haveli, India. *Lepr Rev* 2019;90(1):31-45.
2. Steinmann P, Cavaliero A, Aerts A, et al. The Leprosy Post-Exposure Prophylaxis (LPEP) programme: update and interim analysis. *Lepr Rev* 2018;89(2):102-116.
3. Mieras L, Anthony R, van Brakel W, et al. Negligible risk of inducing resistance in *Mycobacterium tuberculosis* with single-dose rifampicin as post-exposure prophylaxis for leprosy. *Infect Dis Poverty* 2016;5(46).
4. Peters R, Mieras L, Subedi M, Apte H, Koesbardiati T, Banstola NL, Das S, van Brakel W. A single dose of rifampicin to prevent leprosy: qualitative analysis of perceptions of persons affected, contacts, community members and health professionals towards chemoprophylaxis and the impact on their attitudes in India, Nepal and Indonesia. *Lepr Rev* 2018;89:335–352.

The following secondary materials are available along with the Best Practice at <http://zeroleprosy.org/toolkit/>.

- Criteria for exclusion from SDR
- Updated criteria for exclusion from single-dose rifampicin
- Training module 2