Best Practice: *Use of Risk Maps for Implementation of Chemoprophylaxis for Leprosy Contacts with Single-Dose Rifampicin*

Subthemes

- PEP / people at risk

Target Audience(s)

- Program managers
- Health staff
- Persons affected by leprosy

Contributors

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Key Messages

- Since primary care centers are organized around territorial bases, the risk maps belong to the primary care strategy
- Risk maps guide the blanket-approach strategy
- Territoriality as a principle of primary care should be considered to reduce the burden of leprosy

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Description of the Best Practice

Introduction

The Leprosy Post-Exposure Prophylaxis (LPEP) program, which was guided by the protocol of the Chemoprophylaxis of Leprosy (COLEP) study (1), has shown important results in terms of feasibility, acceptability, and active search of new cases among contacts. Scientific evidence was demonstrated for single-dose rifampicin (SDR) as chemoprophylaxis for leprosy contacts (2,3). The Brazilian LPEP project conducted the activities through the network of primary care health centers. Over the last 20 years, leprosy services have been decentralized and are being integrated into primary health care (4). For specialized services, patients are referred to secondary- and tertiary-line facilities.

Among concerns about PEP in leprosy, offering chemoprophylaxis to social contacts or the community is the main challenge. Some countries rely on index case authorization to do an active search among contacts. However, because non-disclosure of the identity of a leprosy case (i.e, the index cases) often results in the loss of many contacts for dermatological exam and chemoprophylaxis, we decided to use the strategy of developing risk maps and presenting the risk areas.

Objectives and Methodology

This best practice describes an operational strategy, using the principles of primary care. It aims for better coverage of contacts in the community without disclosing the identity of the index cases.

During the initial phase of the Brazilian LPEP project, a group of leprosy experts and public health experts found that when the identity of index cases was revealed to households and neighbor contacts, it was difficult to increase the coverage to social contacts and other members of the community.

After 3 months of LPEP implementation and hearing the experiences of community health workers and nurses, the expert group decided to change the strategy of finding leprosy contacts in the field.

For this new approach, the experts considered the principles of primary health care and a center's territorial attached area. These areas, each with an average of 3,500 inhabitants, are divided into 8–10 micro areas each with around 150 families. Each micro area has a responsible community health worker who is supervised by the registered nurse of the primary care center. The main recommendation for the primary care center is to plan the activities using intelligent or risk maps to identify risks areas. Therefore, for this LPEP program we recommended the development and use of risk maps since this was believed to facilitate the identification of houses to be included in screening and subsequent provision of SDR. To realize this, each primary care center annually prepared a map of the territorial attached area, indicating the location of the houses of index cases of the current year. From these maps, the centers were able to identify the streets and/or blocks with the largest number of index cases and thus define the streets or blocks of high risks. All residences in these high-risk areas should be visited for inclusion in the PEP program.

The territorial bases of the primary health centers facilitate the use of risk maps, making it possible to identify the risk population for PEP without disclosing the identify of any index case. This so-called "blanket approach" focuses on specific high-risk areas.

Implementation of Practice

Each primary care center must manually develop a simple map, with locations of the houses of index cases on an annual basis. This will determine which streets and/or blocks should be visited (house by house) to examine the residents and treat them with SDR. During the visits, the health workers inform the residents about the reason for this activity without disclosing the identity of the index case. In this way, the health staff can determine areas where a blanket approach would be more effective.

Results—Outputs and Outcomes

Following the scientific and operational principles in the primary care center, the approach uses risk maps with territorial bases. In our field experience with the Brazilian LPEP project, this was the most effective strategy to organize the active search of social contacts but can be used also for domiciliary and neighbor approaches.

The main result of this active surveillance approach with the use of risk maps was that the program moved from zero social contacts during the first trimester of LPEP to an average of 20% of the total contacts included in the LPEP.

Lessons Learned

The use of risk maps is widely recognized by primary care researchers but not always for leprosy programs. Even with decentralization, leprosy programs have prepared guidelines based on specialized information from dermatologists and epidemiologists, instead of following the territorial risk-mapping of primary care centers. Since the primary care centers are organized around territorial bases, the risk maps belong to the primary care strategy and does not increase costs. According to our scientific evidence, this approach increased the coverage of social contacts from 0 to an average of 20% (5,6).

Replicability and Scalability

The primary care facilities area determined the need for health assistance. All primary care centers are based on a territorial area. Each territorial area has around 3,500 inhabitants and is divided into 8–10 micro areas, each with around 150 families. Each micro area has a responsible community health worker who is supervised by the registered nurse of the primary care center. The main recommendation for the primary care center is to plan the activities using intelligent or risk maps to identify risks areas. This best practice included chemoprophylaxis in a general recommendation of the primary care in Brazil. The territorial bases of primary health centers facilitate the use of risk maps to identify the population at risk without disclosing the identity of any index case.

As the primary health care system is a common system used in many countries, the high-risk mapping approach is absolutely replicable in other countries where disclosure of the identity of index cases is a problem. This strategy is useful in high endemic areas. Areas represent a small municipality or a part of the municipality, not necessarily an entire municipality or district.

Conclusions

The use of risk maps was the best strategy to implement PEP/SDR for social leprosy contacts. Risk maps are in line with the primary care principles. Territoriality as a principle of primary care should be considered to reduce the burden of leprosy.

Further Readings / References

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