

DOTS strategy and community participation: an experience in the Ecuadorian Andes

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SUMMARY

SETTING: The Chine community in Angamarca parish, Cotopaxi Province, in the Ecuadorian Andes.

OBJECTIVE: To relate the DOTS strategy to the world view of the indigenous community in the diagnosis and treatment of smear-positive pulmonary tuberculosis (TB) patients.

DESIGN: Cross-sectional study involving all inhabitants of Chine.

RESULTS: Aspects of the community's world view were

considered in the community-based application of DOTS. A cure rate of 100% was attained, with 0% defaulting from treatment.

CONCLUSION: The results obtained indicate that involving the world view of the community in the management of tuberculosis has several advantages.

KEY WORDS: pulmonary TB; community; world view; Ecuador

PULMONARY TUBERCULOSIS (PTB) is one of several diseases that are re-emerging worldwide. Although treatment is available and a cure possible, it causes more deaths than any other single infectious condition, being a disease associated above all with poverty and marginalisation.^{1–3}

Inequalities of wealth and human development are extremely marked in Ecuador, a country situated on the west coast of South America. The indigenous population, such as that residing in the central Andean province of Cotopaxi, occupies the least productive lands in the highest and most remote areas. As may be seen in the Figure, areas occupied by the indigenous peoples have the highest poverty rates, with one or more basic needs unmet.⁴ The vicious circle of poverty, disease and political instability creates an environment where healthy living conditions are difficult to attain.

A study was conducted between 2001 and 2003 on the prevalence of PTB in one of the communities (653 inhabitants) of the parish of Angamarca (4897 inhabitants),⁵ which found that 6.7% of the inhabitants had the disease. The present study presents the experience of implementing the DOTS strategy, and how it was related to the community's world view.

STUDY POPULATION AND METHODS

This study was carried out in the Chine community, with the aim of implementing the DOTS strategy and

examining at least 70% of individuals with respiratory symptoms, treating 85% of those found to be smear-positive, achieve successful treatment of at least 95% and maintaining default rates below 6%. Furthermore, we wanted to incorporate aspects of the Andean world view.

Consent was obtained from the General Assembly, the highest authority in the community. Active case finding of respiratory symptoms was employed. Diagnosis, treatment and assessment were performed in accordance with the guidelines of the National Tuberculosis Programme (NTP), which supplied the drugs used for treatment and supervised the implementation of the strategy.⁶ The study was approved by the Research Department of the Catholic University of Quito, Ecuador.

All visits to the traditional medicine practitioner were recorded, and exit status from the programme was assessed by means of smear test and Löwenstein-Jensen culture.

RESULTS

A total of 122 subjects with respiratory symptoms were examined, and the 44 (100%) smear-positive cases found were treated. At completion of treatment, smear tests and cultures were negative in 100% of patients. There were no defaults and no deaths.

The symbolic referent, the religious dimension and

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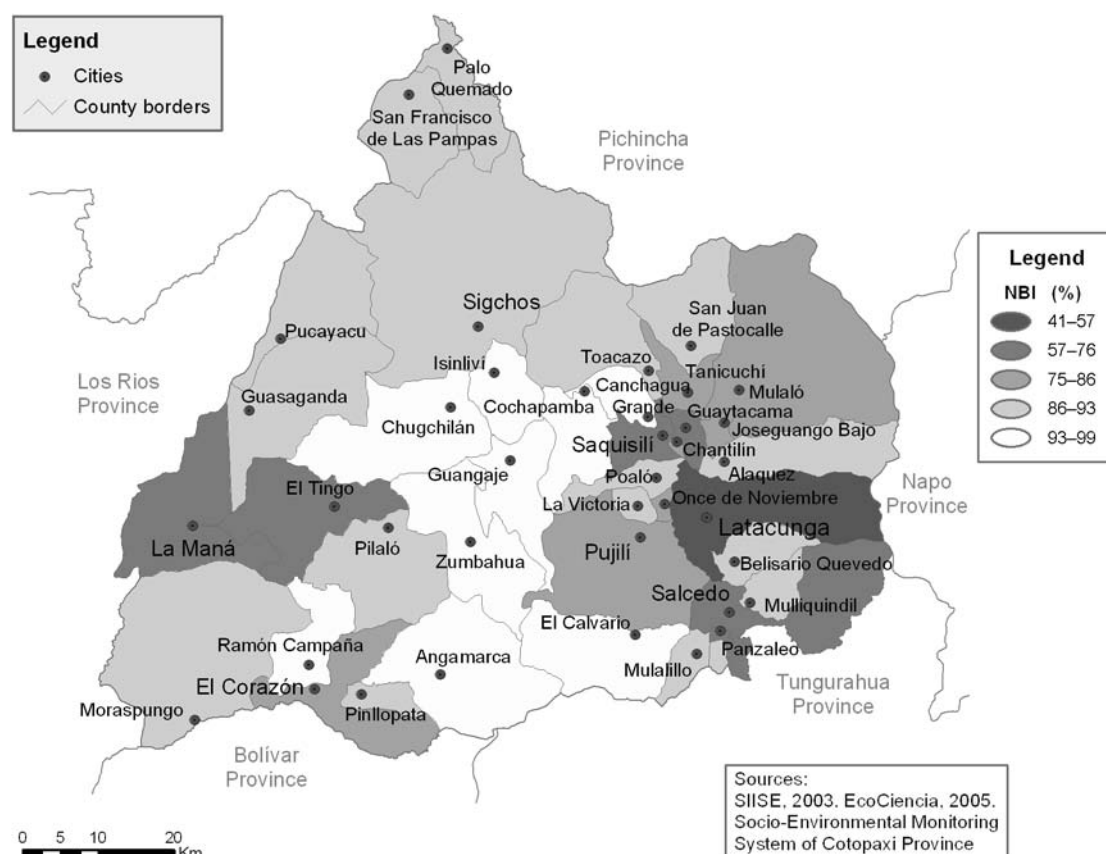


Figure Unmet basic needs in the parishes of Cotopaxi Province, Ecuador, 2003. NBI = percentage of people with unmet basic needs.

religious rituals, as well as aspects of daily life such as working hours for herding, cultivating the land, school, market day, the community calendar and family commemorations, absences related to seasonal migration, eating and leisure customs, community meetings, and traditional medical practices and its mediators, all played a role in determining the schedule for diagnosis and treatment. Socially recognised leaders of the community ensured dissemination of information, convened and directed evaluation meetings and, for those families with a PTB case, provided support during diagnosis, treatment and follow-up. Evaluation meetings with the whole community were held every month. Home visits involved walking or hiking for from 10 min to 2 h.

Samples were collected in the open air, near the subject's home in the morning, between 4 and 8 am. Reception of sputum samples took place between 6 and 9 am; they were delivered to one of the four health promoters trained specifically for this study at a previously agreed meeting point.

During diagnosis and treatment, patients consulted the traditional medical practitioner and visited other community members with a history of PTB who had been cured to talk about their troubles and fears, and to compare notes about the effects of the drugs.

DISCUSSION

Academics and organisations responsible for health worldwide recognise the role of the civil society in the promotion of health and prevention of disease,⁷ seeking to empower the communities; with regard to tuberculosis (TB), however, instructions given to citizens by TB programme centres encourage them to visit the health service and follow orders, but tend to give little consideration to questions of accessibility, or to socio-cultural and anthropological aspects.

In indigenous medicine, the process leading from health to ill health and ill health to recovery involves the whole community, its world view, the personal histories of both the patient and the traditional medicine provider, which are thought to form a united whole, thus creating an atmosphere of trust in which supernatural intervention, transgression of social norms, culpability, or malice on the part of enemies, are all admissible in seeking the causes of the disease.⁸ All patients with respiratory symptoms consulted the traditional medicine practitioner, the *veedor del cuy* (*Cavia porcellus*), who applied his diagnostic-therapeutic ritual. This is an age-old process, and its outcome is either cure, or passive acceptance of the condition.

The present study was conducted sharing the spaces for diagnosis and therapy, and thus the social event

of having chronic cough was converted into a symptom requiring study. Given this situation, active case finding of patients with respiratory symptoms was accepted by the NTP.

In other, similar, settings of marginalisation and poverty, and despite the technically correct implementation of the strategy, generally poor, although variable, outcomes have been obtained.⁹ The positive results of the present study may be seen as being due to the community's efforts to seek satisfaction and community well-being, which includes the responsibility of ensuring quality access to health care¹⁰ as well as the need to adopt other forms of knowledge. The reassessment, to be performed 8 years after this intervention, will contribute to these reflections.

CONCLUSIONS

The implementation of the DOTS strategy, reinforced by a model integrating social structures with the community's world view and historico-cultural traditions, achieved a performance which was higher than the goals set for TB control. The fundamental determinants were a holistic view of PTB, acceptance by the community, and the adaptation of the strategy to realities of life in the community.

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RÉSUMÉ

CONTEXTE : La communauté de Chine, dans la paroisse d'Angamarca, province de Cotopaxi, située au centre des Andes équatoriennes.

OBJECTIF : Faire un lien entre la stratégie DOTS et la vision du monde de la communauté indigène en matière de diagnostic et de traitement des patients atteints de tuberculose (TB) pulmonaire à bacilloscopie positive des frottis.

SCHEMA : Etude transversale impliquant tous les habitants de la communauté de Chine.

RÉSULTATS : Les aspects de la vision du monde de la communauté ont été envisagés dans l'application du DOTS basé sur la collectivité avec obtention d'un taux de guérison de 100% et d'abandon de 0%.

CONCLUSION : Les résultats obtenus indiquent que l'implication de la vision du monde de la communauté indigène a des avantages dans la prise en charge de la TB.

RESUMEN

MARCO DE REFERENCIA : Comunidad China de la parroquia Anagamarca, provincia Cotopaxi, ubicada en el centro de los andes ecuatorianos.

OBJETIVO : Vincular la estrategia DOTS a la cosmovisión de la comunidad indígena para diagnosticar y tratar enfermos con tuberculosis (TB) pulmonar baciloscopia positiva.

DISEÑO : Estudio transversal, dirigido a todos los habitantes de China.

RESULTADOS : Elementos de la cosmovisión comunitaria fueron considerados en la aplicación de la estrategia DOTS centrada en la comunidad, obteniéndose 100% de curación y 0% de abandono.

CONCLUSIÓN : Los resultados obtenidos motivan la necesidad de enlazar la cosmovisión comunitaria en el manejo de la TB.