

Social research as an intervention tool in tuberculosis control

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SUMMARY

Our multidisciplinary project on TB control in the Free State, South Africa, is targeting two dimensions for intervention: firstly, patients, to facilitate compliance and improve quality of care; secondly, the health care system, to identify weaknesses that require remedying and best practices to promote better TB control. This communi-

cation illustrates how social scientists can contribute towards the implementation of interventions related to their research, thus influencing TB policy, programme planning and practice more directly.

KEY WORDS: TB control programme; South Africa; sociology; social research; intervention

TO DEAL SCIENTIFICALLY with tuberculosis (TB), it is important to understand that it is a multidimensional phenomenon necessitating a multidisciplinary approach.¹ Essentially, it is a phenomenon with many social, economic and cultural dimensions, aggravated by poverty and poor living conditions, with important social ramifications and consequences for affected individuals, households and communities, as well as for the health care system.^{2,3} TB is therefore a highly appropriate and relevant object of study for social scientists. Moreover, a social scientific approach appears to be indispensable in the fight against TB and can find unlimited opportunities for making a meaningful difference in addressing TB.

However, in general, social scientists are not known primarily for their ability to use their research for influencing policy or for dealing with concrete problems, mostly because implementation is often not seen as their task.^{4,5} Furthermore, policy makers and managers are generally not keen or at liberty to freely allow 'outsiders' into their domains, or to absorb research results into policy and practice.

OBJECTIVE

This communication reports on a 3-year ongoing multidisciplinary research project. The Joint Research Project on TB Control in the Free State, South Africa, is a bilateral South African-Belgian initiative, comprising social scientists from different disciplines and medical microbiologists from both countries. The research is being conducted in three high-burden TB sites,

both urban and rural, of the Free State. The main aim of the research is to generate information that can lead to improvements in the implementation of the National TB Control Programme (NTCP). More specifically, this aim is pursued in two ways: firstly, to identify and rectify flaws and gaps of the TB control system, but also to promote strengths and 'best practices' for wider application and improve the effectiveness and quality of care. Secondly, information is generated on TB patients, their living and working environments, their experiences within the health care system and illness behaviour. However, the present communication is not primarily concerned with the findings of the research as such. It considers instead the implementation of research results, the process and the effects of such implementation, and the challenges facing social scientists in implementing research results of this nature.

THE RESEARCH STRATEGY AND METHODS

The larger project consists of a number of subprojects, each using its own information sources and employing combinations of data-gathering methods. Among others, these methods comprise surveys among ambulant TB patients (semi-structured interviews in a sample of 220 TB patients visiting primary health care [PHC] clinics) and institutionalised TB patients (semi-structured interviews in a sample of 90 patients hospitalised in a specialised TB hospital and several general district hospitals); a survey of 125 DOTS supporters (semi-structured interviews); in-depth interviews of TB coordinators at the provincial, district

and facility levels; focus group sessions with health care workers responsible for TB management and care; and a multipurpose review of TB patient records at selected clinics and hospitals. The microbiology subproject on DNA fingerprint analyses documents the outcome of DOTS and DOTS-Plus treatment to determine the re-infection rate and acquisition of drug resistance among defaulting, failure or retreatment cases.

ACCESS ROUTES TO INTERVENTION

The use of social research as a tool for intervention is not a simple stimulus response like operation that happens automatically. It is a laborious process often clouded by uncertainty and failure.^{6,7} At best, social scientists offer intervention possibilities in the form of research findings and recommendations, but it is up to people in the field to convert these into policy and practical interventions. At worst, social scientists have no mandate to intervene and therefore do not attempt to. In both scenarios the intervention potential of social scientific research remains grossly unexplored.

The routes to intervention for our research are formal and informal, and indirect rather than direct. As 'outsiders' to the health care system, social scientists rely mostly on key officials or functionaries within the TB control system to accept proposed interventions and to implement research findings. These provincial and district managers, programme coordinators, clinic and hospital staff, DOTS supporters, and laboratory staff are thus the main entry points. As a result, a number of key officials were informed of the nature, scope and aims of the research beforehand. Some of them were incorporated in the project's management structures, while others had an opportunity to comment on the research proposal. They were approached for authorisation and access to facilities, staff and patients, and participated in the development of research instruments.

The research process itself contained significant intervention implications or elements conducive to influencing policy and practice. Such interventions are mediated by direct interviews with TB coordinators at various levels about their daily practices and procedures, thus exposing and highlighting weaknesses, gaps and missing elements in the application of the NTCP. Furthermore, patients are interviewed about matters pertaining to the nature and quality of the diagnostic and treatment skills and their satisfaction with the latter. The research process therefore exerts its own influence on the eventual acceptance and implementation at the individual practice level.

EXAMPLES OF IMPLEMENTED RESULTS

Because the research has not as yet run its full course, the greater part of the research intervention still has to be explored and realised. In ideal circumstances, research findings have the potential to inform and steer policy. Each subproject has its own intervention or implementation potential, and tangible intervention outcomes assume many forms. These varied from mere changes to administrative procedure or follow-up, to identified constraints in practice, to highlighting best practices or making staff aware of common errors in applying the treatment protocol. In more complex modes, research findings determine the contents of training and the medium-term provincial and district plans for TB control.⁸

A few examples of specific interventions resulting from research results will suffice (Table). The sequence of the interventions was as follows: first, identify specific constraints or weaknesses; second, set specific corrective objectives; and third, encourage specific decisions from relevant policy makers and programme managers.⁹

From a managerial perspective, the information generated by the research created a greater awareness of prevailing problems pertaining to the NTCP at all

Table Specific interventions resulting from research results

Research findings	Interventions
Not all TB coordinators at clinics are trained in DOTS guidelines, not all are able to read the flow charts correctly, implement the chest X-ray protocol or read skin tests correctly.	Training of all clinic TB coordinators in the Free State in the South African NTCP.
Apart from TB coordinators at clinics, very few clinic staff are sufficiently trained in the NTCP. This creates a serious problem for continuity of TB treatment at clinics.	Training of 90% of all staff at clinics in the NTCP.
Most DOTS elements are poorly applied in clinics in one particular health district, resulting in poor TB treatment outcomes.	Training of all district TB care givers and managers in this problematic district in three large-scale training sessions.
Problems present in sputum microscopy at laboratories.	More regular laboratory reviews.
Unsatisfactory completion of TB registers at clinics.	Thorough register reviews and on-the-job training of clinic-level staff by district TB co-ordinators.
Professional nurses experience confusion in using the WHO diagnostic score sheet to diagnose TB in children.	Adaptation of the diagnostic tool used in the Integrated Management of Childhood Illnesses programme for use in diagnosis of children with TB.
Poor application of patient-centred care, jeopardising treatment adherence.	The decision was made to adapt/individualise TB services more closely according to patients' needs and preferences.
There appears to be a need to involve African traditional healers as DOTS supporters in TB control.	Management undertook initiatives to develop and implement such guidelines.

levels. High-level managers observed that the research strengthened their programme. It served as an 'outsider' feeding source for the NTCP in identifying deficiencies in a scientific way and carrying out improvements based on objective findings, especially in terms of quality.

In addition to identifying gaps and weaknesses, the research also took stock of the positive elements in TB control in the Free State. It confirmed many aspects that were efficient and effective in the running of the NTCP at the provincial, district and facility levels. Problems in terms of drug supply and expiry dates were virtually non-existent, and any problems with turnaround time of smear results appeared to be negligible.

CONCLUSION

No simple or direct stimulus response line can be drawn between research results and management decisions. Researchers have little control over which results will be implemented and where interventions will take place. The metaphor quoted by Walt also applies to our research: 'the pattern of influence can be likened to water falling on limestone: the water is absorbed, but there is no knowing what route it will take through the different strata of the stone or where it will come out'.¹⁰ However, our research showed that the mode of intervention is crucial in influencing TB health policy, as well as involvement of programme staff in the planning, execution and analysis phases of this type of research. If we had waited for opportune moments to implement results in the neat sequence of feedback, planning, implementation and evaluation, we would have forfeited many opportunities for intervention. Instead, we fed the stream of

policy-relevant information to programme managers, thereby engaging all stakeholders.

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RÉSUMÉ

Notre projet multidisciplinaire sur la lutte antituberculeuse dans le Free State, Afrique du Sud, a comme cible deux dimensions d'intervention : en premier lieu, les patients, afin de faciliter l'adhésion thérapeutique et d'améliorer la qualité des soins ; deuxièmement, le système de soins de santé pour identifier les faiblesses qui nécessitent des corrections et pour identifier les pratiques optimales fa-

vorisant une amélioration de la lutte antituberculeuse. Cette communication montre comment les chercheurs dans le domaine social peuvent contribuer à la mise en œuvre d'interventions en rapport avec leurs recherches et donc influencer plus directement la politique de tuberculose, la planification du programme et sa mise en pratique.

RESUMEN

Nuestro proyecto multidisciplinario sobre control de la TB en el Free State de Sud África tiene como meta dos dimensiones de intervención : primero, los pacientes, para facilitar el cumplimiento y mejorar la calidad de la atención y, en segundo lugar, el sistema de atención de la salud, para identificar las insuficiencias que requieren corrección e identificar las mejores prácticas para pro-

mover un mejor control de la TB. Este artículo pretende mostrar la manera como los científicos sociales pueden contribuir a la implementación de las intervenciones relacionadas con su investigación, influyendo así más directamente sobre la política con respecto a la TB, la planificación y la puesta en práctica.