

BEYOND DOTS (DIRECTLY OBSERVED TREATMENT SHORT-COURSE) IN TUBERCULOSIS' CONTROL: INTERFACING AND SHARING NEEDS

Alba Idaly Muñoz Sanchez¹
Maria Rita Bertolozzi²

Sanchez AIM, Bertolozzi MR. Beyond DOTS (Directly Observed Treatment Short-Course) in tuberculosis' control: interfacing and sharing needs. Rev Latino-am Enfermagem 2009 setembro-outubro; 17(5):689-94.

This study analyzes meanings that health workers attribute to DOTS and points out alternatives that contribute to its performance. After the Research Ethics Committee approved the project, a semi-structured interview was applied to 15 health workers from the central region of the city of São Paulo, SP, Brazil between August and December 2004. This study used hermeneutic-dialectic reference and the theory of social determinants of the health-disease process. DOTS contributes to treatment adherence and promotes interfacing in encounters and conversations between workers and users at the institutional and territorial levels, which permits identifying health needs and implementing appropriate interventions. One of the main challenges to its implementation is to become a space that enables grasping, decoding and reconstructing meanings in relation to the health-disease process including the treatment and life projects of patients with tuberculosis.

DESCRIPTORS: tuberculosis; communicable disease control; professional-patient relations

MÁS ALLÁ DEL DOTS (DIRECTLY OBSERVED TREATMENT SHORT-COURSE) EN EL CONTROL DE LA TUBERCULOSIS: MEDIO QUE PROMUEVE LA COMUNICACIÓN Y LA IDENTIFICACIÓN DE LAS NECESIDADES

El presente estudio buscó analizar los significados que los trabajadores de la salud presentan sobre la estrategia en el control de la tuberculosis, y apuntar alternativas que contribuyan para su desempeño. Después de la aprobación del proyecto por el Comité de Ética en Investigación, fueron entrevistados 15 trabajadores de la salud del Submunicipio de la Sé, de la Secretaría de Salud del Municipio de Sao Paulo, de agosto a diciembre de 2004, por medio de un guión semiestructurado. El estudio fue conducido bajo el marco de la hermenéutica dialéctica y la teoría de la determinación social del proceso salud enfermedad. La DOTS contribuye para la adhesión al tratamiento, promueve la comunicación de encuentros y conversa entre trabajadores y usuarios, en el ámbito institucional y territorial, lo que posibilita la identificación de las necesidades de salud y el encaminamiento para intervenciones apropiadas. Uno de los desafíos de su implementación es concretizarse como espacio que permita aprender, decodificar y reconstruir significados en relación al proceso salud enfermedad, incluyendo el tratamiento y los proyectos de vida de las personas acometidas por la tuberculosis.

DESCRIPTORES: tuberculosis; control de enfermedades transmisibles; relaciones profesional-paciente

ALÉM DA DOTS (DIRECTLY OBSERVED TREATMENT SHORT-COURSE) NO CONTROLE DA TUBERCULOSE: INTERFACE E COMPARTILHAMENTO DE NECESSIDADES

O presente estudo buscou analisar os significados que trabalhadores da saúde apresentam sobre a estratégia no controle da tuberculose, e apontar alternativas que contribuam para o seu desempenho. Após aprovação do projeto por Comitê de Ética em Pesquisa, foram entrevistados 15 trabalhadores da saúde da Subprefeitura da Sé da Secretaria de Saúde do Município de São Paulo, de agosto a dezembro de 2004, por meio de roteiro semiestructurado. O estudo foi conduzido sob o referencial da hermenéutica-dialética e a teoria de determinação social do processo saúde-doença. A DOTS contribui para a adesão ao tratamento, promove a interface de encontro e conversa entre trabalhadores e usuários, no âmbito institucional e territorial, o que possibilita a identificação de necessidades de saúde e o encaminhamento para intervenções apropriadas. Um dos desafios de sua implementação é concretizar-se como espaço que permita apreender-decodificar-reconstruir significados em relação ao processo saúde-doença, incluindo o tratamento e os projetos de vida das pessoas acometidas pela tuberculose.

DESCRIPTORES: tuberculose; controle de doenças transmissíveis; relações profissional-paciente

¹RN, Ph.D., Faculty, Facultad de Enfermería, Universidad Nacional de Colombia, Colombia, e-mail: aimunoz@unal.edu.co, lyiballa@usp.br; ²RN, Ph.D., Faculty, Escola de Enfermagem, Universidade de São Paulo, Brazil, e-mail: mrbertol@usp.br.

INTRODUCTION

Despite the availability of abundant health technology in the modern world and that an efficacious therapy was discovered so long ago, tuberculosis still remains a part of global epidemiological scenarios. According to the World Health Organization (WHO), there were 8.8 million new cases and 1.6 million deaths due to the disease in 2005⁽¹⁻²⁾.

Non-adherence to treatment is one of the main obstacles to the control of the disease because it contributes to increasing the chance of transmitting the bacillus, resistance to medication and leads to a greater chance of recurrence⁽³⁾.

WHO defines 'treatment default' (non-adherence) as a treatment interrupted for two consecutive months. It also stresses that it is well documented that 30% of all patients who are under self-administered treatment do not adhere to the therapy in the first two or three months. The immediate consequence of poor adherence is the failure of the treatment and another of the results, in terms of public health as already pointed out, is the emergence of multi-resistance to antibiotics, one of the most important problems faced in the sphere of public health⁽⁴⁾.

Several situations have been associated with treatment adherence and involve social, cultural and demographic barriers, in addition to those related to medication and also to the process of health care delivery. The patients' poor social condition, their lack of time to search for care services and lack of information about the disease and its treatment, coupled with the frequently difficult relationship between the health team and patients are other factors that hinder adherence to tuberculosis treatment⁽⁵⁾.

A study that focused on adherence to DOTS, carried out in India, verified the need to focus research on addressing the disease from the perspective of patients and health professionals, who are the essential elements in this process. Researchers point out that research can guide health practices in addition to indicate effective and sustainable policies for the control of the disease⁽⁶⁾.

In view of the dissemination of DOTS in Brazil as a strategy to improve adherence with positive consequences to the indicators of morbimortality in relation to tuberculosis, this study aimed to analyze the meanings health professionals hold regarding the strategy and its influence on

treatment adherence. It also aimed to indicate alternatives that contribute to the performance of the Tuberculosis Control Program.

METHOD

The theoretical reference of this study relies on two supporting approaches: the hermeneutic-dialectic and the social determination of the health-disease process. The hermeneutic "(...) is occupied with the art of understanding texts; the term 'text' is used here in a broad sense: biography, narrative, interview...". It is based on the understanding and, in the case of this study, in the understanding of accounts of protagonists in the process of health production in relation to tuberculosis. It is closely related to intersubjectivity, which refers to the "capacity of putting oneself in the place of another"⁽⁷⁾.

Hermeneutics requires the understanding of the whole from the parts, and *vice versa*, which enables the emergence of a dialectic relation: "(...) the anticipation of the sense that directs the whole achieves an explicit understanding through the fact that the parts that are determined from the whole, also determine the whole"⁽⁸⁾. Thus, understanding occurs when there is consistency between the general and the particular dimensions of the life.

The concept of dialectic is related to critique, change and contradiction. The principles adopted by the dialectic method focus on the process and on the chain of processes in a spiral, ever renewing, never the same: things are composed in contradiction⁽⁹⁾. The linkage between these two approaches, the dialectic and hermeneutic, permits one to proceed to the analysis of reality, whereas both depend on and complement each other.

The theory of social determination of the health-disease process constitutes another theoretical support since once such process is intrinsically linked to society's structure "(...) individual conditions and possibilities merge in a social whole, in a general, average or common outcome, which does not cancel individual participation, since all individuals contribute to the result"⁽¹⁰⁾.

Thus, the social character of the health-disease process can be empirically verified in the expression of the pathological profile of human groups and their differences in social contexts, which are distinguished by the particular way they relate with the form of work and development of life.

Based on this principle, the reports of health professionals working in primary care were analyzed as well as the reports of those responsible for care delivery and epidemiological surveillance of five basic health units that had the DOTS strategy implemented and a Sexually Transmitted Diseases (STD)/AIDS Specialized Care Service.

Such health units comprised the Mid-West Health Coordination, the city's central region from the Municipal Health Secretary of São Paulo: the "Sé region", with a total of 339,269 inhabitants⁽¹¹⁻¹²⁾. This region was chosen because of the disease's magnitude at the time of the study, with a rate of incidence of 169.1/100,000 inhabitants, in addition to the poor living and working conditions of the majority of its population.

The project was initially submitted to and approved by the Research Ethics Committee of the Municipal Health Secretary of São Paulo (process No. 213/2004). The workers were invited to participate in the study and signed a free and informed consent agreement. Data were collected through recorded interviews; anonymity of interviewees' was ensured and all recommendations of the Resolution No. 196/96 of the National Health Council were followed⁽¹³⁾.

According to the adopted methodology, the number of the study's participants was not defined beforehand and its limit was reached when information acquired through reports started to repeat.

Data were collected through a semi-structure interview, which was submitted to a pilot test and analyzed by qualified researchers before data collection was initiated. Some of the questions that guided the interviews are the following: "tell me about your daily routine here at the service. What is it like to deal with people with tuberculosis? Tell me about directly supervised treatment. What are the positive aspects of the supervised treatment? What are the negative aspects (difficulties) of the supervised treatment? How can these aspects be overcome? Does supervised treatment contribute to treatment adherence?"

Reports were analyzed according to the discourse analysis technique, based on the Generative Theory of Meaning, which holds that discourses have a structure, a syntax, that presents a certain autonomy in relation to social formation such as discursive semantics but at the same time are dependent on them, that is, on the ideological dimension⁽¹⁴⁾.

All reports were analyzed aiming to maximize their rationality and meaning, focusing on the health-disease process, on the treatment, emphasizing directly supervised treatment and treatment adherence.

The depth and literalness of the individuals' statements were privileged throughout several readings of each interview, seeking underlying themes and figures. The interviews were synthesized into thematic sentences, which were grouped according to analytical categories providing a thematic corpus.

Interviews were recorded and data collection was carried out between August and December 2004.

RESULTS AND DISCUSSION

Fifteen health professionals were interviewed: six nursing auxiliaries, five nurses, and four physicians.

Meanings attributed by the health workers to tuberculosis verified the existence of attitudes and beliefs that still reveal stigma and fear in relation to disease. They also permitted visualizing the poor social conditions of the majority of users cared for in the basic health units that composed this study, who were mainly homeless and hostel users.

The interviewed workers pointed out the following strengths in relation to DOTS:

- It enables the creation of bonds, dialogue and sharing between professionals and patients.
- It enables the identification of patients' needs.
- It gives the opportunity of social integration in the case of homeless and hostel users.
- It diminishes the chance of relapse.
- It contributes to the correct administration of medication.
- It diminishes resistance to medication.
- It enables professionals to provide educational information.

On the other hand, limitations of this strategy were also indicated and these refer more specifically to its operation, such as:

- a restricted number of employees and lack of interdisciplinary teams;
- limited resources (snack, basic basket food) to meet patients' needs;
- resistance of some health professionals to provide care to patients;

- deficiencies in the referral network and the system of health information;
- deficiencies in the units' infrastructure, especially in terms of physical space, which limit biosafety actions;
- overload of work due to bureaucratic actions that integrate supervised treatment, such as filling out forms and the delivery of transportation vouchers to the patients.

Even with such limitations, we verified that, in the encounter between health professionals and patients, DOTS could be an opportunity for the manifestation of subjectivities and to help patients with tuberculosis to recover their capabilities for life during regular consultations. At the same time, it allows identifying vulnerabilities and needs that can be dealt with during the process so as to overcome them⁽¹⁵⁾.

The lack of conditions to support the development of a decent life for the majority of patients should be considered a crucial issue in the understanding of tuberculosis. One cannot fail to grasp it, and thus we defend the position that health workers should use instruments such as DOTS to derive a clear approach to treatment and go beyond listening and interventions, cooperating with the construction of citizenship projects, integrating knowledge from different disciplines so as to meet the needs of people with vulnerabilities.

Under the proposal of regionalization included in the Brazilian Unified Health System, the basic health

units would expand so as to be present where the life and the work of patients are embodied. In this way, DOTS would be an instrument used to understand needs and to implement alternatives with a view to overcome the illness experience. Health demands that emerge from these scenarios go beyond the biomedical ones, which points to the need for actions within a multiprofessional team. Moreover, DOTS could in fact become a relational technology⁽¹⁶⁾.

Based on the proposed model⁽¹⁷⁾, Figure 1 shows that DOTS can become an "interface". The author cites Pierre Levy, a researcher of collective intelligence, and stresses that: "[...] All interfaces condition the way *information* is grasped, information that is offered to the authors of the 'communication' it enables. Interface opens, closes and, moreover, guides the domains of action and signification (emotion and language), which are the potential uses of the 'means' with which it 'interfaces' [...]"

DOTS is implemented in the health services in the Tuberculosis Control Program and such services function as "network interfaces"⁽¹⁷⁾. Thus, the strategy could be also configured as an interface that be composed of other interfaces because it is interconnected with other activities/sectors, which in turn, are influenced by other interfaces internal and external to the service.

Thus, in this study DOTS is proposed as an interface possibility in the network that integrates the process of health production (Figure 1).

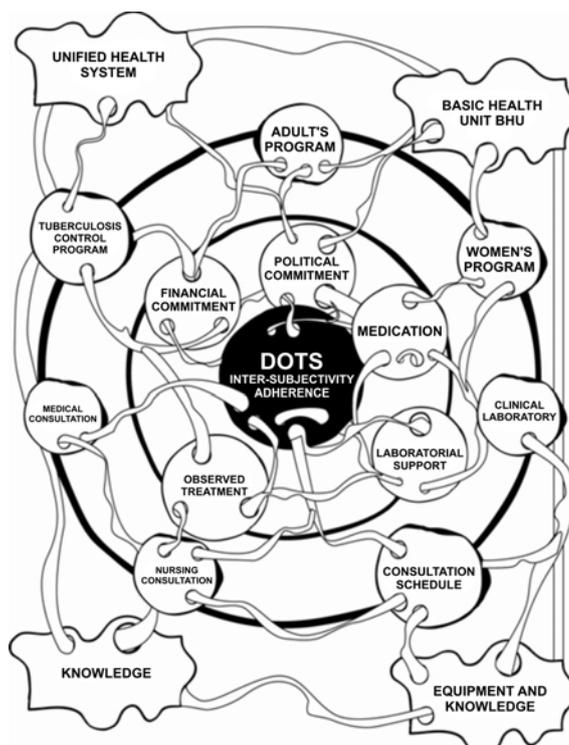


Figure 1 – Supervised treatment: interface in the network of the process of health production

The central circle that corresponds to DOTS and the circles that follow it can be interpreted as the different services, means and instruments that integrate the basic health units (BHS): medical consultation, nursing consultation, the laboratory, and health programs, among others. All these interact with the Tuberculosis Control Program. The circles that follow represent interfaces in a broader sphere and refer to the relation between the BHU and other health and social elements (churches, schools and others); moreover, it encompasses the circle that integrates the knowledge to act on the complex topic, which is health.

DOTS has the potential to use the meetings⁽¹⁶⁾, conversations and relationships, and this interface should be based on openness and availability to understand the needs of individuals with tuberculosis. In this interface, the daily meeting between individuals permits developing welcoming as a sharing process⁽¹⁸⁾, linkage and pact between workers and users so as to promote autonomy of the latter in their daily lives, always keeping in mind the two faces, the individual and the collective.

Thus, the great challenge for DOTS, in addition to contributing to tuberculosis treatment adherence, is to become a space that allows grasping, decoding and reconstructing meanings in relation to the health-disease process, including the treatment and the life projects of people with tuberculosis. Therefore, adherence is conceived here as a process, not of imposition, but rather of exchange and meeting, one that uses the understanding of the context of patients' lives as a trigger to meet social and health needs⁽¹⁶⁾.

The analysis of health workers' reports also indicates the need to review policies and strategies for coping with tuberculosis, such as how the healthcare delivery process is developed in basic health units, considering that the patients' social problems go beyond the biological and individual spheres and pharmacological measures. We cannot ignore the concerted efforts to put the DOTS strategy into operation in the cities considered priority locales⁽¹⁹⁾. However, it is imperative to review the management of resources and planning of health-oriented actions to offer DOTS in different scenarios in addition to basic health units, improving access to other levels and services of the health system, taking into account the social needs of patients and their families⁽²⁰⁾.

It is important to highlight that the adoption of DOTS does not replace the need to radically transform the processes that generate illness, in this case, tuberculosis. One-time actions that merely consider individuals as arithmetic units, the traditional goal of generally programmed actions, will not achieve the goals proposed by governments and international organizations for disease control, rather they will only contribute to patients' suffering.

In the specific case of tuberculosis, health workers interact in the daily production of health care in basic health units with people who are generally living in poor conditions and some very close to social exclusion. This meeting is an opportunity that should be used by the team to share information that guides people in the health-disease process, to clarify how the health system functions, and the rights they should demand, exercise and defend.

FINAL CONSIDERATIONS

This study evidenced the potential of DOTS in the studied health units. The main strength that emerges from DOTS, in addition to its contribution to the improved indicators of treatment adherence, refers to its ability to bring out health needs that may become the target of the development of joint interventions between health workers and patients.

On the other side, we have to point out the many gaps in the organization of health services that have to be grasped, understood and become object of transformation. Among these, the fact that hierarchical structures need to be transformed into interfaces and meetings, in which the contribution each professional category can offer in the daily practice of health services is acknowledged.

Tuberculosis, as a social product, requires that workers understand it as a consequence of the way society is organized and not a consequence of individual behavior. The work of health professionals, focused on the establishment of bonds with patients, requires one to overcome the traditional conception of health-disease, moreover, to seek to put into practice a democratic, responsible and empathic care, taking into account the patients' life context, encouraging their active and critical participation in the daily care process, treatment adherence and in the construction of life projects.

DOTS, in the Tuberculosis Control Program, should follow the body of principles that guides the Unified Health System. These principles hold that health is a citizens' right and this principle is an advance that permits glimpsing hope of reconstruction, transformation and reorientation of health policies and practices. It is in the sphere of

basic health units and in their areas of influence that health professionals should view users as subjects with both vulnerabilities and potentialities. This is one of the ways to overcome the naturalization of the health-disease process and to promote legitimate health as a right in daily health practice.

REFERENCES

1. World Health Organization (WHO). The stop tuberculosis strategy. Building on and enhancing DOTS to meet the tuberculosis-related millennium development goals. Geneva: WHO; 2006.
2. World Health Organization (WHO). Global tuberculosis [report serial]. Geneva; 2006c. [Acesso 2007 Mar 10]. Available from: <http://www.who.int/gtg/publications>
3. Lwilla F, Schellenberg D, Masanja H, Acosta C, Galindo C, Aponte J, et al. Evaluation of efficacy of community-based vs. institutional-based direct observed short-course treatment for the control of tuberculosis in Kilombero district, Tanzania. *Trop Med Int Health*. 2003;8(3):204-10.
4. World Health Organization (WHO). Global tuberculosis [report serial]. Geneva; 2007. [cited 2007 Out 14]. Available from: <http://www.who.int/gtg/publications>
5. Mishra P. Adherence to tuberculosis treatment under directly observed treatment, short-course (DOTS) in Nepal: quantitative and qualitative studies [thesis]. Danish: The Danish University of Pharmaceutical Sciences; 2006.
6. Jaiswal A, Singh V, Ogden JA, Porter JD, Sharma PP, Sarin R, et al. Adherence to tuberculosis treatment: lessons from the urban setting of Delhi. *Trop Med Int Health*. 2003;8(7):625-33.
7. Minayo MCS. Hermenêutica-dialética como caminho do pensamento social. In: Minayo MCS, Deslandes SF, organizadores. *Caminhos do pensamento: epistemologia e método*. Rio de Janeiro: FIOCRUZ; 2002. p. 83-108.
8. Gadamer HG. *Verdade e método*. 4ª ed. Petrópolis: Vozes; 2006.
9. Minayo MCS. *O desafio do conhecimento: pesquisa qualitativa em saúde*. 8ª ed. São Paulo: Hucitec; 2004.
10. Breilh J. *Epidemiologia economia, política e saúde*. São Paulo: UNESP/Hucitec; 1991.
11. Fundação SEADE [Internet]. São Paulo; 2006. [citado 2006 out. 16]. Disponível em: <http://www.seade.gov.br>
12. Instituto Brasileiro de Geografia e Estatística (IBGE) [Internet]. Rio de Janeiro; 2006. [Acesso 2006 out. 15]. Disponível em: <http://www.ibge.gov.br/home/>
13. Conselho Nacional de Saúde (BR). Resolução n. 196, de 10 de outubro de 1996. Dispõe sobre diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. *Bioética*. 1996;4(2 Supl):15-25.
14. Fiorin JL. *Linguagem e ideologia*. 2ª ed. São Paulo: Ática; 1990.
15. Muñoz Sanches AI, Bertolozzi MR. Pode o conceito de vulnerabilidade apoiar a construção do conhecimento em Saúde Coletiva? *Cienc Saúde Coletiva*. 2007;12(2):319-24.
16. Bertolozzi MR. A adesão ao tratamento da tuberculose na perspectiva da Estratégia do Tratamento Diretamente Observado ("DOTS") no município de São Paulo-SP. [tese livre-docência]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2005.
17. Teixeira RR. O desempenho de um serviço de atenção primária à saúde na perspectiva da inteligência coletiva.. *Interface, comunicação, saúde, educação*. 2005;9(17):219-34.
18. Merhy EE, Onocko R. *Agir em saúde um desafio para o público*. 2ª ed. São Paulo: Hucitec; 1997.
19. Vendramini SHF, Villa TCS, Santos MLSC, Gazetta CL. Aspectos epidemiológicos atuais da tuberculose e o impacto da estratégia DOTS no controle da doença. *Rev Latino-am Enfermagem* 2007; 15(1):171-3.
20. Cardozo Gonzáles RI, M AA, Arcêncio RA, Oliveira MF, Ruffino-Netto A, Villa TCS. Indicadores de desempenho do DOT no domicílio para o controle da tuberculose em município de grande porte, SP, Brasil. *Rev Latino-am Enfermagem* 2008; 16(1):95-100.