

Evaluation of detection actions for tuberculosis cases in primary care

Avaliação das ações de detecção de casos de tuberculose na atenção primária

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ABSTRACT

The objective was to assess the detection actions of tuberculosis cases in primary care in a city in the South of Brazil. An exploratory, quantitative study, with 76 nurses. A multiple correspondence analysis was used to identify associations between actions to detect cases (search of respiratory symptoms, health education, discussions about tuberculosis with community leaderships) and the services' characteristics (with or without the family health strategy), using the Statistica 12 software. The units with family health strategy presented better result to detect cases when associated with regular actions, while in units without family health teams the performing detection was associated to infrequency of actions. It was concluded that differences exist in both services regarding performance of case detection actions.

Descriptors: Tuberculosis; Health Services Evaluation; Public Health.

RESUMO

Objetivou-se avaliar as ações de detecção de casos de tuberculose nos serviços de atenção primária à saúde de um município do Sul do Brasil. Estudo exploratório, quantitativo, com 76 enfermeiros. Utilizou-se a análise de correspondência múltipla para identificar as associações entre ações para detecção de casos (busca de sintomáticos respiratórios, educação em saúde, discussões sobre tuberculose com lideranças comunitárias) e as características dos serviços (com ou sem estratégia de saúde da família), usando o software Statistica 12. As unidades com estratégia de saúde da família apresentaram melhor resultado para detecção de casos ao associarem-se com a realização regular das ações, enquanto as unidades em que não há equipes de saúde da família a realização da detecção associou-se à infrequência das ações. Conclui-se que existem diferenças entre ambos os serviços em relação ao desempenho das ações de detecção de casos.

Descritores: Tuberculose; Avaliação de Serviços de Saúde; Saúde Pública.

INTRODUCTION

The tuberculosis (TB) control still is a major challenge for the Brazilian healthcare system. Brazil integrates the group of 22 countries with most elevated load of this disease. Although the country have been evaluated with high detection rate of cases in 2012, there are still difficulties to reach the disease control goals, considering the treatment success rate at this same year was only 72%⁽¹⁾. It should be noted that the three government spheres in the country – Union, States, and Municipalities, have responsibility of tuberculosis control.

The early case detection and the oportune treatment are essential strategies to control TB. It is noted the central importance of primary care services for the development of these strategies, including the treatment directly observed and the counter-reference of secondary and tertiary care⁽²⁾.

The efficiency to search cases and the agility at the beginning of TB treatment by primary care services expressively contribute for a most efficient use of human resources, less onus for the system, the transmission prevention⁽³⁾ and the reduction of suffering for people and families affected by TB.

The primary care is recognized as the main entrance door and as the organizing center of the Brazilian health system. The resolution of health needs, the attention coordination and the responsibility by the population enrolled are the three essential functions for this system organization (Ordinance GM nº 2.488/2011), capable to produce impact on the epidemiological profile and on TB control. The focus of the primary care is considered the promotion, prevention actions, and identification of health needs of families in the community that favors operationally cases detection.

Thus, there is a mismatch between the TB control politics and health practices in primary health care services. Considering that these services, although presenting an adequate structure and material availability to request sputum smear and conduct a TB diagnosis⁽⁴⁾, still perform less diagnostics in comparison

to emergency units and specialized services. Although it is adopted as the main strategy to detect cases, the practice of search for respiratory symptoms (SRS) in health services and in the community is incipient.

In the actual literature, studies are found about TB case detection problems, giving emphasis especially to barriers in the access to health services⁽⁵⁻⁶⁾ and conduction of diagnostic exams⁽⁷⁻⁸⁾. Revealing the need to study aspects related to the evaluation of development of actions, inherent to the health team work from primary care in the territory, to make the TB control effective.

Facing the exposed, the present investigation was conducted electing for study location a city of large population size, in the south half of Brazil, considered as priority for TB control actions by the Health Ministry. All health professionals in the primary care develop case detection actions in the city. The disease treatment is conducted in a specialized ambulatory unit constituted by a health team composed by two pulmonologist physicians, one social assistant and one receptionist. Although this organization exists for disease attention in the city, the control impact still is insufficient, considering that in 2014, 272 cases of disease were notified, and from those 199 cases were new, representing an incidence of 58.17 cases per 100,000 people.

The objective was to assess detection actions for TB cases in primary care of a city in the South of Brazil, using nurses from the study units as source of data, due to their involvement with care, assistance and management of primary care services⁽⁹⁾ and, the execution of TB control actions⁽²⁾. Therefore, they are considered a key-informant to evaluate TB cases detection actions developed by the health team.

METHODS

An exploratory study with quantitative approach, conducted in primary care units of a large population city located in the South of Brazil with approximately 342,053 inhabitants⁽¹⁰⁾. The city has 51 primary care units, being 34 traditional basic health units (TBHU) and 17 family

health units (FHU), with 41 family health teams implemented and reaching a coverage of 42.94% of the population⁽¹¹⁾.

From 84 nurses acting in the primary care, four were not considered for the study due to sick and maternity leaves, and vacation on the period of April to August of 2012, when the data collection occurred. There were three losses of professionals not found in their units during their work shifts for at least four trials, and one denied to participate in the study.

Thus, the study was constituted by 76 subjects. The interviews were conducted in their workplace during their shifts, in accordance with their availability. These professionals answered a structured questionnaire developed with basis on an instrument to assess TB attention in Brazil⁽¹²⁾, pre-tested with 20 health professionals in a city close to the study location.

The selected variables corresponded to actions inherent to the job of these professionals in health services to identify TB cases (frequency of actions to search respiratory symptoms in health services – SRSHS, search of respiratory symptoms in the community – SRSC, TB health education in the services – HED, discussions with community leaderships about TB – DCL). Each one of these variables received numerical additions representative of the answer's options for the frequency of actions development to be represented in the percentage map in the Multiple Correspondence Analysis. Number 1 means infrequency; 2 regular frequency; and 3 frequently.

The multiple correspondence tried to identify associations between case detection actions developed by the health unit (active variables) and the characteristics of these services in which professionals acted (passive variables) without the need of a previous causal relationship⁽¹³⁾. It was used the decrease of self-values to define analysis dimensions, considering therefore, previous dimensions that significantly decrease self-values, once they present more data variability. Such dimensions represent a group of

variables, from this group, those with less absolute contribution ($\text{Cos}^2 < 0,20$) were excluded because they presented instability in the percentage map. The absolute contribution is the addition of contributions of each answer option to a dimension variable.

For the analysis of the ACM Percentage Map of the passive variables "Modality of health service (family health strategy (FHS)/without FHS)" and "frequency receiving respiratory services (SR) (infrequently/regularly/frequently)" were inserted. It is noted that these do not have contribution in the dispersion of points in the map, but it helps the interpretation of graphic results⁽¹⁴⁾.

The data were analyzed using Statistica 12 (Statsoft, Tulsa, OK, USA). The study was approved by the Ethics in Research Committee from the Universidade Católica de Pelotas, protocol nº 2009/04. The ethical principals were respected and the interviewed signed the Free and Informed Consent to participate in the study.

RESULTS

The variables and its respective cosine values for dimensions 1 and 2 are shown in Table 1. Dimension 1 presented variables predominantly related to SRS and health education and, discussions with the community leaderships about TB, and explains 31.65% of data variability. While dimension 2, presents variables related to development of health education activities about TB in the unit, explaining 23.73% of data variability.

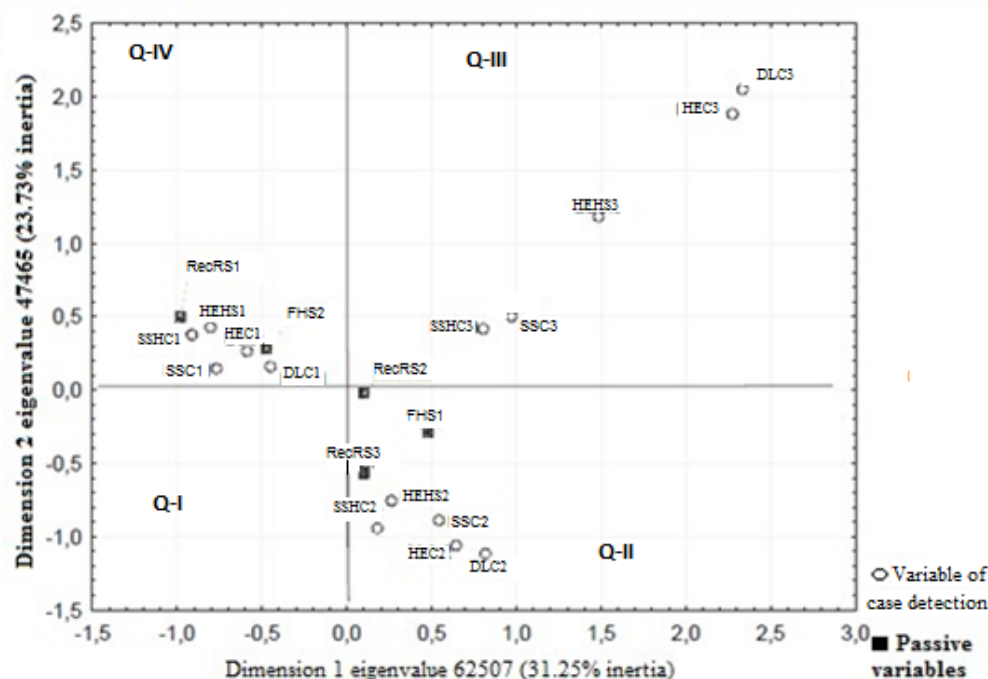
Table 1: Absolute contribution of variables with the dimension. City in the South of Brazil, from April to August of 2012.

Variable	Cos ² Dimension 1	Cos ² Dimension 2	Dimension
SRSHS- Search of RS in health services	0,469	0,374	1
SRSC- Search for RS in the community	0,592	0,240	1
HEDHS - Health education about TB in health services	0,443	0,469	2
HEDC- Health education about TB in the community	0,579	0,471	1
DLC- Discussions about TB with leaderships in the community	0,520	0,348	1

In the percentage map (Figure 1), pertaining variables of each dimension located by its coordinates are represented. In the superior left quadrant (Q-IV) are found the variables associated with infrequent case

detection actions (SRSHS, SRSC, HEDHS, HEDC and DLC). These evaluations correspond to health units without FHS and that does not receive respiratory symptoms actions with frequency.

Figure 1: Percentage Map of detection actions for TB cases in the primary care of a city in the South of Brazil.



Captions:

FHS1: Health Unit with Family Health Strategy
FHS2: Health Unit without Family Health Strategy
RecRS1: infrequent reception of respiratory symptom actions
RecRS2: regular reception of respiratory symptom actions
RecRS3: frequent reception of respiratory symptom actions
SSC1: infrequent search for symptom actions in the community
SSC2: regular search for symptom actions in the community
SSC3: frequent search for symptom actions in the community
SSH1: infrequent search for symptom actions in the health service
SSH2: regular search for symptom actions in the health service
SSH3: frequent search for symptom actions in the health service
HEDHS1: infrequent health education in the health service
HEDHS2: regular health education in the health service
HEDHS3: frequent health education in the health service
HEDC1: infrequent health education in the community
HEDC2: regular health education in the community
HEDC3: frequent health education in the community
DLC1: infrequent discussion about TB with leaderships in the community
DLC2: regular discussion about TB with leaderships in the community
DLC3: frequent discussion about TB with leaderships in the community

In the inferior right quadrant (Q-II) are the variables associated with the regular and frequent development of case detection actions in units characterized as units with the family health strategy that frequently receive respiratory symptoms actions.

Assessments related to the frequent development of case detection actions are found in the superior right quadrant (Q-III). These assessments are not related to receive frequently respiratory symptoms actions.

DISCUSSION

The detection of cases is a complex activity and represents a large challenge to health services, in terms of planning the number of symptoms to assess⁽¹⁵⁾ and the frequency in the development of action⁽¹⁶⁾, which have been presented as deficient in many sanitary contexts in the country⁽⁵⁾. This reality is also found in this study.

This action complexity in health attention resides in the need of a qualified professional approach, compromised with the subject and with the TB control. It should be based on dialogue, creation of bonds, ability to generate safety for the subject when facing the need to resolve a health problem, for the subject to do not feel threatened for having a stigmatizing disease of high transmission. It is essential to establish a relationship of co-participation in the attention process to allow the acceptability of the subject with TB symptoms, the necessary actions to discover the disease and correspondence of knowledge, the desires and needs between the subject looking for attention and the health professional who receives this person.

The National Program for TB Control recommends actions to identify respiratory symptoms to be permanently performed in health services and especially for primary care services⁽²⁾. Thus, the infrequency of SRS, of health education in services as well as in the community, and discussions with community leaders observed in the study, compromise the active identification (search in the community) and passive (search in the health services) of TB cases and the disease

visibility as an important health issue in the population. Due to that, primary care services receive few respiratory symptoms and the population does not know about the offer of services to detect cases in these services. As consequence, the disease is favorable to stay⁽¹⁶⁾.

The difficulties impeding effective detection of TB cases are related to operational aspects in health services (organization aspect to detect and treat cases)⁽⁵⁾ with impact in the time between the identification of the respiratory symptom and the diagnosis⁽¹⁷⁾. Still, the modality of attention to people (traditional units and units with FHS) and professional qualification can influence the performance of this action in primary care services⁽⁵⁾.

The infrequency of case detection actions in units characterized as traditional in this study can be attributed to the organization for attention to people in this kind of service. In general, these units have a broad territory, receiving a large and varied demand of users, implicating in predominantly acting within the health services in detriment of external actions. Thus, the territory actions of SRS and of collective character, as the health education and meetings with community leaders, are below the need to promote early identification of cases present in these units.

Still in relation to the incipient development of actions related to TB in the studied health units, it should be noted that some organization characteristics of health services for attention offer constitute barriers to use it. Among those, restricted attention times, lack of reception, lines and long waiting time to be attended that were present in the sanitary context studied and also described in the literature⁽¹⁸⁾. Such difficulties imposed in the primary care access result in loss of opportunities to identify people with the disease symptoms, therefore reflecting in the time for diagnosis, beginning of treatment, clinical aggravation, and disease infection.

The SRS conducted by the health team in the service as well as in the community are essential strategies to identify cases. To actively ask about the presence of

cough for all adults who go to the health unit can significantly increase the number of diagnosed TB cases⁽¹⁹⁾. It is estimated that 5% of people older than 15 years who search for health service for the first consultation can present cough for more than three weeks, and in those cases the TB hypothesis should be investigated⁽²⁾, this estimate shows the imperative need to execute this action.

Such strategy when conducted also in the community tends to broaden the early identification of symptoms, because when considering that users search for health services in consequence of worsening of TB symptoms, to passively wait for health services would provoke delay in the diagnosis⁽²⁰⁾.

The difference of SRSHS development among units, infrequent in services without FHS and regularly conducted by those with the strategy, can be a result of the presence of health community agents in the family health units, once this professional acts in home visitations⁽²¹⁾. Thus, investment on the sustainability of this professional in quantitative terms and in qualification, when approaching TB, is seen as an initiative to impact development of case detections. As well as, the investment to broaden the Community Health Workers Program for all primary care units is elementary, strengthening the strategy of active search for cases and effective consequent control of the disease.

In relation to health education about TB, a study conducted with nurses in Paraíba highlights the limitations of the physical space of health units as barrier to execute this action⁽²⁰⁾. Therefore, health teams can use community spaces to conduct educational actions, for example, churches, schools and neighborhood associations. This strategy tends to enhance the educational action effect, because it puts the professional in the community space, bringing them close to the social reality of those individuals and enhancing the strengthening of this bond. It is noted that the infrequency of educational actions at the internal level of the unit, but especially in the community space, harms

the self-care ability of the individual and the community, due to the absence of information about available actions to diagnose TB and the ways to obtain actions in health services.

The similarity of the distribution of users in the search for other health services besides the primary care and, the time over 30 days to obtain the disease diagnosis when primary care services were used, observed in a multi-center study⁽¹⁶⁾, can represent results caused from infrequency and the regular development of actions to detect cases found in this study.

The incipient development of case detection actions observed in the study is consistent with other problems experienced in the Brazilian primary care nowadays. Management problems with repercussion on the physical structure, sufficiency and workers profile, on the opportune access to resources and the effectiveness of health actions⁽¹⁸⁾ influence performance of these services to cope and control health problems of the population, being TB one of them.

Regarding the discussion with community leaders, it should be noted the importance of this action, since it incentivizes inclusion and involvement of the civil society in the fight against TB. The social participation in the health management was present in different government levels through a legal enforcement (Law 8.080/90, in the Chapter II and Art. 7^o). However, in respect to TB, this participation seems insufficient and deficient in some local health systems. This reality can occur due to invisibility of the disease as severe health problem by managers and health professionals or by the lack of to cope with diseases with community co-participation.

Investments in action broadening initiatives to control the disease, especially for the detection of TB cases, are indispensable in the studied context facing the infrequent development and regular SRS actions, TB related health education and promotion of community participation in the debate about this theme.

CONCLUSION

In general, the results found in the study show differences between both services in relation to performance of actions to detect cases. It should be noted that all variables used in the study represent enforced recommendations to control TB, thus, they should be

attended by all primary care units. Facing this, to invest on the qualification of human resources is urgent and should be a continuous action, for better work conditions and alterity of each team member, the manager and the citizen, allowing suspicion of the disease to be possible in any health service or community environment.

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