



The Egyptian Society of Chest Diseases and Tuberculosis  
Egyptian Journal of Chest Diseases and Tuberculosis

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ORIGINAL ARTICLE

# Evaluation of Primary Health Care service participation in the National Tuberculosis Control Program in Qalyubia Governorate, Egypt<sup>☆</sup>



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Received 6 May 2015; accepted 17 May 2015

Available online 3 July 2015

## KEYWORDS

Tuberculosis;  
Primary Health Care;  
National TB Control  
Program

**Abstract Objective:** The aim of this work was to evaluate the Primary Health Care service performance in National Tuberculosis Control Program in Qalyubia Governorate.

**Methods:** The studied area (Qalyubia Governorate) includes 8 health territories (each contains 5 primary care units/centers).

A questionnaire based on 6 parameters was used to evaluate the PHC system performance: I – Physicians with basic knowledge about TB (causative agent, methods of spread, clinical picture, essential steps in investigations: X-ray and sputum smear), II – Facilities for primary investigation (sputum examination and chest X-ray), III – Communication with the central health authorities or a TB specialist, IV – Proper recording systems needed for proper patient management and follow up, V – Follow up schedules are available for the detected patients, VI – Have a role in community education about the disease. The data obtained were tabulated and statistically analyzed.

**Results:** Studied area included 8 health territories and 40 primary care units (35% were urban and 65% rural) with one physician in each unit. The mean percent of the correct answers of the basic knowledge score was 48.2% (range = 18%–100%), higher in urban units physicians than rural units physicians, with lack of proper laboratory (for sputum analysis) or X-ray apparatus. Communication with central health authorities in urban areas was higher than rural areas (65.4% versus 57.1%). Case recording was lower in urban than rural areas (42.9% versus 46.2%). Patient follow up after referral to central health units was higher in rural than urban areas (11.5% versus 7.1%). Participation of community education was 78.6% in urban units and 76.9% in rural units.

<sup>☆</sup> This work was primarily carried out in: Qalyubia Governorate, Egypt.

**Abbreviations:** TB, Tuberculosis; MTB, *Mycobacterium tuberculosis*; WHO, World Health Organization; PHC, Primary Health Care; NTP, National Tuberculosis Program.

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Peer review under responsibility of The Egyptian Society of Chest Diseases and Tuberculosis.

<http://dx.doi.org/10.1016/j.ejcdt.2015.05.009>

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*Conclusion:* In Qalyubia Governorate, PHC physicians lack proper knowledge about TB and their units lack proper equipments (Lab and CXR). The PHC system needs to be empowered by the health care authorities through training and equipments for better performance in NTP.

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## Introduction

World Health Organization (WHO) Stop TB Strategy explicitly acknowledges that effective and sustainable TB control relies on the general health system, especially on well-functioning Primary Health Care (PHC). Weak health systems pose many barriers to effective TB control [1].

PHC providers should follow the regulations within their country. Good communication with PHC services can be very useful in detecting and treating patients with tuberculosis (TB). Since PHC providers are the patient's first contact with medical services, the initial suspicion of TB most frequently occurs at the PHC level. When a PHC provider encounters a patient with symptoms indicating TB, he or she should examine the patient, take a medical history, and order sputum smear examination and X-ray (or refer to a provider who can carry out these steps). Referral of a suspected TB case by PHC to specialist can avoid escape of diagnosis of TB case. If TB cases escape suspicion and direction into the right way of medical service spread of the disease and development of bacterial resistance can occur [2].

## Aim of the work

Evaluation of the participation of Primary Health Care service in National Tuberculosis Control Program in Qalyubia Governorate.

## Methods

The studied area (Qalyubia Governorate) includes 8 health territories (each contains 5 primary care units/centers).

According to the Egyptian NTP, (2012) [3] and WHO European region guidelines, (2004) [4], the PHC system should have:

- (I) Physicians with basic knowledge about TB (causative agent, methods of spread, clinical picture, essential steps in investigations: X-ray and sputum smear).
- (II) Facilities for primary investigation (sputum examination and chest X-ray)
- (III) Communication with the central health authorities or a TB specialist.
- (IV) Proper recording systems needed for proper patient management and follow up.
- (V) Follow up schedules are available for the detected patients.
- (VI) A role in community education about the disease.

This study evaluated the above 6-parameters to check if they have met the required criteria using the following questionnaire system:

The basic knowledge is assessed through 11 questions, giving 1 for a positive answer and 0 for a negative or inconclusive one.

These questions are:

- (1) What is tuberculosis?  
-Infectious disease of the lung caused by tubercle bacilli characterized by lung destruction and fibrosis (1).
- (2) What is the causative agent?  
-Mycobacterium tubercle bacilli (1).
- (3) What are the types of TB? (Pulmonary and extra-pulmonary).
- (4) What are the methods of spread? (Droplet, cough and sneezing).
- (5) What are the main symptoms? (Cough expectoration, hemoptysis, fever and sweating especially at night)
- (6) What are the main signs? (General: weight loss and fever and local: consolidation or fibrosis in upper lobes with or without cavitations).
- (7) How to suspect extra-pulmonary TB? (Enlarged cervical L.N, chronic skin ulcers, spine deformity or cold abscesses).
- (8) What will you do if you suspect a pulmonary TB case? (Sputum for acid fast bacilli, chest X-ray, refer to specialist or central hospital).
- (9) What are the main signs in X-ray? (Upper lobe infiltration, fibrosis with or without cavitations).
- (10) If sputum smear is negative and X-ray suggestive of TB what will you do? (Refer to a central chest hospital or a specialist).
- (11) What are the main drugs used in treatment? (INH, Rifampicin, Pyrazinamide, Ethambutol and Streptomycin).

Facilities for case detection and treatment:

- (1) Does a working lab for sputum smear exist?  
-Yes (1). -No (0).
- (2) Does a working X-ray apparatus exist?  
-Yes (1). -No (0).
- (3) DOTS application?  
-Yes (1). -No (0).

Communication with central health authorities or a TB specialist:

-Yes (1). -No (0).

- (1) What are the methods of communication?  
Phone, net or send patients with reports.
- (2) What is the type of health authorities?  
- Ministry of health related hospitals such as central-teaching- chest or fever hospitals.  
- University hospitals.

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