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A public–private partnership to reduce tuberculosis burden in Akwa Ibom State, Nigeria

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ABSTRACT

Background: Tuberculosis (TB) infection and spread are preventable, and TB disease is curable depending on individual and community knowledge of causes of the disease, mode of prevention and cure. An earlier educational intervention carried out in Akwa Ibom State (AKS) of Nigeria in 2006 created awareness of the disease and improved utilization of orthodox medical facilities of residents in 34 communities who had symptoms of TB.

Objective: The overall aim of this program is to reduce the burden of TB disease in 18 communities of AKS through educational intervention, TB case detection and integration into the State National Tuberculosis and Leprosy Control Programme (NTBLCP), as well as build laboratory capacity to improve TB case detection and control.

Methods: Prior to the educational intervention in each community, standard pretested questionnaires were administered to residents to test their knowledge, attitudes and practices concerning TB. Information about causes, symptoms and prevention of TB was disseminated in community town halls, churches, markets and schools. Individuals who were coughing for three weeks or more were investigated for TB following clinical examination by a physician. Three sputum samples (spot-morning-spot) were obtained from each individual and examined microscopically for the presence of acid-fast bacilli (AFB) using the Ziehl–Neelson staining technique. Those with positive AFB results were integrated into the existing NTBLCP treatment facilities for immediate commencement of Directly-Observed Therapy Short Course (DOTS). Treatment outcome was monitored by retesting patients' sputum after two, five and seven months. Two new laboratories were facilitated while existing laboratory capacity was built by providing higher resolution microscopes, power generating plants, refrigerators, locally-fabricated incinerators and furnishing of staff offices.

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utilized health personnel from the Akwa Ibom State NTBLCP who conducted laboratory testing and supervised the treatment.

Results: The 916 responses to the questionnaires showed that 65.3% (549/841) correctly identified that TB is airborne, and 86% (749/871) were aware that TB could be cured by anti-TB medication. Responses to care-seeking attitudes were provided by 123 respondents. Of this number, fear of stigmatization was the reason for 31% (38) seeking care in unorthodox facilities, while 43.1% (53) did not believe that orthodox medicine could cure their symptoms.

Of the 374 detected cases, 9 did not commence treatment. Hence, 365 were placed on DOTS; 36 defaulted, while 11 either died or failed to convert after the seventh month. At the end of month 8, cure was achieved for 87.1% (318).

Conclusion: Although the previous intervention may have contributed to the good knowledge about TB and care-seeking attitudes displayed by respondents in the communities, sustaining active case finding through public–private partnership can go a long way to reduce TB burden, especially in rural communities where healthcare systems are generally weak or inadequate. Adequate funding of TB control activities is critical in eliminating TB as a public health problem, and the private sector participation such as this is a welcome development.

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Introduction

Tuberculosis (TB) is still a public health challenge in Nigeria which ranks 11th among the TB High Burden Countries (HBCs) [1]. A recent report from the national TB prevalence survey in Nigeria has provided a robust direct measurement of TB disease burden in the country for the first time. Amongst all national TB prevalence surveys since 2001, Nigeria has the highest prevalence to annual case notification ratio, at approximately 5 to 1 [1]. The report also revealed that 75% of untreated TB cases reside in rural areas with poor access to health facilities. In Nigeria, like most other countries endemic for TB, case finding for TB is passive (healthcare program waits for patients to come to the facility to seek help for their TB-related symptoms). While this may be ideal, not every person with infectious TB goes to the health facility. Consequently, these individuals continue to spread the disease to other people around them, further increasing the TB burden. In contrast, active case finding means going to places where there might be people with undiagnosed TB. The goal is to find, diagnose and treat TB sooner in almost all the people with the disease. Early detection of the disease is essential to further improve health outcomes for people with TB, and to reduce TB transmission more effectively. The current strategies recommended by the World Health Organization (WHO) Stop TB Partnership include the intensification of active case finding, as well as the engagement of all relevant healthcare providers in TB care and control through Public–Private mix (PPM). PPM encompasses diverse collaborative strategies among the public sector, such as the National Tuberculosis and Leprosy Control Programme (NTBLCP), and the private sector [2]. In recognition of this enormous public health challenge, and with the perspective of TB eradication in the country, a public–private partnership collaborated to reduce the TB burden in Akwa Ibom State (AKS) of Nigeria.

The TB program in AKS was first introduced in 2006, with a focus on creating awareness about the disease and educating the communities on appropriate care-seeking attitudes. The program outcome showed considerable improvement in both TB service utilization as well as case detection [3]. The objective of the phase II program hereby described was to reduce the TB burden in AKS through education, detection of TB cases and strengthening of laboratory capacity. This paper discusses the outcome of the second phase of the program, including knowledge, attitudes and practices affecting treatment-seeking behavior.

Methods

The phase II TB reduction program in AKS lasted 12 months and had the following components: training for program facilitators; consultation with community leaders; mobilization of community residents; administration of standardized, pre-tested questionnaires to test knowledge, attitudes and practices (KAP); and educational intervention through talks, focus group discussions (FGDs) and distribution of TB fact sheets. These were followed by detection of TB cases, integration into the existing DOTS program and laboratory capacity building. A total of 42 field (research and community) assistants and other relevant health workers (TB supervisors and Laboratory technicians) were trained at a workshop. The training module focused on the causes, transmission and symptoms of TB. Also incorporated into the training were HIV/TB co-infection and stigmatization, as they affect TB control. TB fact sheets from the Centers for Disease Control and Prevention (CDC) were modified to include specific messages as required by the NTBLCP. Trainers were drawn from the AKS NTBLCP led by the State TB coordinator. The program was carried out in 18 communities in the 6 selected local government areas (LGAs) of Uyo, Oron, IkotEkpene, OrukAnam,