CONTROLLED TRIAL OF ACTIVE TUBERCULOSIS CASE FINDING IN A BRAZILIAN FAVELA

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Background: Mathematical models suggest that effective tuberculosis (TB) case finding campaigns could contribute to global reduction in cases and deaths, but studies assessing the community impact of active case finding are sparse. We conducted a controlled trial to determine the effect of active case finding on tuberculosis incidence in a high burden community in Brazil.

Methods: A pair-matched, cluster-randomized trial comparing household symptom screening and spot sputum collection (Arm1) versus distribution of an educational pamphlet (Arm 2) was performed in a large Brazilian favela (slum). We compared TUBERCULOSIS case notification rates, time from symptom onset to treatment start, and treatment completion proportions in each arm. Fourteen neighborhoods with a total estimated population of 65,300 were pair-matched by prior tuberculosis case rates and randomly allocated to one of two interventions. Tuberculosis diagnosis was performed using acid fast bacilli (AFB) smears. New tuberculosis cases during the trial were interviewed and clinic records were reviewed.

Results: During the study, a total of 193 tuberculosis cases were identified in the 14 study communities (incidence proportion 329/100,000). Of 92 cases found in Arm 1, 12 (13%) were new, AFB smear-positive pulmonary cases identified at home. Case identification rates in Arm 1 were 9.34/1000 person-years vs. 6.04/1000 person-years in Arm 2 (RR 1.55 (95%CI: 1.52, 1.65; p value 0.03). Mean days of cough before diagnosis were 53 (range 7-336) and 57(10-336) for Arms 2 and 1 respectively. No significant differences were found in time from cough onset to treatment start or proportion completing treatment.

Conclusion: A door–to-door case finding campaign was effective at detecting prevalent cases and influencing people to come for care in this setting, however, no statistically significant effect on time to diagnosis was observed.