Primary care-based screening for *Trypanosoma cruzi* in high-risk populations: results of the Strong Hearts Pilot in East Boston, Massachusetts

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INTRODUCTION

More than 300,000 people in the United States may be infected with *Trypanosoma cruzi*, the causal agent of Chagas disease. Moreover, more than 3,200 of these infected individuals live in Massachusetts.

The Strong Hearts Pilot Project integrates screening of high risk patients for Chagas disease into primary care and facilitates referral for treatment. We present the results of screening for the first 5 months of this pilot program.

METHODS

- Pilot implemented in the Medicine, Pediatrics, OB & Family Medicine divisions at East Boston Neighborhood Health Center
- Program activities:
  - Community outreach to educate at-risk individuals and families
  - Continuing education on Chagas for healthcare providers
- Screening algorithm: one-time screen recommended for all patients <50 years old who have lived in Mexico, South or Central America for at least 6 months. Screening available to all at-risk patients who request it.
- Screen: ELISA (Chagas Hemagen) at commercial laboratory
- Confirmatory testing: performed by US CDC using serum saved at the health center laboratory.
- Patients with 2 positive tests referred to the Center for Infectious Diseases at Boston Medical Center for treatment.

Figure 1. Strong Hearts Screening Pilot Work Flow Diagram

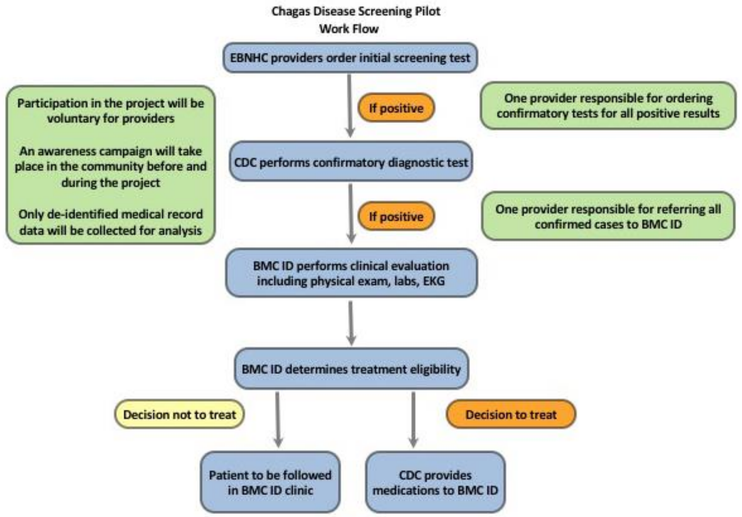

Table 1. Screening Results (March 22 - August 22, 2017)

Test	Number
Total Screening Tests Ordered	869
Total Screening Tests Resulted	700
Initial Screen Negative	665
Initial Screen Positive, Confirmed Negative	23
Initial Screen Positive, Confirmed Positive	4
Initial Screen Indeterminate, Confirmed Negative	7

RESULTS

- Among the 869 people screened, the largest number were from El Salvador (N=380, 44%) and Colombia (N=181, 21%)
- 28 participants in the pilot program initially screened positive. Among these, 4 have been confirmed positive, 1 is pending and 23 have been confirmed negative. (see Table 1)
- Among the confirmed cases, 2 were male and 2 were female.
- The four patients with positive confirmatory test results have been seen for further evaluation and two began treatment.
- Investigation into the discrepancy between screening and confirmatory test results is ongoing

CONCLUSIONS

Our preliminary findings suggest that primary care-based screening for Chagas disease is feasible and embraced by providers and patients, in the context of appropriate education and a well-formulated system for referral and treatment.

More work is needed to optimize models of care for Chagas disease screening and treatment in primary-care health systems in the US.

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