



# Initiation of Targeted Testing Using VDOT

Genevieve Sanders, Mary Scott, BSN, RN; Hevert Rios-Benitez, Kimberly Fields, RN, MSN, FNP; Merci Cruz, Les Becker, MBA; Umair Shah, MD, MPH

## Harris County Public Health Tuberculosis Elimination Program

### Abstract

It is important for Texas health departments to conduct targeted testing in their communities to identify and treat high-risk individuals before they become contagious. Yet, many health departments do not have personnel dedicated to this type of outreach. Instead departments have to wait for reports to come into their offices, a reactionary response. Harris County Public Health (HCPH) TB Elimination program recently launched its targeted testing program in efforts to be proactive about Tuberculosis (TB) prevention. The team identified the need for testing and developed methods for treatment through Video Directly Observed Therapy (VDOT) program.

### Objective

Targeted testing is vital to TB prevention and control. It is used to identify, test, and treat individuals who are at high risk for latent tuberculosis infection (LTBI) or at high risk for developing TB disease once infected with M. Tuberculosis. Identifying individuals with LTBI is important to the goal of TB elimination. A popular phrase is “testing with the intent to treat” when our team identifies high-risk facilities and communities, the team work with stakeholders to identify the best methods for ensuring adherence to treatment. This includes transportation to clinical facilities, doses of medication, and engaging translators.

### Individuals considered high-risk for having LTBI or progressing to TB disease include:

Close contacts of an individual with Active TB disease

Individuals who have immigrated from TB-endemic regions of the world

Individuals with HIV infection

Individuals that participate in injection drug use

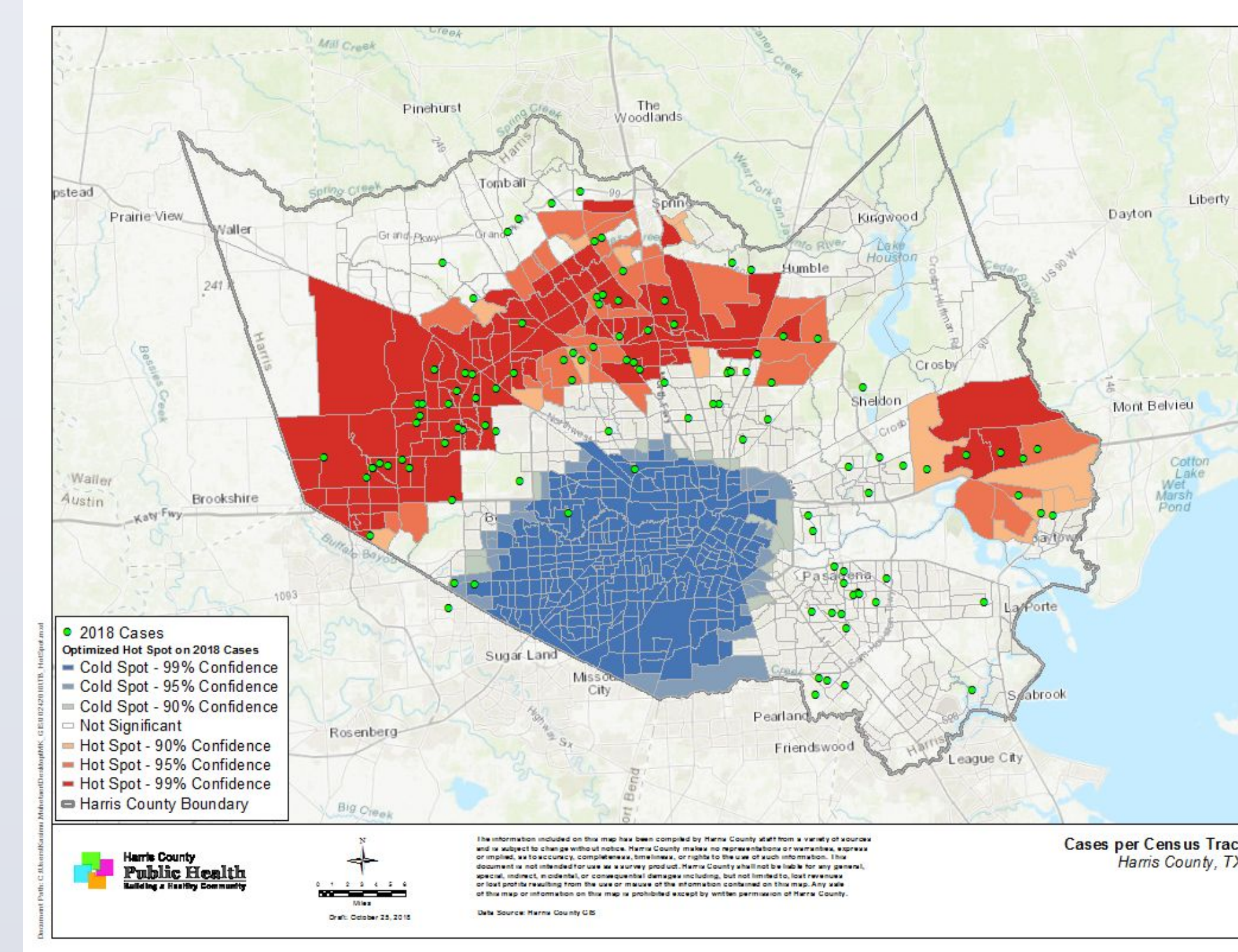
Individuals with other medical conditions, such as: silicosis and diabetes mellitus.

Individuals who work or reside in congregate settings including but not limited to:

- Prisons
- Homeless Shelters
- Nursing Homes

### Methods

To identify the areas that need to be a priority for testing, the team used Geographic Information Systems (GIS) software to map the 2017-2018 addresses of people diagnosed with active TB and those with TB infections in Harris County. Community centers, homeless shelters, local clinics, and congregate centers were located using the hotspots on the GIS map as a visual guide. These facilities were contacted and given risk assessments. If the facilities were determined to be a medium-risk or high-risk location they were prioritized as a potential testing site.

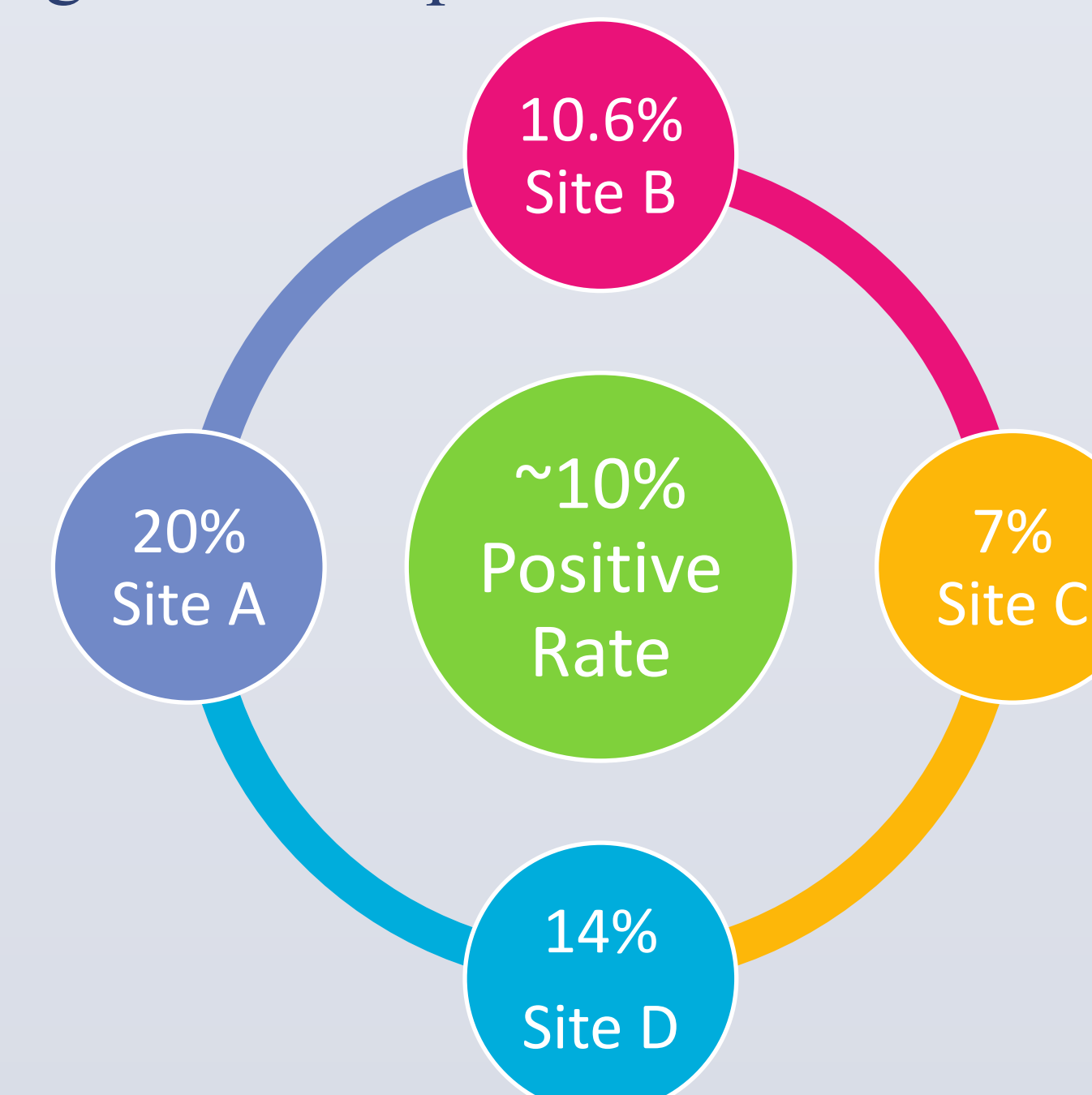


After establishing testing methods, the team worked on the treatment process. Many of the HCPH patients served in this targeted testing effort would be experiencing homelessness, worked day-labor jobs, or have complex schedules that would not accommodate traditional directly observed therapy (DOT). With this in mind, we opted into having targeted testing patients with TB infections placed on VDOT. This would allow our clients flexibility and convenience to adhere to their treatment regimen. We arranged with the homeless shelters to leave cellphones on the premise so that our patients experiencing homelessness could still be on the program. Additionally, we worked with local clinics to help coordinate patient care and even relied on local law enforcement to help provide transportation to our clinics.

### Results

Since our launch in January of 2019, we have established nine community partnerships where we will perform targeted testing on an on-going basis. Some of our partners include community members, religious figures, medical staff, educators, non-profit organization members.

Currently, there are four partner sites where we have active testing and have solidified future testing dates for the remaining five. Currently, our percentage of positive IGRA tests is close to 10%, which is above the Oxford Diagnostic Labs national average of 3%. This offers validity to our strategies in identifying high-risk populations. Additionally, of those identified as having a latent TB infection, about 70% are currently on treatment and being observed using VDOT. Our previous targeted testing efforts at drug-rehabilitation centers have identified TB infections and prevented them from becoming active TB patients.



The T-SPOT.TB Test Results	ODL National Average*
Positive	3.0%
Negative	94.4%
Borderline	2.0%
Invalid	0.7%
Total Resulted Tests	

Another very important part of our targeted testing effort is community and provider education. In each site we educate on average about 40-80 people. We have found that there is a gap in knowledge about transmission and incidence of TB. Moreover, we have initiated physician education. Our team has found that many physicians overlook TB as a diagnosis, so we have reached out and provided educational seminars for physicians and staff to bring awareness about TB in Harris County.

### Conclusion

Future goals are to continue this important work and help protect some of the most vulnerable in our communities from having a life-threatening illness. We aim to work with large hospital systems on screening efforts for refugees and other immigrant organizations. In addition, we intend to place a large emphasis on physician education.



### References

1. LTBI: A Guide for Primary Health Care Providers | Guides & Toolkits | Publications & Products | TB | CDC. (2013, April 3). Retrieved April 10, 2019, from <https://www.cdc.gov/tb/publications/lbti/default.htm>
2. Mancuso, J. D., Tribble, D., Mazurek, G. H., Li, Y., Olsen, C., Aronson, N. E., . . . Keep, L. W. (2011). Impact of Targeted Testing for Latent Tuberculosis Infection Using Commercially Available Diagnostics. *Clinical Infectious Diseases*, 53(3), 234-244. doi:10.1093/cid/cir321
3. Texas Department of State Health Services. (2018, August 31). Texas Tuberculosis Work Plan. Retrieved April 10, 2019, from <https://dshs.texas.gov/idcu/disease/tb/>
4. Tuberculosis Info. (n.d.). Retrieved April 10, 2019, from <http://www.oxforddiagnosticlabs.com/resources/tuberculosis-info/>

### Acknowledgements

We would like to thank Harris County Public Health Tuberculosis Elimination Program Management, and all our community Partners.