



ADDRESSING SYPHILIS IN POPULATIONS WITH SUBSTANCE USE DISORDER AND HOMELESSNESS

Lessons Learned from the Pima County Health Department

Our Community

The Pima County Health Department (PCHD) serves a large area along the southern border of Arizona. Ranging from the densely populated areas of Tucson to remote communities in the Sonoran Desert, one million people call the area home.

In Pima County, two overlapping and related challenges are shaping the local public health landscape. Encampments of unhoused people in dry river basins and undeveloped areas around the city have grown, with high rates of substance use disorder (SUD) and co-occurring mental health conditions among the population. During the 2025 Point-in-Time Count, approximately 2,500 people in the Tucson metro area were identified as experiencing homelessness. These conditions intersect with and contribute to rising rates of infectious disease. Following the COVID-19 pandemic, rates of syphilis and congenital syphilis surged across the nation. In 2024, Pima County reported more than 1,100 cases of syphilis and 53 cases of congenital syphilis, among the highest rates in the nation.

The Syndemic of Congenital Syphilis, SUD, and Homelessness in Pima County

Despite the syndemic relationship between syphilis, SUD, and homelessness, public health programs addressing these conditions are often siloed, limiting local health departments' ability to identify priority populations and target prevention efforts effectively.

To better understand the unique local risk factors for congenital syphilis, PCHD conducted a retrospective analysis of congenital syphilis cases using 13 years of historical interview data obtained by clinical disease investigators and stored in PRISM, the sexually transmitted infections (STI) database maintained by the Arizona Department of Health Services. The analysis identified demographic patterns in maternal syphilis that were significantly different from those of syphilis infections in the general population. Among the mothers of the infants identified with congenital syphilis:

- 95% self-identified as white and spoke English
- 75% reported housing instability
- 70% reported recent substance use – predominantly fentanyl and methamphetamine
- Of those with limited or no prenatal care, over 50% had utilized an emergency room during pregnancy for another condition

These findings helped guide the efforts of the task force to develop coordinated prevention and response efforts through the lenses of trauma-informed care and harm-reduction.

Case Study



Our Work

PCHD has several clinical and outreach programs that historically worked in parallel but with only limited collaboration:

- **Clinical services:** offers STI and family planning services for those who can access one of three brick and mortar facilities.
- **Mobile services:** utilizes three mobile vans to deliver screening services to schools and communities with limited access to care.
- **Community Mental Health and Addiction:** conducts field outreach using care navigators with lived experience in SUD and unstable housing.
- **Epidemiology:** conducts clinical disease investigations and facilitates data acquisition and analysis.

Starting in 2025, in response to rising syphilis rates, increasing homelessness and substance use, PCHD collaborated across divisions to create a new field-based, trauma-informed¹ service delivery model. To do this, PCHD enhanced its traditional outreach by deploying small interdisciplinary teams from a central van and tent that made discrete, regular, respectful contact with individuals living in the encampments.

These teams offered both clinical services and services that addressed basic needs of the community including:



Rapid point-of-care testing (POCT) for both syphilis and HIV



Food, housing, and clothing assistance in collaboration with community partner agencies



Same-day initiation of Suboxone (with expedited access to SUD treatment providers and residential rehab facilities to ensure continuity of care)



Pet food and connection to free animal care services. (See endnotes to learn more about the impact of addressing the human-animal connection.)¹⁻⁴

1. **Trauma-Informed:** A trauma-informed approach recognizes the lasting effects of experiencing trauma and incorporates the following principles: safety; peer support; trustworthiness and transparency; collaboration and mutuality; and empowerment, voice, and choice.

By offering free pet food and connecting residents to no-cost animal care services, PCHD built trust with the community and increased uptake of clinical services.



Field teams utilizing POCT typically included a nurse or clinical disease investigator with wireless access to the state's STI database to review syphilis testing and treatment history, and clarify potential diagnoses. At least one member of the team at each outreach event was trained and certified to draw blood for confirmatory testing. Teams also had telemedicine capability to consult with a clinician to develop treatment plans following the use of a POCT. An essential part of the success of the program was that point-of-care treatment for syphilis using injectable long-acting penicillin was immediately offered to patients with a reactive POCT result and no history of prior treatment in the state STI database. This approach allowed PCHD to initiate treatment while waiting on lab results for staging, reducing delays in treatment and minimizing the risk that patients would not return for care. Care plans included case coordination and small incentives to promote subsequent doses of penicillin if needed to complete the treatment regimens based on lab-based staging.

Delivering field-based treatment required the development of protocols for "cold-chain" delivery of the penicillin. This approach was developed in collaboration with the county's vaccine team and clinicians with experience in rural areas of low-income countries, where conditions were similar to those encountered in the encampments.

Maintaining the Cold Chain for Field-Based Syphilis Treatment

To safely deliver treatment in encampments and other outdoor settings, PCHD developed field protocols to maintain the medication "cold chain" and keep supplies within required temperature ranges. Drawing on experience from clinicians who had worked in other resource-limited settings, staff used secure temperature-controlled storage overnight, transferred medications to insulated coolers with ice packs for transport, monitored temperatures throughout the day, minimized cooler opening, and returned supplies to climate-controlled environments as quickly as possible. This practical systems approach helped make field-based treatment feasible even in Arizona's extreme heat.

Individuals engaged by the team were also connected to additional health and social services. Women of reproductive age were offered expedited access to family planning services at the health department mobile van. Clients found to have HIV infections received navigator assistance to re-establish care with a local health center that provided special programmatic services.

In the first quarter of 2025, nearly 120 people were screened for syphilis and HIV in the local homeless encampments. Over a dozen cases of syphilis at various stages were identified and treated. Many cases required three doses of medication, each delivered a week apart per protocol. The team used small incentives to encourage timely returns to care. Several clients accepted same-day evaluation for potential admission by a residential rehab organization.

Given the impact of this initiative, PCHD has operationalized these strategies within its ongoing work. They continue to deploy rapid syphilis and HIV testing for priority populations in community settings. The clinical services program identifies all newly diagnosed cases of syphilis who report being pregnant and those cases receive case management to facilitate treatment. Clinical responses may include anything from collaboration with prenatal care providers to administration of syphilis treatment in a patient's home if needed. They also use a telemedicine MOUD medications for opioid use disorder program to help clients initiate buprenorphine films (Suboxone) wherever they may be located while actively connecting them to care.



PCHD deployed interdisciplinary teams with staff from across the health department to deliver clinical and social services directly in encampments.

Telemedicine to Support Low-Barrier, Field-Based Treatment for Syphilis and SUD

PCHD uses telemedicine to extend clinical expertise into community settings and support rapid response for both syphilis and opioid use disorder.

Field-based Syphilis Treatment: Allows teams to quickly assess symptoms, confirm next steps, and support timely testing or treatment

- Standing orders detail who can administer field-based treatment, which patients are eligible, and which cases need further consultation via telemedicine
- Outreach teams can contact clinicians in real-time from the field for consultation
- Consults may include phone discussions, review of photos (such as a rash), or direct conversations with the client

Medications for Opioid Use Disorder Fast-Start:

Reduces delays related to transportation and other logistical barriers, while recognizing that opportunities for treatment may be lost if care is not available when a client is ready to engage

- Community members or outreach staff can connect clients to clinicians by phone to initiate buprenorphine/naloxone (Suboxone)
- When feasible and appropriate for a client, PCHD staff can deliver 7-day supply of Suboxone to client location in real-time
- PCHD staff work with each client to identify a continuity provider and ensure insurance coverage for continued care

Staff delivering clinical and social services directly in encampments.



Lessons Learned



Multidisciplinary, trauma-informed approaches are essential: When working with populations experiencing SUDs and/or homelessness, trauma-informed principles are essential for effective outreach and service delivery. Field teams should be equipped with the skills and capacity to both build trust and provide a wide range of services if requested.



Collaboration across the health department and with community partners enables integrated service delivery: During this project, several public health programs realigned services to coordinate outreach efforts. Teams were able to provide rapid STI screening and treatment while concurrently discussing SUD with clients and linking them to care.



Leadership support and a culture of innovation make integrated field responses possible: Expanding services into community settings often requires new workflows, cross-program coordination, and a willingness to adapt in real time. PCHD leadership support and an organizational culture that asks, “how can we make this work?” empower staff to propose and test new approaches, solve operational challenges, and build more responsive services for priority populations.

Endnotes

- 1 Mitchell, C., Ramirez, V., & Cullen, T. (2025). Integrating Human-Animal Care Through a Public Health-Driven One Health Clinic Model in Pima County, Arizona, October 2023 - February 2024. *Public Health Reports*, Volume 141, Issue 1. <https://journals.sagepub.com/doi/10.1177/00333549251367579>
- 2 Project Street Vet. Who we are. Retrieved June 15, 2026, from <https://www.projectstreetvet.org/who-we-are>
- 3 Ho, R., Byers, K., & Tesfaye, R. (2024, June 25). How “One Health” clinics support unhoused people and their pets. *The Conversation*. <https://theconversation.com/how-one-health-clinics-support-unhoused-people-and-their-pets-232246>
- 4 Powell, L., Walsh, M., Reinhard, C. L., Jankowski, K., & Watson, B. (2022). One Health clinic promotes veterinarian-client trust among underserved pet owners and provides learning opportunities for veterinary students. *Journal of the American Veterinary Medical Association*, 260(8), 931–939. <https://doi.org/10.2460/javma.21.06.0274>



This case study is part of a series, *Syndemic Solutions in Action: Lessons Learned from Local Health Departments*. Scan the QR code to access additional information and resources.

Questions? Contact Andrew Saal, MD MPH at Andrew.Saal@pima.gov | (520) 724-2871



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1201 Eye Street, NW • 4th Floor • Washington, DC 20005

P 202.783.5550 F 202.783.1583

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