

IMPROVING PUBLIC HEALTH AND COMMUNICABLE DISEASE CONTROL WITH HEALTH INFORMATION EXCHANGE

How the largest county in the U.S. launched an innovative prevention effort using ADT alerts and longitudinal patient records to coordinate care for vulnerable pregnant women



Manifest
MEDEX



Background

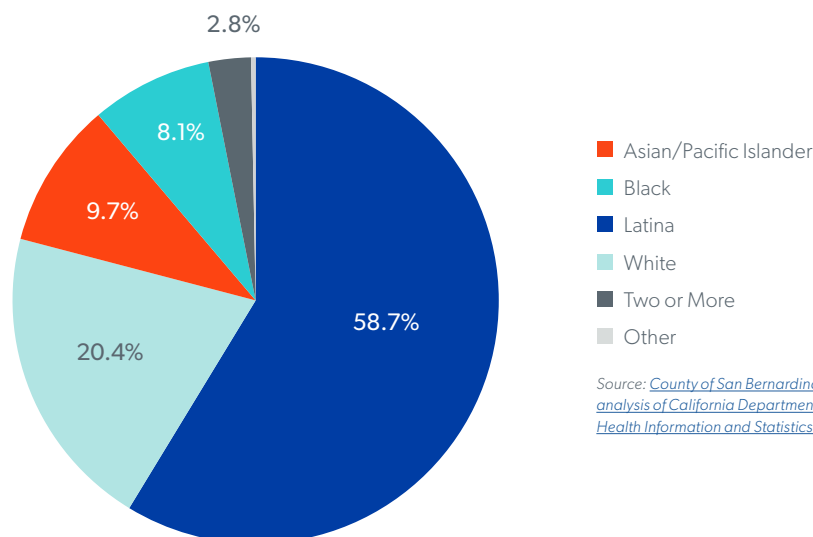
“Partnering with Manifest MedEx really helped us identify and monitor this sensitive population. I encourage all counties to look into data-sharing to improve outcomes for patients who may otherwise be subject to disparities within the health system.”

– Diana Ibrahim, Communicable Disease Program Manager, San Bernardino County Department of Public Health

The San Bernardino County Department of Public Health (SBCDPH) works in partnership with their communities to promote and improve health, wellness, safety, and quality of life in San Bernardino County, the largest geographic county in the U.S. The Communicable Disease Section (CDS) of SBCDPH is responsible for disease surveillance, infection control measures, and education to reduce or manage the incidence of infectious disease. The team, which includes RN case managers, provides a wide range of personalized services, such as working directly with residents who have communicable disease conditions and referring them to health care providers.

Since 2013, San Bernardino County CDS has seen a 366% increase of reported pregnant women exposed to syphilis and an 891% increase of congenital syphilis (CS), when a baby is born with syphilis passed by the mother during pregnancy. In 2019, the county ranked seventh in California for CS, double the incidence rate of California overall, and more than four times the incidence rate in the U.S.

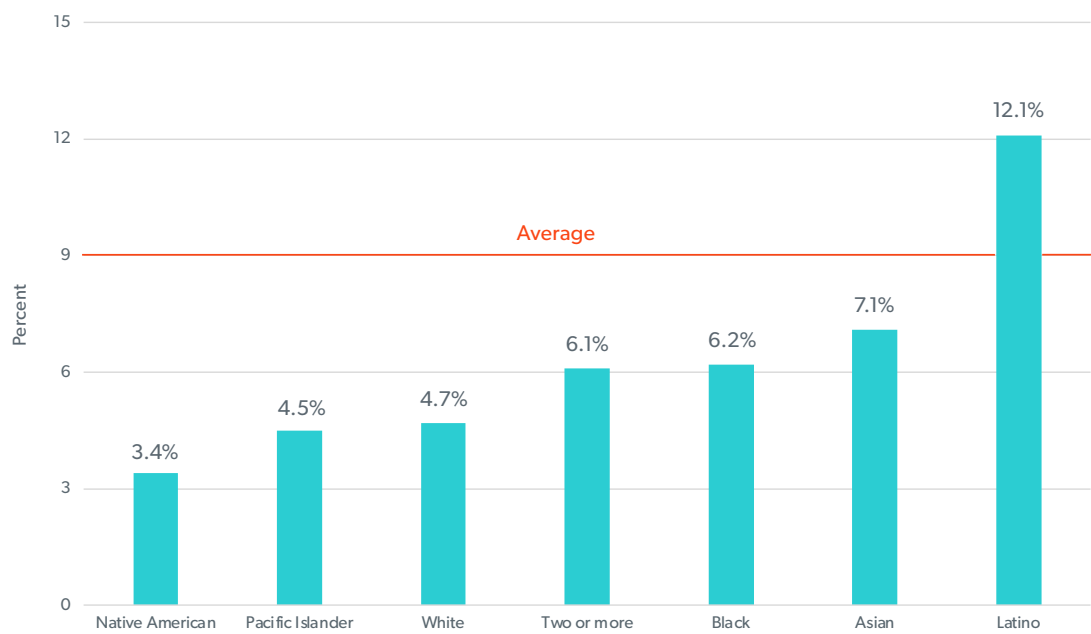
Live Births by Race and Ethnicity in San Bernadino County, 2018



Source: [County of San Bernardino, Department of Public Health analysis of California Department of Public Health, Center for Health Information and Statistics, Birth Statistical Master File](#)

CS is preventable with routine care, but coordinating care for pregnant patients who are vulnerable due to socioeconomic issues and risk factors can be difficult. In San Bernardino County, where the median income lags the state and nation, and 43% of households speak a non-English language as their primary language, pregnant women diagnosed with syphilis are likely to experience significant barriers to accessing care, including homelessness, language barriers, drug use, and lack of transportation.¹ If a pregnant mother diagnosed with syphilis does not receive timely treatment, the impact of CS on the baby can be severe, ranging from prematurity, meningitis, and brain and nerve problems to stillbirth or death.² Substantial resources are required to coordinate testing, treatment, and follow-up for infants with CS.

Latino Residents Have Highest Proportion Uninsured
Uninsured by Race/Ethnicity in San Bernardino County, 2019



Source: [County of San Bernardino, Department of Public Health analysis of California Department of Public Health, Center for Health Information and Statistics, Birth Statistical Master File](#)

Proactive opportunities for prevention of CS include early maternal screening and adequate treatment, but facilitating timely communication of information between public health agencies and health care providers is a major challenge, often resulting in inadequate treatment prior to and after delivery of the newborn. Some vulnerable pregnant patients become unreachable and lost-to-follow-up; delivery at local birthing hospitals may be the only opportunity for medical care and intervention. Others may be diagnosed late in pregnancy, and neonatal health interventions are needed immediately post-delivery. Further complicating healthcare coordination, SBCDPH may not be notified until days after discharge from the hospital, creating critical missed opportunities for early treatment and medical intervention.

¹ <https://indicators.sbcounty.gov/income/overall-poverty>; <https://datausa.io/profile/geo/san-bernardino-county-ca>

² <https://www.cdc.gov/std/syphilis/stdfact-congenital-syphilis.htm>



"California counties have a huge opportunity to leverage health data exchanges, like Manifest MedEx, for accurate, actionable data to support public health goals, address health inequities, and improve health outcomes."

– Joshua Dugas, Director, San Bernardino County Department of Public Health

Solution

SBCDPH has been a long-time participant and advocate of Manifest MedEx (MX) since 2017. Their teams have leveraged MX's tools for various use cases within public health clinics and contact tracing.

In 2021, SBCDPH implemented an innovative pilot program to close CS care gaps and connect with a patient panel of pregnant women diagnosed with or exposed to syphilis by using MX Notify – real-time hospital admission, discharge, and transfer (ADT) notifications. Initially, one of the objectives of the pilot was to enable earlier intervention at the emergency department (ED), where pregnant mothers are more likely to seek care prior to labor and delivery, to ensure the completion of syphilis testing and treatment. Patients with high levels of social vulnerability and lack of prenatal care may seek medical care more frequently in the ED.³ However, RN case managers also received notifications when patients were admitted for labor and delivery, which allowed the CDS team to coordinate testing and treatment with hospital care teams for the mother and newborn prior to the discharge.

In addition to helping reduce CS, the real-time notifications delivered through MX Notify eliminated the need for RN case managers to call local hospitals to track deliveries — saving an average of 30 to 60 minutes per case. Additionally, with MX Access, RN case managers were able to view the patients' longitudinal records, including hospital data, such as labs, progress notes, and any appropriate medications and treatment, to coordinate care and provide supporting documentation as required of CDS by the California Reportable Disease Information Exchange (CalREDIE).



MX Notify and MX Access help San Bernardino County take preventative action much faster than traditional methods of data exchange, like fax or email, between hospitals and public health departments, improving their efforts to control CS and saving valuable time. With earlier intervention and close coordination between county and community health providers, pregnant patients can gain access to culturally sensitive healthcare treatment as well as critical pediatric care for their newborn, helping to close health equity gaps.

The San Bernardino County Communicable Disease Section is currently expanding the application of MX Notify to additional communicable diseases, including early and latent syphilis cases, HIV, and latent tuberculosis patients, with the hope that this use case will expand not only within San Bernardino but throughout the state and the country to improve communicable disease outcomes on a large scale.

³ <https://www.healthcarefinancenews.com/news/suburban-poor-uninsured-turn-emergency-rooms-care>

For more information on how counties can use MX to monitor and control communicable diseases in vulnerable populations, please visit us at manifestmedex.org or contact us at info@manifestmedex.org.



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