

# Enhancing a “Mother-Baby” linked surveillance system for improved rapid response in California



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CATEGORY: Epidemiology and Laboratory Capacity (ELC)

CATEGORY: Enterprise Approach to Data Systems Modernization

California Birth Defects Monitoring Program (CBDMP) conducted an evaluation of their Surveillance for Emerging Threats to Pregnant People and Infants Network (SET-NET) and made investments to its technical infrastructure, workforce, and policies to improve its ability to rapidly respond to emerging threats.

The California Birth Defects Monitoring Program (CBDMP) operates California's Surveillance for Emerging Threats to Pregnant People and Infants Network (CA SET-NET), which conducts surveillance and data collection on pregnant persons and their infants affected by novel or reemerging infectious diseases. Data collection for CA SET-NET leverages CBDMP's birth defect active ascertainment model to conduct comprehensive, multi-facility medical record review of affected pregnancies. This data collection process provides comprehensive data; however, it is quite labor-intensive.



## The “What”

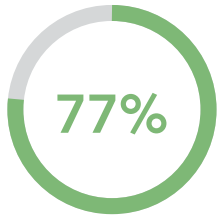
After completing data collection for the 2020 pregnancy cohort affected by COVID-19, CBDMP conducted an in-depth evaluation of its SET-NET processes through a combination of data analysis and key informant interviews: (1) the analysis compared data collected as part of CBDMP's comprehensive data collection process to information readily available from secondary data sources within the Department, and (2) key informant interviews within CBDMP with topics including data collection, data management and policy. The evaluation identified the need to maximize the output of the current workforce and refine CA SET-NET's processes to make the surveillance system further scalable in the face of ever-changing data collection needs.

Through lessons learned from the evaluation, CA SET-NET has made investments in its technical infrastructure, workforce and policies to improve its ability to rapidly respond to emerging threats. Enhancements to the surveillance system include: (1) better workforce planning by conducting linkages with fellow Department programs to predict the burden of affected pregnancies, (2) linkages with secondary data sources to pinpoint which affected pregnancies need enhanced multi-facility abstraction versus those that do not, (3) hiring a support position to focus on medical records acquisition and follow-up (one of the most time consuming tasks of active ascertainment data collection) and lastly, (4) utilizing a new data collection tool to minimize the burden and responsibilities on data management staff.



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**reduction in the acquisition and review of outpatient medical records is projected with these process changes**

### The “So What”

Ensuring timely, accurate and complete data at scale is a challenge for many surveillance systems. Through implementing lessons learned, CA SET-NET has grown

into a “living-breathing” surveillance model capable of rapid response. By removing barriers that interfere with the timeliness of data collection, refocusing the CA SET-NET workforce on tackling key data collection efforts and utilizing secondary data sources to improve the completeness of surveillance data, they have increased the speed and efficiency of the surveillance system while maintaining accuracy and completeness of the data. These process changes are projected to reduce the acquisition and review of outpatient medical records by 77%.

Furthermore, adopting data collection tools that allow for quicker modifications per data collection needs without intervention from senior data management staff expedited the process. CA SET-NET reduced the time needed for modifications to the data collection system from days to hours; similarly, it reduced the burden of cleaning and processing the data from weeks to days. The ability to operate a responsive, efficient and scalable enhanced surveillance system secondary to current CBDMP surveillance activities ensures CA SET-NET can efficiently and rapidly respond to dynamic emerging threats.


### The “Now What”

CA SET-NET continues to improve its surveillance system through continuous process improvement. They will continue to engage with their workforce to identify areas to streamline processes and reduce barriers to timeliness, accuracy and completeness of surveillance data. In addition, they will leverage

the Department’s expansions of public health information systems that may further improve the timeliness and completeness of our surveillance data. They will continue to engage with those partners to realize how these investments can improve the future of “mother-baby” linked surveillance.

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