



REGISTRY OF VITAL RECORDS AND STATISTICS

Department of Public Health

Case Study: Using Vital Records to Improve Maternal and Child Health

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Birth certificates collected and managed by the Massachusetts Registry of Vital Records and Statistics not only provide an official record of a child's birth, they are also enormously important for the purpose of public health research and analysis.

A Massachusetts birth certificate contains over 700 data points including mother's age, body mass index (BMI), and health conditions like diabetes. Birth records also include type of delivery (such as a C-section), any delivery complications, race/ethnicity, parent education level, and more. They are a rich source of information, widely used to assess newborn and maternal health outcomes.

Fifi Diop and Sarah Stone use these data every day as part of their work in the Bureau of Family Health and Nutrition at the Massachusetts Department of Public Health.

"Our division at DPH is a data-hub," says Fifi. "And birth and death records are the core of our work to examine maternal and child health. We use the data to conduct all kinds of analyses critical to helping track the health of mothers and children across the Commonwealth."

One of the most robust ways the records are used is to create the Pregnancy to Early Life Longitudinal, or PELL, data system which links each infant's birth certificate to the mother's hospital discharge record, enabling over time, a better understanding of their health outcomes.

Birth records are also used for PRAMS, the Pregnancy Risk Assessment Monitoring System, a collaboration with the US Centers for Disease Control and Prevention that surveys new parents about prenatal care, life stressors, effects of racism, social supports, father's support, and smoking and substance use. Survey answers inform a range of state maternal and child health programs and help inform policy.

"We use the data in all kinds of ways, including to help inform health system improvements," says Sarah. "For example, birth data are used to help us monitor communities with higher teen birth rates, and the findings helped pregnancy prevention programs secure funding."

DPH also uses birth records to assess enrollment of infants in Early Intervention programs and participation in the state's WIC program. Infant death records have been used to produce informational packets for communities with higher rates of infant death and notify local health care providers.

"DPH has a long history of working with the Registry to help improve health outcomes for families," says Fifi. "We value our partnership tremendously and consider it the keystone for our work to improve maternal and child health."

Learn more at mass.gov/RVRS