

Maternal Deaths among California Women with Sickle Cell Disease 2004-2014

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OBJECTIVE: To use a longitudinal sickle cell disease surveillance system to examine the association between sickle cell disease (SCD) and maternal death in California and to describe these maternal deaths.

METHODS: A retrospective, population-based cohort study analyzed emergency department (ED) and hospitalization data for years 2004-2014 on women between ages 15-45, including 1,829 women who met the program's stringent case definition for SCD. Hospital discharge data were queried to find maternal deaths, defined as women with ICD-CM-9 codes for delivery (V27.X) and disposition codes indicating death during the same admission. The comparison groups for comparable maternal mortality rates were all women and all Black women. For women with SCD who died during a delivery admission, we further reviewed death records and prior ED and hospital inpatient records and described their history.

RESULTS: Maternal death rate for SCD was 629 per 100,000 (n = 4 of 636 deliveries), compared to 12 per 100,000 deliveries among all Black women and 6 per 100,000 deliveries in the general population.

CONCLUSION: Women with sickle cell disease in California are at increased risk for maternal mortality compared to other populations. Future research should incorporate surveillance data as well as genotype and other clinical information to provide further insight into the causes of death for mothers with SCD. It should particularly explore whether lack of access to appropriate, multidisciplinary health care facilities is a factor in those deaths, in order to improve management of cases and lower maternal mortality rates among this population.