

First Candle: Big Data and New Findings: Highlights from 2024 Seattle Children's and Microsoft SIDS Summit

Alison Jacobson



Saving babies. Supporting families.

First Candle's efforts to support families during their most difficult times and provide new answers to help other families avoid the tragedy of the loss of their baby are without parallel.

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This year's Summit gave medical researchers a chance to share findings that included an announcement of genome sequencing

of SIDS infants using a database funded by the Aaron Matthew SIDS Research Foundation. The Foundation was created by John and Heather Kahan to honor the memory of their son. John Kahan is a former Microsoft Vice President and Chief Data Analytics Officer, and a Summit founder.

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This genetic knowledge suggests to researchers that detecting SIDS risk might be possible through genetic testing at birth. In a soon-to-be published study, researchers identified novel genes associated with Sudden Unexplained Infant Deaths (SUID), which includes SIDS. Some genes factor into detecting and responding to low levels of oxygen in body tissues, which could increase the mortality risk caused from sleeping face down.

Researchers are also hopeful for future preventive treatments for children exhibiting SIDS risks. Lead researcher Juan M. Lavista Ferres PhD, MS, Microsoft Chief Data Scientist and the Director of the AI For Good Lab, used big data to estimate that 22% of Sudden or Unexplained Infant Deaths in the U. S. can be directly attributed to maternal smoking during pregnancy, which perhaps could be reduced through education.

Other research included a connection between birthweight and stillbirth risk (University of Auckland/Microsoft), and emerging evidence of the adverse impact of vaping on the developing fetus and emerging epidemiological data of its association with preterm birth, a risk factor for SIDS. (1)

Advancing safe infant care awareness was also part of the Summit, and First Candle outlined its three-year project funded by the U.S. Department of Health and Human Services. The project has

completed its first year and includes examining guidelines and policies on infant safe sleep practices to determine if they perpetuate racial disparities in infant mortality rates. The study area is within the Atlanta Perinatal Region, a 39-county area around metro Atlanta and up to and across the state's northern border.

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Initial accomplishments include the development of a multi-sector team, assessments of infant safe sleep information sources and dissemination of infant safe sleep packages.

Details of the project's first year findings will be released in the June issue of *Neonatology Today*.

References:

1. “Vaping and SIDS: The Developing Story,” Barbara M. Ostfeld, PhD, professor of pediatrics, Rutgers Robert Wood Johnson Medical School and program director of the SIDS Center of New Jersey.

Disclosure: *The author is the Executive Director and Chief Executive Officer of First Candle, a Connecticut-based not-for-profit 501(c3) corporation.*

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About First Candle

First Candle, based in New Canaan, CT, is a 501c (3) committed to eliminating Sudden Unexpected Infant Death while providing bereavement support for families who have suffered a loss. Sudden Unexpected Infant Death (SUID), which includes SIDS and Accidental Suffocation and Strangulation in Bed (ASSB), remains the leading cause of death for babies one month to one year of age, resulting in 3,500 infant deaths nationwide per year.