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The Vermont Safe Infant Sleep Project: Evaluation of an Online Learning Module

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Background

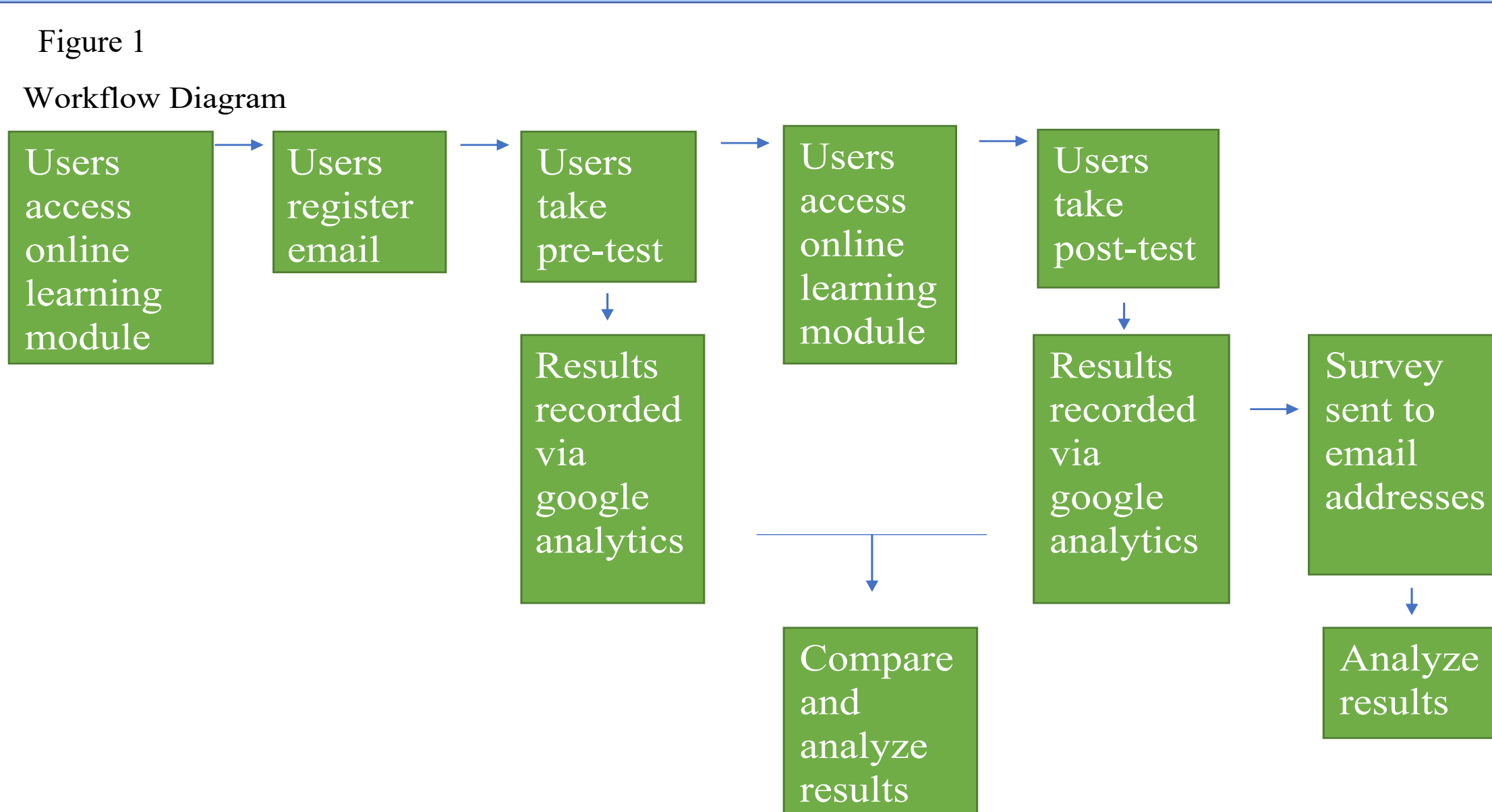
The Vermont Safe Infant Sleep Project is a multi-phased effort focused on the development, implementation, and standardization of evidence-based best practice recommendations regarding safe infant sleep through an online learning module for registered nurses and maternal child health educators working with newborn infants in Vermont birthing hospitals.

- Sudden unintended infant death syndrome (SUIDS) is a leading cause of mortality for infants 28 days to 11 months. Of those deaths, accidental suffocation and strangulation in bed (ASSB) deaths are currently the third leading cause of postnatal deaths in the U.S., with a rate of 22.1 deaths per 100,000 live births in 2018 (CDC, 2021).
- 86.3% of Vermont infants were placed on their backs to sleep (Vermont Infant Safe Sleep: Environmental Scan, May 2017)
- 1 in 4 or 25% of Vermont families practice bed-sharing (Vermont Infant Safe Sleep: Environmental Scan, May 2017)

Project Aims

- Global aim: To influence the infant mortality rate by reducing the incidence of ASSB for Vermont infants by 5% over the next five years.
- Primary aim: To evaluate a standardized online learning module for registered nurses and for maternal-child educators who work with infants and families in the state of Vermont.
- The secondary aim: To evaluate the ease of use of the online learning module.

Methods

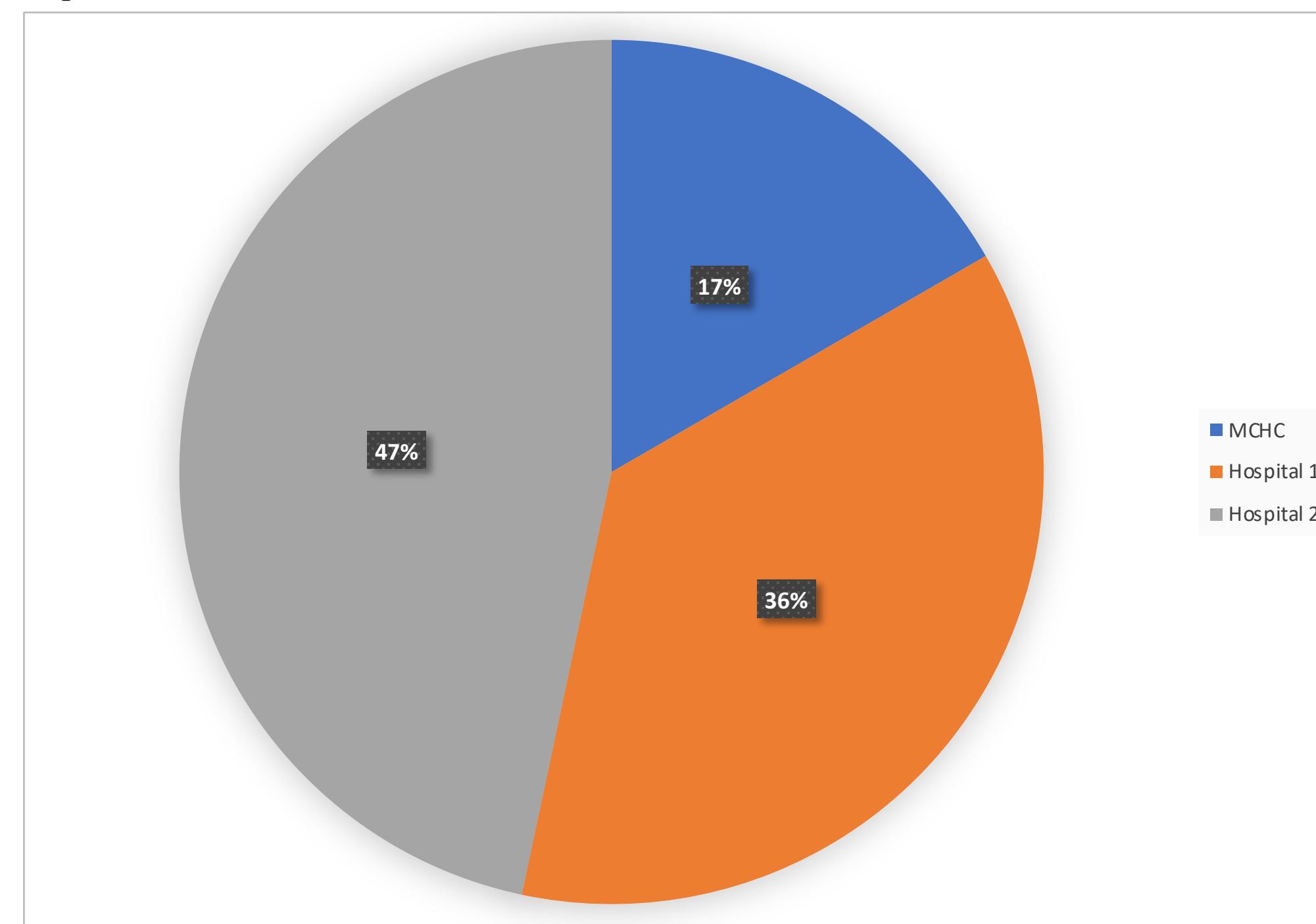


Note: Users consented to participate via email and accessed the module via a password protected website

Results

This project utilized a mixed methods approach to collect data from 30 individuals including, maternal child health coordinators (MCHC) working with a state agency, and labor and delivery nurses working in two Vermont community hospitals. Participants registered for and completed the online learning module with a pre-test (n=30) and post-test (n=25) and an online survey (n=5) to evaluate module's ease of use.

Figure 2
Cohort Participant Distribution



Note: distribution of participants by cohort

Figure 3
Qualitative Survey Results Word Cloud



Note: The online survey measured easy of use and general reception to the online learning module

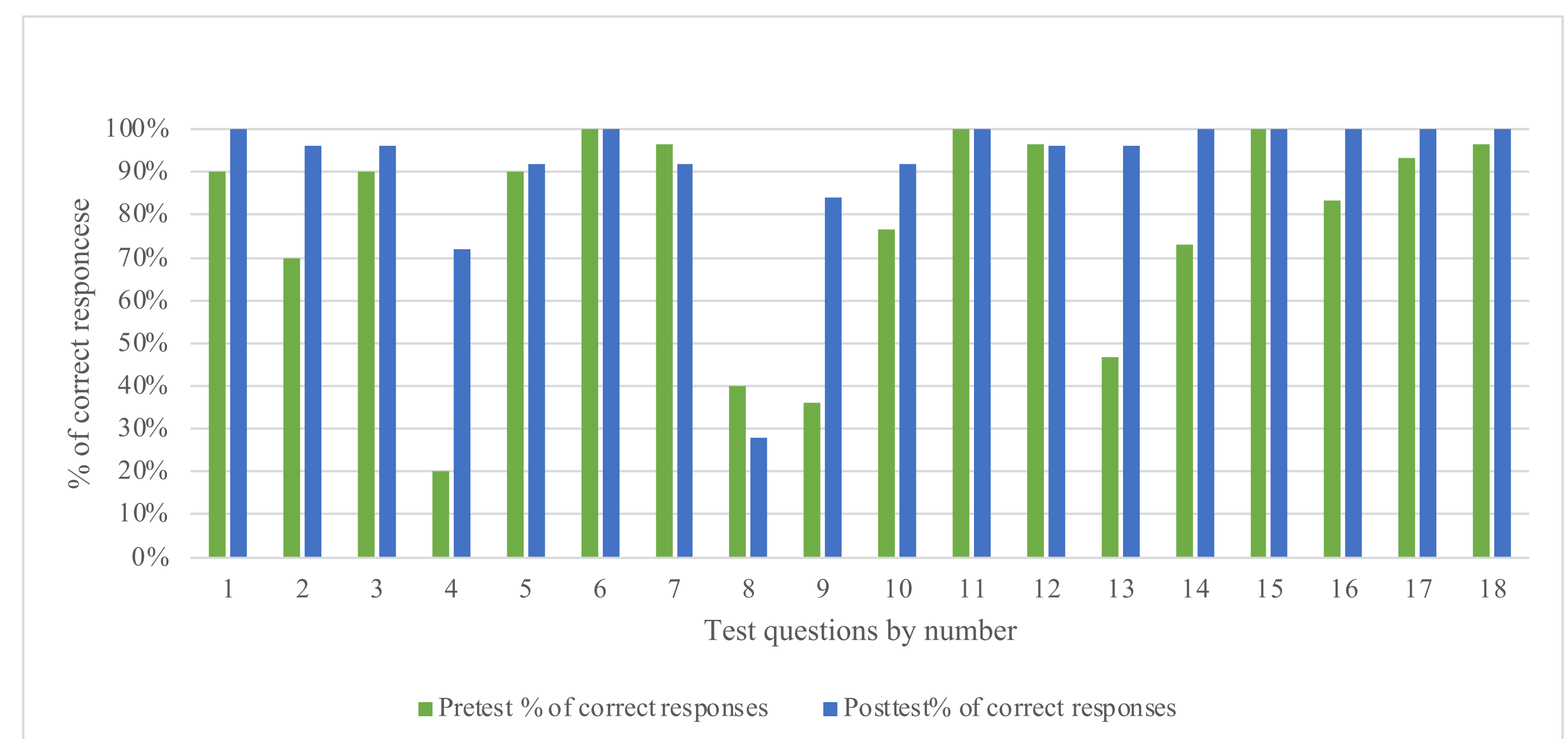
Frequently Missed Questions:

Question	% Correct Responses
Which of the following types of Sudden Unexpected infant deaths has the highest death rate?	20%
Based on the Vermont data shared in this education, what is the percent of Vermont newborns not sleeping in a supine position?	40%
Approximately, what percent of families in Vermont bed share with their newborn?	36%
Which of the following guidelines from the AAP (American Academy of Pediatrics, 2016) is not Level A evidence?	46%

- Pre-test scores averaged 14/18 or 77% questions answered correctly.
- Post-tests averaged a score of 16.4/18 or 91% questions answered correctly.
- 17% post-test score improvement after module completion.

Figure 4

A comparison of the % of correct responses before and after the online training module



Note: pre/post-test comparison by test question

Conclusions

- Nurses and MCHS's have a knowledge gap around the causes of SUID, with 80% of participants answering incorrectly prior to the module.
- Nurses and MCHS's have a knowledge gap about Vermont specific data with 58% of participants missing these questions prior to the training.
- The Vermont Safe Infant Sleep online learning module has demonstrated its ability to identify learning deficits, close educational gaps, and increase baseline knowledge. A 17% improvement in scores was observed post training.
- The online learning module had a 100% positive reception, results indicate ease of use and flexibility for the professionals completing the module.

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