



Memorandum

#16-006

TO: WIC Regional Directors
WIC Local Agency Directors

FROM: Amanda Hovis, Director
Nutrition Education/Clinic Services Unit
Nutrition Services Section

DATE: January 15, 2016

SUBJECT: Safe Formula Preparation Update

The purpose of this memo is to provide background information on powdered infant formula and upcoming changes to formula preparation guidelines. Texas WIC will be implementing formula preparation guidelines consistent with WHO/CDC guidelines in the Fall of 2016. Further guidance and training will be forthcoming.

Background

Powdered infant formula (PIF) is a non-sterile product and has been associated with serious illness and death in infants due to bacterial infections. During production, PIF can become contaminated with harmful pathogens, such as *Cronobacter* (formerly called *Enterobacter sakazakii*), *Salmonella enterica*, and others. Manufacturers report that, using current methods, it is not possible to eliminate all germs from PIF in the factory. PIF can also be contaminated after the containers are opened.

Cronobacter illness is very rare, but it is often deadly in young infants with estimated mortality rates as high as 80 percent. It usually occurs in the first days or weeks of life. The Centers for Disease Control and Prevention (CDC) was informed of a total of 13 cases in 2011 but reporting isn't required in any state except Minnesota so it is likely under reported. Two cases of *Cronobacter* were reported in Texas in November. Both infants had consumed powdered infant formula but it is not known at this time whether the powdered infant formula was contaminated with *Cronobacter sakazakii* nor what kind of formula it was.

Salmonella can cause mild to severe gastroenteritis as well as severe disease like bacteremia and meningitis and affects Black infants at a higher rate than other racial/ethnic groups. Infants are more likely than the general population to have severe illness or death from the infection, and the risk is greatest among preterm and immunocompromised infants. The average annual incidence rate of *Salmonella* infection in U.S. infants has been estimated to be 139 cases per 100,000, a rate that is 8 times higher than that of the general population.

The World Health Organization (WHO) released safe formula preparation guidelines in 2007 in an effort to eliminate potential harmful pathogens in PIF. The WHO guidelines instruct families to mix boiled water with PIF while it is still very hot to kill potential bacteria and then cool the formula to a safe feeding temperature. The CDC released safe formula preparation guidelines in alignment with the WHO guidelines in 2011. Baby-Friendly U.S.A. requires hospitals to teach safe formula prep consistent with WHO/CDC

guidelines to all formula feeding moms and Baby-Friendly hospitals are on the rise. Currently, at least 77% of Texas births are occurring in Baby-Friendly hospitals or hospitals working on Baby-Friendly designation. The WHO/CDC safe formula prep instructions differ from instructions on powdered formula labels and formula manufacturers have no plans to change their labels. Texas WIC will be implementing formula preparation guidelines consistent with WHO/CDC guidelines in the Fall of 2016. Further guidance will be forthcoming.

What to Expect

Because Baby-friendly hospitals are already instructing formula-feeding moms using the new guidelines, you may get questions about it. Please assure participants that the formula preparation instructions they received from the hospital represent the safest way to prevent infection if using PIF.

If you have questions, please contact Tracy Erickson at tracy.erickson@dshs.state.tx.us or Sandy Brown at sandy.brown@dshs.state.tx.us.