temperature measurement. Although a slightly statistically significant difference was found between TAT and axillary temperatures, the difference was deemed clinically insignificant, and the unit has adopted TAT as their standard of care for healthy newborns. Similarly, Lee, Flannery-Bergey, Randall-Rollins, et al (2011) found that TAT and axillary temperatures did not differ significantly, and they concluded that TAT measurements are a reasonable alternative to axillary temperature for stable, afebrile infants in the neonatal intensive care unit. A benefit of this type of temperature measurement is that it is not necessary to undress the newborn. In most studies regarding newborn temperature, the glass mercury thermometer is the gold standard against which other methods are compared. There is no universal agreement on placement times for glass thermometers, although 3 minutes for rectal temperature and 5 minutes for axillary temperature are considered to be adequate. In 2007, the American Academy of Pediatrics, Committee on Environmental Health reaffirmed its statement recommending that mercury thermometers no longer be used in clinics and homes to decrease mercury exposure hazard (Goldman, Shannon, American Academy of Pediatrics, et al, 2001).

Nurses must be cognizant of the many variables involved:

Site—axillary, rectal, tympanic, skin

Environment—radiant warmer, open crib, incubator, clothing, or nesting

Purpose—fever, possible sepsis (in which case the temperature may be lower than normal in newborns), and thermoregulation in the transition phase

Instrument—electronic, digital, infrared

Nurses must also be able to make clear clinical decisions based on accurate and objective data. Further research is needed to perfect thermometers that accurately reflect infants' core temperature to effectively plan nursing care and maintain a stable temperature.

Pulse and respirations also vary according to the periods of reactivity and the infant's behaviors but are usually in the range of 120 to 140 beats/min and 30 to 60 breaths/min. Both are counted for