- All children should be measured at least twice (ideally three times) during each encounter. The measurements should agree within 0.5 cm (ideally 0.3 cm). Use the mean value. If the variation exceeds the limit of agreement, measure again and use the mean of the measures in closest agreement. If none of the measures are within the limit of agreement, then (1) have another measurer assist, (2) check technique, and (3) consider another education session.

- Children between 24 and 36 months of age may have length and/or height measured. Standing height is less than recumbent length due to gravity and compression of the spine. Plot length measurements on a length curve and height measurements on a height curve to avoid misinterpreting the growth pattern.

Apply the Evidence: Nursing Implications

Growth is well established as an important and sensitive indicator of health in children. Abnormal growth is a common consequence of many conditions; therefore, its measurement can be a useful warning of possible pathology. In a study of 55 primary care practices within 8 geographical areas in the United States, only 30% of children were measured accurately due to faulty instruments and casual techniques; an educational intervention increased measurement accuracy to 70% (Lipman, Hench, Benyi, et al, 2004). Measurement error influences growth assessment and can result in delayed evaluation and treatment of some children, as well as apparent growth deviation in others who are actually growing normally (Foote, Brady, Burke, et al, 2011). There is good evidence with strong recommendations for using length boards and stadiometers, the described measurement techniques, and the quality control measures. There is fair evidence to recommend procedures for children with special needs (Foote, Brady, Burke, et al, 2014; Lohman, Roche, and Martorell, 1988).

Quality and Safety Competencies: Evidence-Based Practice*

Knowledge

Differentiate clinical opinion from research and evidence-based