AN EBP TO REDUCE UNNECESSARY CT SCANS IN CHILDREN WITH HEAD INJURIES
Won Joo Yoon, MSN, FNP  and Tova Zarchi, MSN, FNP*
Faculty Advisor: Veronica Arikian, PhD, RN

PROBLEM
❖ Traumatic brain injury (TBI) is a leading cause of death & disability in children
❖ Most common causes of injury: falls & motor vehicle accidents
❖ Bimodal age distribution: including children ages 0-3 & ages 15-18
❖ Estimated one million children undergo unnecessary CT scans every year in the USA

BACKGROUND
❖ Computerized tomography (CT) is used to assess TBI severity & guide treatment in the first 24 hours post-injury
❖ CT is not recommended for all head traumas
❖ CT delivers doses of ionizing radiation 100-500 times higher than conventional radiography
❖ Ionizing radiation is linked to impaired neurodevelopmental outcomes and increases the risk of malignancy

PURPOSE
❖ To reduce unnecessary use of CT scans for assessing pediatric head injuries by using an evidence-based decision tree developed by PECARN

INTERVENTION
❖ **Staff education** info sheet regarding widely accepted (NIH, AAP, ABIM, ACEP) PECARN Head CT Rule
❖ **In-service** education classes
❖ **Posters** in the ED

METHOD
❖ **Design:** descriptive, comparative
❖ **Convenience sample:** HC providers caring for children with closed head traumas in the ED
❖ **Setting:** ED in large urban medical center
❖ **Evaluation:** pre & post test of reported practices & attitudes regarding tool

IMPLICATIONS
❖ **If successful:** PECARN Head CT Rule will be routinely used and thus reduce costs & radiation exposure
❖ **If not successful:** Additional education & interventions may be needed

REFERENCES
1 Kuppermann et al., 2009
2 Dewan, Mummareddy, Wellons & Bonfield, 2016
3 Miglioretti, Johnson, & Williams, 2013
4 Lockie, Dalton, Oakley, & Babl, 2013