Adapting the HSOPS to Evaluate the Impact of TeamSTEPPS
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**Problem:** Changes in safety culture over time, as measured by the Agency for Healthcare Research and Quality’s (AHRQ) Hospital Survey on Patient Safety Culture (HSOPS) are frequently used to evaluate the impact/results of patient safety interventions. However, the HSOPS does not measure variations in knowledge and adoption associated with these interventions.

**Evidence:** Implementation strategies and adoption rates of interventions vary within and across hospitals. Consistent with this variability, Kirkpatrick’s Taxonomy provides a model to evaluate training at four levels: learner reactions, knowledge, behavior, and results.

**Strategy:** Adding intervention specific items to the HSOPS allows an organization to interpret change in HSOPS scores in the context of training and implementation effectiveness.

**Practice Change:** We added ten items specific to the TeamSTEPPS™ (Team Strategies and Tools to Enhance Performance and Patient Safety) program to the HSOPS. One item measured experience in teamwork training, four items measured knowledge of TeamSTEPPS tools, and five items measured perceived adoption of the tools.

**Evaluation:** We surveyed 3,351 hospital employees from 37 hospitals using the expanded HSOPS. Twenty-four of the 37 hospitals participated in a TeamSTEPPS training program that began 18 months prior to survey administration.

**Results:** HSOPS scores varied significantly by level of knowledge and perceived adoption of TeamSTEPPS behaviors. Added survey items discriminated between survey respondents based on three levels of training (p<0.0001). The items were internally consistent: Chronbach’s Alpha = 0.71 for the four knowledge items and 0.83 for the five adoption items.

**Recommendations:** Organizations should measure intervention specific changes in knowledge and behaviors when using the HSOPS to measure the impact of a patient safety intervention.

**Lessons Learned:** Our ten item addition to the HSOPS is a valid and reliable tool to assess changes in employee knowledge and behavior as a result of TeamSTEPPS—a fundamental patient safety intervention. Intervention specific items added to the HSOPS can assist multiple stakeholders to understand how and why patient safety interventions affect safety culture.

**Bibliography:**