

## **PRELIMINARY FINDINGS AND LEARNER SATISFACTION (NURSE AND PARENT) OF A SCHOOL NURSE ONLINE MODULE – STUDENT ASTHMA LITERACY PROGRAM**

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**Background:** “Teaming Up for Asthma Control” (TUAC) is designed to improve asthma outcomes for children in grades K to 6. TUAC is based on IMPACT Asthma Kids©. School nurses are trained by standardized online modules and given essential resources and equipment to apply Expert Panel Report 3 guidelines (EPR3).

**Methods:** TUAC incorporates a six week, pre–post evaluation. Interventions include multimedia asthma literacy training at school, inhalation instructions with an In Check Dial™, identification of students’ inhaler medication by color chart, a take-home activity workbook and multimedia program for families, and ICS Star Chart© to improve adherence. Assessments include a validated functional impairment scale, forced expiratory volume in one second (FEV1), inhalation technique, passive smoke exposure and inhaled corticosteroid (ICS) adherence. School nurses and parents were asked to evaluate the program.

**Results:** Eighty-seven children average age 9 years participated in TUAC evaluation (Spring 2011). Half were Medicaid beneficiaries. Two thirds of the children identified by school nurses had “not well” or “very poorly” controlled asthma. Pre-post mean FEV1 for students increased from 80.9% of predicted to 92.8%, an increase of 14.7% ( $p < .0001$ ). Student-reported impairment declined ( $p < .0001$ ). Pre/post FEV1 improvement correlated with decreasing Functional Impairment Score ( $p = 0.0025$ ). ICS use did not improve. Student-reported smoke exposure scores declined ( $p < .0005$ ). Inhalation effort for metered dose inhaler (MDI) improved ( $p < .0001$ ). Ninety-one percent (21/23) of school nurses who participated would recommend TUAC to other school nurses. Of 178 parents 93% would recommend TUAC to other families with children who have asthma.

**Conclusions:** TUAC was found to improve FEV1 and decrease asthma impairment for students. These preliminary findings have prompted further development and protocols (expert interpretation, reassessment, and guided communication with the medical home) to improve asthma control. Almost all participants (school nurses and parents) would recommend TUAC to others.