SBIRT Training Improves the Documentation of Screening in Pediatric Outpatient Settings
Sandra Burge PhD, Shruthi Vale MS, Glenn Malone MS, Suyen Schneegans MA, Nick Bastian MPH, Nancy Amodei PhD Janet F. Williams MD
The Departments of Pediatrics and Family and Community Medicine at The University of Texas Health Science Center, San Antonio, Texas

Introduction
Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidence-based approach to early intervention for persons at risk for substance use disorders. 

Project S-START’s (SBIRT-South Texas Area Residency Training) overall purpose is to expertly train a cadre of South Texas area resident physicians in conducting regular and effective SBIRT practices to detect and manage patients at risk for substance use disorders.

Project S-START is a 5-year multidisciplinary training curriculum which targeted 625 resident physicians from six medical specialties across South Texas: Pediatrics, Family Medicine, Internal Medicine, Surgery, Psychiatry and Obstetrics/Gynecology.

In addition to enhancing knowledge of and attitudes about SBIRT practices during residency, we examined whether training efforts led to increased documentation of SBIRT practices in patient medical records.

Hypothesis
Compared to the 12-month period prior to SBIRT training, pediatric resident physicians will demonstrate a higher level of SBIRT documentation during the 12-month period after SBIRT training.

Methods
In Year 1 of Project S-START, 42 pediatric residents were trained in SBIRT practices. The training modules included readings, lectures, and small group discussions in the outpatient setting. SBIRT practices were reinforced through reminder pocket cards, changes to the medical record to facilitate SBIRT practices and documentation, and additional curricular modules on inpatient services.

Pediatric medical records were reviewed by ten individuals at two time points: 12 months pre-training (N = 389) and 12 months post-training (N = 381; See Fig 1). Inter-rater reliability was established at a minimum of 70% accuracy.

Eligible records included patients 11 years or older who had at least one visit with a Pediatric resident physician within the 12-month time period of the chart review.

Figures

Figure 1: Demographics Table

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 - 12 yrs</td>
<td>159</td>
<td>134</td>
</tr>
<tr>
<td>13 - 14 yrs</td>
<td>120</td>
<td>103</td>
</tr>
<tr>
<td>15 - 16 yrs</td>
<td>78</td>
<td>97</td>
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<tr>
<td>17 - 18 yrs</td>
<td>32</td>
<td>47</td>
</tr>
</tbody>
</table>

Figure 2: Changes in substance-specific screening of patients conducted pre-training versus 12-months post-training.

Figure 3: Changes in proportion of patients screened positive for substance use pre-training to 12-months post-training.

Figure 4: Changes in brief intervention and referral to treatment pre-training vs. 12-months post-training for patients screened positive for substance use.

Results
At 12-months post-training, pediatric resident physicians significantly increased their use of SBIRT screening practices, compared to pre-training. (Fig. 2, 3)

At 12-months post-training, resident physicians were equally likely to apply brief interventions to patients who screened positive for tobacco, alcohol or drug use. At both time periods, residents documented a near-universal practice of conducting brief interventions. (Fig. 4)

Conclusions
Pediatric residents’ use and documentation of SBIRT screening increased dramatically after implementation of an SBIRT training program and reinforcing strategies in the form of pocket cards and medical record template changes.

Brief interventions were common and documented regarding patients screen-positive for tobacco, alcohol or other drug use during the time periods reviewed. This high rate may be due to physician sensitivity to all use being illegal in adolescents, multiple methods of documenting doctor-patient conversations, any documented BI ‘counting’ as BI conducted.

Previous analyses of the Project S-START has shown that strengthening SBIRT knowledge, attitudes and self-reported practices among residents from several specialties is beneficial to patient care. This analysis further supports that evidence-based curricula plus reinforcing strategies tailored to residency program culture and resources can improve and sustain SBIRT skill use. Normalizing these practices during training likely boosts the likelihood of post-training use, thus contributing to prevention of substance use, use disorders and their broad-reaching health impact.

Acknowledgement
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References