



**Presentation Title:** Using Outcome Data to Create, Sustain, and Expand a Community-Based Injury Prevention Program

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## I. Formative Evaluation – Planning

Our hospital observed a 17% increase in pediatric burn admissions over two years. A formative evaluation identified youth firesetting (YFS) as the primary etiology. Additional local and national data were reviewed and revealed: Each year youth-set fires cause hundreds of injuries, millions of dollars in damage, and are most likely to kill young children under the age of five. Some youth play with fire out of curiosity, boredom, or peer-pressure. In others, YFS is an early warning sign they are struggling with emotions, adverse childhood experiences, or other challenges. Specifically, multiple studies have documented a strong link between YFS and child maltreatment. Abuse or suspicion of abuse was identified in many of the YFS-related burn injuries admitted to our hospital. Most people are not aware that YFS behaviors can result in school expulsion or criminal charges, when in fact, children under 18 years old account for nearly 50% of arson arrests in the United States. Research shows that without appropriate intervention or if only punishment is used, youth who misuse fire are likely to do it again: a risk that greatly impacts the community and school safety. To address this identified issue, twenty years ago, our organization collaborated with a regional multi-disciplinary and multi-agency task force to develop and implement an evidence-based intervention and prevention program for YFS and arson.

## II. Process Evaluation – Implementation

The resulting “Straight Talk” program remains active today, and continues to be adapted and based on currently known best practices in YFS intervention and prevention. It uses principles of cognitive-behavioral therapy and motivational interviewing as fundamental methods to promote behavior change. This supportive, non-punitive program focuses on building decision-making skills to redirect at-risk youth positively. The group class is offered as a one-day session bi-monthly. A team of multi-disciplinary professionals teaches the class, including a trained injury/violence prevention (IVP) nurse, social worker, occupational therapist, fire service, law enforcement, burn survivor, and former youth arsonist. The program is widely utilized and endorsed by juvenile courts, law enforcement, fire departments, schools, parents, youth assistance, and social service and community agencies. There is no cost to families; funding comes from donations and small grants.

Applying a long-term strategic and comprehensive evaluation approach has led to ongoing program expansion, funding, improvements, and other beneficial opportunities. The U.S. Fire Administration highlighted straight Talk as one of only eight exemplary programs for the National Arson Awareness Week “Prevent Youth Firesetting.” The program’s proven success led to the acquisition of a \$300,000 federal FEMA grant to expand it for use by other professionals. The resulting “Sean’s Story: A National Campaign and Toolkit for Youth Firesetting Intervention and Prevention” has been formally incorporated into the curriculum at the National Fire Academy. It was disseminated to every state in the U.S. and over 40 countries globally.

### III. Impact Evaluation – Short-Term Results

Program evaluation methods utilized include: 1) Pre-class screening for YFS behaviors; 2) Completion of youth collage; 3) Immediate post-course 13-item survey; 4) Follow-ups at one month and six months post-course for YFS recidivism; 5) Review of state NFIRS data; 6) Surveillance of Emergency Department, Burn Center, and Outpatient Clinic pediatric burn injury visits. Results: Since the program's inception, there have been 119 classes with over 2,350 youth and families participating in the program. In the past three years, the post-course survey results show: 100% of respondents rate the program a 5 ("Outstanding") on a scale of 1 – 5, and 100% say the program has motivated them to practice fire safety. Open-ended survey question answers and individual youth collages reveal that over 99% show new insight into YFS and safety behaviors. Recidivism is less than 1% at one- and six-month follow-ups.

A data review revealed that YFS is being under-reported and inconsistently documented in NFIRS: During ten years, there was more than three times the number of youth in the Straight Talk program compared to YFS reported in NFIRS in our state. Hence to expand knowledge and awareness, over 130 professional development training sessions were delivered by our program staff during the past five years on best practices in YFS prevention and intervention.

### IV. Outcome Evaluation – Long-Term Results

Pediatric burn injury admissions to our hospital decreased overall by 13%, with an average of 7% of those being YFS-related. A two-year prospective study published in peer-reviewed "Journal of Trauma" demonstrated the recidivism rate for Straight Talk participants was 0.8% (less than 1 percent) versus 36% in the matched cohort group who did not attend the program. Now in its 20th year, these outcomes have been sustained and continue to be demonstrated. Ongoing data analysis has identified changing trends, and program revisions have been strategically made based on best current evidence-based practices.

#### Recommendations for others:

As with all projects, amid the successes, there are also identified weaknesses and shortcomings. A major obstacle to this project is that YFS is often minimized and underreported, leading to a general lack of awareness of the importance of proper intervention. There is also a relatively high turn-over rate in community agency contacts, which leads to low referral rates and the need for extensive ongoing professional outreach education. Over the 20-year history of the program, there have been changing patterns in burn injury admissions, YFS referrals, staffing support, families lost to follow-up, and youth not completing the class that likely impact outcome data but are challenging to demonstrate a direct cause-and-effect. Outcome evaluation was previously conducted at one-year post-intervention, but has since shortened to 6 months due to a high percentage of children/families lost to follow-up (e.g., moved without a forwarding address, changed phone numbers, no longer being seen by referring agency, etc.). A recent decrease in program referrals has been observed, with further analysis into etiology and root causes currently underway.

Other professionals interested in YFS prevention and intervention are encouraged to utilize the no-cost vetted training and resources available via national organizations, such as the National Fire Academy, National Fire Protection Association (NFPA), Sean's Story, and Youth Firesetting Information Repository and Evaluation System (YFIRES).