



# Improving Passive Smoke Exposure Screening for Hospitalized Children



UPSTATE  
MEDICAL UNIVERSITY

Pediatrics

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## Background:

Hospitalized children are more likely than other children to have passive smoke exposure (PSE). PSE is an independent predictor of poor health outcomes in pediatric patients. Adult smoking rates in our area (18.5%) are higher than the national average (13.5%). A child's hospitalization can be an opportunity to address, counsel, and provide resources for parental smoking cessation. Taking advantage of this opportunity requires PSE documentation, but only 59% of our pediatric patients were screened. Preliminary observations of the PSE screening workflow generated a secondary hypothesis that diagnosis and demographic factors were driving screening practice.

## Aim:

Global AIM: To screen all pediatric inpatients for PSE and to provide counseling and resources to the smoking parent. SMART AIM: The first phase of the study was to improve PSE documentation by 20% within 6 months.

## Methods:

We identified the PSE screening process by nurses and physicians, engaged stakeholders, and identified drivers of PSE screening performance to drive improvement. Interventions for nurses began with an education session and signs at nursing stations encouraging PSE documentation. Later, NPs and providers were provided education sessions on PSE, downstream health effects, and how to counsel on smoking cessation. Additionally, signs were placed in the providers' offices. Next, family facing signs were posted offering parents smoking cessation resources and counseling during their child's stay. Finally, PSE was added to the required nursing intake form.

- Chart review was performed by sampling the first 10 consecutive patients admitted each week from 1/1/23-11/5/23 to determine demographic data and provider documentation.
- Using Federal Income Guidelines, we determined zip codes with a medical income above \$55,500 (household size 4) as "high income" and below \$55,500 as "low income".
- PSE nursing documentation data was collected through the EMR on all pediatric patients admitted from 11/4/22-11/20/23.
- Statistical process control charts were generated to document performance and Shewhart rules were used to identify improvements meeting criteria for special cause. Pearson's chi squared tests were utilized in comparing demographic and diagnosis data.

## Interventions:

**FAMILY CENTERED CARE**

Upstate has many free, available resources designed to help our Upstate families during their stay!

**UPSTATE Golisano Children's Hospital**

**FREE NICOTINE ALTERNATIVES**

Upstate is a smoke free campus.

**WHERE?**  
Nicotine Replacement Therapy (NRT) is available in Upstate Cancer Center lobby, Golisano Tree House lobby, and the Pediatric and Adult Emergency Department (ED).

**WHO?**  
All visitors 18 and older.

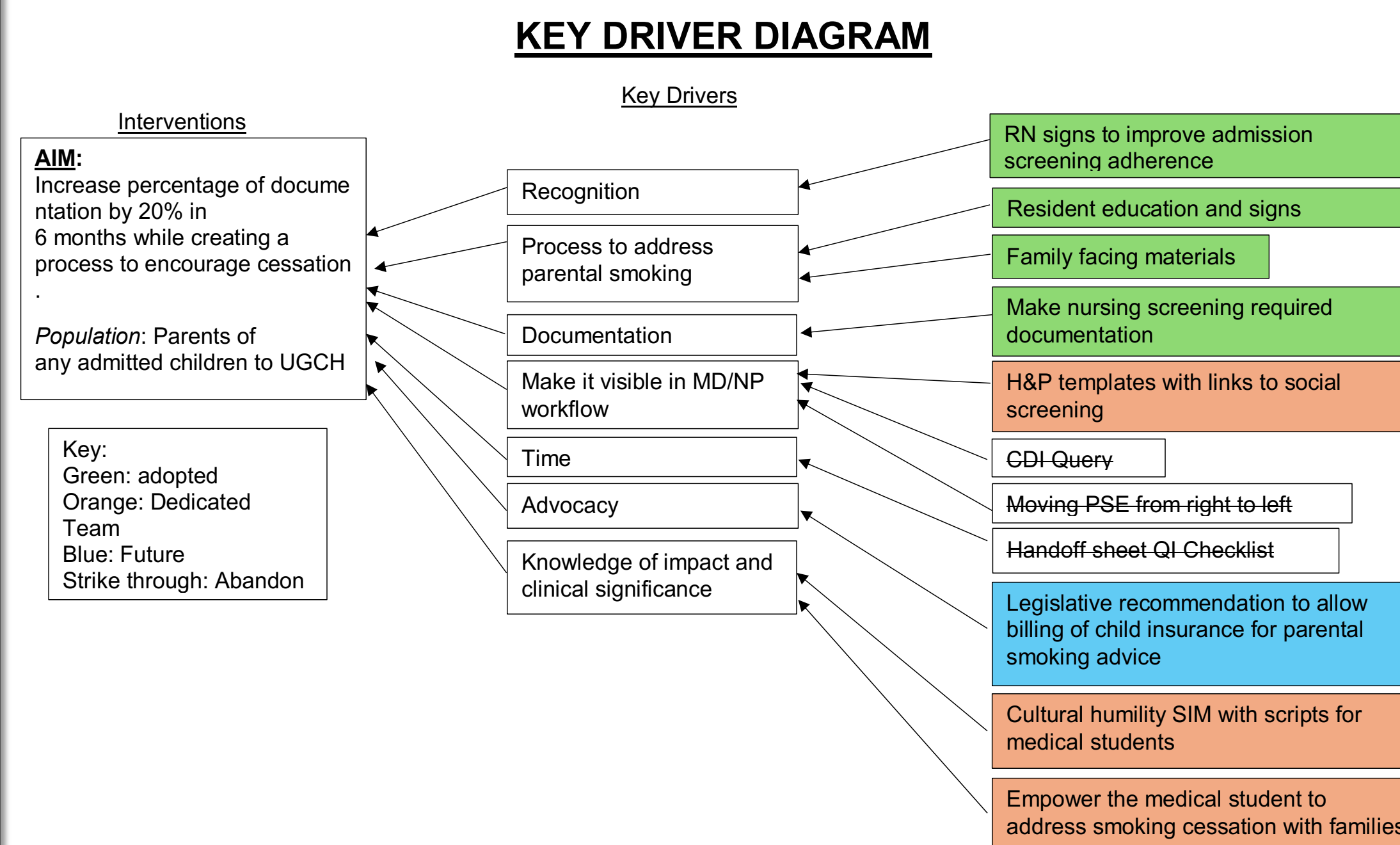
**HOW?**  
Please bring your ID to the security desk at the listed locations and the security guard will provide you with two free nicotine lozenges.

**UPSTATE'S TOBACCO TREATMENT PROGRAM**

Smoking Cessation at Upstate also offers EREE

- support group to help you achieve a tobacco free lifestyle and quit using tobacco for good.
- Brochures and contact information to the NYS smoker's Quitline.

Contact our Tobacco Treatment Team at: 315-464-3519

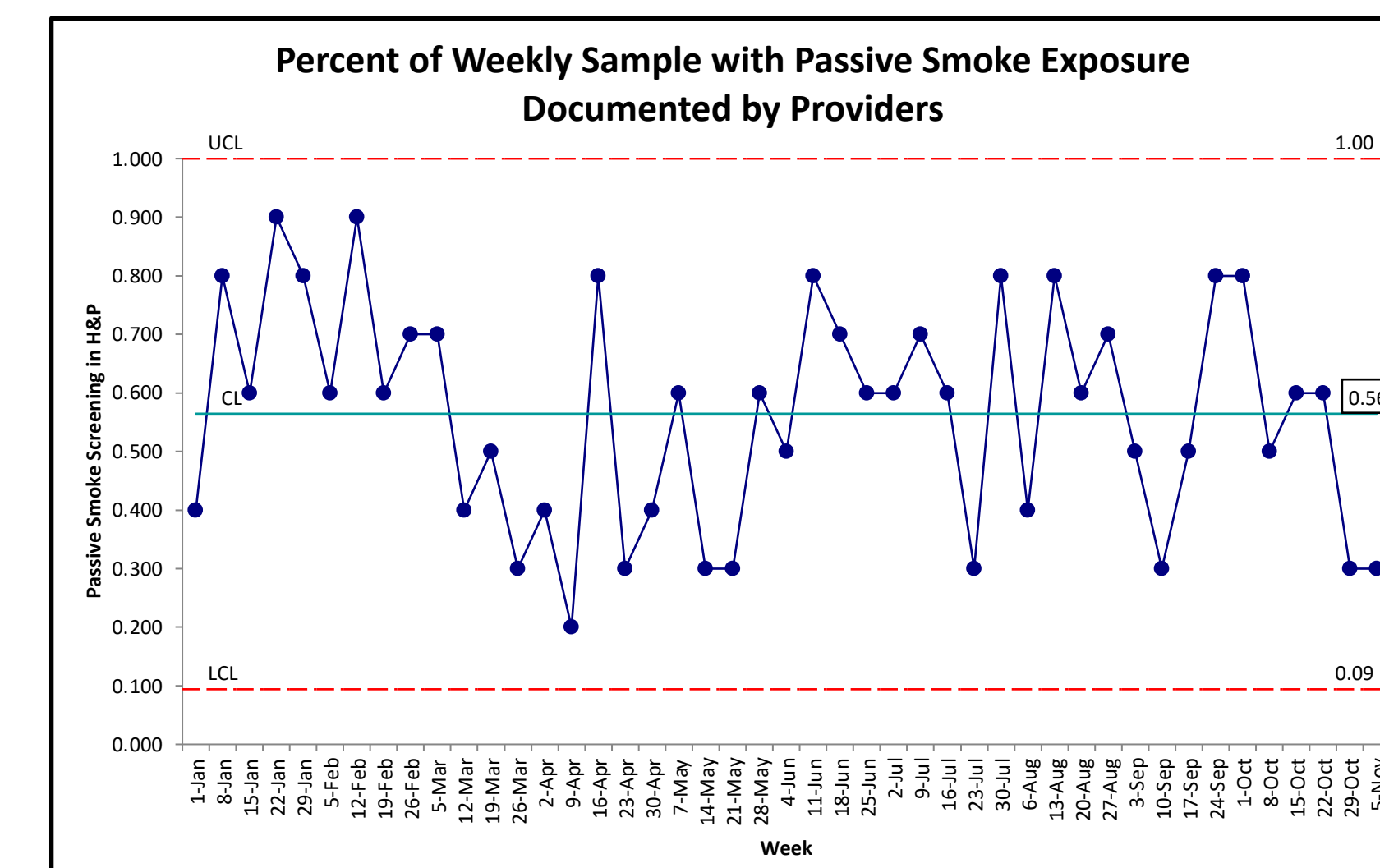
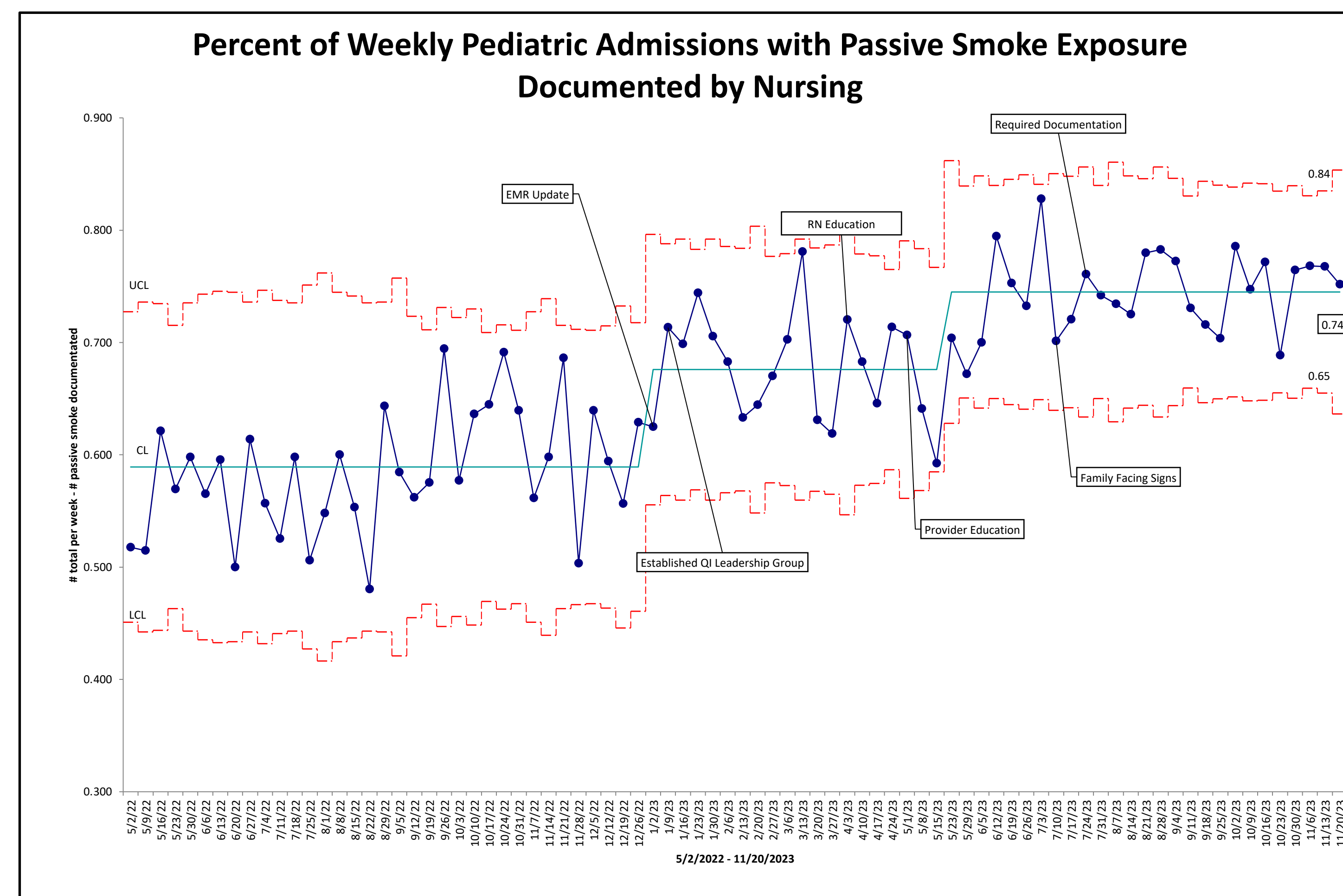


**Passive Smoke Exposure Assessment**

Follow these 4 steps to protect our pediatric patients:

1. Refer to the Handoff on Rounds:  
Ensure successful transfer of care by indicating on Quality Checklist if passive smoke exposure has been completed.
2. Add Passive Smoke Exposure to the Active Problems List  
If passive smoke information not completed on admission, be sure to click pencil next to history and add data.  
When asking about passive smoke exposure, avoid asking "in the home". This can cause inaccurate data collection.
3. Encourage Cessation in Less than a Minute:  
Follow this quick, easy script:  
1. "Do you currently use or smoke tobacco?"  
If yes:  
2. "Quitting Tobacco is one of the best things you can do for your health. I strongly encourage you quit. Are you interested in quitting?"
4. Offer Upstate's FREE NRT to any family that smokes:  
WHAT: Free Nicotine Replacement Therapy (NRT)  
WHERE: Upstate Cancer Center lobby, Golisano Tree House lobby, Pediatric and Adult Emergency Department (ED)  
WHO: All visitors 18 and older.  
HOW: Visitors must bring ID to security desk at listed locations.  
For more information on Upstate's Tobacco Treatment Team visit: <https://www.upstate.edu/hospital/health/healthcare/tobacco.htm>

## Results:



- Baseline screening rates were 59%.
- Nursing education had a sustained improvement on screening rates. Overall, screening rates improved to a sustained 74% with statistical significance
- There was no statistical improvement in provider documentation during the study period.
- We found no significant difference in screening rate based on diagnosis, minority race, or low income.

Percent of Weekly Sample Screened for Passive Smoke Exposure (1/1/23-11/5/23)				p
Respiratory Diagnosis	70%	Non-Respiratory Diagnosis	77%	0.21
Minority Race	71%	White Race	72%	0.76
Low-Income area	66%	High-Income area	75%	0.79

## Discussion:

Improvement in screening for PSE was seen after cumulative interventions to address the importance of identifying passive smoke exposure from a nursing, provider, and family viewpoint. Screening for PSE did not differ based on the child's race, admitting diagnosis, or income level. Further interventions are needed to address provider documentation of passive smoke exposure at our hospital.

Future efforts should be focused on:

- Creating H&P templates for providers
- Developing roles for medical students to document and advocate
- Cultural humility training
- Legislation efforts for cessation counseling reimbursement

## Limitations:

- Limitations:
- Electric Medical Record (EMR)
    - If nurse did not document on main screen would be unaccounted for
    - Preliminary reporting errors
  - Demographic data collection weekly samples
  - Staff turnover
  - Possible differences due to other social determinants of health
  - Does not address vaping or marijuana use

## References:

1. Merianos AL, Jandarov RA, Mahabee-Gittens EM. Secondhand Smoke Exposure and Pediatric Healthcare Visits and Hospitalizations. *Am J Prev Med.* 2017 Oct.
2. "Places: Local Data for Better Health: Compare Counties." *Centers for Disease Control and Prevention, Centers for Disease Control and Prevention (CDC).*
3. "2023-2024 Federal Income Guidelines." *New York State Department of Health.*

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