

# A Quality Improvement Project to Enhance Pediatric Primary Care Family History Collection

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## Background

- Family health history (FHH) review and assessment is a foundational component of the patient's history and is a useful guide for diagnosis, genetic testing and referral(s)<sup>1</sup>
- Literature suggests FHH-taking absent or inadequate in pediatric practice<sup>2,3</sup>
- A quality improvement (QI) collaborative<sup>3</sup> revealed increased adherence to FH creation and maintenance following QI efforts (e.g., learning sessions, access to genetics resources)

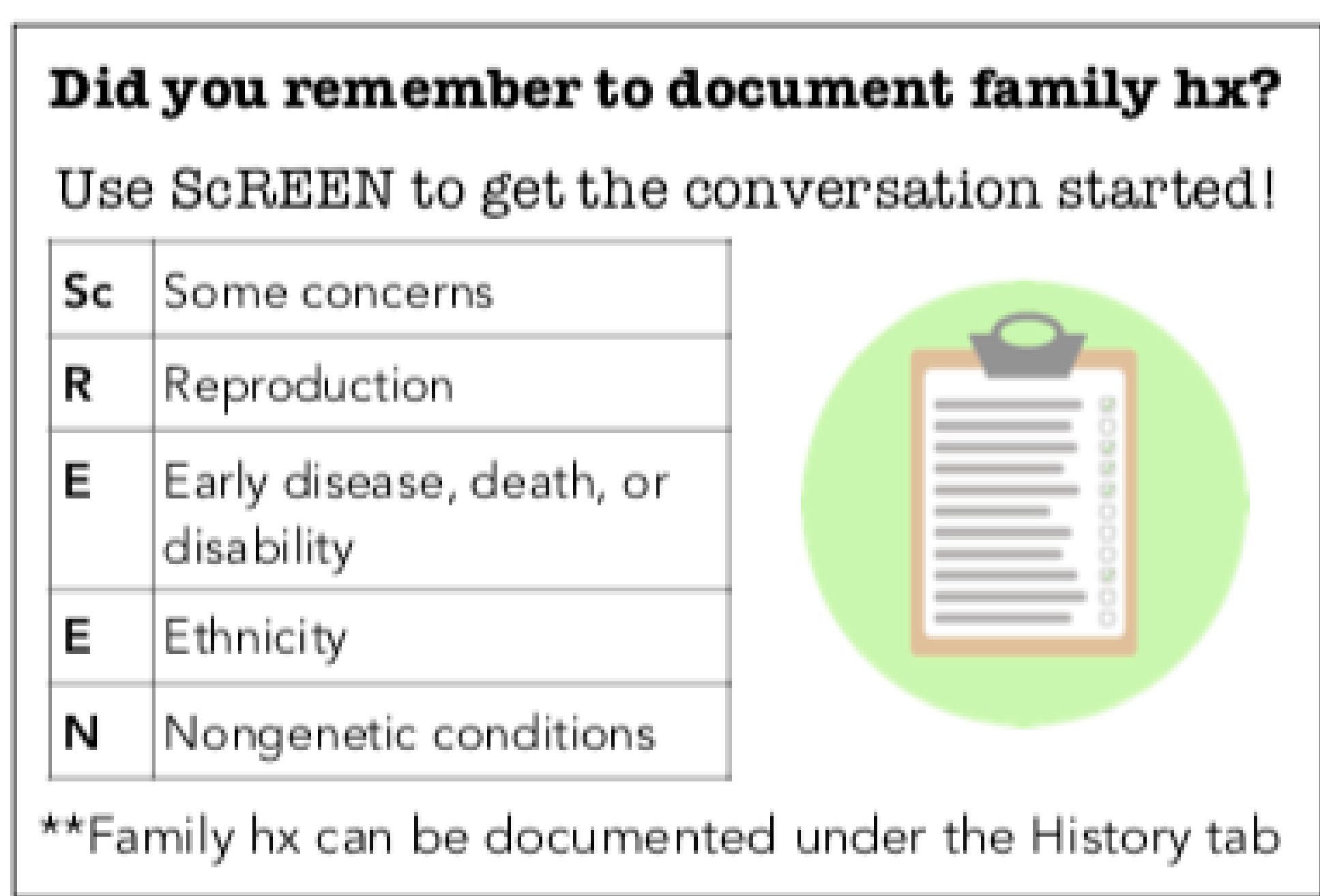
## Purpose & Aims

The purpose of this QI project is to determine whether implementing an educational intervention about pediatric FHH collection will improve pediatric residents' adherence to FHH documentation.

- Aim 1:** Increase pediatric residents' completion rate of FHH collection of newborns by 1-month well-visit.
- Aim 2:** Increase pediatric residents' knowledge and awareness of FHH and its importance.

## Methods

- Design:** Pre- and post-intervention study design over 12-week period  
**Setting:** Pediatric outpatient clinic in a large academic teaching hospital  
**Sample:** 2 convenience samples
- Pediatric residents at project site
  - Newborns seen at project site



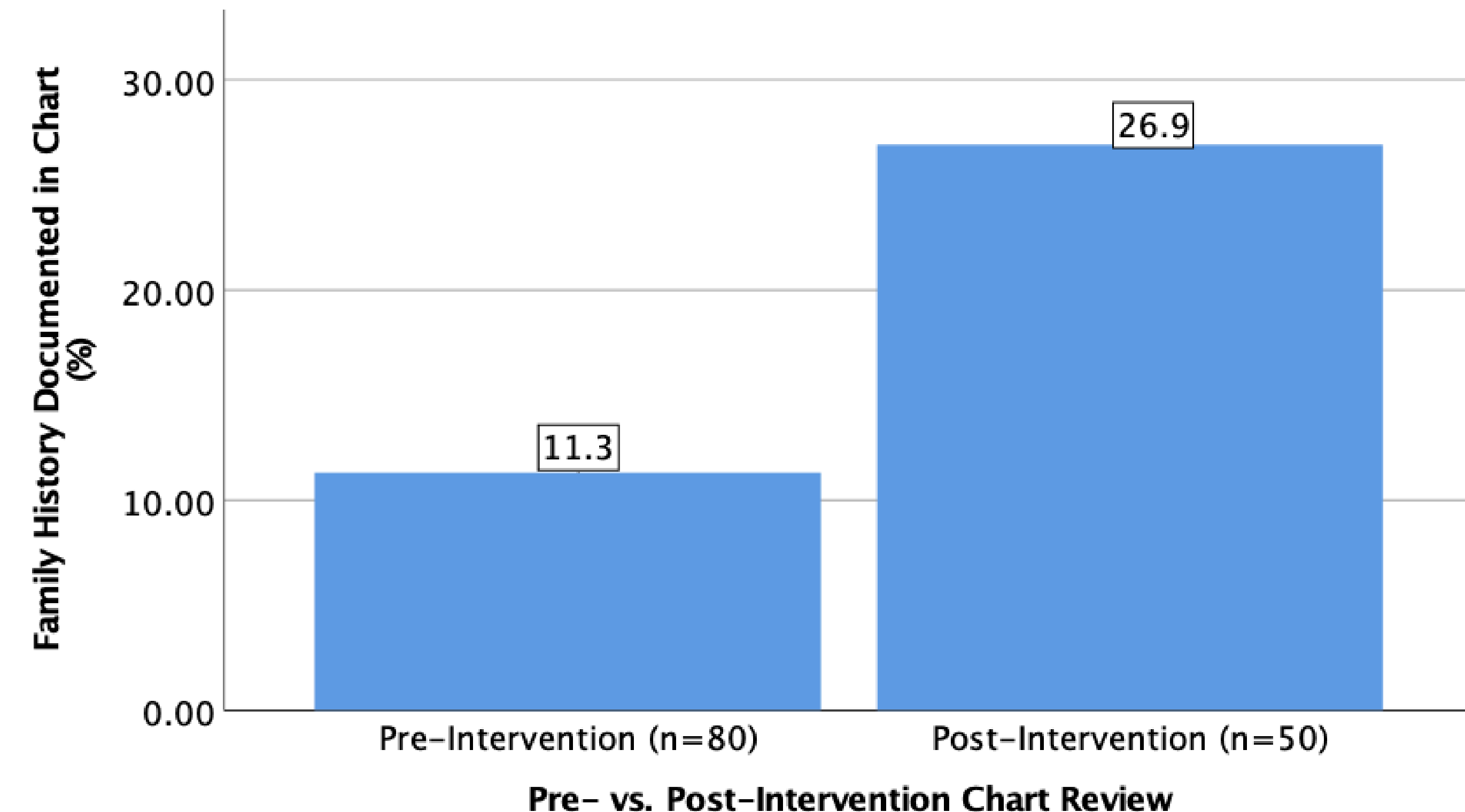
**Figure 1.** Sample of card with "ScREEN" mnemonic and reminder to document family history

## Intervention

- Self-paced Physician Education and Assessment Center (PEAC) module on pediatric FHH was delivered electronically to all pediatric residents 1 week prior to live in-service. Module material was based on a toolkit developed by Rinke et al. (2016)<sup>3</sup> and results from a preliminary survey sent to residents about current FHH gathering practices.
- Module objectives:**
  - Review American Academy of Pediatrics guidelines
  - List components of FHH
  - Understand broad value of FHH
  - Know when to use tailored vs. targeted FHH
  - Recognized red flags in FHH
  - Know when to refer to genetics
- 9 identical 15-minute resident in-service sessions highlighted key points from PEAC module and reviewed the clinic's electronic health record FHH documentation procedure.
- Upon verbal feedback from residents, a card was created and adhered to workstation computers as a reminder to document FHH (Figure 1).

## Results

- 50 pediatric residents received the PEAC module and 32 of the residents participated in the in-service trainings.
- 80 newborn charts were reviewed for baseline data and 50 at post-intervention.
- Rate of FHH documentation showed improvement comparing baseline to post-intervention (11.3% vs. 26.0%,  $X^2(1) = 4.761, p < .05$ ) (Figure 2).
- Due to time constraints, only post-training evaluations were distributed to gauge provider confidence. > 80% of residents felt very confident or confident in the module objectives and where to document FHH (Table 1).



**Figure 2.** Graph of FHH documentation at pre- and post-intervention

Statement	Very confident (%)	Confident (%)	Somewhat confident (%)	Beginning confidence (%)	Not confident (%)	Mean rating <sup>a</sup>
<b>I can:</b>						
1. List necessary components of a comprehensive FH	5 (16.7)	<b>19 (63.3)</b>	3 (10)	3 (10)	-	3.87
2. Articulate the value and importance of FH	12 (40)	<b>17 (56.7)</b>	1 (3.3)	-	-	4.37
3. Recognize when to take a targeted or tailored FH	9 (30)	<b>16 (53.3)</b>	5 (16.7)	-	-	4.13
4. Recognize red flags in FH	10 (33.3)	<b>16 (53.5)</b>	2 (6.7)	2 (6.7)	-	4.13
5. Identify where to document family history on Epic	<b>19 (63.6)</b>	6 (20.0)	4 (13.3)	1 (3.3)	-	4.43

FH = family history  
 Most frequent answer is bolded.  
<sup>a</sup>Responses for items 1-5 were coded as 1-5, with very confident equal to 5.

**Table 1.** Post-training evaluation results, n = 30

## Summary & Conclusion

- This QI project determined that an educational intervention on pediatric FHH collection improved adherence to FHH documentation by pediatric residents at the project site.
- There was statistically significant improvement in FHH documentation by the 1-month well-visit. Success of this project suggests FHH education may contribute to resident behavior change.
- Results are consistent with need for genetic education beyond the classroom.
- Future projects may consider including nurse practitioner and physician assistant students for interdisciplinary approach.

## Dissemination

- Intervention presented at the Johns Hopkins University, School of Nursing, Pediatric faculty Interest Group (10/08/2019)
- Abstract accepted at 2020 NAPNAP Maryland-Chesapeake Chapter Conference
- Integrative review manuscript on pediatric FHH has been submitted to Clinical Pediatrics journal for review
- Poster virtually displayed at the Johns Hopkins University, School of Nursing, Improving Health Outcomes through Translational Scholarship Symposium (05/17/2020)

**References**

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