Increasing Firearm Screening in Resident Pediatric Well-Child Checks

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Firearms are the leading cause of death in children and teenagers in the United States.[1,2] They also cause significant morbidity, from lasting physical disabilities to adverse impacts on mental health. In 2021, an estimated 30 million children lived in households with firearms, and about 4.6 million children lived in households with loaded and unlocked firearms.[3] Although the American Academy of Pediatrics recommends that pediatricians ask about the presence of firearms in the home and provide firearm safety anticipatory guidance at well-child checks (WCCs),[4] screening rates remain low.

Our primary objective is to increase the rate of firearm screening in pediatric resident WCCs at two clinics to 80% over an 8-month period. Our secondary objective is to explore associations between demographics and firearm prevalence in our clinic population.

Starting in 8/2024, we implemented stepwise interventions to promote firearm screening (Table 1), including adding a screening question to resident WCC templates, holding didactic sessions for residents and faculty preceptors, and creating an informational handout for residents. Our project population includes patients 0 to 17 years old who present for WCCs with pediatric residents at two clinics. Our Institutional Review Board deemed our project exempt from review. We randomly selected 100 charts per month from 7/1/2024 to 3/31/2025 to include baseline pre-intervention data and post-intervention data. We retrospectively reviewed these charts for demographics and documentation of firearm screening. We calculated "rate of firearm screening" per month, defined as the percentage of resident WCCs with documented screening (irrespective of whether they answered "yes" or "no" to firearm ownership). Data will be analyzed with descriptive statistics. We will create a run chart to assess whether we met our project aim and use statistical analysis to assess for significant changes in screening rates after each intervention. We will examine associations between demographic data and firearm prevalence with chi-square analysis.

So far, we have reviewed charts from 7/1/2024-11/30/2024. Initial results show an increase in the "rate of firearm screening" from 2% (7/2024; baseline prior to any interventions) to 46% (8/2024) to 65% (9/2024) to 59% (10/2024) to 70% (11/2024) (Figure 1). Of the 500 charts reviewed thus far, there are 5 patients who have screened positive for firearms being present in the home. All of these patients have been <6 years old and English-speaking. Four of the five patients stored their firearms in locked safes. Two of the five patients mentioned that they had a family member in law enforcement (e.g. in the police or in the army).

The modification of WCC documentation templates facilitated increased documentation of firearm screening. Completion of chart review is needed to assess the efficacy of other interventions and to explore associations between demographics and firearm prevalence in our clinic population. By better understanding our clinic population's relationship with firearms, in

the future, we hope to target specific populations with safe firearm storage resources and further investigate how to increase patient comfort around disclosing firearm ownership.

Table 1. Timeline of interventions

Date	**Intervention**
August 15, 2024	● Added a firearm screening question ("Are there firearms present in your home or in any other location your child spends time in?") to the resident WCC documentation template ● Notified residents of new firearm screening question by email
October 17, 2024	● Held didactic session on firearm screening, "be SMART" framework, and safe storage practices during noon conference for residents ● Reminded residents of firearm screening question in WCC template ● Announced a new supply of cable gun locks for distribution in clinic for patients who screen positive ● Demonstrated how to use cable gun locks
January 14, 2025	● Held didactic session on firearm screening and safe storage for attending general pediatrics faculty who precept residents in clinic ● Demonstrated how to use cable gun locks
February 17, 2025	● Presented preliminary findings at Quality Improvement noon conference for residents ● Posted informational handout reminders in clinic workrooms

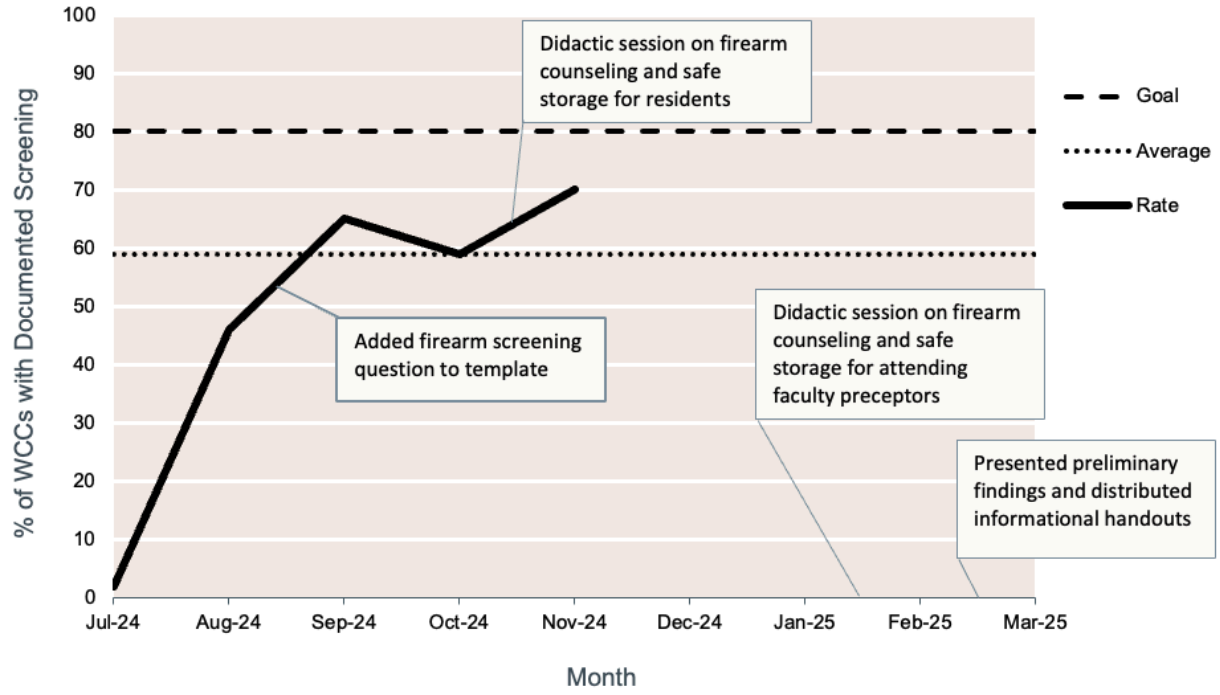
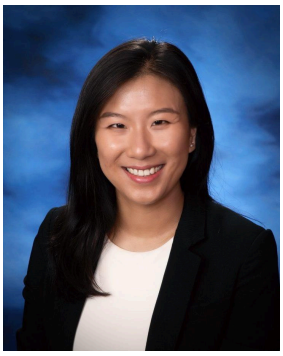


Figure 1. Rate of documented firearm screening per month from July 1, 2024 to March 31, 2025. Chart review is still ongoing. Only data from July 1, 2024 to November 31, 2024 have been plotted thus far.

References:

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