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Adapting *Safety Check* as a Universal Suicide Prevention Strategy in Pediatric Primary Care

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Abstract

Objective: The presence of unlocked firearms in the home is associated with increased risk of suicide and unintentional injury in youth. We adapted an evidence-based program for promoting safe firearm storage, *Safety Check*, to enhance its acceptability as a universal suicide prevention strategy in pediatric primary care.

Methods: We applied ADAPT-ITT, an established adaptation framework, to guide iterative program adaptation with ongoing input from key stakeholders. The present study describes two phases of ADAPT-ITT: the Production phase (generating adaptations) and the Topical Experts phase (gathering stakeholder feedback on adaptations). After generating proposed program adaptations based on three inputs (stakeholder feedback collected in a prior study, the behavioral science literature, and best practices in pediatric medicine), we elicited feedback from stakeholders with firearm expertise. The adaptations included changes such as clarifying firearm ownership will not be documented in the medical record and offering follow-up reminders. We also crowdsourced feedback from 337 parents to select a new name and program logo.

Results: Saturation was reached with 9 stakeholders. Feedback confirmed the value of adaptations that: a) considered context (e.g., reason for ownership), b) promoted parent autonomy in decision-making, and c) ensured privacy. The most preferred program name was *Suicide and Accident prevention through Family Education (SAFE) Firearm*.

Conclusions: Guided by an established adaptation framework that prioritized multi-stage stakeholder feedback, adaptations to the original *Safety Check* were deemed acceptable. We plan to test the *SAFE Firearm* program as a universal suicide prevention strategy in pediatric primary care via a hybrid effectiveness-implementation trial.

Keywords

suicide prevention; firearm safety; pediatric primary care

Firearms are the second leading cause of death for young people (1-19 years old) in the United States (U.S.).¹ Because unlocked firearms are associated with higher likelihood of both suicide and unintentional injury,^{2,3} safe firearm storage is key to preventing firearm injuries and may be a promising universal suicide prevention strategy. The American Academy of Pediatrics⁴ and Society for Adolescent Health and Medicine⁵ have issued recommendations encouraging pediatricians to counsel parents on safe firearm storage and there is evidence that such counseling can affect storage behavior,⁶ but these discussions are not a routine part of well-child visits.⁷ The sensitive national debate surrounding firearms highlights the importance of ensuring that safety programs incorporate the perspectives

of firearm-owning parents and firearm experts. The current study applied an established adaptation framework (i.e., ADAPT-ITT)⁸ to incorporate such stakeholder input into an existing evidence-based program for promoting safe firearm storage, *Safety Check (SC)*. Our goals were to enhance its acceptability and to facilitate widespread use in pediatric primary care.

Safe Storage as a Means to Prevent Youth Firearm Injury and Mortality

Firearms are present in one in three homes in the U.S.⁹ Among firearm-owning households with children, about three out of 10 store all guns unloaded and locked.¹⁰ Simulation research has found that a modest increase in safe firearm storage could prevent as many as 32% of youth firearm deaths in the U.S.¹¹ With documented increases in firearm purchases during the COVID-19 pandemic,¹² there is an urgent need for safe firearm storage programs.

Primary Care as an Optimal Setting for Firearm Safety Interventions

Primary care is an ideal setting for universal prevention programs, since many children and adolescents attend annual well-care visits.¹³ Prior research has found that the majority of parents, both firearm owners and non-owners, believe pediatricians should provide advice about safe firearm storage¹⁴ and that it is appropriate to receive a firearm safety lock at a pediatric office.¹⁵ Moreover, many primary care providers (PCPs) view firearm safety programs as within their scope of practice.^{7,16} Yet, many pediatric PCPs do not deliver firearm safety programs, representing a missed opportunity.¹⁷

The *Safety Check* Program

SC is an evidence-based violence prevention program designed to reach parents of young children (ages 2-11 years), with a focus on discipline, media use, and firearm safe storage. Its firearm injury harm reduction approach includes: (a) screening for presence of firearms, firearm storage, and parental concerns about firearm injuries where children live and/or play; (b) counseling using brief motivational interviewing¹⁸; and (c) providing firearm safe storage tools, such as a cable lock.⁶ A randomized controlled trial conducted in 137 pediatric clinics found a 10% increase in parent-reported use of cable locks to store firearms in the intervention group and a 12% decrease in the control group.⁶

Adapting *Safety Check* for Expanded Use

In keeping with recommendations from the implementation science literature regarding adaptation of evidence-based interventions for use with new populations,^{19,20} we chose the ADAPT-ITT framework⁸ to guide our efforts to adapt *SC*'s safe storage component to reach a broader age group (i.e., youth up to age 18) and to serve as a universal suicide prevention strategy. The framework integrates stakeholder feedback during sequential, iterative phases of adaptation. Although ADAPT-ITT⁸ was first developed in the context of HIV prevention and intervention research, it has been used to guide adaptations to other behavioral interventions (e.g., a brief adolescent substance use intervention),²¹ making it well-suited for the current investigation. As summarized in Figure 1, the model⁸ includes eight steps: Assessment, Decision, Adaptation, Production, Topical Experts, Integration of Feedback, Training, and Testing. As described in detail elsewhere,^{7,16,22} we previously surveyed or

interviewed a range of stakeholders including parents, pediatric primary care providers, and firearm owners and experts as part of the Assessment, Decision, and Adaptation phases and found greater acceptability and use of the screening and counseling components of *SC*, compared to giving out cable locks.^{7,22} The present study describes the subsequent two steps: the Production phase (generating proposed adaptations) and the Topical Experts phase (gathering stakeholder feedback on proposed adaptations). The remaining ADAPT-ITT steps (Integration of feedback, Training, and Testing) will be completed in our future work. To our knowledge, this is the first application of ADAPT-ITT to a firearm safety program.

METHOD

All study procedures were approved by the University of Pennsylvania's Institutional Review Board. We followed Consolidated Criteria for Reporting Qualitative Research (CORE-Q) reporting guidelines.²³

Generating Proposed Adaptations (“Production”)

Our proposed program adaptations were based on stakeholder input from prior stages,^{7,16,22} literature regarding health behavior change, and best practices from other primary care-based interventions on sensitive health topics (e.g., HPV vaccination). For example, some components of the intervention were adjusted to accommodate stakeholder concerns and preferences (e.g., clarifying that ownership will not be documented in the medical record), whereas others were added based on their ability to promote behavior change (e.g., incorporating reminders). An initial group of potential adaptations was discussed and refined in collaboration with the research team before being presented to stakeholders.

Initial Stakeholder Feedback on Proposed Adaptations (“Topical Experts, Part 1”)

Recruitment and Participants.—We recruited a convenience sample of individuals who expressed interest in participating in research related to firearm safety and suicide prevention with the research team and/or the Firearm Safety Among Children and Teens (FACTS) Consortium (<https://www.icpsr.umich.edu/web/pages/facts/index.html>) to confirm acceptability of the proposed adaptations. All participants were firearm owners who were highly engaged in firearm safety promotion, including some who had a specific focus on suicide prevention. They also represented various perspectives based on other roles and backgrounds (i.e., firearm safety instructors or experts, mental health clinician, educator, military veterans, and law enforcement). Stakeholders were located across the U.S. (e.g., Midwest, Southwest, Mid-Atlantic) and provided urban, suburban, and rural perspectives. Eight stakeholders were invited to participate in the initial wave of recruitment; one additional stakeholder was recommended by another stakeholder. All who were invited chose to participate. Thematic saturation was an explicit goal of recruitment. A priori, we planned for a sample size of 9-15 stakeholders, similar to sample size recommendations in the literature.²⁴ Recent work by Guest and colleagues²⁵ suggests that 6-7 interviews is enough to gather most themes in a homogenous sample.

Procedure.—Individuals participated in a one-hour small group discussion or individual interview, based on schedule and/or preference. Members of the research team with

experience conducting qualitative interviews (RSB, ARP, and/or CJ; two psychologists and one graduate-level research coordinator; all women) conducted two small group discussions (comprised of three people each) and three individual interviews via a secure virtual meeting platform. Participants were sent the informed consent document to review ahead of the interview. During the meetings, we obtained verbal consent for participation and permission to audio-record. We then summarized the original *SC* program, presented each proposed adaptation with a brief rationale for the change, and asked stakeholders to provide feedback. Following the meeting, participants were given the option of submitting additional anonymous comments via a secure online survey platform, though no new information was gleaned this way. Audio recordings were transcribed and uploaded into the NVivo Qualitative Data Analysis Software, version 10 (QSR International). Field notes were not taken and transcriptions were not reviewed by participants. Participants did not provide feedback on the findings.

Data Analysis.—We used an integrated analysis approach to coding,^{26,27} which involved identifying a priori constructs related to each program component (e.g., “locks”) and adding codes upon review of all transcripts based on emergent themes. Two members of the research team (AL, CJ) developed a structured codebook by open coding each transcript and then met to refine the codebook (available upon request). After codebook development, two members of the research team (MD, CJ) independently coded each transcript and met to resolve discrepancies, refine the codebook, and analyze consensus codes. All transcripts were double coded (Cohen’s kappa = 0.91).

Additional Stakeholder Feedback on Proposed Adaptations (“Topical Experts, Part 2”)

Recruitment and Participants.—Next, we used an online platform to crowdsource name and logo design ideas for the adapted program. After receiving 1,419 name entries and 299 logo entries, the research team chose the 10 names and 10 logos that best fit the program content, context, and prior stakeholder feedback, and obtained quantitative feedback from firearm-owning and non-owning parents via Amazon Mechanical Turk (MTurk) in two separate surveys.²⁸ Participant selection criteria are detailed in Figure 2.

Measures.—*Background information* included self-reported age, gender, race, number of children, and number of firearms owned. *Acceptability and appropriateness* of each name and logo option were assessed with one question each from the Acceptability of Intervention Measure (AIM; “I like this name/logo”) and Intervention Appropriateness Measure (IAM; “This name/logo is suitable for the pediatric primary care setting”)²⁹ – each of which were rated on a 1-5 Likert scale. *Preferences* were assessed by presenting eight sets of five randomly selected program name and logo options, respectively, and asking participants to pick the best and worst options using best-worst scaling, a preference elicitation approach.³⁰

Data Analysis.—We used a number of strategies to ensure data quality prior to analysis (see the Appendix Part One). Descriptive statistics were used to analyze demographic data. We analyzed mean acceptability and appropriateness scores and used independent samples t-tests to compare responses across firearm owner and non-owner subgroups. We calculated a best and a worst frequency score for each name and logo choice, representing the number

of times each choice was selected best and worst, respectively, divided by the number of times each choice was displayed. Overall preference scores were calculated by subtracting the worst frequency from the best frequency. These scores were calculated separately for firearm owners and non-owners.

RESULTS

Production Phase: Generating Proposed Adaptations

Proposed adaptations centered on a number of key changes: 1) remove screening for firearm ownership to emphasize the goal of universal implementation; 2) clarify for parents that firearm ownership will not be documented in the medical record, to reduce privacy concerns; 3) change the program name; 4) provide cable locks but also offer information on other storage options to accommodate different firearms and uses (e.g., personal protection vs. hunting); 5) use evidence-based behavior change strategies to boost follow-through (e.g., setting an intention, reminder sticker); 6) emphasize the shared goal of keeping young people safe (i.e., use gain-framed messaging to offset perceived disadvantages of changing storage behavior); 7) offer additional resources from firearm experts to increase the credibility of the message; and 8) follow up after the visit to aid follow-through. A detailed list of proposed adaptations and supporting rationales is provided in the Appendix Part Two.

Topical Experts Phase: Stakeholder Feedback on Proposed Adaptations

Table 1 lists the proposed adaptations alongside examples of related stakeholder feedback. Saturation was achieved by the third discussion; however, we continued conducting additional interviews to further ensure saturation as well as geographic representation. Stakeholders were in favor of a safe firearm storage program as a universal suicide prevention strategy and agreed with the importance of delivering the program to all families, irrespective of firearm ownership status. They highlighted the need for safety education among new firearm owners as well as the need for reminders among some established owners, and found value in owners receiving safety messaging from multiple sources, including pediatric providers.

Stakeholders noted that asking about firearm ownership status prior to universal counseling could elicit defensiveness and that allowing parents to choose whether to disclose ownership was preferable. Similarly, they agreed that proactively clarifying that providers would document only that a conversation took place (not whether families owned a firearm) would increase privacy and acceptability and reduce concerns that the information would be used in an unanticipated manner (e.g., to create a national firearm registry). Stakeholders also suggested that a new program name should be succinct and specific, with branding maintaining a focus on safety. One stakeholder suggested a “name the campaign contest” to arrive at the new program name.

Stakeholders saw benefits to providing locks as part of the program in order to motivate behavior change. Nonetheless, they noted both advantages and disadvantages of cable locks and agreed that resources describing alternative locking options would be helpful to provide alongside the cable locks. While stakeholders acknowledged the potential value of reminders

to use the locks, feedback was mixed on the best method (e.g., a sticker to record the date the parent plans to lock their firearm). Stakeholders felt some parents could find such tools helpful, whereas others might find them intrusive. Stakeholders generally agreed that instructional tools to clarify the steps of locking a firearm (e.g., videos) would be acceptable.

Stakeholders agreed that emphasizing the program's intention of promoting child safety would be important, as would ensuring that parents not feel singled out or judged for owning firearms. There was also recognition that family engagement in safe storage is a process and that even small steps toward safer storage are valuable, consistent with a harm reduction approach. Stakeholders recommended consideration of a range of formats (e.g., videos, infographics) for resources to be incorporated into the program. Their primary feedback was about the importance of attending to content and framing (e.g., wording of messages, credibility of speakers).

Finally, stakeholders varied in their beliefs about whether there should be a follow-up component and how that communication should occur (e.g., calls, texts, flyers). They highlighted the importance of maintaining parent autonomy and avoiding follow-up that could be perceived as monitoring or an invasion of privacy. Follow-up was generally considered more acceptable if it was optional and part of broader safety check-ins.

Qualitative analysis revealed several themes that cut across adaptations:

Autonomy.—The need to prioritize parents' autonomy was repeatedly emphasized. Stakeholders indicated that bringing information to parents and letting them make independent decisions about firearm safety would be optimal.

Privacy.—Stakeholders supported adaptations that were focused on maximizing respect for parent privacy, such as allowing parents not to disclose firearm ownership or permitting them to take program resources without clinic staff knowing (e.g., from a basket in a common area).

Communication.—Stakeholders supported the use of nonjudgmental language to help offset concerns that medical providers would be against firearm ownership. Use of a script for how to broach the topic of firearm safety was recommended. Multiple stakeholders commented on the utility of grouping firearm safety with other safety guidance that primary care clinicians provide to families, consistent with the original *SC*.

Knowledge.—Stakeholders cited several anticipated knowledge gaps for parents and children, including the risk of suicide and other injuries associated with firearms and ways to handle and store firearms safely. While stakeholders often suggested clinicians deliver this information to parents, some stakeholders also referenced the duty of parents to educate their children.

Safe Storage.—In responding to questions about what safe storage means to them, stakeholders noted that safe storage carries a different meaning depending on the person and their circumstances (e.g., whether someone owns a firearm for protection or hunting).

However, the general consensus was that safe storage involves preventing unauthorized access to firearms by people who should not have access to them, including children.

Situational Awareness.—Stakeholders commented on the importance of being aware of the location of one’s firearm and cautioned about the possibility of firearm owners forgetting to consider how someone might gain unauthorized access. Several stakeholders indicated that it should not be assumed that children or visitors would be unable to find firearms in a home.

Environment.—A number of environmental factors, including firearm and hunting cultures and the culture of a given clinic or geographic region, were mentioned as critical to consider in the delivery of the adapted program.

Topical Experts Phase: Eliciting Further Feedback on Program Name and Logo

Survey participant demographics were similar across firearm ownership subgroups (Table 2). Parents had children ranging from under one year to 18 years and older. *SAFE (Suicide and Accident prevention through Family Education) Firearm* was the most preferred name by both firearm owners and non-owners based on best-worst scaling scores (Table 3). Additionally, *SAFE Firearm* had the highest average acceptability and appropriateness scores across ownership subgroups. There were no significant differences in acceptability, $t(335) = .12, P = .91$, or appropriateness, $t(335) = -.40, P = .69$, between firearm owners and non-owners for the winning name.

Figure 3 displays the logo that scored highest on appropriateness for firearm owners and second highest for non-firearm owners, while also receiving the highest acceptability rating in both groups. There were no significant differences in acceptability, $t(335) = -.83, P = .41$, or appropriateness, $t(353) = -1.50, P = .13$, between groups for the winning logo.

DISCUSSION

The primary objective of this study was to adapt *SC* (now called *SAFE Firearm*) using an established adaptation framework in order to increase the acceptability of the program, maximize the program-setting fit, and optimize effectiveness for our goal of universal suicide prevention. Via the two stages of the ADAPT-ITT⁸ process described here, we received valuable confirmatory stakeholder feedback on proposed adaptations that were developed based on previous stakeholder feedback,^{7,16,22} the behavioral science literature, and best practices for addressing sensitive health topics. Stakeholders were in favor of the majority of our proposed adaptations and supported the program’s aim of employing a harm reduction approach.³¹ Important themes related to autonomy, privacy, communication, and attention to the broader national environment were also reinforced, consistent with previous work.^{16,22} Additionally, we were able to demonstrate the potential of the ADAPT-ITT⁸ framework to facilitate thoughtful and systematic adaptation of a firearm safety program, and the value of online crowdsourcing marketplaces to rapidly and systematically brand programs to maximize their acceptability. Notably, while our adaptation of *SC* focused on adapting it to be a universal suicide prevention strategy, both firearm-owning and non-firearm owning parents preferred a program name that included “accident prevention,”

which aligns with stakeholder feedback on the importance of inclusive branding that broadly emphasizes safety to support universal implementation.

Much of the feedback gathered in the current study confirms findings from prior research,^{14,32} suggesting that major themes such as privacy are essential and have been appropriately identified and infused into the proposed program adaptations. It will be particularly important to apply these insights to planned future adaptations of *SAFE Firearm*, and to integrate them into the development and/or refinement of other firearm safety programs, to ensure such programs are as acceptable and effective as possible. Interestingly, the adaptations that evoked equivocal responses were those that related to evidence-based strategies to boost behavior change, such as use of follow-up reminders. As Hoskins and colleagues³³ noted when advocating for the application of behavioral economics to understanding firearm storage, “parental decision-making is complex, inevitably value laden, and not cleanly bounded by behavioral science” (p.5). Our findings point to the nuanced factors that may influence decision-making regarding firearm storage and the varied ways in which attempts to intervene upon those factors may be perceived. They also highlight that even universal interventions are delivered in the context of a specific patient-provider relationship, and programs are likely to be most effective when providers are sensitive to each family’s culture, attitudes, and needs. It will be important for future research to continue to engage stakeholders to determine how to increasingly leverage behavioral science in ways that are not only likely to lead to safe firearm storage but are also perceived as being respectful of autonomy (consistent with motivational interviewing¹⁸ approaches), and as minimally intrusive as possible. Emerging options for gathering parent feedback in an economical and efficient way, such as the MTurk methods described here, could facilitate such efforts and coincide with calls in the literature to include parent and patient perspectives in dissemination and implementation efforts and to target marketing of interventions directly to these individuals.³⁴

Our study has several limitations. First, while similar to sample sizes recommended in the literature,^{24,25} our qualitative interviews included a relatively small number of stakeholders. Nonetheless, thematic saturation was reached around the main proposed adaptations, particularly when considering the current results in conjunction with prior work in this area involving other stakeholder groups.^{7,16,22} The only exception was the lack of consensus on reminder strategies. Second, given the involved, iterative nature of the ADAPT-ITT process, we present our findings in stages to allow other researchers to replicate this adaptation process more readily and increase the likelihood of successful adaptation and implementation efforts. In future research, it may be helpful to distill or combine certain phases to accelerate the time from adaptation to implementation, in line with calls for rapid implementation science³⁵ to efficiently bridge the research-to-practice gap. It will be important to balance thoughtful, rigorous adaptation with the need to move quickly on deploying critical healthcare interventions in real-world settings.

Conclusions

The present study provides a methodological roadmap for applying an established adaptation method that can guide future programming related to firearm safety as well as other

sensitive health topics. This work also shows the benefit of triangulating multiple sources of qualitative and quantitative data to arrive at an adapted program in a confirmatory fashion. The adapted program will be tested in a hybrid effectiveness-implementation trial.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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What's New

We adapted *Safety Check*, an evidence-based firearm safe storage program delivered in pediatric primary care, to enhance acceptability as a universal suicide prevention strategy. Stakeholders viewed the adapted program, *SAFE Firearm*, as a promising approach to promoting safe storage.

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PRIOR STUDIES	Assessment	<i>...to understand organizations' capacity or ability to implement the program via focus groups and interviews with stakeholders</i> Conducted quantitative survey with physicians and medical directors on implementation of <i>Safety Check</i> in pediatric primary care. ⁷ Feedback included: stakeholders reported that <i>Safety Check</i> was perceived as acceptable but that they rarely distributed firearm locks to families.
	Decision	<i>...regarding whether the intervention needs to be adapted</i> Decided to adapt <i>Safety Check</i> to further improve appropriateness and feasibility for delivery in the pediatric primary care setting based on the assessment
	Adaptation	<i>...by way of presenting the intervention to the target population and soliciting feedback</i> Solicited feedback from 70 stakeholders (clinicians, health system leaders, and firearm safety experts) via interviews on suggested adaptations to the program. ^{16,22} Feedback included: stakeholders were concerned that question about firearm ownership could be used to document ownership in the medical record.
PRESENT STUDY	Production	<i>...of a first draft of the adapted intervention, which incorporates feedback from stakeholders</i> Developed set of proposed adaptations to <i>Safety Check</i> based on stakeholder feedback, behavioral science literature, and best practices for other sensitive health topics
	Topical experts	<i>...review the adapted intervention and provide feedback</i> Presented the proposed adaptations to <i>Safety Check</i> to stakeholders and presented new program names/logos to parents via meetings and quantitative surveys, respectively, and solicited feedback
NEXT STEPS	Integration of Feedback	<i>...from stakeholders into the adapted intervention</i> Will incorporate stakeholder feedback into second draft of the adapted program. Will solicit additional feedback from parents regarding readability, acceptability, and appropriateness of adapted program. Will incorporate feedback into the adapted program.
	Training	<i>...of facilitators and clinic staff to ensure the intervention is implemented correctly</i> Will train clinicians and clinic staff in the adapted program in upcoming RCT
	Testing	<i>...of the intervention via pilot testing with the target population. Feedback from participants is be incorporated into third draft of the intervention. Third draft is tested in a randomized study</i> Will pilot test the adapted intervention in RCT clinics. Will incorporate feedback into the adapted program. Will test the adapted intervention in RCT.

Figure 1. Steps of adaptation of *Safety Check* via the ADAPT-ITT model⁸

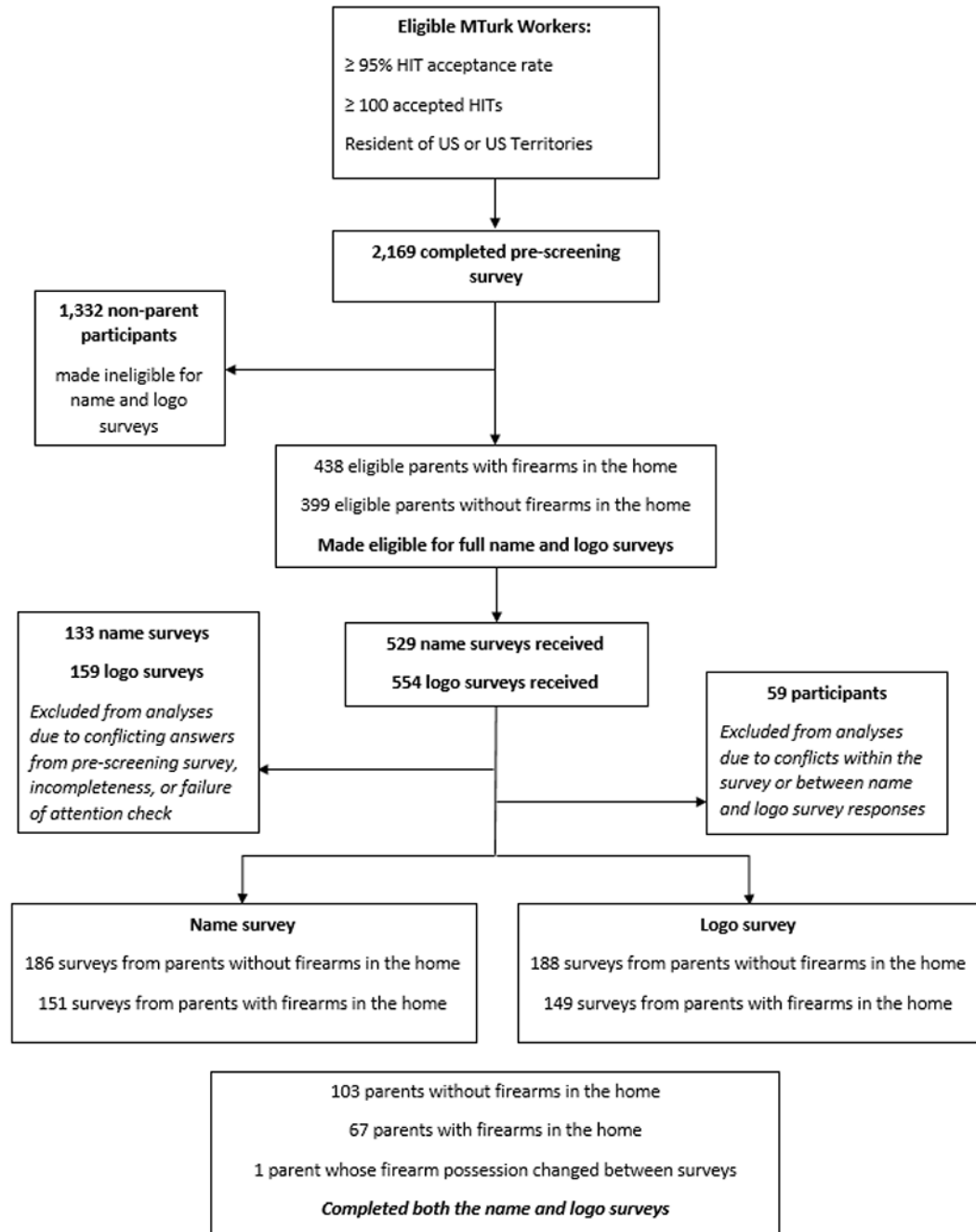


Figure 2. Surveys completed on Amazon Mechanical Turk (MTurk). HIT indicates human intelligence task. Additional details are available in part one of the Appendix.



Figure 3.
Grayscale version of top logo selection across firearm owners and non-firearm owners.

Table 1.

Stakeholder Feedback on Proposed Adaptations and Themes Across Adaptations

Proposed Adaptation or Theme	Example Quotes
<i>Proposed Adaptations</i>	
1: Remove Screening Step	203: When somebody feels like you're trying to single them out as a gun owner, then some of that dialogue starts to shut down, but if you generalize a little bit, and at the same time you're kind of making it more...cause you're talking about, "I don't care where the gun is, you need to be thinking safety." 103: I know from where I'm at...there definitely has been a lot of, from what we've seen recently or generally, concern from individuals about being asked about owning firearms...
2: State that Firearm Ownership Status Will Not be Documented	301: ... I know there are some people out there that feel very strongly about having [firearm ownership] documented. They feel it's their personal right to bear a firearm, regardless if it's a handgun, a long rifle shotgun, that sort of thing. And they don't want it documented.
3: Change the Program Name	101: And so if it's generic, and just descriptive, that makes me a little bit more comfortable. 401: It's not about the gun. It's about, it's one more child. Lock up the guns. Because one is too many. I've been using that phrase a lot. One is too many.
4: Provide Free Cable Locks and Resources Describing Alternative Locking Options	201: So there are a lot of options out there. And I suppose, you know, you can't have one size fitting all, obviously. Firearms are different, people are different, homes are different, locations are different. 101: So I think having the lock on hand is, there is value in that. It's often a conversation starter, even if it's not the preferred method of secure storage. And it can lead people to a discussion of, say, a lock box, which we can't assume, we have some focus group research that says we can't assume that people know about lock boxes because we found out that many people didn't, when we assumed that they did.
5: Use Strategies from Behavioral Science to Promote Behavior Change	101: ...about the sticker, the date-time to use the lock—I wasn't quite sure. I mean, really that only works one time, right? That's—when you give them the lock you put down "install this at 5 PM today" or something like that. Well that—the lock is going to go on the gun, and then off the gun, and then on the gun, and then off the gun. You know, the number of times that people are using the firearm. Or, like I said, it only sort of works one time. And it's a little—seems a little odd. It seems to me that if you're going to do something like that, that maybe a verbal pledge or something like that might suffice. A written pledge might be, some people might respond to that, and for others, that might be a little off-putting.
6: Emphasize the Shared Goal of Keeping Children Safe	401: ...you wear a seatbelt, because it's safer. Lock up the gun, because it's safer. 501: And the main thing I say is, regardless of what your stance is on firearms, don't come across from a judgmental or a critical perspective. And find common ground, which is the safety of the child. You know, that's the main thing, the safety of the child.
7: Offer Additional Resources from Firearm Experts	201: ... information is power and I think that the informed decision on the part of the parents and I see us as being the facilitators of resources, making it available. 501: ...give parents a link to a video that includes credible firearms experts talking about the importance—fantastic. But I think that as important as credible sources, there should also be individuals that have been affected by gun tragedies. Nothing speaks to that population as people who have been there and have done that. So parents of kids who have gotten hurt, individuals that have hurt themselves because of improperly stored firearms.

Proposed Adaptation or Theme	Example Quotes
8: Follow-up	101: But I think it's more palatable if it's optional. Somebody gives you permission or asks you to follow up. I think that makes it much more palatable.
<i>Overarching Themes</i> Autonomy	201: So, I guess the goal would be to provide as much information as possible, and let the parent decide what fits for their situation.
Privacy	301: But I think of it this way...Are you more likely to ask for condoms or ask for other sorts of prophylactics or you know, "Hey, there's a bin there, I can grab a few of them." You know what I mean? Without having to have that conversation.
Communication	102: I would just caution against anything that's going to make people think you are being cute with the language, you know. I think it should be very transparent... 301: ...at least having it in in print material and having a set script, because what I've also experienced is that everybody has their own personal opinions. I've had some pretty opinionated physicians of my own and for my children over time. You don't want them to be interjecting their own personal feelings into it.
Knowledge	101: ...And I think, you know, particularly the suicide angle may be something that some parents have not thought about. I think it's a much more powerful argument. Not that, obviously, keeping a young child safe from accessing a gun is not a powerful argument. But the fact that those numbers are growing rapidly, and there are a lot of external factors...
Safe Storage	202: So safe storage to me is different than what 201 just said. Just not allowing, you know I have a young [child], access to my weapon and knowing where my weapon is at all times and making sure it's in a position where [they] can't get ahold of it.
Situational Awareness	202: I think it is important to do at your well checks, because I think at times we do get complacent. So, and you know, we need to be reminded that we need to put these things away too. 501: You think your kids don't know where your guns are? That is just a fallacy.
Environment	301: The culture that is coming through is so scared of firearms. You know, that's just my opinion, but I see a lot of this fear of firearms instead of [recognizing] it has a purpose. You know, respect it, treat it appropriately, and it's not an issue. But, there's so many people that just have this fear, like the gun is going to jump up and do something to you. It's not. 401: Because certainly a doctor knows his patients, and some of them hunt together. You get some of these communities and it's like, "hey, I know 'Jim' has all these guns. Tell him to lock them up, and there's ten gun locks in there. Take them home to 'Jim,' and tell him I'm going to be over for bourbon, and I'm going to make sure they're locked up." I mean some of these doctors have this kind of relationship...

Table 2.

Survey Participant Demographic Characteristics

	Full Sample	Firearm Owners	Non-Firearm Owners
Program Name Survey Participants			
N	337	151	186
Mean Age (SD), years	37.50 (7.82)	36.87 (8.29)	38.01 (7.40)
Gender			
Female	67%	68%	66%
Male	33%	32%	34%
Race			
American Indian or Alaska Native	1%	1%	0.5%
Asian	6%	3%	8%
Black or African American	7%	7%	8%
Native Hawaiian or Other Pacific Islander	0.3%	0%	0.5%
White	81%	85%	79%
Other	2%	3%	2%
Multiple	2%	1%	3%
Ethnicity			
Non-Hispanic/Latino	93%	92%	95%
Hispanic/Latino	7%	8%	5%
Number of Children, mean (SD)	1.89 (1.05)	1.96 (1.09)	1.83 (1.02)
Number of Firearms, mean (SD)	N/A	2.79 (2.68)	N/A
Program Logo Survey Participants			
N	337	149	188
Mean Age (SD), years	37.71 (7.78)	37.03 (8.05)	38.25 (7.53)
Gender			
Female	62%	60%	63%
Male	38%	40%	37%
Race			
American Indian or Alaska Native	1%	1%	2%
Asian	10%	7%	13%
Black or African American	9%	7%	10%
Native Hawaiian or Other Pacific Islander	1%	1%	0.5%
White	77%	82%	73%
Other	1%	1%	0.5%
Multiple	2%	2%	2%
Ethnicity			
Non-Hispanic/Latino	93%	93%	94%
Hispanic/Latino	7%	7%	7%
Number of Children	1.85 (.97)	1.87 (1.02)	1.83 (.94)
Number of Firearms	N/A	2.54 (2.45)	N/A

Note. Number of children can include those > 18. Number of guns included all guns in the home (regardless of who owned them). There were no significant differences on these demographic variables between firearm owners and non-owners. Some percentage totals do not sum to 100% due to rounding.

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Table 3.

Top Five Names and Logos Based on Preference Elicitation and Corresponding Acceptability and Appropriateness Ratings, by Firearm Ownership Status^{*}

Names and Logos	Best-Worst Scaling		Acceptability Mean (SD)		Appropriateness Mean (SD)	
	Owners	Non-Owners	Owners	Non-Owners	Owners	Non-Owners
Name						
SAFE Firearm	0.58	0.60	4.22 (0.99)	4.23 (0.94)	4.18 (1.05)	4.13 (0.99)
Name 2	0.16	0.19	3.45 (1.12)	3.51 (0.95)	3.76 (1.07)	3.84 (0.93)
Name 3	0.14	0.10	3.35 (1.27)	3.32 (1.21)	3.59 (1.18)	3.50 (1.13)
Name 4	0.05	0.02	3.36 (1.27)	3.03 (1.13)	3.22 (1.23)	3.02 (1.22)
Name 5	0.03	0.09	3.11 (1.24)	3.43 (1.06)	3.51 (1.17)	3.74 (1.01)
Logo						
Selected Logo	0.26	0.24	3.77 (1.10)	3.66 (1.11)	4.35 (0.77)	4.21 (0.84)
Logo 2	0.12	0.07	3.68 (1.19)	3.59 (1.12)	4.28 (0.86)	4.14 (0.85)
Logo 3	0.09	0.13	3.51 (1.14)	3.63 (1.07)	4.06 (0.91)	4.13 (0.84)
Logo 4	0.09	0.07	3.54 (1.19)	3.51 (1.20)	4.26 (0.80)	4.26 (0.81)
Logo 5	0.07	0.12	3.52 (1.12)	3.61 (0.96)	4.12 (0.87)	4.12 (0.79)

^{*} 151 firearm owners and 186 non-firearm owners responded to the name survey. 149 firearm owners and 188 non-firearm owners responded to the logo survey. Best-worst scaling scores reflect the total best frequency minus the total worst frequency. Alternate names and logos are masked due to intellectual property restrictions.