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Impact of a Multidisciplinary Curriculum Training Students and Residents in Tobacco Cessation Strategies for Adult Caregivers of Children

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Abstract

Introduction: Children's exposure to secondhand smoke is an underaddressed public health threat. The Clinical Effort Against Secondhand Smoke Exposure (CEASE) is a validated framework that trains pediatric providers to screen, counsel, refer to quitlines, and prescribe tobacco cessation medications to adult caregivers of children. **Methods:** A physician champion at a major urban academic center delivered a longitudinal didactic curriculum of CEASE principles to medical and nurse practitioner students and pediatrics and family medicine residents. At the end of each session, participants completed an anonymous survey measuring changes in self-perceived knowledge, comfort, and familiarity with smoking cessation skills and concepts. Using a separate end-of-year questionnaire, we also surveyed a group of pediatric residents to compare the impact of CEASE training on clinical practice. Finally, we tracked the number of referrals to the state's quitline for the duration of the training. **Results:** Fifty-two trainees (55% students, 45% residents) responded to the evaluation survey administered immediately following training. There were statistically significant improvements in median scores after CEASE training for comfort in screening, counseling, motivational interviewing, referring to smokers' helplines, and providing caregivers with nicotine replacement therapy (NRT) prescriptions. Fifty-one percent of pediatric residents (41 of 80) responded to the end-of-year survey, which showed statistically significant differences in the number of patients/caregivers offered a referral to California's quitline and prescription of NRT according to completion of CEASE training. **Discussion:** CEASE training successfully improved the self-efficacy of health professions students and residents in smoking cessation techniques for adult caregivers of children.

Keywords:

Smoking, Cigarettes, Secondhand Smoke, Adolescent Medicine, Family Medicine, Pediatrics, Preventive Medicine, Primary Care, Substance Abuse/Addiction

Educational Objectives

By the end of this activity, learners will be able to:

1. List the three steps of the Clinical Effort Against Secondhand Smoke Exposure framework.
2. Demonstrate prescribing nicotine replacement therapy.
3. Demonstrate motivational interviewing techniques for smoking cessation counseling.
4. Demonstrate the referral process for a smokers' quitline.
5. Practice using digital resources for smoking cessation.

6. Explain the basics of vaping.

7. Create an algorithm for smoking cessation counseling.

Introduction

Children's exposure to secondhand smoke by adult caregivers and parents is a significant public health threat, as the inhalation of tobacco combustion by-products leads to and exacerbates pediatric cardiopulmonary diseases such as asthma, respiratory tract infections, and sudden infant death syndrome.¹⁻⁴ Although the American Academy of Pediatrics recommends that pediatricians discuss tobacco cessation with parents and families during clinical visits, implementation of validated cessation strategies remains very low.⁵⁻⁷ For example, rates of pediatricians providing tobacco cessation educational materials to caregivers may be as low as 14%, and referrals to cessation program quitlines may be as low as 16%.⁶ According to clinicians, a major barrier to the uptake of these best practices is the lack of training in their concepts and techniques.^{8,9}

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The Clinical Effort Against Secondhand Smoke Exposure (CEASE) is a well-characterized and well-studied educational framework that provides pediatric providers with systematic knowledge of screening and counseling adult caregivers of pediatric patients regarding tobacco exposure. In addition, CEASE provides practical training on how to refer family members to local and national quitlines, information about cessation resources, and instruction on how to prescribe pharmaceutical tobacco cessation aids such as nicotine replacement therapies (NRTs).¹⁰ CEASE has successfully been used to aid patient caregivers to quit smoking.¹⁰⁻¹³

As documented in *MedEdPORTAL*, smoking cessation educational sessions have been successfully implemented.^{14,15} Our project contributes to the literature by showing the real-world efficacy of CEASE in a multidisciplinary context that includes trainees from a variety of disciplines and across levels of training. Our goal was to assess the impact of a longitudinal CEASE-based didactic curriculum on the self-efficacy of pediatric and family practice residents, as well as pharmacy, medical, and nurse practitioner students, on multiple smoking cessation assistance domains. In addition, our sessions incorporated new issues and approaches, including vaping, text-to-quit cessation programs, and emphasis of hands-on, experiential learning. Our session materials also included preprinted NRT forms to facilitate the prescription training.

Methods

Participant Population and Curriculum Description

Between July 2017 and October 2018, a CEASE physician champion at a major urban academic medical center delivered 18 CEASE training sessions to pharmacy, medical, and nurse practitioner students and pediatric and family medicine residents. From July 2016 through June 2017, another physician had delivered CEASE training sessions to learners, but the results were not tracked. The 1-hour didactic sessions were based on standard CEASE training materials and focused on CEASE principles and techniques.¹⁶ CEASE consisted of three major steps: (1) ask (e.g., using broad, nonjudgmental language to screen patient caregivers for tobacco use), (2) assist (e.g., using preprinted NRT prescriptions or providing motivational interviewing), and (3) refer (e.g., integrating referrals to state quitlines and encouraging caregivers to enroll in national smoking cessation initiatives such as text-to-quit programs).

Beginning in July 2016, the CEASE physicians created a way to track institutional electronic referrals to the California Smokers' Helpline (now Kick It California) to see if learners were making real-time referrals to the quitline.

Practical Implementation

Each 1-hour training session employed a PowerPoint presentation (Appendix A) to cover screening for tobacco use, completing preprinted NRT prescriptions, using motivational interviewing skills, and practicing referrals to state and national smokers' quitlines. The educational sessions occurred during regular in-person educational conferences (morning report, noon teaching conference) for students and residents, with approximately five to 15 attendees per session. Using screensharing technology, the training session could be delivered virtually. Similarly, the lecture could be recorded virtually for future viewing. All trainees, regardless of program, discipline, or educational level, received the same educational curriculum.

Multiple studies have demonstrated that physicians are aware of the dangers of smoking but lack confidence in the implementation of smoking cessation techniques.^{5,6} Therefore, although the educator always delivered the didactic information via the PowerPoint presentation, each of the major learning objectives was accompanied by a practical skills break, during which participants actively practiced completing physical NRT prescriptions (Appendix B), using motivational interviewing techniques with a partner (Appendix C), enrolling in a text-to-quit program, and creating an algorithm for addressing patient caregiver smoking (Appendix D). The educational objectives were crafted using Bloom's taxonomy for higher-order thinking skills instead of having each objective depend only on rote memorization.¹⁷

Appendices

Appendix A: The CEASE training presentation was a 43-slide PowerPoint presentation that included relevant information with colorful graphics from Canva (Canva Pty Ltd). Each slide had a speaker notes section outlining a suggested way to present the material. Most slides also included a teaching suggestions section in the notes section to advise the educator with high-yield approaches for certain topics.

Appendix B: The CEASE NRT dosing guidelines and a preprinted medical prescription included a one-page NRT dosing guide, prefilled prescription forms for use with pediatric patient caregivers smoking half a pack of cigarettes per day or one pack of cigarettes per day, a blank NRT prescription that could be tailored to any clinical situation, and an example of insurance coverage for NRT from the city of San Francisco. Appendix B was created by author Jyothi Marbin and can be used by any interested providers. We advise educators to confirm the details with their local pharmacists, but in the state of California, the prescriptions did not need to be printed on prescription paper

to be valid at the time of publication. We recommend uploading Appendix B into a shared folder accessible to learners so that participants can access and utilize it at any time.

Appendix C: The reflections exercise for motivational interviewing was a partner-based activity in which one learner read the statements of a patient and the other participant read the provider's lines. We designed this example conversation to be brief and informative, but a rich aspect of the teaching experience was hearing from trainees about how they would change the wording to reflect their personal clinical styles.

Appendix D: The example CEASE algorithm was generated by trainees based on Educational Objective 7, which asked trainees to bring together everything they had learned during the session. This was designed to be a fun and imaginative way to reach the top of Bloom's taxonomy pyramid to create something new. We often brought markers and large sections of butcher paper for the trainees to draw on. As they designed the algorithm, the participants talked amongst themselves about their take-home points. In addition, several of the diagrams produced were hung by trainees in the various workrooms in the clinics and inpatient units, serving as learner-generated conversation pieces of wisdom for future trainees.

Appendix E: The anonymous postconference CEASE survey was administered immediately following each CEASE conference, open to participating trainees of all programs and levels of training.

Appendix F: The anonymous CEASE medical education survey was administered yearly to all residents regardless of CEASE training to compare self-perceived knowledge, confidence, and practice related to smoking cessation.

Below is a suggested timeline for the didactic session (Appendix A). The notes section of Appendix A also contains further details about how to incorporate the other appendices:

- 0-5 minutes:
 - Slides 1-10: Introductions and introductory slides.
- 5-10 minutes:
 - Educational Objective 1: List the three steps of the CEASE framework.
 - Slides 11-13.
- 10-20 minutes:
 - Educational Objective 2: Demonstrate prescribing NRT.
 - Slides 14-20.
 - Appendix B: CEASE NRT dosing guidelines and preprinted prescription for NRT writing practice.
- 20-30 minutes:
 - Educational Objective 3: Demonstrate motivational interviewing techniques for smoking cessation counseling.
 - Slides 21-26.
 - Appendix C: Reflections exercise for motivational interviewing to practice a conversation with a patient.
- 30-35 minutes:
 - Educational Objective 4: Demonstrate the referral process for a smokers' quitline.
 - Slides 27-30.
- 35-45 minutes:
 - Educational Objective 5: Practice using digital resources for smoking cessation.
 - Slides 31-35.
- 45-50 minutes:
 - Educational Objective 6: Explain the basics of vaping.
 - Slides 36-38.
- 50-55 minutes:
 - Educational Objective 7: Create an algorithm for smoking cessation counseling
 - Slide 39.
 - Appendix D: Example of a trainee-created algorithm.
- 55-60 minutes:
 - Wrap-up and questions.
 - Slides 40-43.
 - Appendix E: Postconference CEASE survey to assess learning.
- After conference:
 - Appendix F: Anonymous survey administered yearly to all residents regardless of CEASE training to compare self-perceived knowledge, confidence, and practice related to smoking cessation.

The emphasis for this session was on hands-on skills to help the trainees acquire and retain information. Future presenters are encouraged to tailor the training sessions to their individual institutions and to include information for their local state tobacco quitlines.

Evaluation Strategy

At the end of each session, participants completed an anonymous survey to measure changes in self-perceived knowledge, comfort, and familiarity regarding key smoking cessation skills and concepts (Appendix E). The survey consisted of questions on level of training and training program as well as ones about comfort and familiarity with CEASE principles before and after training assessed on 10-point Likert-type scales

(1 = *not at all confident*, 10 = *very confident*). Specifically, we queried learners' comfort with (1) screening patients for secondhand smoke exposure, (2) talking with parents about the importance of smoking cessation, (3) using motivational interviewing techniques to discuss smoking cessation with parents/caregivers, (4) making referrals to the California Smokers' Helpline (now known as Kick It California), and (4) providing caregivers who smoked with an NRT prescription. We also included free-text questions asking about two techniques that were the most valuable part of the training and two things that could be done to improve the training.

In addition, in June 2019, we sent an anonymous, electronic survey (Appendix F) to all pediatric residents to compare self-perceived knowledge, confidence, and practice related to smoking cessation between those who had and had not participated in the CEASE training.¹⁸ By querying house staff the year following their training, we hoped to capture the durability of the curriculum. We focused the survey on pediatric residents because they were permitted to prescribe medication. The survey asked for the residents' training level (i.e., postgraduate year) and, using 5-point Likert scales (1 = *not at all knowledgeable*, 5 = *very knowledgeable*), assessed their self-reported knowledge before versus after training of (1) the cardiorespiratory effects of secondhand smoke exposure on children, (2) the noncardiorespiratory effects of secondhand smoke exposure on children, (3) disparities in the risk of secondhand smoke exposure among children, and (4) consequences of thirdhand smoke exposure on children. Using 10-point Likert-type scales (1 = *not at all confident*, 10 = *very confident*), the survey also assessed comfort before versus after training with screening patients for secondhand smoke exposure, talking with patients' parents about the importance of smoking cessation, using motivational interviewing techniques to discuss smoking cessation with parents and caregivers, making referrals to the California Smokers' Helpline, and providing caregivers who smoked with NRT prescriptions.

Additionally, we asked trainees for (1) the number of patients/caregivers they had counseled to quit smoking in the preceding year, (2) the number of patients/caregivers offered a referral to the California Smokers' Helpline, (3) the number of patients/caregivers for whom they wrote NRT prescriptions, and (4) the percentage of clinical encounters with patient caregivers in which parents/caregivers were counseled to quit smoking, offered a referral to the California Smokers' Helpline, and offered an NRT prescription. All phases of the activity were reviewed by the Institutional Review Board of the University of California, San Francisco, and determined to be exempt (IRB #17-22373).

Analytic Approach

Deidentified characteristics (numbers and percentages) of the participants, including training program and level of training (i.e., student year or postgraduate year), were obtained in the initial surveys of both the multidisciplinary cohort (Table 1) and the pediatric resident-only cohort. The multidisciplinary cohort of students and residents was asked to evaluate self-efficacy in performing interventions to enable smoking cessation on 10-point Likert-type scales that compared pre- and posttraining. The pediatric resident-only cohort was asked to rate self-perceived knowledge of the impacts of secondhand smoke exposure as well as report the frequency of smoking cessation interventions. Descriptive values were reported using counts and percentages, as well as means, standard deviations, medians, and interquartile ranges. Comparisons between groups were conducted using chi-square and Wilcoxon rank sum tests; *p* values less than .05 were considered statistically significant. All survey data were captured and maintained in a secure Qualtrics online database. All statistical analyses were performed with Stata 12 data analytic software (StataCorp).

Results

Demographics

Multidisciplinary cohort: Out of the approximately 70 trainees who participated in the session, 52 completed the postsession evaluation; slightly more than half of all respondents (55%) were students, and 45% were residents (Table 1). Of the students, 59% (17 of 29) were third-year medical students. Among the residents who responded, the group was evenly divided between pediatric and family medicine residents.

Table 1. Trainee Program and Year of Respondents in Multidisciplinary Cohort (N = 52)

Training Characteristic	No. (%)
Training year	
Student	29 (55)
PGY 1	14 (27)
PGY 2	5 (10)
PGY 3	3 (6)
Other	1 (2)
Program (training year)	
Residents	
Pediatrics (1)	5 (10)
Pediatrics (2)	5 (10)
Pediatrics (3)	2 (4)
Family medicine (1)	9 (17)
Family medicine (3)	1 (2)
Students	
Medical student (1)	4 (8)
Medical student (3)	17 (33)
Medical student (4)	6 (12)
Pharmacy student	1 (2)
Nursing practitioner student	1 (2)
Other	1 (2)

In the mixed cohort of students and residents, we noted small but statistically significant improvements in comfort and self-perceived knowledge of multiple smoking cessation assistance domains after CEASE training (Table 2). Improvements were noted in screening (median increasing from 8.0 to 9.0, $p = .03$) and counseling caregivers for tobacco cessation (median increasing from 8.0 to 8.5, $p = .03$). Greater improvements were noted for practical therapeutic techniques such as motivational interviewing (median increasing from 7.0 to 9.0, $p = .02$), referrals to the California Smokers' Helpline (median increasing from 7.5 to 9.0, $p = .001$), and prescribing nicotine replacement therapy to caregivers (median increasing from 6.0 to 9.0, $p = .006$).

When asked to write about two techniques that were the most valuable part of the training, learners enthusiastically referred to the hands-on nature of the teaching. A few example quotations that sum up participants' overall positive responses to the session include that they enjoyed "opportunities to practice," "interaction with text helplines and RX practice," "drawing pictures to sum up learning" (i.e., algorithm creation), "motivational interviewing practice," and "repeating ask, assist, refer like a mantra."

When participants were asked to write about two things that could be done to improve the training, the main suggestion for improvement was more time to practice motivational interviewing. Appendix C now includes more resources for motivational interviewing. Participants also requested resources regarding cannabis cessation, which was outside the scope of this lecture, even though many of the techniques are similar.

Pediatric resident cohort: Forty-one of 80 pediatric residents (51%) responded to the pediatrics-only survey, with two-thirds reporting having ever received CEASE training. Twenty percent were PGY 1, 49% were PGY 2, and 32% were PGY 3.

The pediatric residents who indicated they had received CEASE training were asked to rate their self-perceived smoking cessation-related knowledge and behaviors before and

after training. There were statistically significant increases in their perceived knowledge of the cardiorespiratory effects of secondhand smoke exposure on children (median increasing from 3.0 to 4.0 on a 5-point Likert scale, $p < .001$), noncardiorespiratory effects of secondhand smoke exposure on children (median increasing from 2.0 to 4.0, $p < .001$), disparities in the risk of secondhand smoke exposure among children (median increasing from 3.0 to 4.0, $p < .001$), and the consequences of thirdhand smoke exposure for children (median increasing from 2.0 to 3.0, $p < .001$).

Mirroring the results of the multidisciplinary cohort, the pediatric residents also reported more significant improvements in self-efficacy with screening patients for secondhand smoke exposure (median increasing from 5.0 to 8.0, $p < .001$), counseling parents of patients on smoking cessation (median increasing from 5.0 to 8.0, $p < .001$), using motivational interviewing techniques (median increasing from 6.0 to 8.0, $p < .001$), making referrals to the California Smokers' Helpline (median increasing from 3.0 to 8.0, $p < .001$), and providing smoking caregivers of patients with NRT prescriptions (median increasing from 2.0 to 8.0, $p < .001$; Table 3).

Additionally, pediatric residents who were trained in CEASE reported higher rates of actual smoking cessation assistance behaviors with patient caregivers in the preceding year when compared to residents who were not CEASE trained (Table 4). These included the median number of caregivers referred to the California Smokers' Helpline (3.0 for trained residents vs. 0.5 for untrained residents, $p = .04$) and the median number of NRT prescriptions (2.0 for trained residents vs. 0.0 for untrained residents, $p = .02$). Furthermore, CEASE-trained pediatric residents reported higher rates of patient caregiver counseling (89% vs. 57%, $p = .02$) and frequency of offering quitline referrals (66% vs. 43%, $p = .02$) in half or more of their encounters with parents/caregivers who smoked (Table 4). We were also able to track the number of electronic referrals that were made to the

Table 2. Multidisciplinary Trainees' Comfort and Familiarity With CEASE Principles Before and After Training

Principle ^a	Before CEASE Training			After CEASE Training			p^b
	Mdn	M	IQR	Mdn	M	IQR	
Screen patients for secondhand smoke exposure	8.0	7.8	2	9.0	8.8	2	.03
Talk with parents of patients about the importance of smoking cessation	8.0	7.4	3	8.5	8.4	1	.03
Using motivational interviewing techniques to discuss smoking cessation with parents/caregivers	7.0	7.2	3	9.0	8.2	2	.02
Making referrals to the Smokers' Helpline	7.5	6.1	6	9.0	8.9	2	.001
Providing caregivers who smoke with a nicotine replacement therapy prescription	6.0	6.2	7	9.0	8.7	2	.006

Abbreviations: CEASE, Clinical Effort Against Secondhand Smoke Exposure; IQR, interquartile range.

^aRated on a 10-point Likert-type scale (1 = not at all confident, 5 = somewhat confident, 10 = very confident).

^bSignificance calculated as $p < .05$.

Table 3. Pediatric Residents' Smoking Cessation Knowledge and Behaviors Before and After CEASE Training

Category and Item	Before CEASE Training			After CEASE Training			p ^a
	Mdn	M	SD	Mdn	M	SD	
Knowledge ^b							
The cardiorespiratory effects of secondhand smoke exposure on children	3.0	3.0	1.0	4.0	3.8	0.8	<.001
The noncardiorespiratory effects of secondhand smoke exposure (e.g., ADHD) on children	2.0	2.0	0.9	4.0	3.2	1.1	<.001
Disparities in the risk of secondhand smoke exposure among children	3.0	2.9	1.0	4.0	3.8	0.8	<.001
Consequences of thirdhand smoke exposure for children	2.0	1.9	1.1	3.0	3.0	1.2	<.001
Behavior ^c							
Screen patients for secondhand smoke exposure	5.0	5.4	2.4	8.0	7.7	1.7	<.001
Talk with parents of patients about the importance of smoking cessation	5.0	5.3	2.2	8.0	8.0	1.8	<.001
Using motivational interviewing techniques to discuss smoking cessation with parents/caregivers	6.0	5.7	2.0	8.0	7.9	1.7	<.001
Making referrals to the Smokers' Helpline/quitline	3.0	3.1	1.5	8.0	7.1	2.5	<.001
Providing caregivers who smoke with nicotine replacement therapy prescriptions	2.0	2.9	2.0	8.0	6.7	2.8	<.001

Abbreviations: ADHD, attention deficit hyperactivity disorder; CEASE, Clinical Effort Against Secondhand Smoke Exposure.

^aSignificance calculated as $p < .05$.

^bRated on a 5-point Likert scale (1 = not at all knowledgeable, 5 = very knowledgeable).

^cRated on a 10-point Likert-type scale (1 = not at all confident, 5 = somewhat confident, 10 = very confident).

California Smokers' Helpline from our institution via a weblink that is now <https://kickitca.org/patient-referral>. Between July 2016 (when the CEASE trainings were first started) and June 2020 (when the CEASE grant ended), there were 144 electronic referrals made to the California Smokers' Helpline from our institution, showing that referrals were consistently made by trainees. After the California Smokers' Helpline was rebranded as Kick It California in 2021, a redesign of the referral link made it impossible to track further referral numbers by institution.

Discussion

Our findings suggest that a single-hour tobacco cessation training program based on the CEASE framework can increase both trainee self-perceived knowledge/comfort in smoking cessation techniques and smoking cessation intervention behaviors for adult caregivers of pediatric patients and that these increases may persist over time. The results of the session capture the real-world educational impact of the CEASE model on a multidisciplinary trainee population encompassing students in the fields of medicine, nursing, and pharmacy, as well as house staff

in the pediatric patient-facing specialties of family practice and pediatrics. This approach best approximates the usual attendees of regular academic center pediatric educational conferences, who come from a variety of training levels and backgrounds.

The multidisciplinary nature of CEASE trainee audiences is important because prior literature has suggested that practitioner self-efficacy in introducing and enacting tobacco cessation techniques is associated with neither years since completion of training nor physician subspecialty.^{8,9} Urgency is added to this public health crisis because, despite the widespread acceptance of secondhand smoke exposure as an important determinant of children's health in the medical community, behaviors combating tobacco smoking in pediatric patients' caregivers remain suboptimal.⁵ Thus, reaching as many providers in as many different specialties, disciplines, and levels of training is necessary to maximize the impact of nicotine cessation interventions.

Our educational session also adds to the literature supporting the use of a structured curriculum to educate learners on a vital but

Table 4. CEASE-Trained Versus CEASE-Untrained Pediatric Residents' Smoking Cessation Assistance Behaviors for Parents/Caregivers of Patients Who Smoke

Behavior	CEASE Trained		CEASE Untrained		p ^a
	Mdn	IQR	Mdn	IQR	
Number of patients/caregivers counseled to quit	4.0	3	3.0	3	.20
Number of patients/caregivers offered a referral to the California Smokers' Helpline	3.0	4	0.5	2	.04
Number of patients/caregivers for whom an NRT prescription was written	2.0	3	0.0	1	.02
	No.	%	No.	%	
Counseled parents/caregivers to quit smoking (≥50% of encounters)	24	89	8	57	.02
Offered a referral to the California Smokers' Helpline (≥50% of encounters)	39	66	6	43	.02
Offered an NRT prescription (≥50% of encounters)	16	59	4	29	.06

Abbreviations: CEASE, Clinical Effort Against Secondhand Smoke Exposure; IQR, interquartile range; NRT, nicotine replacement therapy.

^aSignificance calculated as $p < .05$.

nuanced subject such as CEASE. Surveys of pediatric residency program directors in the US have reported that most smoking cessation training curricula focus on the effects of smoking (rather than interventions to reduce smoke exposure), do not employ active learning methods, do not evaluate trainees' self-efficacy, and do not incorporate NRT prescription practices.¹⁹ Adoption of a standardized comprehensive teaching tool like CEASE could be used to implement best practices.

Our educational session had several primary limitations due to its design and scope. First, as completion of the evaluation survey was voluntary, there may have been an attrition bias. Given the retrospective self-assessment and timing of the surveys, there may have been recall and response biases as well. Second, because the surveys did not collect demographic information besides the type of learner, we were not able to adjust for potentially important variables in our regression model. Third, the survey focused on respondents' self-assessments and did not capture outcomes such as caregiver cessation rates. Lastly, our participants were recruited from one urban academic center and may not necessarily be generalizable to trainees in other regions.

In the future, implementation among diverse trainees and in nonacademic settings would improve the generalizability of our findings. Prospective evaluations conducted prior to and at multiple time points following the training could also assess the immediate pre/post educational impact of the session.

In conclusion, for health professional students and residents in pediatrics and family medicine, CEASE training successfully improved self-efficacy related to smoking cessation techniques for adult caregivers of children.

Appendices

- A. CEASE Training.pptx
- B. NRT Dosing Guidelines.docx
- C. Motivational Interviewing.docx
- D. Example CEASE Algorithm.png
- E. Postconference CEASE Survey.docx
- F. CEASE Medical Education Survey.docx

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Disclosures

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Ethical Approval

The University of California, San Francisco, Institutional Review Board deemed further review of this project not necessary.

Disclaimer

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