Summary

California Chapter 1, American Academy of Pediatrics (CC1AAP) is seeking funds to develop the Clinical Effort Against Secondhand Smoke Exposure (CEASE) California. CEASE is a nationally recognized evidence-based smoking cessation program for parents of pediatric patients. (1) CEASE offers pediatricians the tools to screen parents for second hand smoke exposure, promote smoking cessation counseling, Nicotine Replacement Therapy (NRT) prescriptions and enroll parents in a free smoking-cessation helpline. This program is currently offered to pediatric clinicians through Continuing Medical Education (CME) courses based out of Massachusetts General Hospital and administered in 10 states nationwide and is an approved Maintenance of Certification program (MOC) through the National American Academy of Pediatrics.

The specific aims of CEASE California are as follows:

(1) To adapt and implement CEASE for pediatric clinicians in small, medium and large pediatric practices focused on smoking cessation for parents in a pediatric setting in California.
(2) To support pediatricians obtaining Maintenance of Certification accreditation via the American Board of Pediatrics.
(3) To offer in office support to practices setting up the CEASE program who operate in varying types of practices (i.e. urban, suburban and rural settings).
(4) To evaluate the implementation of the program and its success in Northern California in order to disseminate the model in collaboration with the Southern California chapters of the American Academy of Pediatrics.

Specifically, CC1AAP will adapt and disseminate CEASE California (which is currently available in Spanish and English) throughout Northern California's demographically diverse pediatric practice settings. Of these dissemination practices, project staff will select 10 practice sites per year to provide additional training and on-going technical assistance to implement CEASE and to obtain Maintenance of Certification Accreditation (MOC) through the National American Academy of Pediatrics. Through these practice sites the goal is to have CEASE reach over 40,000 parents of children per year. CC1AAP will train pediatricians and their staff about CEASE protocols and discuss how to integrate CEASE in their clinic delivery system (including how to assess risk, provide counseling, referral for appropriate cessation support, and how to document their quality improvement efforts and outcomes). In addition, the program will offer technical support through in person visits, internet helpdesk, and on line conferences to support practices with ongoing implementation and evaluation of the program. To encourage practice sites to participate, and to introduce pediatricians to CEASE, CC1AAP through the American Board of Pediatrics will offer pediatricians complimentary Maintenance of Certification MOC Part 4 (2): A Quality Improvement (QI) component of their board recertification entitled CS2day. Program staff will evaluate the implementation of CEASE on the extent to which it is adopted by pediatric practices throughout the CC1AAP membership.

CC1AAP program staff will also evaluate pre-post improvements in screening children for second hand smoke exposure and select CEASE sites, and will document the proportion of families who smoke that received smoking cessation counseling, support and referral. Program staff will also examine pre-post changes in hospital-related asthma admission.

Background

Prevalence of Smoking in California: According to the California Department of Public Health: Approximately 16% of adults in Northern California are smokers (3); however, this percentage varies greatly by county and race/ethnicity. For instance, over 1 in 5 African American men continue to smoke. (4) In addition, nearly one in five adults smoke daily in the following primarily rural counties of California: Shasta, Tuolumne, Sonoma, Siskiyou, Alpine, Amador, Butte Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Inyo, and Lake. On average almost one in four children share a car ride or house with a smoker. (4) Smoking and second hand smoke exposure rates are at least twice as great in low income populations. (5)

Health Risks of Children Exposed to Second Hand Smoke: The adverse health consequences of second hand smoke exposure are well documented. There are 250 toxic and/or carcinogenic chemicals in tobacco smoke, including benzene, chromium, formaldehyde, cyanide, and carbon monoxide. (6) Second hand smoke puts young children at risk for asthma, bronchiolitis, sinusitis, bacterial respiratory infections, decreased lung growth, decreased exercise tolerance, cognitive deficits, behavior problems and sudden infant death syndrome (SIDS), to name just a few. (6) The Surgeon General has established that there is no safe level of tobacco exposure for young children. (6) In addition, children of parents who smoke may be at an increased risk of becoming smokers themselves. (7) Therefore, it is extremely important to aggressively address parental tobacco use.

Pediatric Practices are an Important Venue to Identify and Address Parental Tobacco Use: There are several reasons the pediatric practice setting provides an important venue to address children's exposure to tobacco smoke. First, most children receive a pediatric preventive health visit in a given year and often have multiple contacts with their pediatric clinicians in the course of a year. According to the most recent 2011 data, 90% of children with health insurance received an annual well check. (8) While children without insurance are far less likely to have a well check visit than those insured -- the majority, over 2/3 of these children (68%) receive a well check in a given year. (8) At this visit, the National American Academy of Pediatrics recommends guidelines that pediatric clinicians ask parents and their children about a wide range of health risk behaviors (including substance use such as tobacco) and provide preventive health counseling. (8)

Second, despite these important clinical guidelines, it is not common for parents to be asked about their smoking status or their child's potential exposure to tobacco smoke. Many pediatric clinicians are uncomfortable addressing this issue with parents, or feel that it is not their business. Others may feel there is little they can do to help if it is discovered that children are

exposed to second hand smoke. As a result, few parents receive the information and resources to quit and/or reduce their children's exposure to tobacco smoke. (9)

Third, there is an opportunity for open communication to address this issue in the pediatric setting. Parents trust the medical advice of pediatricians (10)(11) and would like them to address this issue with their children. This is especially true among parents who smoke. (12) In addition, parents accompany their children to medical appointments on a more frequent schedule than adult preventive visits. Thus, there is both parental desire and opportunity for pediatric clinicians to assess exposure; educate families about the hazards of smoking around children; and provide support services and referrals to help parents quit smoking. (12)

Last of all, helping parents to quit smoking in a pediatric setting can benefit the entire family. It can prolong the life of the smokers (parents), improve the health of all household members (if a household member is pregnant, it reduces the risk of delivering low-birth-weight and premature babies), eliminate a common cause of house fire mortality, and decrease the chances that teens will pick up the habit. (12)

Clinical Effort Against Second Hand Smoke Exposure (CEASE) Intervention: CEASE is an award-winning, nationally-recognized program to reduce children's exposure to second hand smoke via a point-of-care intervention at a pediatric preventive office visit. It was based on a best-practices module for adults and developed specifically for pediatric clinicians to use with families at the pediatric health visit. (13) To encourage the adoption of CEASE, it was designed to be flexible and adaptable to meet the particular practices' staffing needs, available resources, and physical configuration. Practices can choose materials relevant to their own particular systems of care. (13) CEASE provides pediatric providers with the infrastructure, resources and skills to identify and intervene with children whose families are exposing them to second hand tobacco smoke.

In brief, the intervention is based on a 3-step clinical action framework of "Ask, Assist, and Refer." (14)

- **Ask**: Pediatric clinicians ask about second hand smoke exposures at every visit
- **Assist (Health Education, Counseling and Prescription)** Pediatric clinicians advise smoking parents to quit at every medical visit, and establish that the goal is a completely smoke-free home. Pediatric clinicians provide the smoker(s) a prescription for Nicotine Replacement Therapy. The pediatric clinicians give family educational handouts in English and Spanish and offers family additional resources.
- **Referral**: Pediatric clinicians refer smokers to the Smokers' Helpline by completing and faxing customized CEASE forms. Helpline professionals then schedule an appointment with the persons who are smokers. In addition, during subsequent visits, physicians are encouraged to repeat the cycle of "ask, assist, and refer" parents about ability to quit in order to identify and provide additional support as needed.

CEASE – Evidenced-Based Practice Change Strategy: The effectiveness of CEASE has been evaluated in a randomized control trial design and study findings are in the process of being published. Jonathan P. Winickoff, MD, MPH, the principal developer of CEASE is a practicing general pediatrician and researcher at Harvard Medical School and MassGeneral Hospital for Children. Dr. Winickoff has shared findings from his evaluation studies of CEASE (see also letter of commitment). In his randomized control trial of 20 practice sites, CEASE was shown to be feasible to implement and resulted in significantly higher rates of tobacco control assistance (defined as medication prescription, counseling, or enrollment in the Smokers' Helpline) provided to parents. Of the 1981 parental smokers in the study, 43% in the intervention condition parents and 3% control condition parents received tobacco control assistance ($p<.001$). Almost all of the physicians in the intervention practices delivered assistance to parents who smoke representing a systemic change in the intervention practice sites. The study also found that Nicotine Replacement Therapy (NRT) is a critical component to the success of the adoption of the program. In cases where patients are not insured, the program (in collaboration with the Smokers' Helpline), will offer a $50 incentive. In addition, the California's MediCaid program covers the costs associated with NRT. A majority of California smokers qualify for MediCaid subsidized healthcare. (6)

As mentioned previously there is a tremendous need to disseminate CEASE in California, because there are so many underserved areas with high rates of smoking. Currently there is only one CEASE program in the entire state, centered at Children's Hospital Oakland where Gena Lewis, MD, the Primary Investigator and Medical Director for this proposal, has gained intimate knowledge of the program. However, California has established a smoking cessation Helpline that the CC1AAP program will leverage and incorporate into CEASE California. The Helpline has been well received by a wide range of health professionals ranging from pediatricians and family physicians to dental hygienists and diabetes educators who have referred parents to the Helpline. In addition, with funding from the CDC, the Helpline has launched an electronic health record component to improve upon the fax referral system, which can be provided to sites with EHR to support documentation of patient consent for referral, and provide an electronic referral to the Helpline for counseling. Besides improving the accuracy and efficiency of the data transfer, the e-referral system will also enable the Helpline to provide automated feedback, such as: that a referral was received; the patient has been contacted and agreed or refused to participate in counseling; and the patient has completed a counseling session and set a quit date. This approach supports the adoption and integration of successful health quality improvement efforts that CC1AAP is uniquely able to leverage for this proposal.

Methodology

The specific methodology for this proposal is described in the following section and the methods and work plan are outlined in **Table 1**

Develop and disseminate marketing materials: The program will be initially marketed to the CC1AAP members through an email advertisement much in the same way the CC1AAP promotes other Continuing Medical Education events. The email will include information about the purpose of the program, a link to the CC1AAP website to find more specific information about the program, and the ability to fulfill the MOC QI incentive.

Selection of CEASE Participants: CC1AAP project staff will select 10 practitioners the first year and 10 the second. In order to ensure participation as part of the marketing, a survey will be sent to the CC1AAP members to solicit their interest in participating in the program in either 2013 or 2014, and whether an MOC QI is needed to participate. Pediatricians licensed before May 1, 1988 are exempt from participating in MOC QI programs, and yet would be welcome to participate in the implementation of the program for their clinical setting. Based on the level of interest generated in CEASE California MOC, the project staff will develop criteria for selecting the 10 practice sites that will receive the additional technical assistance support. Criteria for consideration include size and types of practice sites, and geographic diversity.

Develop and implement Training Curriculum: The program will use available CEASE training materials and will tailor them to fit the needs and concerns for California pediatric clinicians. The materials are available at http://www.ceasesmoking2day.com/index.php/toolkit. CC1AAP will rely on Chapter board members to review and provide comments about changes needed.

Disseminate CEASE for MOC Accreditation: The National American Academy of Pediatrics through the American Board of Medical Specialties has designed Maintenance of Certification programs in order for practitioners to "ensure continuous lifelong learning" (Pathway to MOC) Part 4 of the MOC (CEASE CS2day) focuses on everyday practice of clinical pediatrics in order to "improve quality of care." (2) An MOC exists for the CEASE program entitled CS2day. It is a one-year program that requires the pediatricians to: participate in regular web-based conference calls; report and send in data regarding referrals, and changes in behavior; and prove implementation of the program for their office environments. After the one-year MOC, pediatricians are encouraged to continue the program. By offering regular contact and support through a "helpdesk", CC1AAP anticipates that providers will remain in the program.

Offer in-office support to practices setting up CEASE: CC1AAP will provide additional training and technical assistance to pediatric clinicians and clinical staff about the CEASE program; environmental tobacco smoke; its role in pediatric health; and what to do for patients who have tobacco exposure including detailed education on Nicotine Replacement Therapy. The training will consist of a two-hour visit with staff to train about motivational interviewing; the materials; and a walk through an office visit with staff to determine the flow of patients and the

best opportunities for implementation of the program. In addition, potential obstacles for patients and the practice will be identified and discussed. Follow up visits and conference calls, web-based calls and informational training will be offered to support clinicians efforts.

In addition, CC1AAP will coordinate regular group "collaborative" meetings for participating pediatric clinicians and their staff to learn about best practices, and overcoming institutional roadblocks to making this program part of the fabric of the daily routine.

The training and support will encourage pediatric clinicians to:

- Screen patients at all visits for environmental smoke exposure.
- Counsel guardians of all patients who confirm environmental smoke exposure of the child about cessation resources.
- Refer smokers to the California Smokers' Helpline by faxing referral forms directly.
- Provide the smokers a prescription for Nicotine Replacement Therapy.
- Provide additional follow up support for those families that previously have been identified as having smoke exposure.
- Evaluate the implementation.

Table 1 Objective	Strategy	Date(s)	Performance Targets for 24-month period.	Source data
Develop and disseminate marketing materials	Market the program through the CC1AAP membership list serve; regional and statewide meetings; informal networking	1/13	Receive responses from CC1AAP members through the website with completed applications and interest in participating in the MOC QI	Marketing log
Selection of CEASE Participants	Identify clinics or providers that are interested in participating.	2/13-1/14 1/14-2/14	Define criteria for selecting program candidates and select 10 practitioners to participate in year one	Website lists of activity, and web applications
Develop and implement Training Curriculum	Provide training to clinical staff about the CEASE program, environmental tobacco smoke, its role in pediatric health, and what to do for patients who have tobacco exposure.	4/13-12/13 3/14-12/14	Training for at least 10 physicians and clinical staff per year	Sign in sheets
	Continue to receive screened guardians' information from all patients for patient environmental smoke exposure		Provide office visits, and technical support to offices	faxed surveys, updated lists of numbers from the Smokers' Helpline
	Follow up with pediatric clinicians participating in the MOC QI	6/16-12/14	Encourage future participation in the program and help overcome obstacles	Phone call and visit log
Disseminate CEASE for MOC Accreditation	Offer the MOC QI Part 4 as a bonus to participating in the program, and provide technical support for pediatric clinicians to continue after MOC is finished	3/13 12/13 3/14-12/14	Offer MOC QI to 20 pediatricians	National Academy of American Pediatrics and invoices to cover services
Offer in-office support to practices setting up CEASE	Provide in office visits to educate pediatric clinicians and office staff about materials, office flow and best practices	3/13-12/14	To overcome obstacles for pediatric clinicians and office staff in order to continue the program after the MOC and initial technical support is offered	Technical support log for in person and virtual visits

Evaluation

There are two primary components of the evaluation of CEASE California. First, CC1AAP program staff will conduct an outcome evaluation to examine pre-post changes in the proportion of children who are screened for second hand smoke exposure. Of those children who are being exposed to second hand smoke, program staff will examine the proportion of family members who (a) received counseling; (b) were referred to the smoking cessation Helpline; and (c) were prescribed Nicotine Replacement Therapy. Program staff will also compare pre-post changes in asthma-related hospital admissions of the 10 CEASE clinics.

Second, CC1AAP program staff will conduct an implementation evaluation to document the dissemination efforts of CEASE and track the proportion of clinicians who request more information about CEASE and the type of CEASE activities they engage in (e.g. MOC). Program staff will also examine how CEASE is being implemented at the 10 practice sites to inform ongoing program improvement efforts; to examine factors that impede and/or facilitate implementation; and to evaluate the extent to which CEASE is implemented as planned. **Table 2** provides an overview of the evaluation objectives and corresponding data sources.

TABLE 2 **Evaluation Objectives**	**Data Sources**
I. Outcome Evaluation	
Proportion of pediatric clients who have a preventive visit that are screened for 2nd hand smoke exposure	Clinician/staff documentation (Clinic records)
Proportion of at-risk children whose family members receive smoking cessation counseling and support services	Clinician/staff documentation(Clinic records): • Proportion who receive counseling • Proportion referred to Smokers' Helpline • Proportion prescribed NRT
Annual pre-post differences in asthma related hospital admissions	Clinic Records
II. Process Evaluation	
Dissemination efforts and CEASE adoption	• # of providers who receive e-mail (mailing list) • Proportion of providers who are interested in learning about CEASE (e-mail record) • Proportion of providers who register for CEASE MOC • Proportion of providers who complete CEASE MOC
Clinician/staff satisfaction of CEASE trainings	Anonymous post-training surveys of clinicians and staff
Clinicians' and clinic staffs' experiences with CEASE	• Questions raised on technical assistance calls; • Online survey (survey monkey)
Factors that facilitate and/or impede the implementation of the intervention	• Questions raised on technical assistance calls; • Online survey (survey monkey)