

Electronic cigarette cessation program in Caja Costarricense del Seguro Social (CCSS)-Costa Rica: An assessment to guide the future development of an educational intervention for CCSS's health practitioners.

by
Jeancarlo Cordoba

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ABSTRACT

Newer tobacco products are becoming widely popular in recent years, especially among youth and young adults. New technologies, such as electronic cigarettes, focus on efficiently delivering the addictive substance nicotine into the body while simulating conventional smoking behavior without burning tobacco (Campaign for Tobacco-Free Kids, 2019). Due to the addictiveness of nicotine, there is a high biological plausibility of high levels of nicotine dependence among electronic cigarette users. Consequently, there is a need for specific interventions for priority populations at risk, requiring research studies that provide evidence for future action and strategic planning purposes.

The 2015 Costa Rican Ministry of Health data showed that 1.3% of the population (47,519 people) were using electronic cigarettes. Regarding tobacco cessation, since 2005, the CCSS has offered tobacco cessation through the program called "Clínicas de Cesación de Tabaco" (CCT). This dissertation research aimed to conduct an organizational assessment to inform the development of an electronic cigarette cessation curriculum for the CCSS practitioners in Costa Rica. This assessment included a description of the systemic and organizational practices related to tobacco cessation with particular attention to electronic cigarettes at the CCSS; an identification of the CCSS' practitioners' training in electronic cigarette cessation; current cessation practices, barriers, and needs related to an electronic cigarette cessation curriculum for CCSS practitioners; and a proposal of specific recommendations for implementing an electronic cigarette cessation curriculum for the CCSS clinics.

The Planned Change Model by Lippitt et al. (1958) and the Framework for Change by Ferlie and Shortell (2001) are two theories integrated into the conceptual framework that guided the research study. This study utilized a qualitative and case study methodological approach with

key informant semi-structured interviews with CCSS staff and document analysis. This study used the content analysis method to analyze the data. The study was conducted in 2022 and 2023 after the approval of the dissertation committee, the CCSS Subarea of Bioethics in Research, and the University at Albany Institutional Review Board.

The findings from this study clearly suggest that the CCT program is following best practices for conventional cigarette tobacco cessation. In terms of electronic cigarette cessation, there is a lack of standardized procedures that allows the CCT program to offer electronic cigarette cessation services to the population. Also, this study found that although some practitioners acknowledged knowing about electronic cigarettes, this knowledge is not uniform throughout the CCT program. Additionally, all the practitioners interviewed expressed a lack of knowledge about electronic cigarette cessation methods. The dissertation concludes with recommendations for the next steps for the CCSS regarding addressing electronic cigarettes as part of the CCT program.

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CHAPTER I: INTRODUCTION AND BACKGROUND

Tobacco is one of the leading causes of preventable deaths (World Health Organization, 2019). Smoking has killed more than 200 million people over the past 30 years, and the annual economic cost of smoking exceeds \$1 trillion (Reitsma et al., 2021). In 2019, the number of smokers worldwide increased to 1.1 billion, of which 7.7 million died from smoking, including one in five male deaths globally (Reitsma et al., 2021). Newer tobacco products are becoming widely popular in recent years, especially among youth and young adults. New technologies focus on efficiently delivering the addictive substance nicotine into the body while simulating conventional smoking behavior without burning tobacco (Campaign for Tobacco-Free Kids, 2019). These tobacco products are in the market as vape devices (pens, universal serial bus, among others), personal vaporizers, e-hookah, mods, e-pipes, or just as "e-cigarettes," the most used term for this type of smoking device (Chu et al., 2018).

Most electronic cigarettes utilize e-liquids or salts with nicotine as the main component. Nicotine could lead to dependence once in the human body due to its psychomotor stimulant properties. As mentioned above, device characteristics can influence nicotine efficiency. Also, evidence has shown that the lungs are the most harmed human organs due to electronic cigarette use with and without nicotine. These devices induce disturbance and injuries in the respiratory tissue, decreasing the oxygen level even in nonsmoker vape users (Bowler et al., 2017; Kaur et al., 2018; Staudt et al., 2018).

Due to the addictive characteristics of nicotine, there is a high biological plausibility of high levels of nicotine dependence among electronic cigarette users. Consequently, there is a need for specific interventions for priority populations at risk, such as young adults, requiring research designs that provide short-term answers for strategic planning purposes. Also, with the

significantly increasing number of young adults using electronic cigarettes, there is a need for cessation treatment services that prevent long-term effects, such as brain damage, based on exposure to nicotine and other potentially harmful substances (Dai, 2021; National Academy of Sciences Engineering and Medicine, 2018; Sikka et al., 2021).

A. Prevalence of electronic cigarette use worldwide

The consumption trends of newer tobacco products have increased over the years (World Health Organization, 2021a). In 2018, the World Health Organization (WHO) estimated that 1.2% of adults worldwide used electronic cigarettes with nicotine; the Western Pacific Region presented the highest prevalence of electronic cigarette use at 2.4% (World Health Organization, 2021b). In most cases, electronic cigarette use rates are higher among men compared to women globally (World Health Organization, 2021b).

Although there is no electronic cigarette use data available for all countries, in those countries monitoring electronic cigarette use, the data shows the prevalence ranges from 11% in Estonia in 2018 to 0.2% in Uruguay in 2016-2017 (World Health Organization, 2021a). In countries with similar population size as Costa Rica, the prevalence of electronic cigarette use is higher; for example, Finland in 2018 showed a rate of 2.2% for both sexes among 5.5 million people, and the Republic of Ireland in 2017-2018 revealed an electronic cigarette use prevalence rate of 4% for both sexes in a total population of 4.9 million people (World Health Organization, 2021a).

Compared to other countries in Central America in 2015, Costa Rica had a similar electronic cigarette use prevalence rate as México (1.2% for both sexes), a country with a total population of 129 million people, compared to the 5 million people who live in Costa Rica. Besides Mexico and Costa Rica, the other country in Central America with data available is Panama,

which reported an electronic cigarette use prevalence rate of 0.4% for both sexes among 4.3 million people in 2019 (World Health Organization, 2021a). However, the case of Panama is exceptional because it banned the importation, distribution, and sales of electronic cigarettes since 2009 (Antolin & Barkley, 2016).

In addition, the age of electronic cigarette users varies around the world. However, in several countries, more young adults (18-24 years old) than adults (≥ 25 years old) have ever or currently use electronic cigarettes, and the rate in this age group has been increasing gradually in recent years (World Health Organization, 2021b). For example, in the United States, young adults aged 18-24 who use electronic cigarettes every day or some days increased from 2.4% in 2012 and 2013 to 5.2% in 2017 and rose again to 7.6% in 2018 (Truth Initiative, 2021).

The trend seen in the United States is similar to other countries, such as Canada, where adults aged 20-24 years had the highest electronic cigarette prevalence rates at 29% in 2017. Also, the same was true in the European Union in 2017, where the prevalence of ever use of electronic cigarettes among 18 and 24 years old was 28% (World Health Organization, 2021b).

B. Electronic cigarette use in Costa Rica

The 2015 Global Adult Smoking Survey conducted by the Costa Rican Ministry of Health monitored the consumption of electronic cigarettes in the country. The results showed that 1.3% of the population (47,519 people) were using this tobacco product in 2015. The primary users of this product were men between 15 and 24 years old, from urban areas, and with an educational level of college and higher (Espinoza et al., 2017).

In 2018, the fifth round of the National Survey on Consumption of Psychoactive Substances in Secondary Education in Costa Rica showed an electronic cigarette consumption rate of 8% in high school students (Dobles-Ulloa et al., 2019). Those in the higher educational levels

used these devices at greater rates compared to the lower academic levels. The survey also demonstrated differences based on gender, with males being the primary users (Dobles-Ulloa et al., 2019).

There is no exact date on which it can be determined that electronic cigarettes began to be consumed or sold in Costa Rica (Ministerio de Salud & Universidad de Costa Rica, 2019a). However, according to data from the Directorate of Customer Service of the Ministry of Health, in October 2016, 32 brands of liquids for electronic cigarettes were labeled as marketed by importers. The following year, the number of e-liquid brands increased to 47, and the increase continued in 2018 when there were 69 brands of e-liquids reported for sale in Costa Rica (Ministerio de Salud & Universidad de Costa Rica, 2019a).

In Costa Rica, there are no data about the electronic cigarette market. Still, a tobacco control group researched the number of physical and virtual stores that have appeared in recent years and verified that it is a growing business (Ministerio de Salud et al., 2019). In 2017, this group did a preliminary search on the internet for places that sell these products to people in Costa Rica. They found that there were approximately 26 websites that sell electronic cigarettes of different types, shapes, colors, and sizes, various refill liquids with different flavors, batteries, resistors, chargers, tanks, and other accessories (Ministerio de Salud et al., 2019). According to data provided by the National Customs Service of the Ministry of Finance, in 2017, the value of imports of electronic cigarettes and vaporizers amounted to \$91,050 (Perez, 2021).

C. Current status of electronic cigarette cessation clinical services in Costa Rica

Based on the Guidelines for Implementation of Article 14 of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC), the definition of cessation is "the process of stopping the use of any tobacco product, and it is, consequently, improbable to

claim this may be done by switching to or continuing to use another tobacco product (World Health Organization, 2021c). Thus, even though some companies have been marketing their products as an alternative to quitting conventional cigarettes, the truth is that continuing to be addicted to nicotine could offset any potential benefits realized among adult smokers using electronic cigarettes to stop (U.S. Department of Health and Human Services, 2020).

Nevertheless, electronic cigarette cessation interventions are not widely disseminated, existing programs have little empirical investigation (Smith et al., 2021), and public health experts have focused on preventing electronic cigarette initiation among young people (Smith et al., 2021). Despite this, in the United States, 44.5% of electronic cigarette users report serious interest in quitting, and 24.9% attempted to quit in the past year, suggesting that electronic cigarette cessation interventions are urgently necessary for the U.S. (Smith et al., 2021). It is yet to be determined how many current electronic cigarette users in Costa Rica would like to seek cessation services.

If a person is dependent on electronic cigarettes, the healthcare provider should offer counseling and treatment for nicotine dependence to help them stop their electronic cigarette use (Farber et al., 2021). However, this is not a common practice worldwide. Instead, it is widespread to see lack of services for this population leads to escalation of use, especially among young adult electronic cigarette users, as indicated by an increase in the frequency of use, intense and more frequent urges to vape, feelings of addiction, and unsuccessful quit attempts (Hammond et al., 2020). This further supports the need for research about electronic cigarette cessation to create comprehensive interventions for this priority population.

In Costa Rica, healthcare services and the management of many social security regimes (such as health insurance with five different types of coverages, retirement pensions with two

different types, and the social benefits) within the national healthcare system have been sustained and implemented by the Caja Costarricense del Seguro Social or CCSS (Costa Rican Social Security Administration) since 1941 (Saenz-Madrigal et al., 2010). Currently, the CCSS offers a whole health service network of a first, second, and third level of attention for services based on the complexity of services needed by the patients.

Regarding tobacco cessation, since 2005, the CCSS has offered cessation services at the second and third levels of complexity through the program called "Clínicas de Cesación de Tabaco" (CCT), called "CCSS-CCT" in this dissertation. As of 2014, this service is standardized in the seven networks throughout the national territory. In addition, interdisciplinary teams and guidelines have been implemented to offer help in primary care clinics and hospitals (Jimenez, 2021). Furthermore, from 2018 onwards, in half of the health areas of the CCSS (105), there are intensive intervention consultations by psychologists, doctors, or social workers trained so that patients in the pre-contemplative or contemplative stage move to the action stage of cessation (Jimenez, 2021).

The intervention model used in the CCSS-CCT program is a brief, rational, emotional, and behavioral therapy that guides smokers to understand the chemical and emotional foundations of tobacco dependence and assists them in carrying out behavioral modifications to achieve cessation during 12 weeks (Sandí-Esquivel & Molina-Di Palma, 2013). In 2016 and 2017, the CCSS-CCT's completion rates were greater than 90% and exceeded 74% from 2018 to 2020. Furthermore, the success rates (abstinence after 12 months) of these programs have remained relatively constant between 2016 and 2019 by exhibiting figures greater than 70% (Jimenez, 2021). The CCSS has 35 CCT programs in Costa Rica. The recruitment of the patients is handled in the

primary care setting, and another available resource is a video library with 14 educational and motivational videos (Jimenez, 2021).

However, even with the great success that the CCSS has achieved in tobacco cessation during the last 16 years, they currently do not offer interventions for electronic cigarette use in their cessation clinics. At this time, the CCSS neither has a guideline for treating electronic cigarette users who want to quit nor has an electronic cigarette curriculum that trains health professionals to screen and intervene with those seeking help to quit their use of electronic cigarettes, a newer form of tobacco product. This situation creates a gap in the tobacco cessation efforts in Costa Rica and creates a disadvantage for those in need.

Consequently, this dissertation research study aimed to conduct an organizational assessment to inform the development of an electronic cigarette cessation curriculum for the CCSS in Costa Rica. This research study is also an opportunity to show an example of an assessment methodology that could potentially be useful in other institutions in Costa Rica to develop an electronic cigarette cessation program for clinical settings. The methods of this dissertation included an organizational assessment to identify gap areas related to electronic cigarette cessation efforts and practices within Caja Costarricense del Seguro Social and to identify opportunities to incorporate an electronic cigarette educational curriculum for practitioners within this system.

D. Statement of the Problem

Over the last decades, the tobacco industry has created newer ways to introduce nicotine through electronic devices that mimic conventional tobacco but more efficiently (National Academy of Sciences Engineering and Medicine, 2018). The new devices and their liquids and salts have increased the number of users worldwide, especially adolescents and young adults, but also current smokers who recognize the burdens of tobacco and want to find a solution to their

addiction (World Health Organization, 2021d). However, the new technologies' main hook is still nicotine, creating an increasing number of individuals who are addicted to nicotine (Giovenco et al., 2019), especially among adolescents and young adults (Sikka et al., 2021). Therefore, interventions must be developed and implemented to assist individuals with electronic cigarette cessation (Sikka et al., 2021).

However, despite the increases in electronic cigarette use in some countries (Centers for Disease Control and Prevention (CDC), 2020; Cornelius et al., 2020), the evidence shows that more people have started asking for help quitting these devices (Graham et al., 2019). Also, a call for research to develop effective vaping cessation interventions was made (U.S. Department of Health and Human Services, 2020), but there is limited electronic cigarette cessation intervention research (Amato et al., 2021; Connor, 2019; Graham et al., 2019, 2020; Sanchez, Kaufman, Pelletier, Baskerville, Feng, Connor, Schwartz, & Chaiton, 2021). Similarly, there are no published randomized trials on vaping cessation interventions, resulting in a lack of available interventions and resources. Consequently, research is urgently needed to rapidly inform ongoing and future electronic cigarette cessation interventions and programs and to enhance the evidence base (Berg, Krishnan, et al., 2021), particularly in terms of early nicotine cessation (Neuberger, 2021)

Over the last couple of years, the efforts of major health organizations worldwide have been directed to prevent the initiation of electronic cigarette users (Liu et al., 2020). Nevertheless, for the people who are already addicted, there is a lack of resources focused on cessation programs targeting the specific characteristics of this population that may differ from conventional smokers (Amato et al., 2021; Graham et al., 2019; Liu et al., 2020).

Regarding conventional tobacco, since 1990, scientific knowledge has grown dramatically on the determinants and processes of smoking cessation, increasing the development of

interventions that promote cessation. Consequently, a considerable range of effective pharmacologic and behavioral smoking cessation treatment alternatives are now available (U.S. Department of Health and Human Services, 2020). As of October 16, 2019, the U.S. Food and Drug Administration (FDA) has authorized two non-nicotine oral medications and five nicotine replacement therapies (NRTs) to help smokers quit, and the use of these treatments has expanded, including stronger combination with counseling assistance (U.S. Department of Health and Human Services, 2020)

Consequently, following the international guidelines and the body of knowledge regarding cessation methods, countries that have signed the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) agreed to help their population quit tobacco use. Thus, based on the WHO FTCT, they should support their population to make cessation attempts by implementing policies and programs (WHO Framework Convention on Tobacco Control Secretariat, 2017).

Therefore, to complete their agreement, countries like Costa Rica should start thinking about policies and programs to assist those already addicted to the newer tobacco products and thinking about growing the body of knowledge around this issue. Electronic cigarette cessation programs are relatively new, and their effectiveness is still emerging (Berg, Krishnan, et al., 2021). Significant behavioral and contextual differences related to electronic cigarette use may require different or specifically designed interventions (Amato et al., 2021; Graham et al., 2020; Liu et al., 2020). However, there is no doubt that more resources, evidence-based tools, research, and evaluations are needed to inform effective electronic cigarette cessation interventions (Liu et al., 2020).

E. Purpose and Significance of the Study

The purpose of this study was to conduct an initial organizational assessment to inform the future development of an electronic cigarette cessation curriculum for the Caja Costarricense del Seguro Social in Costa Rica.

To the best of the researcher's knowledge, this research study is one of the first studies to consider a national effort in Costa Rica to assess the need for an electronic cessation program, including the training needs among the practitioners, in the healthcare system. Also, this study is aligned with the U.S. Surgeon General's Report on Smoking Cessation calls for research to develop effective electronic cigarette cessation interventions, particularly for young adults (Berg, Duan, et al., 2021). While more research is needed, clinicians worldwide need better guidance on patient-centered approaches to address electronic cigarette use (Kovach et al., 2021).

E.1. Impact on clinical practice

Currently, Costa Rica has a well-formed tobacco cessation program. Nevertheless, the expeditious creation of new tobacco products produces a gap in knowledge of effective cessation interventions for these products, such as electronic cigarette users. The findings from this study should inform Costa Rica's health officials to move forward to offer its population the most comprehensive tobacco cessation programs. Furthermore, the assessment generated from this research project provides the initial essential elements to build new programs and policies based on the need of the CCSS and its users, increasing the chances of cessation success. Furthermore, this study's results will lead the scientific community to better understand the need and opportunities for electronic cigarette cessation interventions in Costa Rica.

E.2. Impact on population

In Costa Rica, 47,519 people used electronic cigarettes in 2015 (Espinoza Aguirre et al., 2020). However, there is a concern that the number has been increasing based on the market's estimated projection of the consequent years (Ministerio de Salud & Universidad de Costa Rica, 2019b). Also, there is a concern that youth and young adults are at significant risk of initiation of tobacco use because of the widespread availability of electronic cigarettes (Soneji et al., 2017). As a result, the tobacco industry has created many commercial tactics to engage new users with their products. However, health organizations globally have been counter-attacking those tactics with the best of their resources. Still, many young adults are now addicted to tobacco products, and their need for cessation programs is increasing (National Academies of Sciences Engineering and Medicine., 2018).

This study takes the initial steps to strengthen a tobacco cessation program in the CCSS by providing evidence of the gaps related to electronic cigarette cessation interventions. In addition, this study may result in future efforts to provide access to cessation interventions for almost 2% of the population currently using electronic cigarettes (Espinoza Aguirre et al., 2020), resulting in a higher quality of life, improved health status, reduced mortality, and increased life expectancy, but also reducing the high financial costs for those addicted to nicotine, the healthcare system, and society (U.S. Department of Health and Human Services, 2020).

F. Specific Aims and Research Questions

The specific aims of this study are as follows:

- Aim 1: To describe the systemic and current organizational practices related to the Cessation Clinics at the Caja Costarricense del Seguro Social.

Research Question 1: What are the systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes, at the Caja Costarricense del Seguro Social?

- Aim 2: To identify the Caja Costarricense del Seguro Social 'practitioners' training in electronic cigarette cessation, current cessation practices, barriers, and needs related to an electronic cigarette cessation curriculum for practitioners.

Research Question 2: What are the current knowledge, practices, and needs related to electronic cigarette cessation among the cessation clinic practitioners to implement an electronic cigarette cessation curriculum?

- Aim 3: To propose specific recommendations for implementing an electronic cigarette cessation curriculum for the Caja Costarricense del Seguro Social clinics based on the findings from Aims 1 and 2.

Research Question 3: Given the findings from Research Questions 1 and 2 and taking a systemic approach, what are the specific recommendations for an electronic cigarette cessation curriculum or services for the CCSS cessation clinics?

This study used a qualitative approach, including document review and key informant semi-structured interviews with coordinators and health practitioners at the CCSS-CCT program to address the specific aims. First, key informant semi-structured interviews with CCSS-CCT's national and local coordinators and a review of the CCSS-CCT guidelines were completed to describe the systemic and organizational practices related to tobacco cessation, particularly electronic cigarettes, at the CCSS (Aim 1). Then, key informant semi-structured interviews with CCSS-CCT's health practitioners were implemented to understand the current knowledge, practices, and needs related to electronic cigarette cessation among the cessation clinic practitioners

to inform a future electronic cigarette cessation curriculum (Aim 2). Finally, an analysis and synthesis of data collected in the previous phases, plus a literature review, allowed the researcher to propose specific recommendations for an electronic cigarette cessation curriculum for the CCSS-CCT (Aim 3). It is important to highlight that no institution funded this research project, and the only financial support came from the personal savings of the researcher.

To summarize, electronic cigarettes have become a severe threat to all the tobacco control efforts developed by health organizations globally. Even with the scientific advances in the cessation of conventional tobacco products, there is a gap in knowledge regarding the best approach for electronic cigarette cessation programs; however, there is an imminent need for electronic cigarette cessation interventions based on the increasing number of people becoming addicted to nicotine as a result of their use. This study addressed the need to implement an assessment to inform a future electronic cigarette cessation training curriculum for practitioners nationally in Costa Rica.

The next chapter contains a literature review pertaining to electronic cigarettes, their health effects, and the positions of the major health organizations globally. It also includes a brief summary of the Costa Rica public health care system, an overview of the existing tobacco cessation programs, and the evidence base for electronic cigarette cessation programs.

CHAPTER II: REVIEW OF THE LITERATURE.

A. *Current Electronic Cigarette Information*

A.1 *Health Effects of Electronic Cigarettes*

Electronic cigarettes have been on the market worldwide for less than two decades, making locating scientific evidence about most long-term health effects difficult. In addition, variability across studies focused on device, liquid, and aerosol-generation methods makes the generalization of effects on human beings challenging. Consequently, we must consider all the findings regarding knowledge in progress in this field. Some research on short-term exposure to these devices, effects on symptoms, and intermediate results exist. The first point that is important to highlight is that electronic cigarettes contain components that are not benign and are likely to have some adverse health effects on their own (National Academy of Sciences Engineering and Medicine, 2018; Staudt et al., 2018), particularly concerning body systems that are sensitive to nicotine effects (Breland et al., 2017).

From there, we can emphasize that in terms of the respiratory system, many studies suggest that exposed cells to electronic cigarette aerosols increase oxidative stress and decrease epithelial cell viability at least 24 hours after exposure stress (Breland et al., 2017), with increased oxidative stress when nicotine is added to the liquid in some studies (Scheffler et al., 2015) but a decrease in others (Lerner et al., 2015). In addition, some studies have shown that lung inflammation is associated with nicotine, acrolein, PG, and glycerol included in electronic cigarette aerosol (Schweitzer et al., 2015). Likewise, in vitro studies have demonstrated that electronic cigarette aerosol can modify epithelial and endothelial cell biology, affecting the normal lung (Staudt et al., 2018). Moreover, even studies in healthy non-smoker individuals with acute exposure to electronic cigarette aerosol suggest a change in the biology of different lung cells. That effect

translates into an increased risk for lung diseases, such as asthma and chronic obstructive pulmonary disease (COPD) (Bowler et al., 2017; Staudt et al., 2018; World Health Organization, 2021c), indicating that electronic cigarette aerosols are not benign (Staudt et al., 2018).

In addition, clinical studies showed that similar to combustible cigarette smoke, electronic cigarette aerosol increases the heart rate and blood pressure after acute exposure to the cardiovascular system, increasing the risk of myocardial infarction (World Health Organization, 2021c). However, to date, the long-term effects of electronic cigarette use on cardiovascular health are unknown (Breland et al., 2017). However, based on several studies, unless supported by more robust evidence, the electronic cigarette should not be considered a product that is safe for cardiovascular health (Skotsimara et al., 2019). This particular position is justified due to numerous studies with substantial bias tending to appraise electronic cigarettes' effects on cardiovascular health favorably or studies with conflicts of interest in the same direction (Kennedy et al., 2019; Pisinger, 2014).

Similarly, to understand the real effect of electronic cigarettes on users' health, it is important to consider the many factors associated with the variety of electronic cigarette designs and how they are used, in addition to other products the user is consuming at the same time and the amount or pattern of their consumption. For example, dual-use (use of both electronic cigarettes and conventional tobacco cigarettes) could have more harmful effects on users' health than electronic cigarette use or traditional consumption of cigarettes alone due to the continuous nicotine dependence and its association with increased risk of respiratory and cardiovascular medical conditions compared to single product use (World Health Organization, 2021c).

Likewise, the outbreak of electronic-cigarette or vaping product use-associated lung injury (EVALI) in the United States in 2019–2020 highlights the potential dangers of these

products. According to data from the CDC, there were 2807 EVALI cases and 60 deaths associated with electronic cigarette use (Centers for Disease Control and Prevention, 2021). While the cause of these deaths has not been conclusively determined, vitamin E acetate (VEA), a common additive in e-liquids that contains cannabis (or THC), is believed to have played a significant role in these cases of lung injury. Even though VEA is safe when consumed orally in foods and when used on the skin, the impact of inhaling VEA is not fully understood (World Health Organization, 2021c) and has set an example of the real risk of these newer tobacco products.

In terms of environmental health, studies showed that indoor electronic cigarette use increases the airborne concentration of particulate matter above the background levels and the levels of nicotine, particulate matter, and potential carcinogens in second-hand aerosols (SHA) exceed the maximum recommended levels set in WHO Framework Convention on Tobacco Control (FCTC) guidelines (Green et al., 2018; World Health Organization, 2021c). This situation is concerning, especially for bystanders' respiratory health (Hess et al., 2016), due to the exposure to ultrafine particles that may penetrate the alveoli, increasing the risk of health and lung disorders (Lerner et al., 2015).

Besides the impact on the respiratory and cardiovascular systems, electronic cigarette use and its consequences on the brain are significant concerns. This concern is based on the high levels of nicotine that can prime the brain for addiction to other drugs introducing additional population-level risks (U.S. Department of Health and Human Services, 2020). Equally, there is fear that powerful nicotine addiction is now increased with the new product formulation such as nicotine salts, which can enhance the dose and efficiency with which nicotine is delivered. For example, adult smokers attempting to quit smoking potentially increase the likelihood that they will

transition entirely to electronic cigarettes (U.S. Department of Health and Human Services, 2020) and simultaneously reduce the possibility of quitting completely.

In summary, the evidence has shown how nicotine exposure can influence central nervous system (CNS) activity (Breland et al., 2017). This exposure can lead to a change in the way the brain works, causing lifetime addiction and, in some cases, long-lasting effects like mood disorders (U.S. Department of Health and Human Services., 2016). Also, exposure to other toxic substances provided from the aerosolized e-liquid, such as formaldehyde, acetaldehyde, acrolein, glyoxal, methylglyoxal, metals, volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs) has been found in electronic cigarettes users, offering a cumulative risk for this part of the population (Breland et al., 2017; National Academy of Sciences Engineering and Medicine, 2018; Rubinstein et al., 2018). Other studies have also suggested an increase in traditional smoking frequency and intensity later in life (Aladeokin & Haighton, 2019; Franks et al., 2018; National Academy of Sciences Engineering and Medicine, 2018). Generally speaking, studies showed that young adults' use of electronic cigarettes could affect central nervous system activity, causing addiction, mood disorders, and learning problems. In addition, the exposure to other toxic components from vaporized e-liquids could also lead to severe health problems, such as oxidative tissue injury, including potential DNA damage.

A.2 Health Organizations' Positions on Electronic Cigarettes

Since the appearance of electronic cigarettes in the market, different organizations have taken positions to guide public discussion and communicate with the general population about the potential risks and benefits. Internationally, the WHO has stated its position against these devices based on the most up-to-date information. The first position statement was made in 2008, declaring that WHO did not consider electronic cigarettes a safe and effective smoking cessation

aid (World Health Organization, 2008) . In 2010, during the fourth session of the Conference of the Parties (COP) of the WHO Framework Convention on Tobacco Control (FCTC), the WHO presented the first comprehensive report based on the scientific findings at that moment (World Health Organization, 2010). This report was updated in the following COP sessions, including the last one held in November 2021, and summarized the updated data regarding electronic cigarettes plus the organization's positions (World Health Organization, 2021a).

The position invites parties to take steps to address the problem of electronic cigarettes, including: (a) preventing non-smokers and adolescents from starting electronic cigarette use, paying particular attention to vulnerable groups; (b) minimizing potential health risks to users, and protecting non-smokers' emissions; (c) preventing unsubstantiated health claims about ENDS/ENNDS; and (d) protecting tobacco control activities from all commercial and other vested interests associated with these products, including the tobacco industry's benefit (World Health Organization, 2014). States are also invited to consider banning or regulating electronic cigarettes, including as tobacco products, medicinal products, consumer products, or other appropriate categories, taking into account the high level of protection of human health (World Health Organization, 2014).

In the United States, the CDC has a more neutral position regarding electronic cigarettes than the WHO. However, the CDC claims that electronic cigarettes can benefit adults who smoke and are not pregnant if used as a complete substitute for regular cigarettes and other smoked tobacco products (Centers for Disease Control and Prevention, 2021). At the same time, different from the WHO's position, the CDC advises that electronic cigarettes are not safe for youth, young adults, pregnant adults, and adults who do not currently use tobacco products. In addition, CDC recognizes the potential of electronic cigarettes to benefit some people and harm

others and stresses that scientists still have a lot to learn about whether electronic cigarettes are effective in helping adults quit smoking (Centers for Disease Control and Prevention, 2021).

Other health agencies in the United States, such as the American Cancer Society (ACS), take a more restrictive stance, emphasizing three main points: First, “no youth or young adult should begin to use any tobacco product, including electronic cigarettes.” Second, “Electronic cigarettes should not be used to quit smoking,” and finally, “Current e-cigarette users should not also smoke cigarettes or switch to smoking cigarettes; former smokers now using electronic cigarettes should not revert to smoking” (American Cancer Society, 2019). Like the ACS, the Oncology Nursing Society (ONS) has a conservative position advocating regulation of electronic cigarettes as any other tobacco product (Oncology Nursing Society, 2019), while the American Lung Association’s position advocates increased oversight and scrutiny of these products by the Food and Drug Administration (FDA) (American Lung Association, 2020).

In Costa Rica, the Ministry of Health, the CCSS, and the National Institute of Alcoholism and Pharmacological Dependence (IAFA) have expressed their concerns about the safety of electronic cigarettes and their potential health effects (Castro Córdoba et al., 2019), especially the physical and psychological dependence that they produce (Recio, 2018). Likewise, those three institutions advocated for regulating electronic cigarettes as tobacco products, subject to taxes (*Ley No 10066*, 2021).

A.3 Prevalence of Electronic Cigarette Use: Worldwide and Costa Rica

The prevalence of electronic cigarette use was extensively discussed in Chapter 1. To reiterate, in 2018, the WHO estimated that 1.2% of adults globally used electronic cigarettes containing nicotine; the Western Pacific region had the highest rate of electronic cigarette use at 2.4% (World Health Organization, 2021c). In most cases, global electronic cigarette use is higher

among men than women (World Health Organization, 2021c). While data on electronic cigarette use is not available for all countries, data from countries that monitor electronic cigarette use shows that electronic cigarette use varies from 11% in Estonia in 2018 to 0.2% in Uruguay in 2016-2017 (World Health Organization, 2021a). In addition, the age of electronic cigarette users varies around the world. However, in some countries, more young people (18-24 years) than adults (≥ 25 years) have ever or currently used electronic cigarettes, and the proportion of this age group has gradually increased in recent years (World Health Organization, 2021c).

Regarding Costa Rica, the 2015 Global Adult Smoking Survey conducted by Costa Rica's Ministry of Health monitored electronic cigarette consumption in the country. The results showed that 1.3% of the population (47,519 people) used this tobacco product in 2015. The main users of this product are urban males aged 15 to 24 with a college education or above (Espinoza et al., 2017). Then, in 2018, the fifth round of Costa Rica's national secondary education psycho-active substance consumption survey showed that the rate of electronic cigarette use among high school students was 8% (Dobles-Ulloa et al., 2019). People with higher education use these devices twice more frequently as those with lower education. The survey also revealed gender differences, with men being the primary users (Dobles-Ulloa et al., 2019).

It is important to note a lack of recent global electronic cigarette use data. Furthermore, as of 2018, the information is only available for 67 countries, namely Europe, the region with more national data (38 countries), and Africa, the region with less national data (3 of 46 countries) (World Health Organization, 2021d). Essentially, the lack of updated data available limits our understanding of this public health issue and its impact on morbidity and mortality rates in many countries in the world and raises the question of how to estimate the prevalence of electronic cigarette use in countries with no information available.

B. Brief Background of Costa Rican Healthcare System Organization and Management

B.1 Overview of the Current Costa Rican Healthcare System

The Costa Rican healthcare system is organized in a manner that determines the population's access to its services. Therefore, for this dissertation research, it is important to understand how the system was built under specific values and circumstances to reach the coverage that allows services, such as tobacco cessation services, to be offered to a large proportion of the population nationally.

Since 1989, by Executive Decree No. 19276-S, the management of health services in Costa Rica has been divided administratively by the Health Sector, composed only of those State institutions whose specific mission is to carry out some health action in compliance with the national health policy (CENDEISSS, 2004). In addition, the National Health System is made up of a set of institutions and organizations that are part of the public and private sectors and whose purpose, directly or indirectly, is to contribute to improving the health of individuals, families, and communities, whether these are institutions of the health sector or other sectors (CENDEISSS, 2004). This management division has a conceptual background due to its implications, especially in light of the concept of health that Costa Rica has appropriated from the reform promoted in the 1990s. In that reform, Costa Rica recognized that health is a social product and not only the result of the work of the same institutions traditionally recognized as the ones in charge of the population's health (CENDEISSS, 2004).

Consequently, the healthcare system in Costa Rica is unique in structure and function. Contrary to widespread practice in other countries, Costa Rica's healthcare system provides three different services: health, water, and sanitation services. The government publicly controls water and sanitation services; however, the health branch is divided into the public and private sectors

(Riley & Vincent, 2020). The health care insurance and healthcare services in Costa Rica are provided through a single publicly-funded, integrated purchaser-provider, the Caja Costarricense de Seguridad Social (CCSS) (OECD, 2017). The CCSS runs the public health sector and offers maternity/sickness insurance, disability insurance, and life insurance. At the same time, the CCSS is the main health care provider in Costa Rica (Saenz-Madrigal et al., 2010). The private sector works similarly to the United States, where hospital care coverage comes from private insurance premiums or out-of-pocket costs (Saenz-Madrigal et al., 2010).

Regarding health services and insurance, CCSS is governed by principles such as universality, equality, state subsidiarity, completeness and sufficiency, efficiency, social participation, and mandatory (Caja Costarricense del Seguro Social, 2006). Those principles are aligned with the Political Constitution of Costa Rica enacted in 1949, which, although not expressly protecting the right to health, has been interpreted by the courts to derive from the right to life. For example, article 21 of the Costa Rican Constitution says, "The life of a man is inviolable." Also, the constitution includes the environment as part of population health; some articles expressed that the State should protect the health, environment, safety, and economic interests of consumers and users (Article 46) (*Constitucion Politica Costa Rica.*, 1949).

Under those principles and constitutional duties, the CCSS administers three regimes or methods of organizing the health insurance coverage and services: Sickness and Maternity Insurance (abbreviated in Spanish as SEM), Disability, Old Age, and Death Insurance (abbreviated in Spanish as IVM), and the non-contributory regime. The SEM covers the following comprehensive health care services: promotion, prevention, healing, and rehabilitation; specialized medical and surgical assistance; outpatient and hospital care; pharmacy service for granting medicines; clinical laboratory service and cabinet exams; oral health assistance, and individual and family

social assistance (Caja Costarricense del Seguro Social, 2006). The IVM includes a pension for old age, a pension for invalidity, and a pension for orphans and widows. Finally, the non-contributory scheme provides insurance for people and their families who did not contribute to the system due to their condition of poverty or disability, offering the ordinary benefits of the SEM comprehensive care package and monetary benefits for families with cases of deep cerebral palsy (Sáenz et al., 2011). Those regimes allow the system to include the majority of the population in Costa Rica.

The beneficiaries of those three regimes are classified according to various insurance modalities, namely: a) direct insured (salaried workers; retirees from any of the state systems; individuals who individually or collectively pay the voluntary insurance modality to the CCSS; independent workers, who contribute to the insurance individually or collectively; populations living in poverty, insured by the State); b) indirect insured (relatives and dependents of the directly insured who receive the family benefit); and c) uninsured (people with contributory capacity who do not contribute to social security and undocumented migrants) (Sáenz et al., 2011). In addition, all minors (under the age of 18) and pregnant women who are not protected by the family benefit, pensioners of the non-contributory regime, and identified homeless are insured by the State (Asamblea Legislativa de la República de Costa Rica, 1998). For this dissertation, it is important to understand that all the previously mentioned beneficiaries of the regimes are allowed to access the tobacco cessation services if needed, as well as any other health service provided by the CCSS. In other words, there is no restriction of services or medicines for patients if a medical opinion indicates their use.

B.2 Management of the Costa Rican Health System

The health needs of the population are highly diverse and broad. Likewise, technology and service responses (supply) are diverse, over-specialized, and add complexity and cost. Therefore, for cost-effectiveness and technical justification, it is necessary to identify health priorities based on installed health capacity and economic possibilities in the country and stagger their delivery at two or more levels of attention (Salas Chaves, 2010).

The country is divided into seven health regions: Chorotega, Brunca, Central Pacific, Huetar Atlántica, Huetar Norte, Central Norte, and Central Sur. These health regions are divided into health areas and then into health sectors where the Basic Integrated Health Care Team (abbreviated in Spanish as EBAIS) is located. At the first level of attention, the EBAIS is responsible for an average of 1,000 to 1,200 families (4,000 to 4,500 insured persons) living in the geographic area of the health sector. Each health sector in the country is assigned an EBAIS responsible for providing comprehensive health care to its families (Salas Chaves, 2010).

Each health sector has an EBAIS comprised of a primary health care technical assistant (ATAPS abbreviated in Spanish), who carries out home visits according to an annual schedule, refers people who need it to the doctor and nurse, administers the house-to-house vaccinations, and keeps the record up-to-date with the demographic changes that are generated within it: births, deaths, transfers of relatives, the appearance of chronic diseases, problems of family violence, drug addiction, and others. The nursing assistant executes home visits, educates, and promotes health. In addition, the nursing assistant administers vaccines, performs wound care, and prepares the medical consultation in the establishment, among other duties. The general practitioner divides their time into direct care for patients who need to be treated acutely and chronic patients who require care and education, including patients, caregivers, and their families (Salas Chaves, 2010).

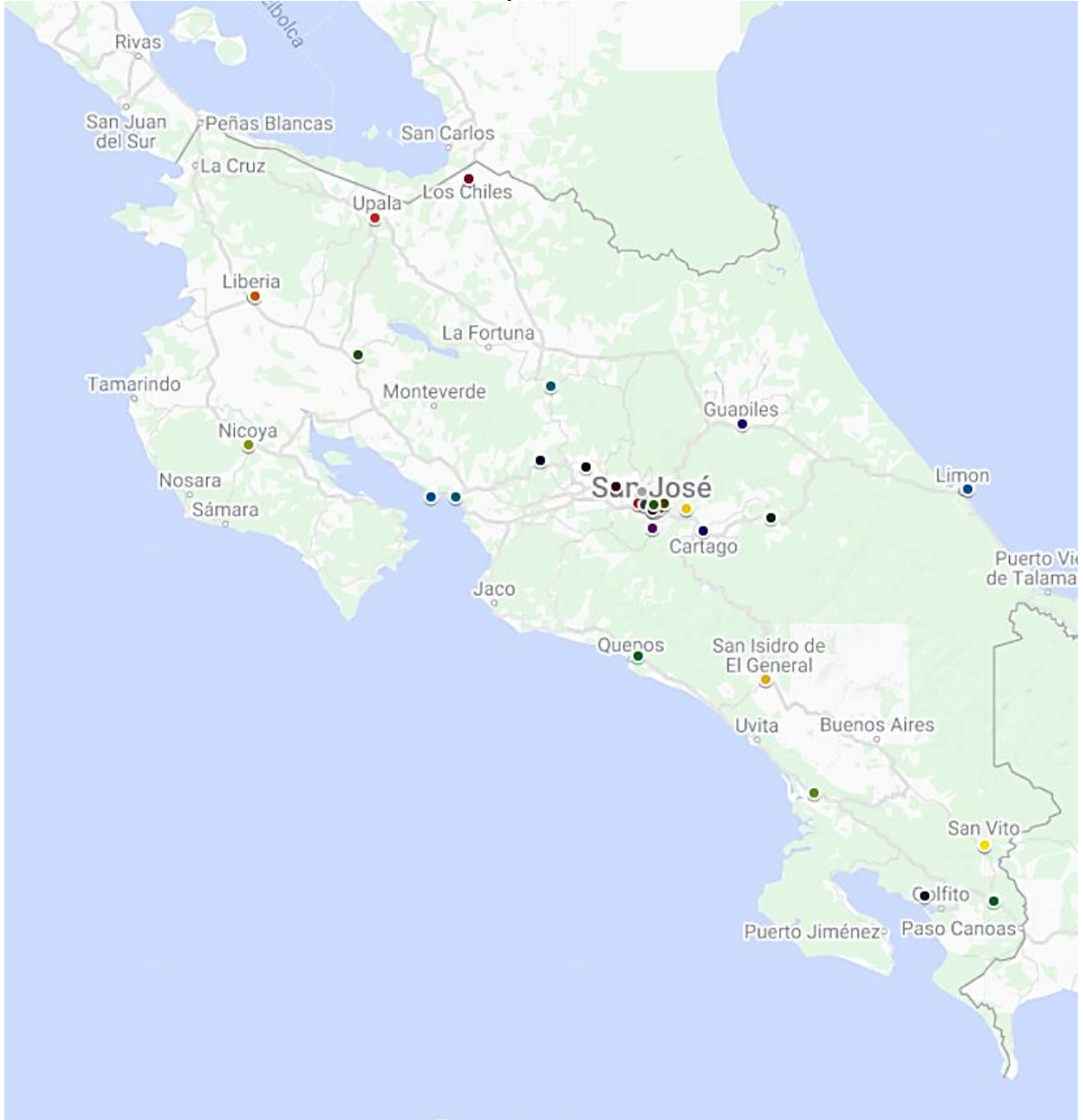
While the first level of attention is dedicated to offering a basic service package at the community level, the second level of attention includes five medical specialties: internal medicine, psychiatry, pediatrics, obstetrics and gynecology, and general medicine. The second level's purpose is to provide support at the first level of care and offer more complex outpatient and inpatient interventions by basic specialties and some subspecialties, for example, neonatology, otorhinolaryngology, orthopedics, cardiology, dermatology, and ophthalmology (CENDEISSS, 2004; Salas Chaves, 2010). In addition, at the second level of attention, some services support the first and second levels, such as pharmacy, psychology, kinesiology, physical therapy, social work, and diagnostic images (CENDEISSS, 2004).

The third level of attention provides more complex outpatient and inpatient services in the specialties and subspecialties than the second level of care and all other subspecialties. Some of the subspecialties in the third are allergology, urology, hematology, nephrology, infectiology, neurology, and physiatry. Additionally, diagnostic and therapeutic services with high technology and specialization are provided at this level (CENDEISSS, 2004).

Typical facilities for the second and third levels are regional, national, and specialized hospitals distributed throughout the entire country (CENDEISSS, 2004). These two levels are important for this research study because their services include tobacco cessation programs. However, in terms of tobacco screening, healthcare practitioners at all levels must ask about tobacco consumption in every appointment, as part of the electronic health record protocol. The most updated data from the CCSS report the existence of 35 Tobacco Cessation Clinics (abbreviated in Spanish as CCT) in 29 hospitals and six health areas (Caja Costarricense del Seguro Social, 2020) (see Figure 1). However, the general population needing tobacco cessation services

who access the first level or EBAIS can also be referred to the second or third level to receive those services.

Figure 1: Geographical distribution of the 35 "Clínicas de cesación de tabaco (CCT)" around the country



Source: Google Maps. (n.d.). [Adapted map by Jeancarlo Cordoba showing the geographical distribution of the 35 "Clínicas de cesación de tabaco (CCT)" around the country]. Retrieved March 9, 2023, from <https://www.google.com/maps/d/u/0/edit?hl=en&mid=1OMB3GXBEaxdgVvCiQgkPWA98oAA9l-A&ll=9.434917540202411%2C-84.62484431666243&z=8>

B.3 *Financing*

The country has a universal public insurance system. It is the CCSS that is responsible for administering and applying for the mandatory, solidarity, and universal health insurance, financed in a tripartite manner: State, employer, and worker, defined as such in Article 1 of Law No. 17 called "Ley Constitutiva de la Caja Costarricense de Seguro Social" (Organización Panamericana de la Salud, 2019). CCSS is funded by a mandatory 15% payroll tax for all individuals employed in the formal sector, of which employees pay 5.5%, the employer pays 9.25%, and the State pays 0.25%. The legal and regulatory framework dictates that workers must not pay higher premiums than employers. Retirees also contribute 14% of pension income (Montenegro-Torres, 2013). All CCSS funds are consolidated into one pool and managed by the CCSS central treasury (Montenegro-Torres, 2013; Pesec et al., 2017).

Analysis from funding sources shows that households provide half the resources to finance health care in the country, either through contributions to social security or through direct payments to private providers. Companies, in turn, provide nearly 40% of health financing in Costa Rica, a situation that cannot be ignored when designing policies and reallocating responsibilities to strengthen the health finance system. The Central Government also has a role with 7.3% of the financing (Organización Panamericana de la Salud, 2003).

Costa Rica's universal base is strong because everyone collectively contributes to and benefits from the health system, allowing it to evolve over the years. However, the tripartite financing model could be under threat; for example, the lower contributory base of health insurance and the low levels of efficiency in using resources represent the main challenges to the financial sustainability of health insurance (Organización Panamericana de la Salud, 2019). Therefore, to keep the health coverage, there is a need for some adjustments and new regulations on

contributions and corresponding basic wages for formal and non-poor informal workers and foreigners living in Costa Rica, counting and streamlining contributions, and a special agreement for the informal sector workers (Montenegro-Torres, 2013). For this dissertation research, it is important to emphasize that all the people enrolled in the CCSS services can utilize the tobacco cessation services and receive all the medication needed without paying extra money other than the mandatory payroll tax or pension contribution in case of retirement.

C. Tobacco Cessation Programs

C.1 Evidence-based tobacco cessation methods-brief overview

Scientific advances have aimed at developing comprehensive therapies to promote smoking cessation. For example, pharmacotherapy for smoking cessation was introduced in the 1980s in the U.S., and behavioral and other counseling approaches in the 1990s (U.S. Department of Health and Human Services, 2020). Currently, the literature has shown that smoking cessation medications and behavioral counseling from FDA-approved smoking cessation strategies are cost-effective (Jha et al., 2013). In addition, FDA-approved smoking cessation medications and behavioral counseling increase the likelihood of successful smoking cessation, especially when combined. Using a combination of nicotine replacement therapy and behavioral counseling may further increase the chance of quitting smoking (U.S. Department of Health and Human Services, 2020).

Although smoking cessation rates can be increased by raising the price of cigarettes, enacting comprehensive anti-smoking policies, mass media campaigns, mandating the use of pictorial health warnings, and maintaining comprehensive national tobacco control programs (U.S. Department of Health and Human Services, 2020), for this research, the focus is only on interventions for smoking cessation and treatments for nicotine dependence at the clinical level.

Therefore, the following is a brief overview of the primary clinical strategies that promote smoking cessation, as indicated by the evidence.

Current evidence-based treatment approaches to smoking cessation include seven pharmacotherapies and several behavioral treatments—such as individual, group, and telephone counseling—approved by the U.S. Food and Drug Administration (FDA) (U.S. Department of Health and Human Services, 2020). All of them are focused on the addiction to nicotine based on combustible cigarette use.

C.1.1 Evidence-based behavioral treatments

Behavioral and psychological strategies have been demonstrated to treat nicotine dependence and tobacco use effectively. First, effective-proven strategies include motivational interviewing, which is an approach that utilizes a unique counseling style that is instructional, patient-centered, non-adversarial, non-judgmental, and highly collaborative (Lindson-Hawley et al., 2015). Secondly, contingency management or incentive-based interventions is an approach that involves using incentives (including money, gift cards, or other material goods) to motivate people to change their health behaviors (proven to be effective beyond when the incentives had ended) (Notley et al., 2019). Thirdly, behavioral therapy is used for smokers who are preparing to quit or quitting, and its goal is to address historical learning processes directly related to smoking and current contextual factors (e.g., social, behavioral, and environmental factors) that make quitting difficult (Fiore, Jaén, Baker, Bailey, Benowitz, Curry, Dorfman, Froelicher, et al., 2008). Fourthly, Cognitive Behavioral Therapy (CBT) is a psychotherapeutic approach embedded in the fact that behavioral problems may be persistent due to cognitive factors, including beliefs that lead to automatic thinking about a particular situation (Perkins et al., 2011; Sykes & Marks, 2001).

Lastly, Acceptance and Commitment Therapies (ACTs) draw on cognitive therapy but emphasize changing the functioning of mental events and the individual's relationship to them. For example, in ACTs, "acceptance" is established by accepting the entity's physical sensations and the emotions and thoughts that accompany those sensations. In contrast, "engagement" focuses on articulating what is particularly important or valued to the individual and using those values to motivate and guide specific actions, such as quitting smoking. (Bricker et al., 2013).

These strategies can be group- or individual-based. Also, they can differ in intensity from brief to more intensive, where both are cost-effective compared to self-help materials (Fiore, Jaén, Baker, Bailey, Benowitz, Curry, Dorfman, Froelicher, et al., 2008). The mode of delivery (e.g., delivery by a clinician, counselor, telephone, or computer) can also change; however, the effectiveness of all of them has been proven (U.S. Department of Health and Human Services, 2020). Generally, the data show a strong dose-response curve, with more intensive behavioral and psychological therapies (e.g., higher amounts of contact time, more sessions) generating greater chances of sustained cessation (Fiore, Jaén, Baker, Bailey, Benowitz, Curry, Dorfman, Froelicher, et al., 2008).

C.1.2 Evidence-based pharmacotherapy treatments

Regarding pharmacological treatments for quitting tobacco, the rationale for getting smokers to use cessation medications as part of a quit attempt is to reduce the physical symptoms of nicotine withdrawal and allow smokers to focus on the behavioral and psychological aspects. Additionally, by desensitizing nicotine receptors, smoking cessation medications have the added benefit of eliminating or significantly reducing the direct boosting effects of nicotine absorbed from tobacco smoke (Prochaska & Benowitz, 2016). Seven U.S. FDA-approved first-line drugs have proven safe and effective for nicotine addiction in this context. Of those, two are non-nicotine

oral medications (Bupropion and Varenicline) and five nicotine-based medications (the nicotine patch, nasal spray, oral inhaler, gum, and lozenge) (U.S. Department of Health and Human Services, 2020). It is important to point out that even though a U.S. organization approves these pharmacological treatments, the WHO also considers them as best practices in tobacco cessation (Boyle & Prochaska, 2021; World Health Organization, 2021b).

Nicotine replacement therapy (NRT) delivers nicotine to combat physical nicotine addiction without exposing people trying to quit smoking to toxic components from combustion or other additives. NRT provides lower plasma nicotine concentrations than conventional cigarettes and rises more slowly, thereby reducing the effects of smoking on behavior (Fiore, Jaén, Baker, Bailey, Benowitz, Curry, Dorfman, & Froelicher, 2008). Based on the scientific literature, the five forms of NRT (gum, lozenge, transdermal patch, nasal spray, oral inhaler) are similar in efficacy (Lindson et al., 2019). However, even though NRT is sold in different doses, some healthcare providers recommend that more dependent smokers use higher doses of NRT or a combination of both forms of NRT. In particular, Lindson and colleagues (2019) found that smokers who used the gum with the 4 mg dose of nicotine had an increased chance of successfully quitting smoking compared to the 2 mg dose of nicotine gum. The review also found that high-dose nicotine patches appeared to be associated with higher withdrawal rates than low-dose patches, although this finding was less conclusive due to the quality of the evidence (Lindson et al., 2019).

Regarding pharmacological treatments, Bupropion is a prescription drug that blocks the reuptake of dopamine and norepinephrine to a lesser extent. It also has some nicotinic receptor blocking activity (Slemmer et al., 2000) and thus, Bupropion increases dopamine and norepinephrine levels in the brain, mimicking the effects of nicotine on these neurotransmitters (U.S. Department of Health and Human Services, 2020). In humans, blockage of nicotinic receptors

with Bupropion may help reduce cigarette intensification in cases of failure or relapse (Prochaska & Benowitz, 2016). Bupropion was initially marketed and is still widely used as an antidepressant. However, Bupropion extended-release formulations have been found to help smokers quit smoking, regardless of whether the smoker has a history of depression (Hurt et al., 1997). In 2009, the FDA required new boxed warnings for Bupropion's product labeling due to case reports of severe changes in mood and behaviors in patients taking Bupropion. Clinical studies developed afterward found that the risk of serious side effects to mood, behavior, or thinking is lower than previously expected, and product labeling should be revised accordingly. At the same time, the FDA stated that despite these side effects, especially in patients with current or psychological conditions, they were rare (U.S. Department of Health and Human Services, 2020).

On the other hand, Varenicline is a prescription drug specifically used to quit smoking. The drug is a partial agonist of the $\alpha 4\beta 2$ nicotinic acetylcholine receptor subtype, which mediates dopamine release, thought to be the primary receptor involved in nicotine addiction. Varenicline activates the nicotine cholinergic receptor $\alpha 4\beta 2$ with a maximum effect of approximately 50% of nicotine, reducing nicotine withdrawal symptoms, including cravings, while blocking the effect of nicotine on the receptors, reducing the rewarding effects of cigarettes (Aubin et al., 2014).

Regarding its efficacy, the largest clinical trial to date of approved tobacco cessation medications, the Evaluating Adverse Events in a Global Smoking Cessation Study (EAGLES), found that (a) varenicline was more effective than placebo, nicotine patch, or Bupropion for smoking cessation, and (b) Fentanyl and nicotine patches were more effective than placebo with comparable effects (Anthenelli et al., 2016).

In conclusion, the literature provides a clear conclusion that behavioral counseling and pharmacological smoking cessation interventions increase smoking cessation success compared

to self-help materials or no treatment. They are also independently effective in increasing smoking cessation and even more effective when combined (U.S. Department of Health and Human Services, 2020).

C.2 History of tobacco cessation treatments and interventions in Costa Rica

Regarding tobacco control measures in Costa Rica, since 1988, the Institute on Drug Addiction and Alcoholism (IAFA) has conducted ongoing and comprehensive work on many aspects of the issue: prevention, public education, education, smoke-free spaces, strengthening public policy, educational material production, and smoking cessation (Sandí-Esquivel & Molina-Di Palma, 2013). As a consequence of those efforts, in 1998, the IAFA began researching to find the best treatment for tobacco cessation in Costa Rica. A study by Sandí and colleagues (1998) found that a greater proportion of participants from the experimental group (given nicotine patches for 15 days plus a behavioral modification program) achieved abstinence after six months compared to the control group (behavioral modification program plus placebo), and this difference was statistically significant. The same study also found that educational level and gender were determinant factors for seeking help for tobacco dependence. Higher educational attainment and women were statistically more efficient in achieving cessation than lower educational attainment and men (Sandí et al., 1998). The study also showed the need for implementing multi-component treatments to achieve greater efficacy (Sandí et al., 1998).

In 2008, the IAFA developed the first Treatment Intervention Guide for Tobacco Dependence to provide healthcare professionals with the basics and tools to help smokers quit (Sandí-Esquivel & Molina-Di Palma, 2008). Also, on July 17, 2008, Costa Rica became the fifth Central American country to ratify the Framework Convention of the World Health Organization for Tobacco Control (Organización Mundial de la Salud, 2003).

In 2012, the WHO made a call to appeal to member countries wishing to participate in the World Health Organization/International Telecommunication Union (WHO/ITU) initiative called "Mobile Health." As a result, Costa Rica joined seven other countries to implement preventable disease projects through mobile technology. In this context, Costa Rica proposed an innovative intervention to help smokers quit using a two-way smoking cessation platform (Zamora et al., 2017). In 2013, with the increasing popularity of mobile technology, it was decided to strengthen the framework agreement's strategy by launching a smoking cessation initiative using text messages (SMS). As a result, on April 9, 2013, the Costa Rican Ministry of Health, the World Health Organization, and ITU signed a cooperation framework agreement at the Presidential palace (Zamora et al., 2017).

C.3 Current tobacco cessation programs in Costa Rica

The CCSS and the National Institute of Alcoholism and Pharmacological Dependence (IAFA) offer tobacco cessation services in Costa Rica. However, in 2015, according to the Global Adult Tobacco Survey (GATS) in Costa Rica, only 3.6% received medication for quitting, despite guidelines stating that medication should be offered to all patients without contraindications (Espinoza Aguirre et al., 2020). In addition, smokers report that 64% are advised to quit (Espinoza Aguirre et al., 2020), whereas smoking cessation should be advised to all smokers (Ramírez, 2020). Currently, no private health organizations are offering cessation services in Costa Rica (Asesorías En-Comunicación S.A., 2021).

The drugs currently used for smoking cessation in Costa Rica are Varenicline and Bupropion (Ramírez, 2020). Varenicline is available in 0.5 mg and 1 mg doses (as varenicline tartrate). In Costa Rica, it is a restricted-use drug only for patients receiving cessation treatment at

tobacco cessation clinics duly established and accredited under the protocol (Asesorías En-Comunicación S.A., 2021; Ramírez, 2020; Sandí-Esquivel & Molina-Di Palma, 2013).

Bupropion is safe to use combined with nicotine replacement therapy, such as nicotine patches, lozenges, and gum. However, these products are not currently available in the Costa Rican healthcare system. Neither IAFA nor CCSS offers them, and while Nicorette-branded nicotine gum used to be available from community pharmacies, it is not currently available (Asesorías En-Comunicación S.A., 2021).

C.3.1 CCSS: Caja Costarricense del Seguro Social

The tobacco cessation clinic (abbreviated in Spanish as CCT) at the CCSS is an institutional smoking care model program characterized by an interdisciplinary approach to smoking cessation and maintenance. The cessation clinic model uses group therapy, individual therapy, and, if necessary, medication (Asesorías En-Comunicación S.A., 2021).

To be registered at the CCSS tobacco cessation clinic, the person must want to quit; patients must have health insurance and no alcohol or other drug problems. Patients are also given medical and psychological evaluations to determine the level of addiction and the treatment needed (Asesorías En-Comunicación S.A., 2021; Recio, 2017). At the end of the program, patients are given a one-year follow-up appointment (Recio, 2017).

The CCT at the CCSS consists primarily of group therapy. Each participant's possibility of additional medication is analyzed based on the patient's nicotine dependence and psychiatric characteristics. Since 2015, CCSS has used the central partial nicotine agonist Varenicline in patients with at least moderate nicotine dependence and no history of decompensated major depressive disorder (Ramírez, 2020). In addition, in the CCSS, the drug varenicline is offered to

patients participating in smoking cessation programs who, in the physician's opinion, are candidates for high nicotine dependence and are not contraindicated (Ramírez, 2020).

According to CCSS statistics, 59% of patients in CCSS's CCT use Varenicline. In addition, the proportion of patients who took Varenicline and quit smoking in 2019 was 55%, while the proportion of patients who quit smoking after quitting Varenicline was 19% (Asesorías En-Comunicación S.A., 2021).

According to 2016 data, between 900 and 1,000 people participate in group therapy at the CCSS yearly. Participants in this treatment option had a 93% success rate at the end of the program and 77% a year after the last session. Four groups of 10 to 20 participants are accepted into group therapy each year. Some regional and surrounding hospitals have less inflow and demand, forming three groups each year. Meetings are held weekly and last three to four hours. The program takes eight weeks and is taught in small groups for added motivation (Recio, 2017).

Individual therapy is also conducted in exceptional circumstances, such as if the patient has scheduling issues, geographic accessibility issues, cognitive or physical impairments, and is ineligible or unable to attend group meetings. Additionally, individual therapy is provided when a patient has medical condition(s) that require immediate cessation of smoking or when the patient may have an unstable mental condition that requires additional personal attention, primarily from a psychiatrist, psychologist, or psychiatric nurse (Asesorías En-Comunicación S.A., 2021).

The CCSS treats smoking as a chronic addiction and requires a multidisciplinary team's involvement, including different professionals, depending on the center, such as medicine, psychology, social work, nursing, psychiatric nursing, respiratory therapy, pharmacy, and nutrition. The interdisciplinary team must be comprised, at its base, of a doctor, a psychologist, and a

social worker. However, this depends on the human resources capacity of each medical center where the tobacco cessation clinic is located.

C.3.2 IAFA: National Institute of Alcoholism and Pharmacological Dependence

Treatment at IAFA is individualized. Psychosocial therapy is provided, and a motivational interview is given during each patient's session. At the beginning of the service, the first treatment option used by IAFA, due to lack of resources, was group therapy utilizing a model of eight sessions of one or two-hours with patients preparing to quit smoking. This type of treatment was led by a doctor or psychiatrist and assisted by nurses and social workers. This is the current model adopted by the CCSS (Asesorías En-Comunicación S.A., 2021) but is no longer offered at the IAFA. There are currently 16 centers serving insured and uninsured patients in nine regions throughout Costa Rica (Instituto sobre Alcoholismo y Farmacodependencia, 2020).

At IAFA's Center for Comprehensive Drug Care (abbreviated in Spanish as CAID), patients are enrolled by social work or psychology professionals who use assessment tools to assess the severity of depression, anxiety, addiction to smoking, alcohol, or other drugs. The patient is then examined by a general practitioner, and in the most severe cases, by a specialist or psychiatrist. IAFA provides individualized psychosocial therapy and motivational interviews for each patient in each session (Sandí-Esquivel & Molina-Di Palma, 2013). Sessions last about 30 minutes, and then they are progressively lowered to 10 to 15 minutes per week. The sessions start monthly, then every six months, then annually. Unlike CCSS, which has a fixed schedule, patients can adapt treatment to their own schedule (Asesorías En-Comunicación S.A., 2021; Sandí-Esquivel & Molina-Di Palma, 2008, 2013).

IAFA takes care of 100% of the consultant patients, whether they are insured or not, referred by a doctor, or walk-in without reference. In addition, the patient must not have other

addiction problems, such as alcohol and other illicit drugs, requiring treatment before smoking has been resolved (Asesorías En-Comunicación S.A., 2021). Regarding the treatment, IAFA uses the abrupt termination model and various strategies to relieve withdrawal syndrome and maintain abstinence. In addition, IAFA uses smoking cessation drugs such as Bupropion or Varenicline (Sandí-Esquivel and Molina-Di Palma, 2008).

D. Overview of electronic cigarette cessation programs

As electronic cigarettes evolve (improved designs, longer-lasting batteries, higher voltages), the ability to use higher levels of nicotine, and amplify the pharmacodynamics of nicotine, it is clear that people with electronic cigarette addictions need help to assist in the cessation and prevention of disease (Sikka et al., 2021). However, there are some challenges that science needs to address to create an effective cessation method; one example of those challenges is the scarce data on electronic cigarette cessation behaviors (Hammond et al., 2020). In this regard, this section of the literature review is focused on summarizing the updated information about how electronic cigarette cessation programs and activities have been implemented.

Although there have not been many experiences with electronic cigarette cessation programs, Berg and colleagues synthesized the literature to inform electronic cigarette cessation interventions focused on young adults (Berg, Krishnan, et al., 2021). In their work, Berg and colleagues suggest that interventions to promote electronic cigarette cessation should address outcome expectations of vaping and reasons or motives for electronic cigarette use. For instance, some people's motives to use electronic cigarettes are based on false claims of industries or a lack of information about the harms of those devices such as acceptability of electronic cigarettes among nonsmokers, that it facilitates socializing, smoking cessation or reduction, or an alternative to quitting smoking cigarettes (Berg, Krishnan, et al., 2021). Also, motives can differ among

cigarette use subgroups such as never or non-smokers, former smokers, and dual users (Berg, Krishnan, et al., 2021).

Regarding motivations to stop using electronic cigarettes, Berg and colleagues note that the most common are social influences that discourage use, concerns about academic/sports/career prospects/performance, mental and physical health issues (including addiction), lack of satisfaction with taste or controlling cravings (especially in smokers who switch electronic cigarette use) or because they have only experimented with electronic cigarettes (Berg, Krishnan, et al., 2021). In addition, Berg and colleagues point out that smoking history impacts motivation to quit electronic cigarettes. For example, quitting electronic cigarettes for never, current, and former smokers are health concerns and costs. Moreover, for people who never smoked or those who only use electronic cigarettes, the reason for quitting is the cost. For former smokers, their reasons for quitting electronic cigarette use are health concerns and not needing electronic cigarettes to maintain their cessation status. For dual users, their main reason for quitting is finding electronic cigarettes less satisfying than conventional cigarettes (Berg, Krishnan, et al., 2021). According to Berg and colleagues, one study also found that those who use electronic cigarettes for non-targeted reasons (e.g., curiosity) were more likely to quit than those who used electronic cigarettes for targeted reasons (e.g., quitting).

Based on their literature review, Berg and colleagues (2021) suggest that vaping cessation interventions must also ensure that those who quit vaping do not continue or increase the use of other tobacco products (particularly cigarettes) or even marijuana. Likewise, they suggest that electronic cigarette cessation intervention studies are needed to investigate the usefulness of intervention strategies based on new technologies—for example, programs that enhance text messaging programs, designed as smartphone apps, chatbots, and or integrated with social media

(e.g., Snapchat, TikTok, Facebook, Twitter). In addition, those intervention studies should investigate whether specific technology-based approaches and different characteristics can effectively target electronic cigarette users and promote behavioral change, especially among young adults (Berg, Krishnan, et al., 2021).

Health services have been trying to keep pace with the evolution of electronic cigarettes. One example is the development of the ReACH Assessment of Knowledge of Electronic cigarettes (RAKE) education program for dental practitioners and community members (Mungia et al., 2021). RAKE includes three components: (1) dental practitioner electronic cigarette education, covering topics such as the prevalence and tendencies of electronic cigarette use, components and harmful ingredients of electronic cigarettes, best practices and guidance for evaluating patient use of electronic cigarettes, electronic cigarette cessation strategies, oral and systemic health consequences of electronic cigarette use in the short and long term (as this information becomes available), the role of dental practitioners in electronic cigarette cessation, and evidence-based resources and fact sheets for patient education; (2) recommendations for identifying people who use electronic cigarettes in dental settings; and (3) the 5 A's for electronic cigarette cessation, which was adapted from the 5 A's for conventional cigarette use cessation method (Mungia et al., 2021). After development, RAKE was validated using interviews with practitioners and community members (Mungia et al., 2021). However, it has not been implemented.

Similarly, another approach for the health services that want to help their patients with cessation is to include electronic cigarettes in tobacco use screening using the 5A's model for comprehensive anti-addiction interventions (Franks et al., 2018). If this approach is implemented, clinicians should recommend all available cessation options to patients willing to quit, including the harms of electronic cigarette use (Franks et al., 2018). For individuals who want to

try or continue to use electronic cigarettes as part of their smoking cessation options, clinicians should advise them to set a quit date and limit long-term electronic cigarette use due to the lack of evidence of safety (Franks et al., 2018). In addition, clinicians should monitor cartridge use, side effects, continued cigarette use, and relief of withdrawal symptoms in follow-up programs for electronic cigarette users (Franks et al., 2018).

Another option for initiating cessation programs for electronic cigarette users is to teach current health science students while they are still in their programs so they can treat people with an adequate knowledge framework. In that sense, experiences worldwide have been mixed when engaging healthcare providers in national smoking cessation efforts, especially those that include cessation services for electronic cigarette users. For example, Milella and colleagues designed one e-learning, fully online English language course for medical students (4th, 5th, and 6th year of school) based on The Rx for Change developed at the University of California at San Francisco for medical students at Sapienza University of Rome, Italy (Milella et al., 2021).

The course was organized into 16 didactic modules. Each module consisted of 15-20 slides and was about 40 minutes long. The first part of the course, “Tobacco Dependence” (TDI), included six modules: history of tobacco, epidemiology of smoking in Italy, nicotine dependence, toxicology of nicotine, craving, and withdrawal, and other tobacco products and exposures. The second part of the course, “Treating Tobacco Dependence” (TDII), contained five modules: clinical practice guidelines, the main pharmacological therapies for smoking cessation (Varenicline, Bupropion, Nicotine replacement therapy), and the role of physicians in helping smokers quit. Finally, the third part of the course, “Electronic Products and Tobacco Control” (TDIII), consists of five modules: an overview of electronic cigarettes, health effects of electronic

cigarettes, epidemiology of electronic cigarette use, heated tobacco products – IQOS, and Tobacco Control Policy (Milella et al., 2021).

After pre and post-measures in each part of the e-learning course, the intervention significantly increased knowledge of nicotine dependence and treatment options among undergraduate medical students. Also, students showed significant improvement in knowledge of the emerging science of electronic cigarettes and heat-not-burn products (Milella et al., 2021). However, the pre-measure results from the third part of the e-learning course also showed that students' knowledge of the epidemiology and risks of electronic cigarettes and heat-not-burn products like JUUL and IQOS is minimal (Milella et al., 2021).

Some researchers have tried a targeted self-help intervention with a high potential for dissemination to successfully promote smoking cessation in dual users (Martinez et al., 2021). For example, in a randomized controlled trial, Martinez and colleagues (2021) tested the hypothesis that a self-help intervention explicitly designed for dual users would improve smoking abstinence compared with a no-treatment control and an existing, efficacious and generic self-help smoking cessation intervention. The authors of the study used a three-arm design, where participants were dual users randomly assigned to assessment only (ASSESS; the no-treatment control group), a generic self-help intervention (GENERIC, received smoking cessation materials based on cognitive-behavioral theory and empirical evidence regarding the nature of tobacco dependence), or a self-help intervention targeted to dual users (eTARGET, received a guide designed specifically for dual users) (Martinez et al., 2021).

Complete follow-up assessments were done 6, 12, 18, and 24 months after enrollment, and abbreviated assessments were administered at 3, 9, 15, and 21 months after baseline (Martinez et al., 2021). In addition, participants reporting smoking abstinence at 12 or 24 months and

living within 100 miles of the research site were invited to complete a biochemical validation appointment (Martinez et al., 2021). Findings showed that over 18 months of treatment, targeted interventions resulted in approximately 5-10 percentage points higher quit rates than assessed control alone, while the generic intervention resulted in abstinence rates between those of the targeted and control groups (Martinez et al., 2021).

Likewise, Kovach and colleagues evaluated an electronic cigarette cessation program in a sample of family medicine practices supported by the American Academy of Family Physicians (AAFP) (Kovach et al., 2021). The program recruited eighteen family medicine practices to implement the AAFP's Treating Tobacco Dependence Practice Manual. The manual provides resources for clinical systems change and cultures to ensure that every patient who uses tobacco is identified, encouraged to quit, and equipped with evidence-based treatment. In addition, each family practice was asked to expand this program to ensure that electronic cigarette users were identified and provided cessation assistance as appropriate (Kovach et al., 2021).

The AAFP uses web conferencing software to provide each family medicine practice with a one-hour orientation guide. This orientation presented the current status of tobacco and electronic cigarette use, the risks of tobacco and electronic cigarette use to adolescents, current treatment recommendations for tobacco and nicotine addiction, as well as screening methods, quality improvement, and leading organizational change (Kovach et al., 2021). After orientation, each family medicine practice developed an implementation plan that included at least one clinical system change. These practices were then expected to integrate changes in clinical systems, testing and improving their systems, with the aim to identify and help all tobacco and electronic cigarette users (Kovach et al., 2021).

Then, participants were asked to provide monthly reports to the research team detailing the number of adolescent and adult patients served by the clinic, how many were asked about their tobacco and electronic cigarette use status, and a list of those who discontinued support (if any) (Kovach et al., 2021). The reports were intended to help the research team track the practice's progress and support their quality improvement process. The family medicine practices gain considerable autonomy in how to achieve program goals. The project started in June 2019 and ended in May 2020 with ongoing technical support from the research team (Kovach et al., 2021).

The study by Kovach and colleagues included asking about the challenges family physicians and their clinical care teams face in incorporating electronic cigarette cessation, as well as the opportunities for improving electronic cigarette smoking cessation. These issues were considered in the context of patient-centered care, where cessation decisions should be made collaboratively between patients and their physicians, and recovery from addiction is challenging (Kovach et al., 2021).

As a result, the study found nine opportunities to improve electronic cigarette cessation associated with three more significant themes: leading change, creating processes, and assisting patients who use electronic cigarettes (Kovach et al., 2021). In terms of leading change, Kovach et al. (2021) found that creating a system change in a new field, such as electronic cigarettes, to assist patients in their cessation process was challenging. Participants in this study shared challenges and opportunities in supplying, training, and influencing others to assist them with incorporating electronic cigarette cessation into their practice (Kovach et al., 2021). For example, the results indicate that incorporating electronic cigarettes into an electronic health record (HER) is complex and should be addressed at different levels (Kovach et al., 2021). Electronic cigarettes

were not incorporated into many EHR systems when the study was done, and recommendations have been made to develop this. Participants also discussed issues related to the involvement of other healthcare professionals in their practice and the more comprehensive healthcare system. Most participants emphasized the importance of having internal employee buy-in as they are critical to making changes (Kovach et al., 2021).

In addition, participants reported a lack of knowledge about electronic cigarettes among themselves and their peers, suggesting that this is a barrier to successfully incorporating electronic cigarette cessation into practice (Kovach et al., 2021). Regarding this aspect, one of the possible solutions that the participants mentioned was creating a standardized curriculum in family medicine practices, residency training, and continuing medical education to increase knowledge of ENDS that could improve the confidence and routinization of primary care professionals to address ENDS use with patients (Kovach et al., 2021).

In terms of creating processes, the study participants found a need to establish criteria for screening and quality improvement for electronic cigarette cessation that identify patient characteristics and standards of care (Kovach et al., 2021). Also, participants suggested that when screening for tobacco use, family physicians should be specific when asking about electronic cigarettes. This includes mentioning the names of the most popular brands of electronic cigarettes, as well as up-to-date terminology and slang (Kovach et al., 2021).

Regarding helping patients quit electronic cigarettes, the participants mentioned a need to educate patients and correct them about electronic cigarettes, their potential harm, and other misconceptions about their safety (Kovach et al., 2021). Additionally, participants mentioned that avoiding dual-use in patients and developing a plan to quit is one of the most important duties when helping patients quit electronic cigarettes (Kovach et al., 2021).

Another case report published by Silver and colleagues demonstrated how nicotine replacement therapy and behavioral counseling were successfully used in electronic cigarette cessation (Silver et al., 2016). The case report featured a 24-year-old man enrolled in a tobacco cessation program with the wish to stop using electronic cigarettes. The subject started using electronic cigarettes as a cessation tool, thinking that this would be a good action toward permanent cessation. He enjoyed the hand-to-mouth activity of smoking and electronic cigarette use and felt that vaping helped him reduce work-related tension like conventional cigarettes did. He started using electronic cigarettes within 30 minutes of waking up and used them up to 10 times a day, or an average of one 16 mg bottle of liquid nicotine per week. By the time he entered the tobacco cessation treatment program, he had quit smoking conventional cigarettes and used electronic cigarettes for approximately seven months (Silver et al., 2016). After an initial assessment of his nicotine dependency levels based on the Fagerström scale, the subject was determined to have a moderate dependency on nicotine. The tobacco treatment specialist initially recommended a 14mg daily patch, supplemented by a 4mg nicotine lozenge, which he used about eight times a day, with behavior modification strategies (Silver et al., 2016).

After the first week of using both, he reported that his electronic cigarette use had halved. After a week, he stopped using the patch because he felt he could not control the dose. He continued to use about eight nicotine lozenges (4 mg) per day and reported no use of electronic cigarettes on two days in weeks 3 and 4. Six weeks into the program, he asked to try the 4mg cinnamon nicotine gum because cinnamon was his favorite flavor of e-liquid, and he thought the similar taste might help him achieve his goal. His intuition proved correct. He quit electronic cigarettes entirely before completing the 12-week program. For the next six months, he used NRT

intermittently and then discontinued it. More than a year after quitting electronic cigarettes, he was still free of vaping, tobacco, and nicotine (Silver et al., 2016).

In addition, Sahr, Kelsh, and Blower published a case report that reported their experience with an alternative approach to cessation of electronic cigarettes through an electronic cigarette use taper and behavioral counseling (Sahr et al., 2020). A 23-year-old man who used electronic cigarettes daily for 18 months participated in a pilot electronic cigarette cessation program study. He was motivated to quit because he lacked energy and struggled to exercise. Using the modified Fagerstrom Test for Nicotine Dependence (FTND), he was assessed as having high nicotine dependence at the first visit (Sahr et al., 2020). Next, pharmacists guided the participant through a quit attempt using behavioral support and sessions to reduce nicotine e-liquid concentrations and electronic cigarette use. The taper is designed to help patients quit and stop using nicotine within 12 weeks of enrollment (Sahr et al., 2020). The participant, after 12 weeks, still had not vaped or used nicotine. No other side effects of withdrawal were noted, and the modified FTND score was 0. At the patient's 6-month follow-up, he said he was not using any nicotine or electronic cigarette products (Sahr et al., 2020).

It is essential to highlight that most electronic cigarette users are youth and young adults. At the same time, many young adults report addiction symptoms and seek support for electronic cigarette cessation (National Academy of Sciences Engineering and Medicine, 2018). For example, one of the key elements for pursuing an electronic cigarette cessation program is the expressed need to quit among youth and young adults. In this regard, the study conducted by Sanchez and colleagues (2021) showed how electronic cigarette cessation could differ from smoking cessation, at least from the user's perspective. In their study, the researchers conducted seven focus groups between November 2019 and February 2020 among youth (ages 16–18) and

young adults (ages 19–29) living in the Toronto area who identified themselves as electronic cigarette users and stated interest in vaping cessation (Sanchez, Kaufman, Pelletier, Baskerville, Feng, Connor, Schwartz, Chaiton, et al., 2021). The two aims of the study were to identify similarities and differences between electronic cigarette use and smoking according to the responses of youth and young adult electronic cigarette users and to examine the implications of these similarities and differences in how research and practice in electronic cigarette cessation are advanced (Sanchez, Kaufman, Pelletier, Baskerville, Feng, Connor, Schwartz, Chaiton, et al., 2021). Their results identified many differences suggesting that interventions designed explicitly for electronic cigarette cessation may be more appropriate for this population than interventions that address electronic cigarettes within the context of broader tobacco cessation frameworks (Sanchez, Kaufman, Pelletier, Baskerville, Feng, Connor, Schwartz, Chaiton, et al., 2021). Significant differences included perceived social acceptability of electronic cigarette use, levels of certainty about the health effects of electronic cigarette use, and levels of awareness of behaviors associated with electronic cigarette use (Sanchez, Kaufman, Pelletier, Baskerville, Feng, Connor, Schwartz, Chaiton, et al., 2021).

Likewise, Berg and colleagues assessed preference for tobacco/e-cigarette cessation methods in a 2020 sample of 483 young adult tobacco/e-cigarette users (Berg, Romm, et al., 2021). In this sample, the most common preferred intervention was NRT (72.7%), followed by technology-based programs (70.0%) and oral cessation medications (53.0%) (Berg, Romm, et al., 2021). The type of technology-based approach most commonly mentioned was smartphone apps (85.9%), followed by SMS-based programs (62.1%), web-based programs (57.1%), social media-based programs (48, 4%), and video consultation (41.6%) (Berg, Romm, et al., 2021). The researchers found no approach differences among tobacco and electronic cigarette users (Berg, Romm, et al., 2021).

The findings by Berg and colleagues show a high level of agreement with technology-based interventions, suggesting that advancing such options through apps, video consultations, and other features to benefit from smartphone technology is appropriate (Berg, Romm, et al., 2021).

Also, a study by Amato and colleagues (2021) found that young people trying to quit electronic cigarettes have a variety of reasons for doing so, including health, economic, social, and academic. Therefore, the scope of impact should be considered when discussing policies to protect young people and incorporate them into smoking cessation programs designed to serve them (Amato et al., 2021).

Likewise, a study by Hongying Dai analyzed a sample of 1,660 high school students who reported using electronic cigarettes in the 2020 National Youth Tobacco Survey. The study reported the prevalence of quitting electronic cigarettes intentions in the next 12 months, as well as quit attempts among current electronic cigarette users during the past year, examined multiple risks and protective factors that may be associated with quit intentions and quit attempts, and assessed the frequency of quit attempts (Dai, 2021). The results of this study may inform the development of future evidence-based electronic cigarette cessation interventions. For example, the perceived harms of electronic cigarette use were strongly correlated with quitting intentions and attempts in the past year. Moreover, as previous qualitative research has shown, health effects are one of the main reasons young people quit using electronic cigarettes (Dai, 2021).

A study by Sikka and colleagues (2021) found that adolescents and young adults who use counseling and nicotine replacement therapy can quit electronic cigarettes. The study reported a case series of six patients followed for 12 months while attempting to stop using electronic cigarettes with medical guidance. All patients in this case series reduced electronic cigarette use or were able to achieve cessation (Sikka et al., 2021).

Another example of a current electronic cigarette cessation program is “This is Quitting,” a program developed by Truth Initiative, a nonprofit public health foundation dedicated to tobacco control in the United States (Graham et al., 2019). “This is Quitting” was launched on January 18, 2019, as a freely available quit vaping program based on the social media surveillance the Truth Initiative conducted, where it found that there was a need for an easily accessible and scalable program to help young adults quit electronic cigarette use (Graham et al., 2019). “This is Quitting” is a U.S. national text-messaging electronic cigarette cessation program for teens (13-17 years) and young adults (18-24 years), with over 232,000 young people (93,000 teens, 139,000 young adults) enrolled as of December 2020 (Graham et al., 2020).

The program is based on evidence about young people's behavior change theories for smoking cessation treatment. The messages are tailored to the user's age, their enrollment or quit dates, and the electronic cigarette product they are using, and vary for those who are not ready to quit (i.e., focus on skills and building confidence) (Graham et al., 2020). A preliminary observational analysis of “This is Quitting” showed that most young adults set a quit date (74%), and 38.4% used interactive keywords. At day 14 (37% response rate), 61% reported a reduction (47%) or discontinuation (16%); at 90 days of enrollment (response rate 21%), 7-day and 30-day point prevalence were 26% and 15.0%, correspondingly (Graham et al., 2020). This example shows that a theory-led, technology-based approach leveraging the evidence base for smoking cessation treatment is feasible, satisfactory, and hopeful in young people (Graham et al., 2020).

In this context, a 2020 review by Liu and colleagues examined eight cessation programs that focus on electronic cigarettes (full or partial), prioritizing youth and young adults (Liu et al., 2020). The programs reviewed were: “*My Life, My Quit*,” a texting/quitline support intervention that included five one-on-one sessions with a counselor developed by The National Jewish

Health, “*This is Quitting*,” a texting intervention developed by the Truth Initiative, “*Healthy Futures/Tobacco Prevention Toolkit*” an alternative to suspension program developed by Stanford School of Medicine, “*Not on Tobacco (N-O-T)*” a school-based education program of ten sessions developed by the American Lung Association, “*Project Alert (Adolescent Learning Experiences Resistance Training)*” a school-based education program of one session on electronic cigarettes, “*Smokefree.gov*” a cessation tools program developed by the National Cancer Institute (NIH), “*INDEPTH*” an alternative to suspension program of four sessions developed by the American Lung Association, and the “*1-800 QUIT NOW/State Level Quitlines*” a quitline program developed by the Centers for Disease Control and Prevention (CDC) (Liu et al., 2020). The study found that all were free of cost, and six were entirely available and accessible online (Liu et al., 2020). Three cessation programs contained texting elements, which showed that these programs were trying direct-to-youth strategies using platforms and technologies that adolescents frequent (Liu et al., 2020). Four of the cessation programs explicitly incorporated theory in their program descriptions and published materials; one explicitly mentioned Positive Youth Development, one explicitly referred to Social Cognitive Theory, and one expressly alluded to theories of behavior change (Liu et al., 2020).

In addition, current international guidelines such as in Ireland, Saudi Arabia, Malaysia, India, and Argentina (Ireland Ministry of Health, 2020; Ministerio de Salud Argentina, 2014; Ministry of Health & Family Welfare Government of India, 2016; Ministry of Health Malaysia & Malaysian Academy of Pharmacy, 2015; National Committee for Tobacco Control, 2018), are focused on strategies for the cessation of combustible cigarettes. These guidelines recommend the best FDA-approved drugs and behavioral change activities for tobacco addiction. However, all FDA-approved tobacco cessation methods have been demonstrated to be more effective in

helping patients quit smoking than placebo. Still, those methods emphasize nicotine addiction and tobacco addiction management from combustible cigarettes, but it is still unclear whether a similar approach can be generalized to nicotine addiction in electronic cigarettes (Sikka et al., 2021).

Therefore, it is necessary to investigate whether the FDA-approved treatments for combustible cigarette addiction are effective against nicotine addiction from electronic cigarettes (Sikka et al., 2021). Currently, little is known about the process of electronic cigarette cessation. To bridge the gap between the current state of electronic cigarette research and the urgent need for electronic cigarette cessation interventions, it has become common practice for researchers and other stakeholders to refer to the traditional smoking cessation literature (Graham et al., 2019). However, electronic cigarettes may have other important aspects that must be considered for treatment and interventions in various settings.

Finally, there is an urgent need for research to inform ongoing and future electronic cigarette cessation programs and advance science. In this regard, this study contributes to the knowledge base by providing the outcomes of an organizational assessment to inform the future development of an electronic cigarette cessation curriculum for the Caja Costarricense del Seguro Social in Costa Rica.

CHAPTER III: THEORETICAL FRAMEWORK.

A. Introduction

This chapter discusses the theoretical literature that provides the basis for a conceptual framework for this study. The Planned Change Model by Lippitt et al. (1958) and the Framework for Change by Ferlie and Shortell (2001) are the theories that have been integrated into the conceptual framework that guided this research study. First, the Planned Change Model (Lippitt et al., 1958) provided an understanding of the change that results from intentional decisions to improve an individual or social system with the help of professional guidance. The Framework for Change (Ferlie & Shortell, 2001) was then used to analyze and support the concept of change in a setting such as the healthcare setting. Finally, the chapter concludes with the theoretical framework utilized for this study with the CCSS in Costa Rica.

B. Introduction to the Planned Change Model

This project used the Planned Change Model developed by Ronald Lippitt, Jeanne Watson, and Bruce Westley in 1958 to guide the assessment for the future development of an electronic cigarette cessation educational program for health practitioners in the CCSS (Lippitt et al., 1958). The Planned Change Model provides an understanding of organizational change, which is appropriate for this research project designed to conduct an organizational assessment to inform the potential future development of a potential significant organization change for the Caja Costarricense del Seguro Social in Costa Rica. In addition, the Planned Change Model is the most appropriate evidence-based model for the project as it focuses on the role of the leader in the change process and provides a seven-step method to assess the proposed change (White et al., 2019). The following section describes the Planned Change Model, how other researchers have utilized it to guide their studies, and how it is appropriate for use in this study.

Lippitt et al.'s Planned Change Model presents seven dynamic stages of change that leads to a transformation of a person or organization (Lippitt et al., 1958). Lippitt et al. (1958) defined a planned change as a client system's decision to make improvements within the system with the help of another person or group, called a change agent (Lippitt et al., 1958). The term "client system" refers to an individual, organization, or community receiving transformation support (Lippitt et al., 1958). Change agents can be individuals or teams that help define, investigate, facilitate, and plan change with individuals, groups, or systems to effectively address internal and external expectations or realities (Lippitt et al., 1958). In this case, the change agent was represented by the researcher conducting this dissertation research. However, it is recognized that the CCSS has leadership that would also need to serve as change agents in the future to make any proposed program a reality. Therefore, CCSS-CCT program leadership and staff were engaged in this study by serving as mentor and research participants and recipients of its findings and recommendations. Change relationships reflect mutually agreed-upon plans, expectations, and shared experiences between client systems and change agents (Lippitt et al., 1958).

The pioneer of the change process, Kurt Lewin, influenced Lippitt et al. in developing their dynamic Planned Change Model (Kritsonis, 2005). Lewin's three-stage model of change connected decision-making (unfreezing), action (moving), and evaluation (freezing) processes that lead to individual, group, or community change. Using Lewin's conceptualization of organizational change, Lippitt and colleagues proposed that the change process through short-term interventions, such as educational information or workshops, does not achieve the desired goal (Lippitt et al., 1958), which means that the process of permanent change needs comprehensive well-planned actions to increase their chance for being effective. Lippitt and colleagues also stated that people return to the status quo unless they develop change goals and plan a change process to move

toward the desired goal (Lippitt et al., 1958). Therefore, in addition to Lewin's change phase, Lippitt et al. (1958) added a change agent to the model, who plays an important role in facilitating the change process (Lippitt et al., 1958). As a result, Lewin's three-stage process was expanded to seven stages in the Planned Change Model (Lippitt et al., 1958). Other stages involve establishing and terminating the relationship between the change agent and the client system (Lippitt et al., 1958). The Planned Change model by Lippitt et al. (1958) includes the following stages (Lippitt et al., 1958; White et al., 2019):

Stage 1. Develop the need for change by diagnosing the change.

Stage 2. Establish change relationships and assess the motivation and capacity to change.

Stage 3. Clarify assessment for change and determine resources.

Stage 4. Establish goals and interventions for an action plan.

Stage 5. Examine alternatives.

Stage 6. Transform intentions into actual changes and maintain the change.

Stage 7. Generalize and stabilize change and end the helping relationship of the change agent.

Lippitt et al. (1958) envisioned the seven stages of change in the client system as a dynamic, complex, non-linear process where multiple stages can run concurrently (Lippitt et al., 1958). For example, a change agent who works in stage three may need to return to stage one to redefine goals. All stages contribute to developing change goals (Cogil, 2015).

Lippitt et al.'s model has been used in healthcare settings, such as establishing a new cardiac surgery service in an Australian university hospital (Ciobanu et al., 2018), where the Planned Change Model stages were matched with the Australian and New Zealand Society of Cardiac and Thoracic Surgeons Guidelines in the process of setting a new cardiac surgery service (Cogil, 2015)

In this case, the Planned Change Model helped promote an effective organizational change to guarantee positive outcomes for patients and health care staff (Cogil, 2015).

In addition, the Planned Change Model has been used in a project for enhancing Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) cultural competencies in the staff of a primary care clinic setting (Felsenstein, 2018). In Felsenstein's quality improvement project, the Lippitt et al. (1958) Planned Changed Model was used to assist each step from beginning to end, highlighting the role of the change agent that was executed by an expert consultant (Felsenstein, 2018).

Similarly, the Planned Change Model was applied in a project seeking to improve unit morale in the Medical-Surgical Unit (MSU) by incorporating a lead nurse program (LNP) at the Department of Veterans Affairs (VA) hospital in Sacramento (VA Mather)(Kara, 2016). In that case, the Planned Change Model matched the nursing process, assisting the lead nurse trainee in adopting the leader role and understanding the change process's schematics more clearly. It also helped guide an interdisciplinary team when establishing the lead nurse curriculum (Kara, 2016).

The Planned Change Model has also been applied to a quality improvement project to increase Hepatitis C treatment at a rural Navajo health clinic through a partnership with Project Extension for Community Health Outcomes (ECHO) specialists (Nance et al., 2020). Nance et al.'s (2020) project utilized the model as a guide to implementing the proposed change in services. In addition, the model guided the responsibilities of the change agent, represented by the quality improvement Project Manager (Nance et al., 2020).

Lippitt's seven stages Planned Change Model became the basis for many other researchers and practitioners to develop consulting models and processes. Moreover, its stages are supported by methods and practices still critical in leading and managing change today (Szabla et al., 2017). In this case, Lippitt's Planned Change Model was chosen as a framework to guide this dissertation

project because it is a model that provides the tools for planning, managing, analyzing, and organizing complex change in an organization (Cavner, 2022). Also, the Planned Change Model could be easily aligned to the organizational structure of the CCSS's tobacco cessation clinic program (abbreviated in Spanish as CCT), facilitating the CCSS to make decisions regarding the changes proposed in this research for implementing an educational curriculum specific to the cessation of electronic cigarettes for practitioners, to offer electronic cigarette cessation services to patients in the future. Therefore, this research project utilized Lippitt et al.'s Planned Change Model, focusing on stages 1, 2, and 3, to address the specific aims of this research study.

Additionally, the project included recommendations for implementing an electronic cigarette cessation curriculum for CCSS's CCT practitioners; those recommendations were aligned with the actions in Planned Change Model stages 4 (Establish goals and interventions for an action plan) and 5 (Examine alternatives) in case CCSS authorities consider continuing with the implementation process in the future. Moreover, Lippitt's Planned Change Model also presents a valuable tool for planning purposes, generating a timeline since its detailed stages act as a "roadmap" for future project implementation with a good understanding of organizational change. See Table 1 for a description of how the model guided this project through the dissertation research aims.

Table 1 Lippitt’s Planned Change Model as a Guide for the Dissertation Process

Stages of change	Dissertation research aims
A. Diagnose the problem	1. To describe the systemic and current organizational practices related to the Cessation Clinics at the Caja Costarricense del Seguro Social.
B. Assess motivation and capacity for change	2. To identify the Caja Costarricense del Seguro Social 'practitioners' training in electronic cigarette cessation, current cessation practices, barriers, and needs related to an electronic cigarette cessation curriculum for practitioners
C. Clarify assessment for change and determine resources	
D. Establish goals and interventions for an action plan	3. To propose specific recommendations for implementing an electronic cigarette cessation curriculum for the Caja Costarricense del Seguro Social clinics
E. Examine alternatives	
F. Transform intentions into actual changes and maintain the change	(Post-dissertation)
G. Generalize and stabilize change and end the helping relationship of the change agent	(Post-dissertation)

C. Introduction to Ferlie and Shortell’s Framework for Change

This research study also utilized the Framework for Change developed by Ewan B. Ferlie and Stephen M. Shortell in 2001 to guide the study, specifically the selection of key informants and the development of key informant interview guides (Ferlie & Shortell, 2001). The Framework for Change is a framework for implementing change for quality improvement in healthcare (White et al., 2019). The model focuses on the importance of context in change and describes four levels of change to consider: (a) the individual healthcare practitioner, (b) the medical team, (c) the organization as a whole, and (d) the organization's cultural environment (Ferlie & Shortell, 2001).

Ferlie and Shortell propose that before changes to improve quality and care outcomes can occur, those changes must consider all four levels of change within the organization to maximize the probability of success (Ferlie & Shortell, 2001). The application of the Framework for Change

has been broad. For example, Ferlie and Shortell's framework has been used to clarify the structure and dynamics of the healthcare system, the rough divisions of labor and interdependencies among major elements of the system, and the levers for change in the engineering/healthcare partnership strategy developed by the Institute of Medicine of the United States in 2005 (Institute of Medicine, 2005). Similarly, the Framework for Change has been applied to patient expectations studies, such as the one developed by El-Haddad, Hegazi, and Hu, where Ferlie and Shortell's model helped to overlap the findings of 26 participant interviews conceptualizing and describing their expectations in 3 distinct domains: (1) health outcomes, (2) individual clinicians, and (3) the healthcare system (El-Haddad et al., 2020).

Another example of how the Framework for Change has been utilized is a study developed by Rogers et al. (2016) called "Implementation of repeat HIV testing during pregnancy in Kenya: a qualitative study". Rogers et al. (2016) used Ferlie and Shortell's framework in the analysis phase when they used the framework's levels as the initial themes of their qualitative study, resulting in a better understanding of the need for change in the program's implementation.

In this dissertation research, Ferlie and Shortell's Framework for Change offered an appropriate structure for analyzing the four CCSS organizational levels. The following levels were considered: the individual practitioner that works at the CCSS tobacco cessation clinics at the first level; the cessation clinics at the second level; the CCSS at the third level; and the CCSS cultural environment at the fourth and last level. Hence, the Framework for Change supported the Planned Change Model in the analysis phase to strengthen the recommendations to inform the development of a future electronic cigarette cessation program in CCSS-Costa Rica by considering these four organizational levels and their role and impact on a future intervention.

D. The Conceptual Model for the Study

In summary, this research study used the Planned Change Model proposed by Lippitt et al. (1958) to guide the assessment and future needed change and the Framework for Change proposed by Ferlie and Shortell (2001) to strengthen the recommendations provided to the CCSS by incorporating the organizational levels.

The following is the theoretical framework that was used as the basis for this study (see Figure 2). The framework shows how through this study, the current tobacco cessation clinics program in the CCSS will go through a process of organizational assessment using the Planned Change Model, specifically from stages 1 to 5 (from left to right in the diagram) to provide recommendations for the future development of an electronic cigarette cessation curriculum for the practitioners who work at the CCSS's CCT. The orange color of the stage's boxes (Stages 1-5) represents those stages that the study addressed, while the gray boxes (Stages 6 and 7) represent the stages out of this project's scope. The arrows between stages represent the non-linear characteristic of the Planned Change Model, where stages can run concurrently.

The Planned Change Model guided the methods of this study by providing the phases that the data collection methods should follow to propose a set of recommendations for implementing an electronic cigarette cessation curriculum. Specifically, in Stage 1, developing the need for change by diagnosing the change, the researcher assessed the need for change to include electronic cigarette cessation services in the current CCSS-CCT program through the document review and the interviews. In Stage 2, establishing a changing relationship and assessing the motivation and capacity to change, the researcher used interviews with CCSS-CCT coordinators and health practitioners to determine the social environment to recommend a change to the program, if needed. In Stage 3, clarifying assessment for change and determining resources, the researcher identified all

the resources that the CCSS-CCT has and those needed to produce a change in the program. Then, in Stage 4, establishing goals and interventions for an action plan, the researcher provided the building blocks and recommendations for a possible future implementation of a curriculum based on electronic cigarette cessation methods using the results of the previous stages. Finally, in Stage 5, examining alternatives, the researcher provided recommendations based on the identified needs of the CCSS-CCT for an electronic cigarette curriculum, including an analysis of the assets and the possible steps the CCSS could take once the study is complete.

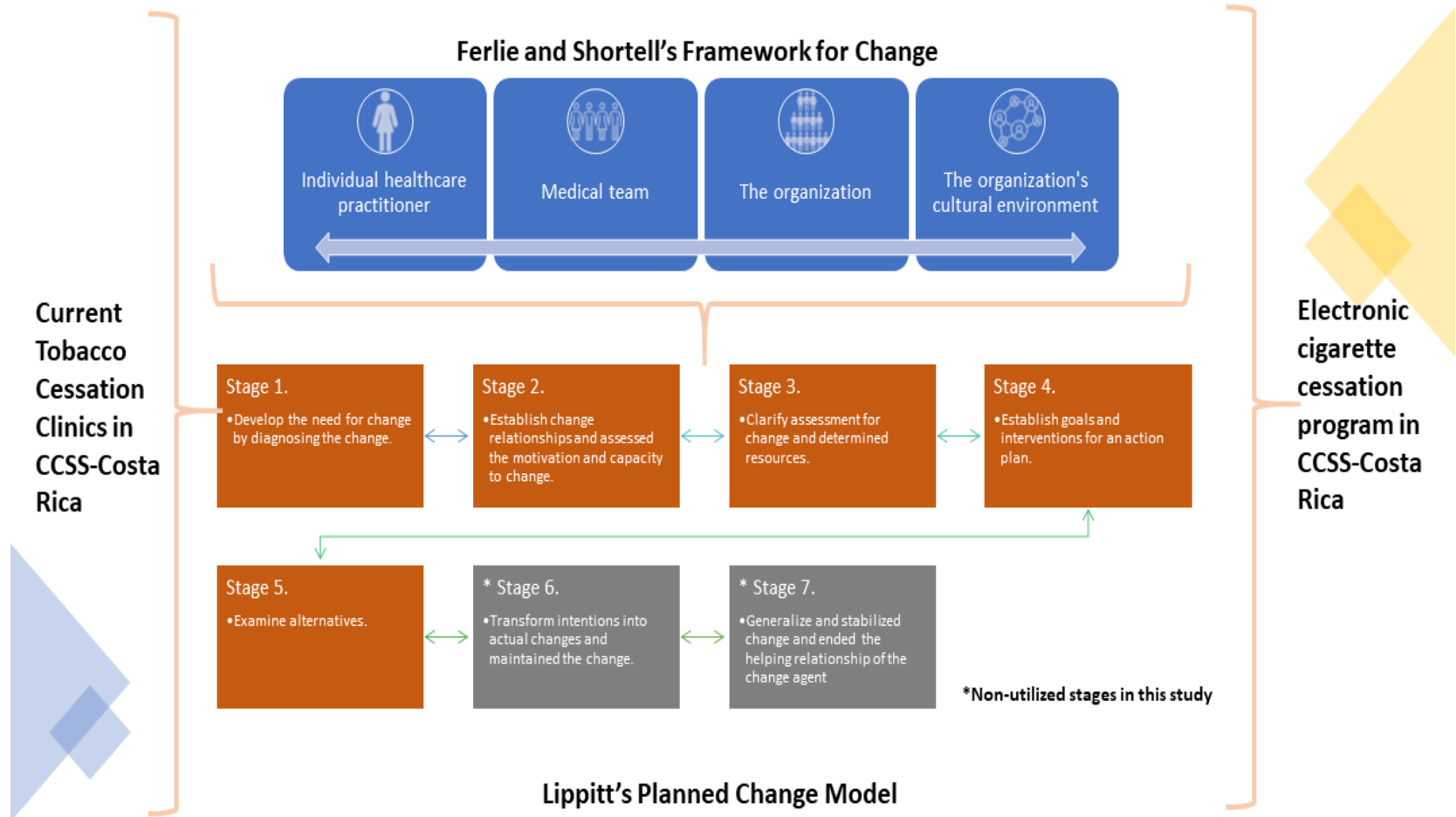
At the same time, during this study, the Framework for Change was considered during study design, data collection, and analysis. Specifically, the four Framework for Change organizational levels are in blue boxes at the top of the figure, representing their consideration in the project and, thus, in the process for a future effective change (see Figure 2). The Framework for Change guided the selection of people to recruit for the study. Specifically, key informant participants were recruited who can describe the individual, team, organizational and cultural environment levels of the CCSS tobacco cessation services. For example, the Framework for Change allowed the researcher to consider the level at which the interview participant works and what questions this person should answer to gain more knowledge related to the first two specific aims of the research study. For instance, a CCT coordinator (medical team level) was asked questions about the team this person leads and what team needs could potentially be fulfilled if an educational curriculum about electronic cigarette cessation methods is implemented. The CCT coordinators and the individual practitioners interviewed for the study were also able to inform the specific educational needs related to electronic cigarettes and best practices in cessation treatment.

The Framework for Change guided the researcher during data analysis by considering the levels and coding based on these levels when analyzing the data and offering recommendations

from this study. For example, during data analysis, the data were coded using inductive and deductive methods; some codes in the code directory were based on the Framework for Change levels.

Finally, the study's theoretical framework helped to create the building blocks for the recommendations proposed for the future electronic cigarette cessation program for the CCSS. Specifically, the framework guided the researcher in offering suggestions for the CCSS's individual healthcare practitioners, medical team, organization, and cultural environment to assist with the curriculum's potential future implementation.

Figure 2: Theoretical framework for the organizational assessment of a future curriculum in an electronic cigarette cessation program in CCSS-Costa Rica



Chapter IV: The Design—Methods and Procedures

A. Introduction

This study utilized a qualitative methodological approach to answer the following three research questions:

1. What are the systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes, at the Caja Costarricense del Seguro Social? This research question was answered using CCSS document review and key informant interviews with CCT coordinators.
2. What are the current knowledge, practices, and needs related to electronic cigarette cessation among the cessation clinic practitioners to implement an electronic cigarette cessation curriculum? This research question was answered using key informant interviews with CCT healthcare practitioners.
3. Given the findings from Research Questions 1 and 2 and taking a systemic approach, what are the specific recommendations for an electronic cigarette educational and cessation curriculum or services for the CCSS cessation clinics? This third research question was answered through data analysis and synthesis from research questions 1 and 2, as well as a review of the literature about electronic cigarette cessation curriculum for healthcare settings.

B. Research Study Framing and Epistemological Approach:

Qualitative research can be defined as a study of the nature of a phenomenon, particularly suited to answering questions about why something was (not) observed, evaluating complex interventions with multiple components, and focusing on improving interventions (Busetto et al., 2020). Likewise, qualitative research systematically studies social phenomena in the natural

environment. These phenomena include but are not limited to how people experience various aspects of life, how individuals and/or groups behave, how organizations function, and how interactions shape relationships. In this study, the qualitative approach provided the opportunity to understand the organizational context in which an electronic cigarette cessation curriculum and services might be implemented and obtain the practitioners' perspectives, making it an appropriate methodology for this study.

Based on the aims, this study was comprised of an organizational assessment of the CCSS's CCT for the future development of an electronic cigarette cessation curriculum for health practitioners. The curriculum will focus on electronic cigarette cessation methods so they can implement this treatment in the future with CCSS patients. An organizational assessment is a largely employed approach to managing a diverse number of workplace topics, but it also can be defined as a method that allows workplaces to review a range of organizational functions and plan to improve practices (Trenery & Paradies, 2012). Examples of organizational assessments are the studies developed by Cumbey (1995), who researched the job satisfaction of public health nurses and organizational variables of structure, technology, and environment in South Carolina (Cumbey, 1995). Similarly, in a 2015 study, Lemke and Apostolopoulos assessed the state of health and wellness programs in the trucking industry (Lemke & Apostolopoulos, 2015).

The type of study conducted for the organizational assessment of the CCSS's CCT was a qualitative case study that assessed the current organizational conditions for the future development of an electronic cigarette cessation curriculum for health care practitioners at the CCSS's CCT and proposed a set of recommendations to implement it. According to Yin (2009), case study design should be considered when: (a) the research focuses on answering the "how" and "why" questions; (b) you cannot manipulate the behavior of the people involved in the research;

(c) you want to cover contextual conditions because you think they are relevant to the phenomenon under study; or (d) the boundary between the phenomenon and the context is not clear (Baxter & Jack, 2015; Yin, 2009)

Qualitative case study methods are based on a constructivist paradigm (Yin, 2009). From this perspective, meaning is considered subjective and based on one's own experience but also influenced by interactions with others and historical and cultural norms (Creswell, 2009). Cases are reviewed in the context of people's lives and work and based on the participants' perspectives (Creswell, 2009). A case study is done in a way that incorporates the views of the 'actors' in the case under study (Yin, 2009), rendering it ideal for exploring the perspective of healthcare practitioners about a future electronic cigarette cessation curriculum. Also, case studies have been proposed as a suitable method to describe, explain, predict, or control processes related to phenomena at the level of individuals, groups, or organizations (Woodside & Wilson, 2003).

One example of a qualitative organizational case study is the one conducted by Esemikelu B. Oghenejobo in 2018. Oghenejobo examined the organizational infrastructure of the service-level lead and care management, the role of providers, the core services offered to the HIV population, and the facilitators and barriers related explicitly to coordinating and managing care for the HIV population in six health homes in Upstate New York (Oghenejobo, 2018).

A qualitative case study and organizational assessment incorporating document review and semi-structured interviews with key informants was used to answer research question 1; semi-structured interviews with key informants were conducted to answer research question 2; while analysis and synthesis of all data with an educational curriculum literature review were conducted to answer research question 3. In addition, these methods were used to describe the current systemic organizational practices related to the CCSS's CCT, especially regarding

electronic cigarette cessation treatment, and to understand the electronic cigarette cessation educational needs, knowledge, and practices of CCSS health practitioners to inform the potential future development of an educational curriculum.

C. Study Design

The current study was a qualitative case study and organizational assessment of the Tobacco Cessation Clinics program at the CCSS to determine whether there is a need for a training program curriculum for practitioners to provide an electronic cigarette cessation program in this clinical setting. For this dissertation, the case was defined as the CCSS's CCT, and an organizational assessment of the CCSS's CCT was conducted to explore the future development of an electronic cigarette cessation curriculum for health practitioners. The case study design (Hancock & Algozzine, 2017) enabled the CCSS healthcare practitioners to express their views freely about the possibility of implementing an electronic cigarette cessation curriculum at the CCSS CCT. Hence, this design allowed for the health practitioners' perspectives on the potential positive and negative implications of developing a curriculum and its feasibility within their organization. It also enabled an in-depth understanding and analysis of the steps needed to integrate an educational curriculum focused on electronic cigarette cessation for healthcare practitioners in the CCSS's CCT effectively.

D. Research Participants & Recruitment

D.1. Key Informant Interviews

For this study, it was proposed that the National Coordinator of the CCT program and a sample of CCSS-CCT coordinators and healthcare practitioners would be recruited for the semi-structured key informant interviews. For the interview recruitment, purposive sampling was utilized to select a heterogeneous group of participants with experience in the study topic. For

research question number one (RQ1), the sampling included the former National Coordinator of the CCT program and a sample of CCT coordinators at the local level. Initially, it was proposed that a minimum of fifteen interviews would be conducted in this study stage to answer RQ1, and that key informants would be recruited based on the CCT's geographic location to reach at least two CCT program coordinators per province in the seven provinces of Costa Rica. Although every attempt was made to recruit coordinators in this manner, a total of 13 participants from six provinces were recruited and interviewed.

Regarding the second research question (RQ2), healthcare professionals in medicine, psychology, social work, pharmacy, nursing, specialized mental health nursing, respiratory therapy, physical therapy, and nutrition at the CCSS's Tobacco Cessation Clinics program were recruited for the key informant interviews. It was originally proposed that key informants would be recruited based on the CCT's geographic location to reach at least two CCT healthcare practitioners per province. Every attempt was made to meet this recruitment goal. However, a total of 10 healthcare practitioners were interviewed. All key informants had worked in the CCT program for at least one year before the interview and were at least 18 years of age.

During the interview recruitment process, names, titles, and e-mail addresses were obtained for CCT-CCSS coordinators and healthcare practitioners through contact lists obtained from CCSS representatives at the coordination office of the CCT program, CCSS websites, or e-mail, Whatsapp and/or telephone communication with CCT-CCSS clinics directly. Recruitment took place over four months (January to April 2023).

Key informants were recruited through an e-mail invitation (see Appendix 7 for the Spanish version and Appendix 8 for the English version) containing a description of the study, the purpose of the study, and procedures detailing what the key informant will be asked to do,

information on protecting participants and disseminating project results, and notification that research participants can withdraw from the study at any point in the research process. No incentives were offered to research participants. For respondents who agreed to participate, a follow-up e-mail was sent to schedule the video calls utilizing the video call software “Microsoft Teams” or telephone, scheduling preferences, and requests for research-related documents, including informed consent. Also, an email reminder for the appointment was sent two days before the meeting (see Appendix 9 for the Spanish version and Appendix 10 for the English version). If after the first email there was no response from the contact within approximately seven business days, a follow-up recruitment e-mail was made. If the contact declined to participate, the contact was asked to provide the name and contact information of another contact with a similar role in their CCT who may be interested in the project and could provide insight into the phenomenon of interest, if they were willing to provide the contact. A final recruitment e-mail attempt was sent to all the coordinators that did not respond or the ones who agreed to be interviewed but for some reason the interview did not happen.

Another round of recruitment was made two months after the beginning of the recruitment period using a Whatsapp Group Chat with a general message to all the CCT local coordinators based on the current National CCT Coordinator’s suggestion. The message included a description of the study, the purpose of the study, the procedures detailing what the key informant will be asked to do, and the contact information of the lead researcher.

E. Data Collection Methods Description

E.1. Document Analysis

Document analysis is a method that involves analyzing different types of documents, including books, newspaper articles, scientific journal articles, and institutional reports. Any

document that contains text is a potential source for qualitative analysis (Morgan, 2022). Document source observations or questions may also be required when the situation or event cannot be directly studied (Ritchie & Lewis, 2003). For this study, the document analysis method complemented the interviews to answer research question one, exploring the systemic and organizational practices related to tobacco cessation, particularly concerning electronic cigarettes at the CCSS.

For this dissertation, the procedural manual of the CCSS's CCT was reviewed thoroughly as a data source to understand how the program works and how tobacco cessation services are currently provided to the patients. The procedural manual of the CCSS's CCT in its version from 2021, is the fundamental tool to standardize the approach to smoking cessation in the institution, maximizing the use of resources and providing care according to the best available scientific evidence. This manual is not publicly available. Also, in every semi-structured interview, the researcher asked for any public document that the interviewee thought may be useful for analysis in this study and that could be shared with the researcher. Finally, all documents were analyzed using the content analysis method described in the data analysis section of this study.

E.2. Key informant interviews

Semi-structured interviews are particularly suitable for case studies. In this approach, the researcher asks pre-determined but flexible-worded questions and the answers to these questions provide an initial response to the researcher's question. In addition to pre-set questions, researchers using semi-structured interviews also ask follow-up questions designed to probe and/or further explore topics of interest to respondents that were relevant to the research question. In this way, semi-structured interviews invite respondents to express themselves openly and freely and

to define the world from their own perspective, not just that of the researcher (Hancock & Algozine, 2017).

Semi-structured interviews were conducted via Microsoft Teams with purposively sampled CCSS-CCT professionals in medicine, psychology, social work, pharmacy, nursing, specialized mental health nursing, respiratory therapy, physical therapy, and nutrition. Key informants included CCSS-CCT program coordinators, defined as the person who coordinates all the administrative procedures and logistics of the CCT, and the CCT health practitioners responsible for implementing CCT cessation programs. The interview included questions about the point of view of coordinators and health practitioners of the CCSS's CCT on systemic and organizational tobacco cessation practices, with particular attention to electronic cigarettes and their current knowledge, practices, and needs related to electronic cigarette cessation for their patients. During the research process, interviews with the program coordinators were initially conducted to gain insights related to RQ1. Subsequently, the researcher proceeded with practitioner interviews to answer RQ2.

Three key informant interview guides were used in this study. One of the guides (see Appendix 1 for the Spanish version and Appendix 2 for the English version) was used with the CCSS-CCT National Coordinator and incorporated questions to answer research question one. Similarly, another interview guide (see Appendix 3 for the Spanish version and Appendix 4 for the English version) was used with the CCSS-CCT coordinators at the local level to answer research question one as well. Finally, the last interview guide (see Appendix 5 for the Spanish version and Appendix 6 for the English version) was used with the CCT health practitioners to answer research question two.

All interviews were conducted by the researcher, Jeancarlo Cordoba, and took approximately 1 hour. All interviews were recorded with consent for an accurate report, and the researcher transcribed the interviews. The researcher checked all transcripts for accuracy.

All interviews were administered in Spanish, the native language of the participants. Interviews were recorded and transcribed. A conversational interviewing style was adopted to encourage a comfortable and fluent dialogue that could be rich in detail while using an interview guide as a reference to ensure that all key topics were covered (Dillman et al., 2014)

F. Data Analysis

This study used the content analysis method to analyze the data. Content analysis continues to be one of qualitative research's most common data analysis methods (Cerignoni Benites et al., 2016). According to Bardin (1979), content analysis has two main functions: exploring content and discovering new elements and encouraging the emergence of hypotheses as guidelines for researchers to return to the field, demonstrating scientific rigor. In addition, inductive and deductive methods can characterize qualitative data analysis (Bardin, 1977).

The content analysis method focuses on verbal or non-verbal communication. Examples include letters, newspapers, books, autobiographical reports, audio recordings, interviews, diaries, photographs, videos, and other media. These are its data sources and express social representations as mental views constructed under the contextual conditions (historical, economic, and socio-cultural) in which the sender participates (Cerignoni Benites et al., 2016).

This study used the categorical content analysis method, which uses a data reduction technique employing coding and thematic organization (Gondim & Bendassolli, 2014). As described by Bardin in 1977, with some modifications, categorical content analysis involves the following main steps (Bardin, 1977; Gondim & Bendassolli, 2014):

1. Pre-analysis: including selecting the material (corpus) to be analyzed (articles, transcribed interviews, etc.) and reading it carefully;
2. Encoding: the step of transforming the original data from the corpus, using the dataset to be grouped in the future. In this sense, it is necessary to clarify the record units (words, sentences, sentence order breaks, pauses, subjects, etc.) and enumeration rules (with or without);
3. Categorization: stage of organization and classification of the corpus over a large number of record units (codes); this is a way of sorting all encoded material based on the selected criteria;
4. Interpretation, which consists of a process of reasoning.

The above steps allow the researcher to determine that the underlying principle of the categorical content analysis operation is data reduction through two fundamental processes: encoding and categorizing the content of a specific corpus of interest (Gondim & Bendassolli, 2014). The process of encoding and categorizing the contents of a corpus is based on two basic mechanisms: on the one hand, the induction; on the other, the deduction. These two mechanisms can vary and be combined in different ways, and their existence underpins the standard categorical content analysis process (Bardin, 1977; Gondim & Bendassolli, 2014).

To analyze qualitative data, researchers can use predefined categories that support induction using theoretical references based on defined theories (Gondim & Bendassolli, 2014). For example, a common practice is to use structured or semi-structured guides that researchers use to conduct interviews. The same guide encourages participants to discuss specific topics and provides researchers with a pre-categorization of the data to analyze, especially during the categorization process (Gondim & Bendassolli, 2014). These categories can then be used to generate a start list of codes before the coding process, which gets further refined during the next step of the

analysis. The startlist of codes was developed using the proposed theoretical framework for this study, as discussed in Chapter 3.

The other side of coding and categorization systems is deduction (Bardin, 1977; Gondim & Bendassolli, 2014). To some extent, the validity of induction can be tested by successful deduction (Gondim & Bendassolli, 2014). However, since the researcher encodes the raw data using inductive methods (data reduction in the first place), he must turn to deductive elements to be able to identify the organization of these codes by forming categories that further reduce the important elements of the corpus. In this regard, induction is linked to deduction (Gondim & Bendassolli, 2014).

For this study, the provided CCSS's CCT documentation and interview transcripts, were analyzed using the categorical content analysis method. This research utilized ATLAS.ti 23 qualitative analysis software to organize and code the data. ATLAS.ti 23 software can be used with different theoretical methods and various data analysis methods. For example, the content analysis method proposed by Laurence Bardin is a possible approach in this software and a helpful resource for data analysis in qualitative research (Soratto et al., 2020).

All information (interviews and procedural documents) was translated after the coding process with the premise of being as close as possible to the original meaning while accurately recreating the interviewees' statements in terms of validity (Abfalter et al., 2021). Additionally, the codes and quotes used in Chapter 5 below are translations that the researcher made from the original version of the textual data that is located at the footnote of each page.

This process of translation and analysis is a recommended practice when collecting and reporting data in two different languages, as Abfalter et al. (2021) discuss in their article about staying as close to the original language as possible in order to avoid potential limitations in the analysis

Table 2 provides additional information to highlight the data source and analysis for the study to ensure that each research question was adequately addressed using the methods and analysis plan.

Table 2 Overview of Research Questions, Data Sources, & Analysis Plans

Research Question (RQ)	Data Source and Sample	Analysis Plan
1. What are the systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes, at the Caja Costarricense del Seguro Social?	-CCSS's CCT key informant interviews (The former CCSS's CCT National Coordinator and sample 12 of CCT's local coordinators) - CCSS's CCT guidelines review (document review)	Qualitative categorical content analysis of key informant interviews and CCSSS CCT documents
2. What are the current knowledge, practices, and needs related to electronic cigarette cessation among the cessation clinic practitioners to implement an electronic cigarette cessation curriculum?	-CCSS's CCT health practitioners' key informant interviews (sample of 10 CCT health practitioners)	Qualitative categorical content analysis of key informant interview and survey data
3. Given the findings from Research Questions 1 and 2 and taking a systemic approach, what are the specific recommendations for an electronic cigarette educational and cessation curriculum or services for the CCSS cessation clinics?	- Analysis and synthesis of data collected in RQ1 and RQ2 -Further literature review, including considerations for educational cessation curricula	Qualitative review of current clinical and public health practice recommendations for electronic cigarette cessation followed by use of the results from RQs 1 & 2 to provide commentary on what is needed for a training program curriculum for practitioners in the healthcare system in Costa Rica

G. Ethical considerations and Institutional Review Board processes

The researcher took steps to ensure the protection of all study participants throughout the entire research process. All institutional review board (IRB) research protocols were followed according to the University at Albany's (State University of New York [SUNY]) protocols, and an IRB application for this study was submitted once the dissertation committee approved the dissertation proposal. Based on the location of the study, the Bioethics Area of the CCSS first gave their approval before starting the study. To get that approval, the Subarea of Bioethics in Research, the department in charge of research ethics in the organization (CCSS), requested the necessary documents to prove this was a non-biomedical proposal and posed a low risk for its participants. Once the CCSS approved the proposal, the researcher applied to the IRB at the University at Albany and obtained approval (Protocol/study number 22X292).

Minimal risks to the research participants were anticipated. Potential risks included loss of confidentiality, invasion of privacy, or discomfort related to addressing sensitive topics, interview questions, and/or being observed by the researcher (Creswell, 2009). During the research period, the researcher collected participants' contact information for the interview. Participants' contact information were stored on a secure password-protected computer and the University at Albany One-Drive storage system. At the time of a key informant interview, the researcher assigned the participant an identifier code; this code identified the participant on audio recordings, transcripts, and demographic information documentation.

If a participant disclosed any identifying information in the interview, the identifying information was deleted from the written transcript. Likewise, electronic data was de-identified before being stored. All digital files were password-protected, and only the researcher and dissertation chair had access to this information. Participants' names did not appear in any findings and

will not be included in future publications from this study; however, anonymous quotations were used with the participant's permission.

The researcher respected all study participants' rights, needs, values, and wishes. The researcher informed participants that questions, concerns, or complaints could be referred to the researcher or the University at Albany-SUNY's Institutional Review Board. To protect all participants, the researcher informed the participants of research aims, goals, and procedures, both verbally and in writing, so that all aspects of the research study were understood, obtained informed consent from all participants, followed all IRB protocols, and retained anonymity of participants during the research process.

The researcher believes that healthcare coordinators and practitioners' perspectives at the CCSS's CCT were a valuable contribution to the research study for the future development of an educational curriculum based on electronic cigarette cessation methods. The anticipated benefit associated with participation in the study was the opportunity to set the building blocks of a potential new cessation service that may benefit the users of electronic cigarette devices. In addition, a summary of results from the study will be shared with all participants after the dissertation defense. Finally, a meeting with the CCSS's leadership will be held to disseminate the results and to discuss the steps for disseminating the results among potential service users.

CHAPTER V: FINDINGS.

The findings chapter presents a comprehensive analysis and synthesis of the data collected during this study, providing an in-depth exploration of the research questions and objectives. The following chapter presents the findings from the analysis of the document review and the key informant semi-structured interviews with the national coordinator, program coordinators, and health practitioners at the CCSS-CCT program to address this dissertation's research questions.

This chapter includes a set of tables that reflects examples of quotations from the interviews. Tables with exemplar quotations are used to ensure trustworthiness by increasing transparency about the methods used in the study that resulted in the reported findings and conclusions (Cloutier & Ravasi, 2021). Those quotations have been translated by the researcher into English for the purpose of this dissertation, and its original version in Spanish is in the Appendix section of this document, referenced by a footnote at the bottom of each table correspondingly. This method of presenting results follows the best practices of translation and research when collecting and reporting data in two different languages (Abfalter et al., 2021).

A. Findings by Research Question

A.1 *Research Question 1:* What are the systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes, at the Caja Costarricense del Seguro Social?

For research question 1, the national CCT program coordinator and a sample of 12 CCT coordinators at the local level were interviewed, for a total of 13 research participants. Also, the researcher reviewed the current version of the procedural manual of the CCT program. The purpose of this research question and its later analysis was to describe the current systemic and

organizational practices related to tobacco cessation at the CCT program and also focus on the current practices related to electronic cigarette cessation.

Regarding systemic and organizational practices related to tobacco cessation, it was found that the CCT is a program with a defined structure that demonstrates an organization of processes to offer the best cessation practices to the population. In that sense, the review of the procedural manual showed that the treatment for smoking is structured in three stages (Caja Costarricense de Seguro Social, 2023):

Stage 1. Pre-treatment: In this stage, the procedural manual describes how the patient can access information about the program and the responsibilities of the CCT team staff for registering and screening to determine what kind of treatment the patient would need.

Stage 2. Treatment: The procedural manual provides information about the two different modalities for treatment cessation within the program. This section details all the activities that the CCT team staff should implement in every treatment session and also who should be in charge of those activities.

Stage 3. Follow-up: This section explains what happens once the patient has finished the treatment successfully and describes the steps to prevent that patient from using tobacco for at least one year. It also explains what to do if a patient misses a follow-up appointment or starts smoking again.

Table 3 includes specific statements in the procedural manual pertaining to how the CCT program is structured and organized, how the patients can access the services, and how the cessation intervention works. The table is arranged by major themes that have surfaced during analysis of all the study data.

Table 3 Examples of Guidelines for Tobacco Cessation Practices based on the CCT Procedural Manual¹

Category	Theme	Examples
Current CCSS Tobacco Cessation Practices	CCT Structure and Organization	<i>“The interdisciplinary team that makes up the CCTs is made up of professionals in medicine, psychology, social work, pharmacy, general nursing and mental health, respiratory therapy, physical therapy, and nutrition.”</i>
		<i>“Said team is responsible for providing three to four group therapy workshops a year for tobacco users, lasting eight weeks each, and guaranteeing follow-up of users for a period of no less than one year. In addition to providing individualized attention in cases that do not qualify or cannot be incorporated into group therapy.”</i>
		<i>“The order of the lectures is suggested; it can be readjusted according to the needs and availability of the professionals, and other additional topics can be added; however, it must be taken into account that those mentioned in this manual cannot be omitted”</i>
	CCT Access	<i>“In relation to the route of entry, the user (insured or worker of the CCSS) can arrive on their own initiative, or with a referral from any level of care of the Institution or a referral from the doctor responsible for Comprehensive Worker Care to request information and registration at the office within the opening hours established by the Tobacco Cessation Clinic. The staff will provide you with the information, register you in a database and explain the procedures to follow for the selection.”</i>
	CCT Pre-treatment	<i>“...the clinic staff, according to the distribution of work established by the coordinator, contacts each user by telephone and schedules an appointment for the individual or group motivational interview...The motivational interview is a requirement and is carried out a few weeks before including the user in a group or individual therapy, according to their needs. The interview lasts approximately 30-60 minutes and covers aspects of physical and mental health, as well as characteristics of nicotine dependence.”</i>
CCT Treatment		<i>“As support material, the document Manual of the Successful Process in Tobacco Cessation, external signs, among others, will be used; that will be sent to the user by means of a face-to-face appointment or delivery to a designated person. Additionally, the talks can be recorded and delivered to the user on a USB storage device. It should be noted that the Institution has a virtual platform where you can access the videos of all the sessions scheduled according to the topic to be discussed and related motivational videos, or on the YouTube platform on the CCSS microsite.”</i>
		<i>“Group therapy: Two types of treatment are used: psychosocial-educational and pharmacological, both can be done face-to-face or by teleconsultation. The clinic's cognitive-behavioral program is based on Albert Ellis's rational emotive theory, which, among other consequences, can help the user to stop smoking and stay without smoking. (Ellis A. & Gieger R. 1990)</i>

¹ For the table with the original quote examples in Spanish, refer to Appendix 13

		<p><i>The user receives information about the harmful effects of tobacco use, as well as about the strategies available to resolve stress and other negative emotions without the need for tobacco.</i></p> <p><i>In the group modality, groups of 15 to 20 users are formed in a psychosocial-pharmacological treatment scheme, with a duration of eight to nine sessions, being once a week. In this modality, each session lasts approximately 3-4 hours and is led by professionals trained in group therapy together with the support of the clinic coordinator.</i></p> <p><i>Pharmacological treatment is prescribed, if necessary, in parallel to psychological treatment to address physical dependence on nicotine.</i></p> <p><i>To determine if a user requires pharmacological therapy, the levels of physical dependence are analyzed (Fargerström test)."</i></p>
		<p><i>"Individual Therapy: The structure of individual therapy is based on the same principles as group therapy: educational, motivational, cognitive-behavioral, and pharmacological... Intervention:</i></p> <ul style="list-style-type: none"> <i>• Consists of 8 sessions.</i> <i>• Four weekly sessions.</i> <i>• Four sessions every two weeks for two months."</i>
	CCT Follow-up	<p><i>"After finishing the eight or nine sessions of group therapy, users will attend at least four follow-up appointments during a year (it can be by a professional in medicine, psychology, social work, specialized nursing in mental health and psychiatry or respiratory therapy), in addition to individual appointments with psychology, social work, pharmacy, and nutrition according to the case. Strategies for relapse prevention are reinforced"</i></p>

As can be seen in Table 3, the procedural manual states the type of professionals that serve on the CCT team, their responsibilities, and the way they have to deliver the program (Table 3, Theme: CCT Structure and Organization). Also, the procedural manual explains that any person (insured) who wants to be treated can ask for a spot in the CCT program or ask for a referral from their doctor (Table 3, Theme: CCT Access). The procedural manual also explains in detail every step of the three treatment stages in its two modalities (Table 3, Theme: CCT Pre-Treatment, CCT Treatment, CCT Follow-up).

Findings pertaining to RQ1 from key informant interviews: During interviews of the coordinators and the national coordinator, the CCT programmatic structure and practices documented in the CCT procedural manual were also discussed by participants. Participants discussed the CCT program structure, how it is organized, how clients access the CCT program, and how it is implemented at every stage of the cessation intervention (Table 4, Theme: “CCT Structure and Organization” data source: Participants E02201 and E07062). Table 4 contains specific quotes related to Current CCSS Tobacco Cessation Practices, divided into themes such as: CCT Structure and organization, CCT Access, and CCT Pre-Treatment, Treatment, and Follow-up from the CCT coordinator’s perspective.

Table 4 National Coordinator and CCT Coordinators’ Examples of Systemic and Organizational Practices Related to Tobacco Cessation at the CCT- from the Key Informant Interviews²

Category	Theme	Data Source	Examples
Current CCSS Tobacco Cessation Practices	CCT Structure and Organization	E02201	<i>“Well, basically, the program’s tobacco cessation clinics is an institutional program at the level of the... of the... of what the Costa Rican Social Security Fund is; it is a specialized and very specific program in terms of care for what it is dependence on smoking, whose main objective is basically the cessation, the eradication.”</i>
		E07062	<i>“What is the objective? What do we want? And that is it, that is, to provide interdisciplinary support to the patient, covering the three types of addiction that we already know, right, in tobacco, and it is a support during the clinic, before the clinic, and after the clinic, with the only goal of the patient to stay long-term to quit smoking.”</i>
		E05022	<i>“The tobacco cessation program at the CCSS is ruled by a manual, right? So, for example, in the first session, we talked about the group rules, right, what it means to go to the clinic, what is allowed, what is not, not being with the cell phone, paying attention, they cannot miss more than two sessions, then the general rules, then why the cessation clinics were born, then we talked a little about how the law came about, why the law #9028 was born, which is the one that we have in Costa Rica, right!”</i>
	CCT Access	E07062	<i>“Well, when the person wants to quit smoking, they have various ways of accessing the clinic; one is to go to a health professional and tell them that they want to quit smoking and then have that professional refer them, or simply tell them where there is the clinic, that they contact us through social networks, on the social networks of the hospital or that they come directly to consult, there is also mouth-to-mouth contact that is also an important part of the patients that arrive, which is ¡día! smokers normally get together to smoke, right, and then when the cob breaks, when one of them stops smoking, they know that they came to the clinic and that they stopped smoking through the clinic, so they also refer.”</i>
		E10192	<i>“Well, admission to the clinic is totally voluntary; the way to enter may be that the patient requests a referral to a clinic, or an EBAIS, to a specialist consultation, etc., or even for the patient himself to go and sign up directly with the secretary at the hospital.”</i>
	CCT Pre-Treatment	E10192	<i>“Once the patient is registered, then an appointment is assigned where an initial assessment is made through a structured interview, where various personal and health data are taken, some</i>

² For the table with the original quote examples in Spanish refer to Appendix 14

			<i>screenings are carried out, depression, anxiety, the degree of nicotine dependence, of the use of other drugs, or of any other substance, at what stage are you, how do you want us to help you, and finally after this initial interview process, you are offered some kind of help, whether you want to participate in a group, or some other individual therapy.”</i>
		E18133	<i>“Exactly at that moment, when the patient already has their form filled out, it is done like a reception day, let's say it, this is where the patient is already received together with the others, the topics that are in the form are reviewed, for example, to detect symptoms depressive symptoms, addictive symptoms, the type of addiction, if it is more physical addiction or some other dependence of the patient, and to know another type of pathology of the patient that perhaps the patient himself doesn't know, then from there if he meets all the requirements, in our case, we schedule an appointment with the doctor to make an initial assessment, and determine if that patient could do group therapy, or if for different reasons it should be worked individually first, in fact, it is not uncommon for some patients to stop smoking in the individual consultation while others will quit smoking in group therapy, ¡día! Everyone has a different mindset, right?”</i>
		E19183	<i>“If in this initial evaluation, we detect that you could benefit from a medication, for example, to help you quit smoking, then we also assess it. The doctor will give you the information, right? Tell you that it is a medication, and what are the possible benefits, if there were any kind of side effects, and we refer you to the pharmacist so that they also give you all the pharmaceutical care, then the pharmacist will explain how to take the medication, what issues to avoid, it will clarify doubts, etc.”</i>
	CCT Treatment	E13282	<i>“The group treatment is based on the approach to psychological, social, and physical dependence on tobacco, so the participants attend eight group therapy sessions, which in our case are on Tuesdays from 8:30 a.m. to 11 p.m. 12 of the day, depending on the topic, there they are addressed not only psychoeducational style, right?, but also an individualized approach to the needs of each one, and in this process, right?, in this process of eight sessions, the patient is expected to establish what is D-day, and can quit, give an accompaniment.”</i>
		E20203	<i>“It is a program precisely for the cessation of tobacco consumption, very successful, yes, we have seen it because the group part is very valuable for the empowerment and self-confidence of those who participate, I think that this is the greatest work, the strongest when they make alliances with their peers at the group level, they are more motivated, and the whole motivation part is worked on.”</i>
		E19183	<i>“And if it couldn't be done in a group, then we still give it individual follow-up, and throughout this process of eight sessions, we hope that you will establish what D-day is, right, which is the</i>

		<i>day to quit smoking, the sooner, the better, so that you have more support from the clinic while you are trying to quit smoking.”</i>
	E01111	<i>“In these sessions, then, the presentations are addressed together with social work, psychology and the medical part, and topics are developed that all the clinics are already, let's say, uniformed, and well, they are given the possibility that if the person needs support, let's say from the pharmacological part, then treatment is given, and when the program is over, the idea is that the person has stopped smoking at the last session, right? then the patient is given an acknowledgment, a certificate.”</i>
CCT Follow-up	E07062	<i>“Then the eight sessions pass, once a week, and after that in the eighth session we give everyone a follow-up appointment with pulmonology, to all the patients who completed the course, and the physician will assess it, if If they have a history of lung disease, they are sent for follow-up laboratory tests, a chest X-ray, and a CT scan, even if necessary, and the phisician will see them approximately one month after finishing the course, six months and a year, if the patient has any respiratory pathology, he continues to be monitored, and if he is not, will be discharged after a year, if the patient has a psychological anxiety disorder, mainly depression, no, because they are referred to psychiatry, but if they have a disorder that is still pending management continue to be followed up with psychology until the psychologist determines that they are fit to register, or forward to the corresponding attraction area, and if the patient is a stable patient, who does not require psychological follow-up or pulmonology, so I follow up, someone from the work team follows up until the end of the year, that is with respect to the follow-up established with respect to the professionals”</i>
	E10192	<i>“and after that, a monthly follow-up is done, at three months, at six months, and a year, and after this process, what we have chosen is to continue doing activities called ex-smokers meetings, where we meet at least three times a year, all people who have stopped smoking, by some means, regardless of the time of cessation.”</i>
	E18133	<i>“Afterwards, the patient, taking into account that he did a group therapy, which is the one that lasts approximately eight or nine weeks, later, the patient continues with individual follow-up and using other services, be it mental health, psychology, because I like to put it this way as part of the program, we want to teach people to stop smoking and learn to live, which is another very important thing, and in the end, all these evaluations are also an opportunity to improve the quality of life in all aspects of the patient, and after these sessions the follow-up of the patient continues until one year of abstinence, working on issues such as relapse prevention, stress management in the face of new situations on their day as a non-smoker.”</i>

In summary, participants consistently referred to the procedural manual as the guide for the programmatic operations to be applied in the program. For example, research participant E05022 stated: *“The tobacco cessation program at the CCSS is ruled by a manual, right?”*. Also, participant E02201 mentioned *“It (the program) is provided through an interdisciplinary team, which is trained for this purpose in the specific subject of what smoking is, and practically this is to open the doors to people who smoke and who want to quit smoking.”* Those statements provided by the CCT coordinators are aligned with the guidelines provided in the procedural manual (see Table 3, theme: CCT Structure and Organization); however, the procedural manual is clear on leaving some decisions to the CCT coordinators in order to adapt the program to their needs and the conditions of the population that they are treating, for example deciding on what other topics can be added to the lectures. In this case, the procedural manual states: *“The order of the lectures is suggested; it can be readjusted according to the needs and availability of the professionals, and other additional topics can be added; however, it must be taken into account that those mentioned in this manual cannot be omitted”*

Furthermore, the participants mentioned the ways to gain access to the program. Participants stated that patients typically gain access by contacting the CCT program directly, explaining to any health professional at the CCSS that they want to quit smoking and asking them for a referral, contacting the CCT staff through social networks, or asking an ex-smoker about his treatment (see Table 4 Theme: “CCT Access” data source: Participants E07062 and E10192). This is illustrated by research participant E10192 who said: *“the way to enter may be that the patient requests a referral to a clinic, or an EBAIS, to a specialist consultation, etc., or even for the patient himself to go and sign up directly with the secretary at the hospital.”*

Regarding the three stages of the CCT program, the participants detailed the pre-treatment procedures and how every specific CCT manages the distribution of the patients between the two treatments (individual and group therapy). Specifically, in the Pre-Treatment stage, CCT coordinators explained that after registering the patient, screenings for depression, anxiety, and nicotine addiction are carried out. Also, in this stage, it is decided if the patient is going to need pharmacological treatment or not. For example, participant E10192 mentioned *“Once the patient is registered, then an appointment is assigned where an initial assessment is made through a structured interview, where various personal and health data are taken, some screenings are carried out, depression, anxiety, the degree of nicotine dependence, of the use of other drugs, or of any other substance, at what stage are you, how do you want us to help you, and finally after this initial interview process, you are offered some kind of help, whether you want to participate in a group, or some other individual therapy.”* Additional practices are exemplified by quotes in Table 4, theme: CCT Pre-treatments, Participants E18133 and E19183. Similarly, the procedural manual explains in general how the pre-treatment stage should be implemented, focusing on when this stage happens and what elements are included (see Table 3, theme: CCT Pre-Treatment).

In the treatment stage, the procedural manual describes the two modalities of treatment: the individual and the group therapy (see Table 4, Theme: CCT Treatment), but also points out the use of a document called *“Manual of the Successful Process in Tobacco Cessation”* which is a tool provided to the patients as a guide that includes different materials to support the process that they are going through. The research participants also mentioned specific treatment practices at their CCTs, especially in terms of practitioners that are engaged in the treatment, activities that are developed, the use of the pharmacological component, and their views about the

success of the treatment among the patients. This is exemplified by the quote of participant E01111 in Table 4, Theme: CCT Treatment, which specifies that the sessions are addressed mainly between professionals in social work, psychology, and medicine. Another example is provided by participant E20203: *“It is a program precisely for the cessation of tobacco consumption, very successful, yes, we have seen it because the group part is very valuable for the empowerment and self-confidence of those who participate, I think that this is the greatest work, the strongest when they make alliances with their peers at the group level, they are more motivated, and the whole motivation part is worked on.* Examples of other quotations related to this theme can be seen in Table 4, Theme: CCT Treatment, source: E13282 and E19183).

For the last stage, called “Follow-up,” the procedural manual gives general guidance about how to proceed once the second stage has been completed (see Table 3, theme: CCT Follow-up). However, the research participants pointed out not only what the procedural manual suggests but also how they have adapted this stage in order to continue offering a contact to ex-smokers and provide them with the chance to build a support community (see table 4 Theme: CCT Follow-up Participants E07062, E10192, and E18133). For example, participant E10192 stated: *“and after that, a monthly follow-up is done, at three months, at six months, and a year, and after this process, what we have chosen is to continue doing activities called ex-smokers meetings, where we meet at least three times a year, all people who have stopped smoking, by some means, regardless of the time of cessation.”*

A.1.1 Systemic and Organizational Practices Related to Electronic Cigarettes

In terms of electronic cigarette cessation practices, the CCT procedural manual only made one reference to ENDS (Electronic Nicotine Delivery Systems), one reference to Heat-not-Burn Tobacco, and one reference to flavors of electronic cigarettes, and all of those references

are located in the “definitions” section of the document. Consequently, in the main narrative of the manual, there is no reference to any practice related to cessation for electronic cigarette users (Caja Costarricense de Seguro Social, 2023).

However, some of the coordinators mentioned what they do or what they would do if an electronic cigarette user came to the CCT program asking for cessation assistance. Table 5 provides examples of quotations stated by CCT coordinators related to electronic cigarette cessation practices in the program under their supervision.

Table 5 Examples of CCT Practices Related to Electronic Cigarettes Provided by the National Coordinator and the CCT Coordinators³ - from Key Informant Interviews

Category	Theme	Data Source	Examples
Current Practices on Electronic Cigarettes	CCT Access for Electronic Cigarette Users	E05022	<i>“Actually, we put people who have even stopped smoking six months into the cessation clinic, that is, if they are people who use electronic cigarettes, they can enter the program, that is if they have smoked and switched, for example, to electronic cigarettes. We also include them in the program because we know that going from the electronic cigarette to cigarette again is very easy, it's almost, that's to be expected, so yes, it is considered for them to enter the cessation clinic.”</i>
		E06022	<i>“the same, the same process, whether the EBAIS detects it, or if the person arrives, the psychologist, for example, if she always asks me for a referral, then usually if the patient does not come with a referral, I make a referral either to by hand or by EDUS at the moment that I screening them, and I send it right!, and if it is at that moment by hand I'll do it right!, I am a little more flexible in that, right!, but it would be exactly the same, be a person who wants to stop vaping would be exactly the same process.”</i>
		E10192	<i>“No, it follows exactly the same process because currently our policy as CCSS, what we have been discussing with the coordination, is that I don't smoke, I don't vape, we are trying to equalize tobacco with vaping, so that has been our policy and yes we have had some patients who are.... Well, they believe and use vaping mainly as a way to quit smoking, but it still enters the system just like any other common tobacco.”</i>
		E03271	<i>“No, there is no difference because diay! the same dependence on nicotine is treated”</i>
		E20203	<i>“You can see that for electronic cigarettes, let's say, it's not a criteria for admission to the clinic yet, it's that what happens is that we stick a lot, let's say to the manual, rather within the alternatives, right, when talking about tobacco cessation and there are, for example, these devices that are used a lot now, and for damage reduction, and not for direct consumption, but yes, we don't really work only with that criterion, no, not at the moment.”</i>
	CCT Pre-treatment for	E07062	<i>“exactly the same, it is exactly the same requirements, the patient seeks help in the way I mentioned before, referred, that they come alone, has been referred by another ex-smoker, or that they come to the outpatient reception to ask if we care for patients with</i>

³ For the table with the original quote examples in Spanish refer to Appendix 15

Electronic Cigarette Users		<p><i>electronic smoking, and we follow the same procedure, you make an appointment with me, or with one of the team who explains what the program consists of, you make an appointment with psychology, and you make an appointment with the pulmonologist, who He is going to define whether or not to use treatment, varenicline, he still passed the questionnaire where we measured the Fagerström level, what Fagerström level, I suppose he knows the truth, it is going well, aimed more at physical addiction, some of these patients have levels of high physical addiction, so if the doctor considers that he needs varenicline, we send him to the pharmacy as well, and we put him in the same treatment use protocol as a regular smoker, participating in the course and the follow-up is the same”.</i></p>
	E13282	<p><i>“Yes, I would go through the same process, I would enter the same, either with vaping or with an electronic cigarette, I would go through the same process, we do have, let's say, there are no instruments that I know of, to quantify, right! at the level of one of these devices, how much nicotine they consume, well, we do it there with a multiplication, right!, but it's not like something exact, but the process would be basically the same.”</i></p>
	E15023	<p><i>“Ok, well, we have not yet had patients who exclusively use electronic cigarettes, we have had a few who used or have used electronic cigarettes in an attempt to quit conventional cigarettes but then go back to conventional cigarettes, we have not yet had patients who use electronic cigarette exclusively, if someone wanted to do it, they would have to go through the same process because strictly speaking the addiction is the same.”</i></p>
CCT Treatment for Electronic Cigarette Users	E07062	<p><i>“In fact, in the current course, we currently have an IQOS smoker, I suppose you already know them, we have an IQOS smoker who, since January, no, since December of last year, stopped smoking completely and went only to IQOS, reducing exposure to combustion and the doctor decided that it was necessary for him to take varenicline, so at this moment he is taking varenicline, he has already stopped smoking, he has already suspended the IQOS and we are in the exact same protocol, the same as with a conventional cigarette smoker”</i></p>
	E18133	<p><i>“So in essence it has been a very similar service, with the difference that emphasis is placed on understanding that this method, however popular it may be, is not a cessation method that is recognized by the CCSS”</i></p>

Most research participants in their role as coordinators stated that access to the CCT program for those who use electronic cigarette devices and want to quit is similar to any other conventional smoker who wants to stop consuming tobacco (see Table 5, Theme: CCT Access for Electronic Cigarette Users). One example of this practice is from participant E06022 who mentioned: *“the same, the same process, whether the EBAIS detects it, or if the person arrives, the psychologist, for example, if she always asks me for a referral, then usually if the patient does not come with a referral, I make a referral either to by hand or by EDUS at the moment that I screen them, and I send it right!, and if it is at that moment by hand I’ll do it right!, I am a little more flexible in that, right!, but it would be exactly the same, be a person who wants to stop vaping would be exactly the same process”* (See Table 5, Theme: CCT Access for Electronic Cigarette Users). In this quote, the research participant explained that the EBAIS and the referral system would work exactly the same for an electronic cigarette user, and even if the patient asks for the cessation treatment at that moment, they will make the referral however they can in order to provide the service.

However, one of the coordinators mentioned that if an electronic cigarette user asks for help at their specific CCT, that individual will not get help because the procedural manual does not include electronic cigarette use as a criterion for admission, and they stick to the manual, as evidenced by the following: *“You can see that for electronic cigarettes, let's say, it's not a criteria for admission to the clinic yet, it's that what happens is that we stick a lot, let's say to the manual, rather within the alternatives, right, when talking about tobacco cessation and there are, for example, these devices that are used a lot now, and for damage reduction, and not for direct consumption, but yes, we don't really work only with that criterion, no, not at the moment”* (See Table 5, Theme: CCT Access for Electronic Cigarette Users, Participant: E20203).

Regarding the three stages of cessation treatment stated in the procedural manual, coordinators mentioned that the Pre-Treatment stage would be the same for electronic cigarette users, as for conventional smokers. Research participant E13282 exemplifies this: *“Yes, I would go through the same process, I would enter the same, either with vaping or with an electronic cigarette, I would go through the same process...”* Additional quotes can be seen in Table 5, Theme: CCT Pre-Treatment and Treatment for Electronic Cigarette Users. Similarly, research participants E07062 and E13282 explained that they use Fagerstrom for measuring nicotine levels in electronic cigarette users just as they do with conventional smokers. Also, in the same theme, coordinator E15023 explained that besides the fact they have not had any patients using electronic cigarettes only, they have had the experience of treating dual users, or people who smoke but tried electronic cigarettes before going back to conventional tobacco, hence, they would treat them all exactly the same because *“the addiction is the same.”*

Participant E18133 also mentioned: *“So in essence, it has been a very similar service, with the difference that emphasis is placed on understanding that this method, however popular it may be, is not a cessation method that is recognized by the CCSS”*, explaining that the information provided during the treatment for electronic cigarette users also includes the dangers of these devices as a cessation method (see Table 5, Theme: CCT Treatment for Electronic Cigarette Users, Data Source: E18133). Regarding the CCT Follow-up for electronic cigarette users, only participant E07062 explained explicitly that the last stage of the treatment will be exactly the same as it is for conventional smokers: *“...we are in the exact same protocol, the same as with a conventional cigarette smoker”* (see Table 5, Theme: CCT Pre-Treatment for Electronic Cigarette Users, Participant: E18133).

Consequently, at this point in time, it is clear that there is not a formal and institutionalized electronic cigarette cessation-specific element of the CCT program, and different CCT clinics are approaching this type of cessation differently – with some not offering this cessation treatment at all due to the procedural manual not mentioning this as a service that is provided within CCT clinics.

A.2 Research Question 2: What are the current knowledge, practices, and needs related to electronic cigarette cessation among the cessation clinic practitioners to implement an electronic cigarette cessation curriculum?

For research question 2, a sample of 10 CCT practitioners were interviewed, from five out of seven provinces of Costa Rica. The roles of practitioners that were interviewed vary from different areas such as medicine, nutrition, pharmacy, nursing specialized in mental health, physical therapy and psychology. The purpose of this research question was to identify the current knowledge, practices and needs related to electronic cigarette cessation from the practitioner's perspective and provide the building blocks for a future electronic cigarette cessation curriculum. The roles of practitioners that were interviewed vary from different areas such as medicine, nutrition, pharmacy, nursing specialized in mental health, physical therapy and psychology.

The following table includes examples of practitioners' quotations regarding their knowledge about electronic cigarettes in general and electronic cigarette cessation. The purpose of this table is to show the varying levels of practitioner knowledge regarding the generalities of those devices and their use and also to present their own reflection about how much information they have related to cessation practices based on electronic cigarettes.

The table presents two categories (Knowledge about electronic cigarettes and Knowledge about Electronic Cigarette Cessation) and two themes (High Knowledge about electronic cigarettes

and Low Knowledge about Electronic Cigarettes Cessation). It is important to highlight that all participants expressed knowing something about electronic cigarettes in general, however, when asked about electronic cigarette cessation best practices all participants stated they had no knowledge of these practices.

Table 6 Examples of Practitioners’ Knowledge about Electronic Cigarettes and Electronic Cigarettes Cessation⁴ - from Key Informant Interviews

Category	Theme	Data Source	Examples
Knowledge about electronic cigarettes	Personal knowledge about electronic cigarettes	E08092	<i>“Currently, well, I know that the technique used to make it work is based on a battery that heats, or that gives it energy to heat a resistance, and then this resistance is responsible for heating and evaporating an oil-like liquid, which is it returns gas, and the person inhales it, right!, and in that liquid, or in that oil, any type of substance could come, any type of substance, and well, let's say, yes, when it comes to nicotine, right!, I could say that then there is in different concentrations, that is, there are different concentrations of nicotine, including some that say zero, and that actually do not have zero but have zero point, right! let's say in the theoretical part that is what I know, I know that they exist with flavors, I know that even with other products like CBD, like THC and other substances”</i>
		E16033	<i>“well, actually I know little, I know that they are used with well... with a base of... some with a water base, others with a base of... like some kind of oil, and some use these oils as aromas, like flavor, nothing more, and the nicotine ones that come as graduates in the amount of nicotine they have, I really don't know what the system is, if it is a system of... let's say that it burns the oil, or that it tends to boil, no, no I know, I don't really know how it works when it's time to inhale it, and what it exhales, really, I really know very little.”</i>
		E22273	<i>“Well, about electronic cigarettes, we've had some training, we've had training with the cessation clinic, very general, right? They told us about the different devices that are made for vaping, right! They were talking about the different substances, about its very particular characteristics from one device to another device, that it is not the same, right? The way in which the different formulas that are used are burned, or combusted, right! that there are no regulation about how must be certain substances, in certain concentrations, right! the differences between filters, that some do not use filters, others do, others use other temperatures, there are no studies yet on the evidence of these substances in the long term, medium term, right! There is still no very stable regulation on this topic of vapers, right!”</i>

⁴ For the table with the original quote examples in Spanish refer to Appendix 16

Knowledge about Electronic Cigarette Cessation	Personal Knowledge about Electronic Cigarettes Cessation	E14282	<i>“No, but we have applied the same treatment, that is, we consider that they are practically the same addictions, right?”</i>
		E04311	<i>“Cessation practices, no, I have to accept it, I don't know, I don't know how to do it, I feel that there is an important psychological dependency, and I feel that we should work it very similarly to smoking cessation, accompanying with support groups, more with psychology, I think that this topic is already like rebellion, and on the other hand, it is fashionable right!, then I don't know, no, no, I don't know because we haven't had experience for now, I think that up to now already in the clinics are accepting people who want to treat vaping dependency, and up to now right!, in EDUS we can see it, incorporated into that question, and that for me has been a super good tool because I do believe that is a reality that we had to be enter it right! so I have no experience”.</i>
		E21273	<i>“Well, you see that really nothing, I haven't really started to investigate, nor have I read much about it, to be honest, at least at the moment, I think, diay! that is something that is like a part that we leave forgotten, because one always focuses on cigarettes, and cigarettes and cigarettes, but this is probably going to be the new problem that we are going to have in the long term, right?, or in a few years maybe not so long term, maybe it's more short term than starting to work to stop this addiction, but if still, honestly, never, I don't know... nor have I read anything about... yes, no, no, not really.”</i>

In terms of knowledge about electronic cigarettes, most practitioners answered that they don't have much knowledge, however they were able to mention some electronic cigarette facts, such as the components and functioning of some devices and constituents of e-liquids. This is exemplified by participant E16033 who mentioned that she knew that e-liquids were oil-based and included some flavors, but that her general knowledge was limited: *“well, actually I know little, I know that they are used with well... with a base of... some with a water base, others with a base of... like some kind of oil, and some use these oils as aromas, like flavor, nothing more, and the nicotine ones that come as graduates in the amount of nicotine they have, I really don't know what the system is, if it is a system of... let's say that it burns the oil, or that it tends to boil, no, no I know, I don't really know how it works when it's time to inhale it, and what it exhales, really, I really know very little.”*

Participant E08092 mentioned that his knowledge is based on how a battery gives power to a resistance that heats an e-liquid that could include nicotine and flavors (see Table 6, Category: Knowledge about electronic cigarettes, Theme: High Knowledge about electronic cigarettes). Another participant, E22273, explained that they have had some training about electronic cigarettes; however, this training was not specific and had a lot of information, with an emphasis on electronic cigarette characteristics and barriers to research related to this topic: *“Well, about electronic cigarettes, we've had some training, we've had training with the cessation clinic, very general, right? They were talking about the different substances, about its very particular characteristics from one device to another device, that it is not the same, right?...”*

When practitioners were asked about their knowledge about electronic cigarette cessation methods, all of them answered that they do not have knowledge in this area. One example of this was stated by research participant E04311: *“Cessation practices, no, I have to accept it, I don't*

know, I don't know how to do it...” Nonetheless, some of the practitioners stated that even though their knowledge is limited, they use the same treatment for smoking and electronic cigarette use (see Table 6, Category: Knowledge about Electronic Cigarettes Cessation, Theme: Low Knowledge about Electronic Cigarettes Cessation, Participant: E14282).

Research participant E04311 also stated that they don't know about electronic cigarette cessation practices, but they feel that there are two elements to consider for this type of addiction: “...*I feel that there is an important psychological dependency, and I feel that we should work it very similarly to smoking cessation, accompanying with support groups, more with psychology, I think that this topic is already like rebellion, and on the other hand, it is fashionable right?...*” Participant E21273 stated that they know nothing about electronic cigarette cessation, and they think this is something that has not been part of the program and could be due to it potentially being a problem soon: “...*that is something that is like a part that we leave forgotten, because one always focuses on cigarettes, and cigarettes and cigarettes, but this is probably going to be the new problem that we are going to have in the long term, right?, or in a few years maybe not so long term, maybe it's more short term.*”

The following table includes examples of practitioner quotations regarding current practices related to electronic cigarette cessation. The category “Current Practices on Electronic Cigarettes” with the theme “CCT Treatment for Electronic Cigarette Users” is included. The purpose of this table is to show how practitioners treat the users of those devices and how specific CCT's can differ from others.

Table 7 Examples of Practices related to Electronic Cigarettes Cessation based on CCT Practitioners' Perspectives⁵ - from Key Informant Interviews

Category	Theme	Data Source	Examples
Current Practices on Electronic Cigarettes	CCT Treatment for Electronic Cigarette Users	E08092	<i>“Well, basically it would be handled in the same way, many of the patients who vape are first-hand smokers of conventional cigarettes, right! basically because they fell into the trap of having tried to quit the conventional cigarette through an electronic cigarette, and that later, since they were not able to disappear from their physical dependence, they were requiring higher doses of nicotine and the budget was not enough to be only vaping, then diay! They are people that they are, let's say, who are currently vaping and also smoke conventional cigarettes, and we are currently managing them equally than smokers, well, let's say, the level of physical dependence is determined, and it is assessed whether there is a need to use some type of drug.”</i>
		E09172	<i>“In fact, within the lectures that are given, it is within that, a lecture about vaping and electronic cigarettes, which we have had for a long time, let's say, that talk is being given despite the fact that there may not be any patients consuming electronic cigarettes but let's always say... because normally they think that going from one to another is better, and that I can maybe stay with the other, since I no longer smoke a conventional cigarette, if I don't keep the electronic cigarette, and everything is fine, then from For a while now, this talk about electronic cigarettes has been going on, there is also a video about that, about electronic cigarettes, what it can cause, and that right now there are not enough studies, so let's say all this has also allowed us to have experience”</i>
		E11212	<i>“We would have to know the history of that patient very well, because if he only uses nicotine in the electronic cigarette, then probably we could treat him with varenicline. I am speaking to you hypothetically because I have not found such a case, the idea of tobacco cessation clinics it is not to let the patient who has a desire to stop using it, then it would be as if one of those cases were presented to me, it would be to take it to the team meeting to see how we handle it.”</i>
		E12242	<i>“Well, at least in my case, since I provide care for all types of addictions, I prefer it to be an individual approach, because it is another process, there are other emotions,</i>

⁵ For the table with the original quote examples in Spanish refer to Appendix 17

			<i>there are other symptoms that the user has, or other types of characteristics that does not belong to the group.”</i>
		E21273	<i>“Well, actually, it was not until recently that we began to talk a little more about the subject in the workshop, right! Since it is something relatively new, I really included it a little bit in the lecture, right! to clarify to the patients that we, well, that it is not a treatment to quit smoking, because there are many patients who came to one with the idea that I am trying to quit smoking.</i>
		E22273	<i>“vaping treatments, we do not have any guidelines that tell us that there is any therapy, right! to follow, or some protocol to follow to quit vaping, right!”</i>

When practitioners were asked about their current practices related to electronic cigarette cessation treatment, there was a diverse group of opinions. For instance, participant E08092 explained that they treat electronic cigarette users exactly like any other conventional smoker: *“Well, basically it would be handled in the same way, many of the patients who vape are first-hand smokers of conventional cigarettes, right! basically because they fell into the trap of having tried to quit the conventional cigarette through an electronic cigarette, and that later, since they were not able to disappear from their physical dependence, they were requiring higher doses of nicotine and the budget was not enough to be only vaping, then diay! They are people that they are, let's say, who are currently vaping and also smoke conventional cigarettes...”* (see Table 7, Category: Current Practices on Electronic Cigarettes, Theme: CCT Treatment for Electronic Cigarette Users, Participant: E08092). Also, participant E09172 stated that during the group sessions, there is a lecture specifically about “vaping”, and they present the lecture even if they do not have any electronic cigarette users in that session to increase the knowledge of all the patients about the risk of switching (see Table 7, Category: Current Practices on Electronic Cigarettes, Theme: CCT Treatment for Electronic Cigarette Users). Likewise, participant E21273 expressed *“Well, actually, it was not until recently that we began to talk a little more about the subject in the workshop, right! Since it is something relatively new, I really included it a little bit in the lecture, right! to clarify to the patients that we, well, that it is not a treatment to quit smoking, because there are many patients who came to one with the idea that I am trying to quit smoking.”*

Similarly, another practitioner confirmed that even though they have not had any experience with electronic cigarette users, in a hypothetical case that could happen, they would apply the same pharmacological approach that they use with a conventional smoker: *“We would have*

to know the history of that patient very well, because if he only uses nicotine in the electronic cigarette, then probably we could treat him with varenicline. I am speaking to you hypothetically because I have not found such a case, the idea of tobacco cessation clinics it is not to let the patient who has a desire to stop using it, then it would be as if one of those cases were presented to me, it would be to take it to the team meeting to see how we handle it” (Participant E11212).

This is in contrast to Participant E12242 who stated that because of her role in the CCSS, she would treat any electronic cigarette user individually, and not in a group, due to the differences with the addiction to conventional cigarettes (see Table 7, Category: Current Practices on Electronic Cigarettes, Theme: CCT Treatment for Electronic Cigarette Users).

The following table provides examples of practitioners’ quotations related to expressed needs for electronic cigarette cessation services and training. Table 8 presents the category “Needs” and the theme “Practitioners’ needs” with the purpose of demonstrating practitioners’ perspectives on their needs, in terms of training and resources at the CCT Program related to electronic cigarettes.

Table 8 Examples of CCT Practitioners’ Needs based on Electronic Cigarette Cessation Services and Training⁶ - from Key Informant Interviews

Category	Theme	Data Source	Examples
Needs	Practitioner’s needs	E14282	<i>“So we would need a lot of training to take care of that population, I think that it is not something only in tobacco and electronic cigarettes cessation, but at the level of all health services, you have to know how to treat the younger population differently, because one sees it is almost a population that does not consult, yes I feel that this is the most worrying.”</i>
		E22273	<i>“What we should work hard on is training the staff, right, because we have already an infrastructure there, where you can go educating on this new topic, right!, it is easier to reach different areas of the country, right!, if we were already starting to train a team that did not exist, a governing body, right!, central that had to be implemented in each of the different areas, in the centers of attraction, in each of the levels of care”</i>
		E23303	<i>“As I was telling you, I think you also have to train the staff, right? for this to start being implemented, and the population is very unaware of these new devices, they don't see it as a dependency, they see it as a healthy alternative, right? , as something that nothing will happen in the future.”</i>
		E11212	<i>“But at a central level in the clinics there must be a change in the vision of what a clinic is, and actually set up a team for a clinic, because if there is not a team with a delimited space, with a determined time, the results are always going to be poor, so for me that is essential, and obviously having training, having time to train, but it has to be a training at an adequate level, right? I can tell you that at least we when we went to receive training, there they did have structured training, but it only lasted one week, and during that week we traveled from here to the XXXX hospital and arrived from one to three, from one in the afternoon to three in the afternoon, so it was very little time”</i>
		E15023	<i>“I think that the problem is that, raising awareness among the general population, the support that tobacco cessation clinics have exists institutionally, there is no</i>

⁶ For the table with the original quote examples in Spanish refer to Appendix 18

		<p><i>problem, we have a lot of support, sometimes some of them are limp because we are the same ones doing many things, but we have enough support to take serious steps in the sessions, logistically we also have the materials that we have there, maybe we would need specific material for electronic cigarettes, printed, we have a lot of tobacco but electronic cigarettes that I remember right now, no I remember seeing none, there's barely a mention in the big pamphlets, so we would need some information to give people, but what it would take is to reorganize, complete that training and find people, not wait for people to come in, as I said, maybe depending on the number that come, different groups can be made, but with the experience we have here of how many people come, I think it should be included in a conventional group, which could work well for us."</i></p>
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Regarding practitioner needs related to implementing electronic cigarette cessation as part of the CCT program, the practitioners agreed that there is a need for training, especially a training that includes different elements about electronic cigarettes but also about the populations that uses those devices and how to convince the general population about the danger that electronic cigarettes represents. One clear example is provided by E14282, who stated that the training that is needed for the health services on how to assist the young population is very different than the training needed to treat older populations: “...we would need a lot of training to take care of that population, I think that it is not something only in tobacco and electronic cigarettes cessation, but at the level of all health services, you have to know how to treat the younger population differently, because one sees it is almost a population that does not consult, yes I feel that this is the most worrying.”

Another example of the training needs is provided by participant E22273 who explained that the infrastructure of the program could be an advantage for training the staff but also for providing services to different areas of the country, even if the training is given to another team that is not part of the CCT (see Table 8, Category: needs, Theme: Practitioner’s needs). Likewise, Participant E23303 explained that once the staff is trained, the services could be offered to the population that at this point is unaware of the risks and even think that electronic cigarettes can be a healthy alternative: “As I was telling you, I think you also have to train the staff, right? for this to start being implemented, and the population is very unaware of these new devices, they don't see it as a dependency, they see it as a healthy alternative, right? , as something that nothing will happen in the future.”

A.3 Research Question 3: Given the findings from Research Questions 1 and 2 and taking a systemic approach, what are the specific recommendations for an electronic cigarette cessation curriculum or services for the CCSS cessation clinics?

The purpose of research question 3 was to synthesize the findings from this research study, including the review of the procedural manual and key informant interviews, and literature review to create a set of recommendations for an electronic cigarette cessation curriculum and/or services for the CCSS CCT, if the findings justified a recommendation for this curriculum. These recommendations will be provided in Chapter 6.

However, in preparation for these recommendations, Table 9 provides examples of proposed changes that the CCT national coordinator, CCT coordinators, and practitioners suggested for including an electronic cigarette cessation curriculum and services. In Table 9 the main category called “Proposed Changes” presents four themes (Individual Level Changes, Medical Team Level Changes, Organizational Level Changes and Cultural Environment Changes) following the Ferlie and Shortell Framework for Change, a theoretical foundation for this study (Ferlie & Shortell, 2001).

Table 9 Examples of Proposed Changes for the Program provided by CCT National Coordinator, Coordinators and Practitioners for including an Electronic Cigarette Cessation Curriculum and Services⁷

Category	Theme	Data Source	Examples
Proposed Changes	Individual Level Changes	E17063	<i>“Yes, I think we should review a little more, right? About what electronic cigarettes are, right? We need to start studying a little more because tobacco is something like old, more like an everyday matter, right? and we have a lot of information, this is something newer, and if we have to soak up a bit of how to get there, from how to work it, how to impact this new population, but as strengths I think that there is a consolidated team, ready, and willing to work it .”</i>
	Medical Team Level Changes	E04311	<i>"Well, thank God, uh, the composition of the clinic, right? It is incorporated with the psychology part, I feel that mental health must be incorporated, in these programs mental health is vital, it is a figure that is really advancing in other areas, and it seems to me that he is a key person, I think that the team, at least our team includes pharmacy, respiratory therapy, pulmonology, psychology, and the doctor, well there pulmonology or us, right? but I do believe that in this line of vaping, you have to put more into that line the part of psychology, mental health "</i>
		E02201	<i>"Going back to the subject of the contents, obviously they have to be more specific contents, they would have to be discussion spaces, for example, where myths are discussed, even a specific section, for example, at a group level with all the team members, where they discuss... Why did I decide as a consumer to consume nicotine through a device like this? Right? What led me to it? And that can even help us in research terms, right? To determine a bit about oh well, people are consuming because, for example, if that were the case, advertising is hitting hard, or because we have social pressure, or the issue of misleading advertising, that at least I believed that this was not harmful, for example, and then that will help us in institutional and national health policies, to be able to carry out prevention campaigns, and know where to attack, where to mitigate, where reduce that impact, so that there are no new people or people who debut using these devices, and consuming nicotine through those devices. That could be one of the things there.”</i>

⁷ For the table with the original quote examples in Spanish refer to Appendix 19

Organizational Level Changes	E01111	<i>"I'm not, no no no, the truth is that I'm not very sure, that is, it seems to me that it should be a little more focused on a younger population, which is the one that normally... in fact, most of the patients that we have are a little older, and they are, many times, because they already have surgery and they need to quit smoking, something like that, and the electronic cigarette is normally the youngest, but even we have a restriction in that sense because the clinic, a requirement is that they be over 18 years of age, so in that case it does seem to me that there should be flexibility for adolescents, who also use a little more, I think."</i>
	E02201	<i>"Obviously we will have to make its adaptations in the interviews, direct it more towards, for example, what aspect led you to consume or change? if it is that the person switched from the traditional cigarette to the electronic one, or if it was already that he made his debut with electronic cigarettes. All of this is part of what would be the history of consumption, the reasons that led that person to consume, what is underlying there as well, and I think that this is a fundamental part of exploring it in an interview as well. Not just tell the person to come here, there is a group, and in that group get in there like a herd, all together, and without knowing any particularities. Rather, I think these previous interviews even help us, firstly, to filter because they have that purpose, but they also help us to direct which are the points to reinforce, to take into consideration, when the person begins in that process itself, for example the D-day, that you are no longer smoking and you are facing, for example, the abstinence period, and how you deal with it, how can we help you there, I think it is essential that much of that established procedure be used and that it be adapted to what it is electronic nicotine delivery systems or electronic cigarettes in general."</i>
	E03271	<i>"in what sense? because the people who vape are younger, so probably what I would think could vary is what is the approach towards the young population to motivate them to stop vaping? Because just like with the normal, conventional cigarette, there is little perception of risk, especially therein lies the problem, now!"</i>
	E12242	<i>"It would be a differentiated approach, because, for example, we know that the intervention program for smoking cessation is very structured, only for that consumption, right?, and it is only the total cessation, so you have to really assess the characteristics of the cigarette electronic to be approached in a different way, no, I don't think it's like the same type of talks, with the same characteristics, I think that something"</i>

			<i>has to be changed there, and even separate smokers from conventional cigarettes because they're going to say " me in the same group? I left that a long time ago!"</i>
		E15023	<i>"So yes, we would have to carry out a prior campaign to include, that is, to call these people, by the time they come then we can include them in a fairly similar program, perhaps as I said, one session or two extra sessions for them if they were enough"</i>
		E19183	<i>"Exactly, exactly, yes, because for example, we have talks, let's say, that the program as such has made it easier for us, right? They are already more structured, the manual, let's say it's the manual provided by the CCSS, the manual is specifically designed to be tobacco, right? Conventional tobacco, so I would imagine giving that manual to a person who that smokes an electronic cigarette and she probably wouldn't feel as identified, because you will find more information related to the conventional cigarette than to the vape or the electronic cigarette."</i>
	Cultural Environment Level Changes	E05022	<i>"So, in this case, we would have to go looking a little more where these types of smokers are, right? Electronic cigarette consumers, and attract them"</i>
		E07062	<i>"Well, the first change was in the mentality, right? Because initially we had some experiences there when electronic cigarettes just started to appear, where we thought that the nicotine substitution that is already used in other presentations was a good option to use, in an electronic cigarette, right? So, after we saw that we were simply exchanging one addiction for another, then that was one of the first changes we had to make, in the concept we had of electronic cigarettes as an alternative device for smoking cessation to what it really is"</i>

As seen in Table 9, at the individual level, the participants expressed the need to prepare themselves for a change in order to provide better services to the population, in this case regarding electronic cigarettes. An example of that is participant E17063 who expressed conventional tobacco is something old, but it is necessary for them to receive more information about electronic cigarettes, and they also mention that their team is willing to learn, showing how this could be something that they think should happen at this level of change. This research participant declared: “...as strengths I think that there is a consolidated team, ready, and willing to work it.”

Then, at the Medical Team Level, in Table 9, there were perspectives about which medical areas and professionals should reinforce the program in order to treat electronic cigarette users. For example, participant E04311, mentioned that mental health professionals are key for treating this population: “...I feel that mental health must be incorporated, in these programs mental health is vital, it is a figure that is really advancing in other areas, and it seems to me that he is a key person...” Also, participant E02201 expressed that at the Medical Team Level they can explore users’ nicotine consumption with the patients, and then use that information to improve other areas such as communication campaigns, national and institutional policies, etc. This research participant stated: “... at a group level with all the team members, where they discuss... Why did I decide as a consumer to consume nicotine through a device like this? Right? What led me to it? And that can even help us in research terms, right? To determine a bit about oh well, people are consuming because, for example, if that were the case, advertising is hitting hard, or because we have social pressure, or the issue of misleading advertising, that at least I believed that this was not harmful, for example, and then that will help us in institutional and national health policies, to be able to carry out prevention campaigns, and know where to attack, where

to mitigate, where reduce that impact, so that there are no new people or people who debut using these devices, and consuming nicotine through those devices...

In Table 9, Theme: Organizational Level, research participants suggested that in order to treat electronic cigarette users, the age of coverage for the CCT program should change. This is exemplified by research participant E01111 who said: "*it seems to me that it should be a little more focused on a younger population.*" Also this research participant proposed to have more flexibility for adolescents who are the main users of electronic cigarettes: "*Most of the patients that we have are a little older, and they are, many times, because they already have surgery and they need to quit smoking, something like that, and the electronic cigarette is normally the youngest, but even we have a restriction in that sense because the clinic, a requirement is that they be over 18 years of age, so in that case it does seem to me that there should be flexibility for adolescents, who also use a little more, I think.*" Another change at the Organizational Level was suggested by participant E02201, who affirmed that initial interviews require an adaptation for covering electronic cigarette users, and that adaptation would benefit the specificity of the treatment. Research participant E02201 explained: "*Obviously we will have to make its adaptations in the interviews, direct it more towards, for example, what aspect led you to consume or change? if it is that the person switched from the traditional cigarette to the electronic one, or if it was already that he made his debut with electronic cigarettes.*"

At the same level, participant E15023 pointed out that one needed organizational level change is to create an awareness campaign to attempt to recruit all the electronic cigarette users, and then offer them a similar treatment as conventional smokers but include one or two extra sessions for its specific purposes. This research participant stated: "*So yes, we would have to carry out a prior campaign to include, that is, to call these people, by the time they come then we can*

include them in a fairly similar program, perhaps as I said, one session or two extra sessions for them if they were enough.” Participant E19183 expressed that at the Organizational Level, the CCT should change the structure in order to offer electronic cigarette users a treatment that makes them feel included as much as conventional tobacco smokers. This is exemplified when E19183 mentioned that the user manual does not include anything related to electronic cigarettes so their users would not feel like they can be part of the program.: “...*because for example, we have talks, let's say, that the program as such has made it easier for us, right? They are already more structured, the manual, let's say it's the manual provided by the CCSS, the manual is specifically designed to be tobacco, right? Conventional tobacco, so I would imagine giving that manual to a person who that smokes an electronic cigarette and she probably wouldn't feel as identified, because you will find more information related to the conventional cigarette than to the vape or the electronic cigarette.*”

For the Cultural Environment theme in Table 9, changes proposed by participants are based on the recruitment strategy and the general mentality of how to approach electronic cigarettes. Participant E05022 advised that the recruitment strategy for electronic cigarettes should be different than the strategy applied now for conventional smokers, meaning that the CCT program should make more efforts to recruit electronic cigarette users and bring them to the program, instead of just waiting for them to come to the program: “*So, in this case, we would have to go looking a little more where these types of smokers are, right? Electronic cigarette consumers and attract them.*” Additionally, Participant E07062 mentioned that when they started treating electronic cigarette users, they thought those devices could be just another presentation of nicotine replacement therapies (NRT) like the one they knew, but they then realized electronic cigarette devices are different than NRT, so the mindset now should change to really understanding

the consequences of its use and that it is not a healthy alternative to conventional smoking.

“Well, the first change was in the mentality, right? Because initially we had some experiences there when electronic cigarettes just started to appear, where we thought that the nicotine substitution that is already used in other presentations was a good option to use, in an electronic cigarette, right? So, after we saw that we were simply exchanging one addiction for another, then that was one of the first changes we had to make, in the concept we had of electronic cigarettes as an alternative device for smoking cessation to what it really is.”

Tables 17 and 19 located in the Appendix 20 and 22 correspondingly, includes specific quotes related to the practitioners’ recommendations for the contents and modalities of a potential future electronic cigarette cessation training curriculum. For space purposes, these tables are placed in the Appendix, and key exemplary quotes are in the narrative in this chapter and also referenced in Chapter 6.

In terms of contents for an electronic cigarette cessation curriculum, research participants mentioned that it is important to encompass specific details about electronic cigarettes (devices, e-liquids, flavors, post-combustion products, and health effects) from a scientific perspective, but also noticing that the market is changing; hence the knowledge about these devices and the differences and similarities compared to conventional tobacco has to be addressed. For example, Participant E12242 stated: *“¡diay!, obviously the contents would be what electronic cigarettes are, the different types of electronic cigarettes that have been around over time, the type of substances that an electronic cigarette can contain, are these substances registered at the national level or not? Are all the components of an electronic cigarette known? What is the percentage of that substance or nicotine in that cigarette? Uh, what else could I think of, now, the approach protocol for those patients who have the electronic cigarette from a psychological point of view,*

from a pharmaceutical point of view, from a medical point of view, what conditions must that patient meet who is going to come to the clinic to request help to stop using electronic cigarettes?” It is important to highlight that this research participant suggested the need for contents that include the basic concept of electronic cigarettes, the types of substance that those devices contain, their components and nicotine percentages, a procedural manual for treating electronic cigarette users, and the perspective from the psychological, pharmaceutical and medical point of view.

Additionally, this research participant stated that the curriculum should include in its contents the process they will have to follow for treating electronic cigarette users, especially in the follow-up component of the program: *“we could talk in that training about how many sessions we can give them, if that patient who is going to be an ex-smoker of electronic cigarettes is going to go to the same clinics as ex-smokers of conventional cigarettes, who is going to manage these patients after they finish the sessions?”* Similarly research participant E23303 also agreed that the method of treatment should be included to guarantee better outcomes, starting with the initial motivational interview: *“... And the importance of doing an initial motivational interview with the user, and the success they may have in the process to be able to conclude it satisfactorily, and everything that has to do with the type of this addiction, right?...”*

Moreover, research participants mentioned that basic chemistry should be taken into account to understand better the components of electronic cigarettes, as suggested by research participant E04311: *“...They would have to start us with chemistry, I think because we are very bad in that part, right?...”*, but also research participant E16033 mentioned that the chemical knowledge is important to understand the mechanism of use and the effects on the human body: *“Oh, I think that, well, the chemical part, very important, the products that are used, how they*

are used, right? If it's true, well, the flavor part, if they really are oils, if the water base is really water-based, or does it have some other additive, right? Let's say what, what is the scientific part? What has been discovered that produce? Right? What is the reality, studies? I don't know if there are already studies regarding what diseases, or what vaping is causing, right?"

Regarding the methods for the electronic cigarette cessation curriculum, participants suggested that dynamic methods should be considered to improve learning in health professionals. Table 19 in the Appendix 22 contains examples of participants' opinions about this topic. For example, participant E16033 mentioned: *"...I think that case studies, well I don't know if there really are any kind of studies, let's say, of the patients, if there is evidence and so on, but actually in case studies, personally I like them a lot, they force you to read, they force you to put it into practice, and I think it's quite nice, and the theoretical part, well, the person who always comes and explains everything to you is also quite interesting, right?"*

Similarly, research participant E09172, explained that more participative methods are the ones they like the most: *"I think that for me the best way, although this is also personal, is as a workshop type, which is more participative, right? It also depends on where one is, if it were virtual, one can.... So it seems to me that a workshop would be better because you can also share and express these different opinions."* This opinion was shared by participant E12242: *"I prefer the workshop modality, in reality the construction of knowledge is essential, and the case study can be done together with the workshop modality, so in reality there are different educational techniques, but I prefer doing, the same that I believe that all the trainings need a masterful part, right? Because if I don't know what an electronic cigarette is, it's better for an expert to explain it to me, right? construction of knowledge."*

On the other hand, regarding the schedule for the electronic cigarette cessation curriculum, there was no consensus about the schedule based on research participants' opinions. This is illustrated by research participant E23303: "...*I think that one week would be enough to carry out an intensive process, from seven in the morning to four in the afternoon, right?, with a theme, let's say a well-structured planning, right?*" Whereas, research participant E18133 believed that a training could be spread out throughout the year: "...*you could consider doing something like this, not once a year, but during the year two or three times to update the entire population...*" Research participant E04311 stated that the training should consider having the same structure as the CCT program: "*It is that if we do it too long, people are going to leave it lying around, so it also seems to me that at least, like the tobacco cessation clinics, 8 weeks, each week we see a topic that we even have to address then with the people, and do it a little more as if it were a clinic, right? The program is going to be prepared, right?*"

With respect to the modality of the electronic cigarette cessation curriculum, there was not a clear consensus either of what could be the best modality for training the CCT professionals. However, some of the research participants stated the benefits of a virtual modality for a training like this one, as illustrated by research participant E11212 who said: "*Virtual courses are very, very useful, I feel that for me personally they are more gainful than face-to-face courses, why? because they take away travel time or take away a lot of time that was there as wasted, and aside from that, it forces the student more to learn, to do jobs, to do them practically by the student.*" Similarly, research participant E22273 explained that based on their experience, virtual settings help them to reach different places in Costa Rica: "*But by professionals that we also had to train or give some type of attention, we saw that there is a territory problem, right? Because we serve people from all over the country, it was easier to reach that type of people.*"

diay! for virtual talks, then diay! we take the time, we see that the professionals from the cessation clinic obviously connect to the internet, from different places, uh, we have different clinics or professionals who can take that time, right?, so diay! to get there faster, from different places, I think the virtual sessions help a lot in that.”

Nevertheless, some other research participants stated that hybrid modalities could benefit the learning process due to the advantages that the in-person part offers. This situation is exemplified by research participant E12242 who said: *“It could be hybrid, but I think we have to go back to face-to-face, actually, I have taken a lot of virtual training, and I don't deny it, one really is sometimes in training and is watching the cell phone, is watching television, or is watching something else, and is not really focused, whether it is interesting or not, on the training, especially if we are at home, the truth is even worse, at work sometimes and it is not always possible, because like happened before they knocked on my door, so actually it can be hybrid in the sense that it is the main training, like the main components face-to-face, and then putting them into practice and commenting on the experiences.”* Another research participant agreed with that idea and stated: *“...Virtual asynchronous and maybe face-to-face yes, a little of both...”*

In summary, research participants are clearer on the contents that they want to be included in the electronic cigarette cessation curriculum than the training schedule or the modality. Besides the knowledge needed about electronic cigarettes and cessation best practices, participants also stated the need for knowing about treatment protocols and the way to treat younger populations. In terms of methodology, research participants agreed that dynamic ways of learning are better for the CCT program. In Chapter 6, formal recommendations will be provided for the CCT program, based on these findings.

CHAPTER VI: DISCUSSION AND CONCLUSIONS.

This study aimed to conduct an initial organizational assessment to inform the future development of an electronic cigarette cessation curriculum for the CCSS in Costa Rica. The following chapter will start with a discussion of Research Questions 1 through 3, including specific recommendations for an electronic cigarette cessation curriculum for the CCSS cessation clinics. It will conclude with the limitations of this study, the implications for research, policy, and practice, and final conclusions.

A. Discussion

A.1. Discussion: Research Question 1

Research question 1 addressed the description of systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes, at the CCSS. The findings from this study suggest that the CCT program has a defined structure that demonstrates an organization of processes to offer the best smoking cessation practices to the population. The program's structure includes a set of standardized procedures that are aligned with the best practices for tobacco cessation (Fiore et al., 2008; Ireland Ministry of Health, 2020; Krist et al., 2021; Rigotti et al., 2022).

Those practices are embedded in the CCT procedural manual. Formalizing treatment practices in a procedural manual is the best practice for providing systematic uptake and consistency in routine clinical practice due to the potential vehicle by which the content of interventions with demonstrated effectiveness may be translated into the content of clinical practice (Begum et al., 2021; Lorencatto et al., 2013).

As stated by Lorencatto et al. (2013), the term 'treatment manual' is typically used to describe structured, procedural books that describe the intended goals and methods of treatment, as

well as the recommended content (e.g., behavioral change techniques) that will be implemented during the administration of a treatment (Lorenatto et al., 2013). In this study, the CCT procedural manual, the CCT National Coordinator, and the CCT coordinators confirmed that the CCT procedural manual fulfills this role for the CCT program.

The utilization of manuals has abundant benefits in clinical practice, including ensuring the dissemination and replication of actions, as well as the focused and structured nature of the content. Manuals also make the duration of limited-time actions more organized and thus facilitates the training and supervision of those involved in them (Lorenatto et al., 2013). This research study confirmed that most CCT coordinators referred to the manual as their guide for the implementation of tobacco cessation practices in its three components (Pre-treatment, Treatment, and Follow-up) demonstrating in a way the program fidelity through the dissemination and replication across the CCT program. It is recommended that the CCT authorities assess the fidelity of the program at some point, for example, determining how the program was implemented (fidelity assessment), how people participated in and perceived, and the contexts that mediated this relationship (Haynes et al., 2016; Lorenatto et al., 2013).

Regarding the systemic and organizational practices related to electronic cigarettes, the CCT program procedural manual only made one reference to ENDS (Electronic Nicotine Delivery System) in the definitions section. Thus, at this point in time, the current procedural manual does not specifically address or include electronic cigarettes and best practices related to cessation for the CCT program. It is important to highlight that even though there is no guideline related to electronic cigarette cessation, that does not mean that CCT coordinators and practitioners are not treating electronic cigarette users who seek help to quit. Nevertheless, it reflects no current guideline from the CCSS for the standardization of electronic cigarette cessation treatment.

Additionally, the literature suggests that youth and adults are demonstrating increasing interest in quitting electronic cigarettes (Palmer et al., 2023; Palmer, Price, et al., 2022). For that reason, this could be an opportune time for the CCT program to develop standardized procedures related to electronic cigarette cessation treatment protocols.

In terms of the current practices that CCT coordinators apply in their clinics, most of them stated that access to the CCT program, as well as the three components of the treatment for those who use electronic cigarette devices and who want to quit, is similar to any other conventional smoker who wants to stop consuming tobacco. This situation is not ideal based on the scientific literature that recommends specific strategies for electronic cigarette cessation instead of applying the ones planned for conventional smoking, but it has been applied in other settings to offer some help to electronic cigarette users who want to stop using those devices. Although there is a significant overlap between electronic cigarette use and smoking, electronic cigarette cessation methods should be focused on characteristics that are specific to those devices that are not present in conventional cigarettes (Palmer et al., 2022). For example, increasing literature suggests that when measuring electronic cigarette dependence, providers should include specific constructs, such as sensory dependence, that are associated with electronic cigarettes, not conventional ones (Bold et al., 2018).

There are also public health and clinical frameworks that have been adapted and applied to electronic cigarette cessation. One example is the 5As (Ask, Advise, Assess, Assist and Arrange) developed by the United States Public Health Service to address smoking cessation. The Screening, Brief Intervention, and Referral to Treatment (SBIRT) is also a wide-ranging approach developed by the Substance Abuse and Mental Health Services Administration (SAMHSA) to

address substance use and refers patients with substance use disorders to treatment (Kaliyamurthy & Camenga, 2022).

When considering a treatment protocol for electronic cigarettes, it is also important to consider the screening practices. For the CCT program, the research participants stated they use the Fagerstrom test for measuring nicotine levels in electronic cigarette users just as they do with conventional smokers. However, researchers have created or adapted a series of other screening tools with potential promising practice for electronic cigarette dependence measures, with additional research needed. One example is the Modified E-Cigarette Evaluation Questionnaire (MECEQ), which is a twelve-item tool distributed in a five-factor solution for electronic cigarettes: Vaping Satisfaction (satisfying, taste good, enjoy smoking), Psychological Reward (calm down, more awake, less irritable, help concentrate, reduce hunger), Enjoyment of Respiratory Tract Sensations (enjoy the sensations in your throat and chest), Craving Reduction (immediately relieves craving), and Aversion (dizzy, nauseous) (Morean & Bold, 2022). This questionnaire has proven reliable and valid for assessing electronic cigarette dependence (Morean & Bold, 2022).

Similarly, Morean and colleagues determined the psychometric properties of the PROMIS Item Bank v1.0—Smoking: Nicotine Dependence for All Smokers, the version of twenty-two items, as well as the eight and four-item versions in a new form called E-cigarette Dependence Scale (EDS). The EDS, a modified version of the PROMIS measure of nicotine dependence, has proven psychometrically that it can be used to assess electronic cigarette dependence in its three versions (22, 8 and 4 items) (Morean, Krishnan-Sarin, Sussman, Foulds, Fishbein, Grana, O'Malley, et al., 2019).

Another example is the Penn State Electronic Cigarette Dependence Index (PSECDI), which assesses withdrawal, frequency, and craving (Bold et al., 2018). The PSECDI contains ten adapted items that were picked based on their predictive utility in studies of smokers (Morean, Krishnan-Sarin, Sussman, Foulds, Fishbein, Grana, O'Malley, et al., 2019). Some limitations of the PSECDI are that its psychometric properties have not been established; also, the questionnaire contains items modified from previous cigarette dependence measures with questionable psychometrics, for example, the Fagerstrom Test for Nicotine Dependence (Morean, Krishnan-Sarin, Sussman, Foulds, Fishbein, Grana, O'Malley, et al., 2019).

In contrast with the procedure implemented at the CCT program, Bold et al. (2018) suggest that it is important to evaluate the degree of electronic cigarette dependence in a different way than conventional tobacco cigarettes due to several unique attributes of electronic cigarettes, including the capacity to alter the experience through the characteristics of the device and the variety of e-flavors. As such, existing nicotine dependence metrics may not be valid and reliable tool for screening and measuring the various domains of electronic cigarette dependence, including sensory dependence (Bold et al., 2018). This differentiation of electronic cigarette screening compared to conventional smoking should also be considered for users that claim to use zero-nicotine e-liquids because they have also become dependent on electronic cigarettes, developing a strong addictive attachment for those devices, giving justification for screenings that consider unique sensory and behavioral cues for electronic cigarettes (Foulds et al., 2015).

Additionally, other tests can measure other aspects of electronic cigarette use rather than just nicotine dependence. For example, Morean and colleagues developed a Sensory E-cigarette Expectancies Scale (SEES) for assessing sensory expectancies associated with electronic cigarette use in adults (Morean, Krishnan-Sarin, Sussman, Foulds, Fishbein, Grana, Halpern-Felsher, et

al., 2019). The SEES covers three underlying factors reflecting expectancies for taste/smell, pleasure/satisfaction, and vapor cloud production (unique among electronic cigarette expectancy measures). Each subscale showed good internal consistency and scalar invariance by sex, race, cigarette smoking status, electronic cigarette use status, e-liquid nicotine content, and device type (Morean, Krishnan-Sarin, Sussman, Foulds, Fishbein, Grana, Halpern-Felsher, et al., 2019).

In sum, through review of the CCT procedural manual and key informant interviews with the national coordinator and a sample of CCT program coordinators, it is evident that the CCT program is following best practices for conventional cigarette tobacco cessation. In terms of electronic cigarette cessation there is a lack of standardized procedure that allows the CCT program to offer electronic cigarette cessation services to the population. These standardized procedures should include consideration of the content of the cessation services, starting with specific elements of those services, such as screening for electronic cigarette use and dependence.

A.2. Discussion: Research Question 2

Research question 2 addressed the identification of current knowledge, practices, and needs relating to electronic cigarette cessation treatment best practices among CCT practitioners in order to inform the potential implementation of an electronic cigarette cessation curriculum.

In terms of knowledge, this study asked the CCT practitioners what they knew about electronic cigarettes and their cessation methods. The results indicated that CCT practitioners had some knowledge of electronic cigarettes, but this knowledge was not standardized and it was limited which could become a barrier to successfully incorporating electronic cigarette cessation into practice (Kovach et al., 2021). For example, a recent study by Ferrillo et al. (2022), found that in a group of nursing students who practiced in a hospital did not feel that they had enough information related to the health risks of electronic cigarettes necessary to confidently assess and

counsel their patients in the clinical setting, further demonstrating that lack of knowledge could be an obstacle to implementing an electronic cigarette cessation intervention in the clinical setting (Ferrillo et al., 2022).

The importance of provider knowledge has also been exemplified in a study of knowledge and beliefs about electronic cigarettes among physicians in Poland which showed that approximately 50.2% of respondents had moderate knowledge about electronic cigarettes, and 24.3% of respondents rated their knowledge as poor (Zgliczyński et al., 2019). Additionally, a study by Kanchustambham et al. (2017) found that 65% of residents, fellows, and faculty specialists from Saint Louis University (SLU) Hospital in Louisiana self-reported being “somewhat familiar” with electronic cigarettes, indicating that additional education could be helpful to fill their knowledge gap related to this substance.

Similarly, AlMuhaissen and colleagues found that health professions students’ knowledge allowed them to recognize that electronic cigarettes are carcinogenic (72.3%), that electronic cigarettes contain nicotine (72.3%), more than two-thirds of them (70.7%) identified electronic cigarettes as tobacco products, and 51.5% of participants were sure that electronic cigarettes are addictive (AlMuhaissen et al., 2022). Consequently, similar to the CCT practitioners interviewed for the current study, the majority of these providers understood the health risks associated with electronic cigarettes, however, there was still room for improvement in this area, even among healthcare providers.

Regarding their knowledge about electronic cigarette cessation methods, all the practitioners indicated they did not have any knowledge about cessation best practices specific to this substance, indicating a need for training on this topic. Based on the literature review conducted for this dissertation, no scientific papers reflect research conducted to measure practitioners'

knowledge about cessation methods for electronic cigarettes. Nevertheless, there is an increasing tendency to publish scientific papers that measure the knowledge, beliefs, and practices of using electronic cigarettes as a cessation method, a practice that the main regulation entities around the world have stated is incorrect and should be discouraged (National Academy of Sciences Engineering and Medicine, 2018; World Health Organization, 2016, 2017, 2019, 2021b). Given the findings from this study and the literature review, it is clear that additional studies are needed on healthcare providers' knowledge of electronic cigarette cessation best practices, especially for those directly involved in tobacco cessation programs, such as the CCT program.

Concerning electronic cigarette cessation practices, there was a diverse group of responses from the CCT practitioners which included the following: they treat electronic cigarette users just like any other conventional cigarette consumer; they provide information about electronic cigarettes to all the users, even if they use those devices or not; they would use the same pharmacological approach as the one used for conventional cigarette consumers;, or that they would treat electronic cigarette users individually instead of in a group, just like what happens with most of the people who seek help to quit conventional cigarettes.

Based on the scientific literature, the best approach is treating an electronic cigarette user who seeks help, rather than denying the service (Centre for Addiction and Mental Health's (CAMH), 2022). However, when interacting with individuals who want help to stop electronic cigarette use, healthcare providers are encouraged to utilize principles of evidence-based medicine and consider the patient's needs. Healthcare providers should always consider the unique goals of patients and their history of smoking and electronic cigarette use when designing a treatment regimen (Centre for Addiction and Mental Health's (CAMH), 2022).

Also, the first approach for those individuals that stop smoking and continue using electronic cigarettes or those who never smoked but are using electronic cigarettes is to advise them to quit (Centre for Addiction and Mental Health's (CAMH), 2022; King et al., 2020; Wang et al., 2020). Some other guidelines suggest that adults, youth, and people with mental illness and/or substance use issues who exclusively use electronic cigarettes can be offered a combination of behavioral therapy strategies (CBT, tapering, etc.) with or without pharmacotherapy to help quit (Centre for Addiction and Mental Health's (CAMH), 2022).

Regarding the pharmacological approach to treating electronic cigarette use, some literature suggests that varenicline and behavioral counseling may help with the cessation process for nicotine-containing electronic cigarettes after a 12-week course (Barkat et al., 2019). Similarly, Silver and colleagues confirmed that NRT and behavioral counseling were positively used in electronic cigarette cessation (Silver et al., 2016). Also, a research study by Sikka and colleagues (2021) revealed that adolescents and young adults who utilize counseling and NRT could be successful at quitting electronic cigarettes. The research documented a case series of 6 patients that were followed for 12 months in an attempt to quit electronic cigarette use with medical supervision. In this case, all patients decreased the use of electronic cigarettes or were able to stop successfully (Sikka et al., 2021).

However, it is important to highlight that insufficient evidence supports the recommendation of pharmacotherapy to assist people in quitting electronic cigarette use. The recommendations published thus far are based on initial findings primarily derived from existing smoking cessation strategies. The utilization of smoking cessation drugs for the treatment of electronic cigarette use is considered 'off-label' in the majority of countries. Healthcare providers should inform their

clients about the use of medication based on tobacco cessation methods (Centre for Addiction and Mental Health's (CAMH), 2022).

Hence, the literature supports this study's practitioners' opinions on treating electronic cigarette users who seek help quitting their electronic cigarette use at the CCT program with the current approach they provide. That means that a combination of pharmacological treatment and behavioral therapy could offer some positive preliminary results. However, the whole intervention and cessation practices need to be focused on and adapted from conventional cigarette cessation practices.

When asked about their electronic cigarette-related training needs, CCT practitioners affirmed that they perceived a lack of knowledge about electronic cigarettes in general; hence there is a need for training that allows them to provide better treatment and information to CCSS patients. This finding is consistent with the aforementioned studies and their conclusions related to practitioners' knowledge, indicating a need for more training for healthcare providers in this area.

The CCT practitioners also discussed the need for training on how to provide better cessation services to younger populations, compared to the patients that they currently treat, understanding the consumption trend of electronic cigarettes in adolescents and young adults. Other studies have found that youth and adults who use electronic cigarettes are interested in online/smartphone apps to assist with quitting (Palmer et al., 2022). In terms of treating adults, research suggests that this population is interested in stopping their electronic cigarette use due to negative consequences and are willing to use pharmacotherapy (Palmer et al., 2023).

Similarly, CCT practitioners expressed the need for awareness campaigns that allow the general population to know the risks and dangers of electronic cigarette use. This is aligned with

some of the recommendations provided in the study conducted by Sanchez and colleagues (2021), where participants suggested developing programs similar to those implemented in schools for tobacco and conventional cigarette denormalization. However, this recommendation was more relevant for prevention than cessation.

In the same study, the authors recommend awareness campaigns considering the presentation of evidence on the health effects of electronic cigarette consumption and the perceived credibility of the entity conducting research and communicating the results of it (Sanchez et al., 2021). In their study, Sanchez and colleagues (2021) found that clear and direct communication was paramount to participants who are youth or young adults and spend a significant amount of their lives tuned in to social media and online information networks (Sanchez et al., 2021). Also, as an added challenge, vaping pseudoscience and misinformation are widespread in social media communities, aggravating a sense of skepticism and tiredness in the recent ubiquity of electronic cigarettes on popular media channels (Sanchez et al., 2021).

In sum, through the interview with CCT practitioners, this study found that although some practitioners stated knowing about electronic cigarettes, this knowledge is not uniform among all the research participants. Also, all the practitioners expressed a lack of knowledge about electronic cigarette cessation methods. Similarly, practitioners mentioned that their practices for treating electronic cigarette users are the same as those that they use for conventional tobacco consumers. The literature suggests the need to specify electronic cigarette cessation approaches to their users for increasing efficacy in the treatment.

A.3. Discussion: Research Question 3

The focus of research question 3 was to allow for the synthesis of findings from research questions 1 and 2 that resulted in specific recommendations for an electronic cigarette cessation

curriculum or services for the CCSS cessation clinics. Based on the literature review, the analysis of the procedural manual, and the interviews, a set of recommendations are proposed following the Framework for Change from Ferlie and Shortell, previously described, to classify the proposed recommendations in four different levels to improve the chance of successful adjustments for the organization (Ferlie & Shortell, 2001).

Proceeding through the levels of the Framework for Change, it was found that at the individual healthcare practitioner level, the weight of the lack of knowledge was put on the practitioners, stating that they must learn the most updated practices on electronic cigarettes even if there is no guidance from the CCT coordination. It is understandable that practitioners do not have all the knowledge or preparation to address electronic cigarettes, since it is still a relatively new aspect of clinical practice, and the element itself is seeing rapid changes. Given clinical best practices, it is best for healthcare programs to assume the responsibility of standardized training for their providers, thus, it is recommended that the CCT program implement this training in order to guarantee its providers are uniformly well-prepared to treat the program's clients (Zwar & Richmond, 2006).

At the medical team level, in this case the CCT staff, research participants suggested that a potential improvement area is that mental health services and mental health professionals should be mandatory in the CCT program. Currently, some CCT programs do not have mental health professionals (e.g. psychologists, specialized nurses) who deliver behavioral therapies; in these cases, other professionals (such as social workers and physicians) deliver these services. Regarding this finding, there is no scientific evidence to support this specific request that specific mental health professionals must be the individuals to deliver these therapies; however, the literature indicates that comprehensive cessation programs are made up of a series of professionals in

different areas who provide their service and experience to care for people seeking help to stop using tobacco products (Ferrillo et al., 2022; Kovach et al., 2021; Perkins et al., 2011). Thus, it may be advisable to include mental health services delivered by specialized providers within the CCT program. However, additional exploration and discussion in this area is needed.

Also, at this level, research participants suggested that the medical team further explore users' nicotine consumption, especially during conversations that are part of the group sessions, and use that information for future communication campaigns to create awareness among the population and national policies that help to decrease electronic cigarette consumption. As mentioned in this chapter, understanding the patterns of consumption is vital to offer better cessation services to the population who seek help to quit electronic cigarette use (Martínez et al., 2020; Palmer et al., 2022), but also for the creation of communication materials and should be considered as part of a more comprehensive strategy that includes a prevention program, awareness campaigns, community participation, research, and other evidence-based strategies (Case et al., 2016; Crosbie et al., 2016, 2017; Simpson et al., 2021).

At the organizational level, research participants stated that there should be a change in how the organization views electronic cigarette users because those patients are perceived like any other conventional cigarette user, however, is that based on CCT practitioners perspectives, electronic cigarette users feel they are not similar to a conventional smoker and should be treated differently by healthcare providers and systems. For example, this is reflected in the informational materials of the CCT program, such as the "*Manual of successful process in tobacco cessation*" and CCT flyers and banners, that refers only to conventional tobacco and its consumers. The scientific literature has demonstrated that specific interventions designed to help people quit electronic cigarette use are more effective than other interventions that address the entire tobacco

cessation process (Sanchez et al., 2021). Key variations were noted in the perceived social acceptability of electronic cigarette use, the degree to which the health effects of electronic cigarette use were understood (believing that those devices are less harmful than conventional cigarettes for example), and the degree to which people were aware of the behaviors associated with electronic cigarette use (Sanchez et al., 2021). Also, the literature suggests a potential conflict with integrating electronic cigarette cessation within tobacco cessation initiatives is the potential for young people who use electronic cigarettes to be alienated or stigmatized, and then for example transition to combustible cigarettes (Sanchez et al., 2021). For example, among the participants of the Sanchez et. al. (2021) study, there was a strong stigma against smoking, along with an apparent desire to separate smoking from electronic cigarette use. The perception of social acceptance was central to the participant's narratives regarding electronic cigarette use but not regarding smoking. As a result, young people may be dissuaded from seeking support for quitting electronic cigarette use through a conventional smoking tobacco program (Sanchez et al., 2021).

Regarding the organization's cultural environment, another element of the Framework for Change, research participants stated that electronic cigarette users present different characteristics than conventional cigarette consumers; hence, the promotion of cessation services and recruitment should also be different within the organization implementing a cessation program. Scientific literature has confirmed different characteristics among populations consuming electronic cigarettes compared to people who consume other tobacco products. The main differences pertain to age, given electronic cigarette users are typically younger than the rest of tobacco product consumers (Chu et al., 2018; Fonseca-Chaves et al., 2017; Wang et al., 2020). For this reason, electronic cigarette cessation programs should focus on tailoring the program as best as possible to the population of users to ensure better results. For example, an organization could

utilize its social media channels, apps, and general technology tools to be more responsive to the interests and needs of young electronic cigarette users (Graham et al., 2020; Sanchez et al., 2022).

Similarly, at the same level, the research participants explained that at first, they were taught that the electronic cigarette could become an excellent tool to quit smoking. However, after seeing the path that these devices and their components have traveled, they had to change their mentality and apply the precautionary principle. This situation is aligned with the scientific literature that suggests that the best approach, due to the increasing uncertainty, is to protect the population's health from the danger of tobacco and not trust the lack of safety measures that involve the use of electronic cigarettes (Department of Health et al., n.d.; Fairchild et al., 2019; Prochaska, 2019; World Health Organization, 2019, 2021b)

In summary, the following Table 12 includes recommendations for an electronic cigarette cessation curriculum or services for the CCSS cessation clinics, by level based on the Framework for Change:

Table 10 Recommendations for an Electronic Cigarette Cessation Curriculum or Services for the CCSS Cessation Clinics

Framework for Change Levels	Recommendations
Individual health care practitioner level	Practitioners should be trained about electronic cigarette use and cessation throughout the organization
Medical team level	At this level, especially at the first level of attention in the nationwide services that the CCSS offers, there must be screening for electronic cigarette use, with greater attention to the younger populations.
	The screening tool for measuring electronic cigarette dependence must follow evidence-based criteria and should be based on the specific dependence on those devices.
	The CCT team should identify outcome expectations of electronic cigarette use and reasons or motives for electronic cigarette use in order to tailor the intervention to those who want to quit its use
Organizational Level	In order to offer electronic cigarette cessation services to the population, the CCT staff must be trained systematically and across the program. The training should be based on a curriculum implemented across the organization that includes contents such as: electronic cigarette prevalence and tendencies of electronic cigarette use; an in-depth description of components of electronic cigarettes and harmful ingredients of e-liquids; the mechanism of use of electronic cigarettes as well as chemical processes that e-liquids go through during the combustion; best practices and guidance for evaluating electronic cigarette use, and electronic cigarette cessation strategies. Additionally, the training should consider the participants' preferences regarding the schedule and training modality.
	The cessation strategies included in the training and implemented within the organization should include the pharmacological approach and with patient education information on the health consequences of electronic cigarette use in the short and long term; nicotine dependence; toxicology of nicotine; education and strategies to debunk the myths about electronic cigarettes; and other misconceptions about their safety; outcome expectations of electronic cigarette use and reasons or motives for electronic cigarette use.
	The methodology of the training should be dynamic and offer different adult learning best practices and activities to promote an improvement in the learning process.

	<p>The training should be piloted with a small group of CCT practitioners and evaluated before scaling it up nationally throughout the CCT program.</p>
	<p>In order to develop and integrate an electronic cigarette cessation curriculum, it is important to identify the CCT program practitioners' baseline knowledge and perceptions of electronic cigarette use to better understand the specific knowledge gaps and design the training.</p>
	<p>The electronic cigarette cessation curriculum must be evaluated and updated at least every two years to reflect the changing knowledge and evolution of electronic cigarettes. However, it is important to understand that science is continuing to evolve so the manual and training of healthcare practitioners should also be continuously updated as this happens as well. The modality, methods, and schedules should consider the CCT coordinators' and practitioners' opinions on improving the curriculum.</p>
<p>Organization's cultural environment</p>	<p>The CCSS as a national healthcare provider, should create and formalize in writing an overall approach for treating electronic cigarette users. This means changing the cultural environment about smoking cessation and including electronic cigarettes as part of the services they provide to the population. Part of this change is creating a recruitment strategy for electronic cigarette patients.</p>
	<p>Electronic cigarette use should be incorporated into the electronic health record. It should include information, such as type of device, nicotine concentration average, cartridge type, craving, withdrawal symptoms, frequency of use, and history of use, among others.</p>
	<p>As suggested by the literature (Kovach et al., 2021), it is important to have internal employee buy-in as they are critical to making changes. This means that all CCSS healthcare staff should be trained about electronic cigarettes, at least in a general manner, in order to involve other healthcare professionals in their practice and take a more comprehensive healthcare and systemic approach to electronic cigarette cessation.</p>
	<p>Awareness campaigns should be implemented to inform about electronic cigarette risks and dangers; those campaigns should be directed to the general population and CCSS healthcare practitioners. Once the training is complete for the CCT program, promotional campaigns to inform about the electronic cigarette cessation services must be considered.</p>

B. Limitations

The tobacco cessation clinic program at the CCSS is unique. It is embedded in a large institution that provides health care services for an entire country, and its services do not represent an out-of-pocket cost for its users. Additionally, CCSS's CCT program is focused on a particular population which is Costa Ricans who have access to health services. Therefore, the present study findings cannot be generalized to or used to describe all tobacco cessation programs and services outside of the CCSS in Costa Rica. This is also, one of the significant criticisms of case studies is that case studies are not generalizable to the population. However, case studies do not aim for generalizability (Creswell, 2009). Consequently, it is essential to highlight that the recommendations provided as a result of this study can only apply to the CCSS's CCT program.

Fundamental limitations of the interview method include the recall bias of the interviewee and the potential bias introduced by the researcher. The researcher collected data from a variety of CCSS's CCT coordinators and health practitioners throughout the CCT program to minimize memory bias. The researcher also used document analysis to cross-check the data, and specifically the current organizational practices. To minimize researcher bias, the researcher documented the methods and analyses used throughout the study and was prepared to review and revise the transcripts with respondents when necessary for member-checking purposes.

In terms of documentary materials limitations, since documentary data may not be developed for research purposes, they may be incomplete and not meet the researcher's goals and research questions (Busetto et al., 2020; Creswell, 2009). Moreover, some literature sources may not be beneficial to the researcher. However, when the document contains information related to a specific aim, the researcher used documentary material to support the project's aims. In addition, it was anticipated that the researcher would receive documents deemed relevant to the study

from the key informants, however this situation did not happen during the data collection phase of the study due to participants not providing additional documents, other than the procedural manual.

Participation in the study could have been impacted by the lack of incentives offered to potential research participants. Consequently, the projected sample sizes indicated in this research proposal were revised once in the field for data collection. Due to challenges in the recruitment phase outside of researcher control, recruitment methods were reviewed and adjusted through communication with the dissertation committee and UAlbany IRB when needed. The data collection time period was also extended to ensure every recruitment attempt could be made. However, understanding the dynamic of the research participants it will be important for future research. It is recommended to include methods such as Whatsapp messages, including group messaging in order to increase the number of participants and guarantee a quick communication, especially in this type of population.

It was anticipated that other study limitations could arise. Therefore, the researcher communicated with the dissertation chair and other committee members as needed to determine how best to address these limitations immediately, when possible. The CCT program-affiliated mentor and national coordinator were also consulted to ensure all data collection methods, especially regarding recruitment, were acceptable and utilized.

C. Implications for Research, Policy, and Practice

Based on the findings of this study, this section provides broader recommendations in the areas of research, policy, and practice.

C.1. Implications for research

The CCT is a structured tobacco cessation program. Although this was not the main scope of the study, it is recommended that the CCT program leadership assess the fidelity of the program. Even if the CCT program staff confirm they are following the procedural manual, it is important to demonstrate it scientifically.

Future research should prioritize developing and testing electronic cigarette interventions in general but specifically focused on cessation in the healthcare setting, including behavioral and pharmacological approaches. Also, it is important that research focus on understanding electronic cigarette use, especially in dual users, while investigating ways to discourage tobacco consumption (including nicotine), given its association with several health issues. In addition, research should focus on electronic cigarette users who are not interested in quitting, including their reasons for not quitting, sociodemographic factors, and motivations for using electronic cigarettes in order to design effective interventions.

This research study was an assessment for a tobacco cessation program in order to create an electronic cigarette cessation curriculum for the CCT. However, additional research is needed on best practices for related training in other healthcare settings, including continuing to assess the providers' knowledge and practices once trained.

C.2. Implications for Policy, including Organizational Policy

This study demonstrates the need for an educational program among CCT program staff, but, also some other measures should be taken into account to offer and promote electronic cigarette cessation services once those are offered. For example, screening for electronic cigarettes should be mandatory at all levels of the CCSS services. The screening tool that is implemented should also be standardized and evidence-based.

Also, this research study showed the need for training among the people who work at the CCT program; however, it is the position of this researcher that the CCSS should educate all its staff on this topic to increase the chances of screening electronic cigarette users at a higher rate. This could result in an increase in the number of people who could receive services from and quit with the help of the CCT program.

Additionally, this research has brought to the attention the need for electronic cigarette cessation services; however, this is just one element of tobacco control. Electronic cigarette prevention programs are also needed, especially for adolescents. Also, awareness and informational campaigns should be directed to the general populations, and specifically parents, teachers, and adolescents. In terms of policies to discourage electronic cigarette use, taxes are needed for electronic cigarettes and their components. There should also be regulations in marketing, sponsorship, and advertising. Governments should also consider the prohibition of flavors to stop electronic cigarette addiction among the population (World Health Organization, 2021a).

C.3. Implications for Practice

In terms of practice, this study brought to the attention the need for a change in a program that is currently very structured, by showing the need for a standardized cessation service within the CCSS for the people who want to quit using electronic cigarettes. For this reason, it is hoped that the changes proposed in this study will encourage the CCT program leadership to plan and implement evidence-based electronic cigarette cessation practices to maximize.

Similarly, the implementation of an electronic cigarette cessation curriculum needs an evaluation in all phases to guarantee its efficacy and the efficiency of the resources used. A pilot implementation must be carried out before scaling up the curriculum or services throughout the CCT program at the national level.

In terms of tobacco control, this study is an opportunity for Costa Rica leadership and public health and medical practitioners to continue to look carefully at the global and local trends related to electronic cigarettes and start thinking about ways to ensure that their use does not become more widespread within the country. Costa Rica is not exempt from increasing trends regarding their use, and only preparation with evidence-based prevention and treatment programs will prevent morbidity and mortality, as well as increasing healthcare costs for the country, due to electronic cigarettes.

This study represents only the first step in many actions that the CCT program needs to follow to ensure a comprehensive treatment protocol for tobacco cessation in all its forms. But, at the same time, it could be an example for other countries that may be wanting to take a nationwide approach to provide better tobacco control services to their populations. To the best of the researcher's knowledge, if the electronic cigarette cessation curriculum and a future electronic cigarette cessation service are implemented by the CCSS, Costa Rica will be the one of the first countries to do so at a national level.

D. Conclusions

Guided by Lippitt's Planned Change Model and Ferlie and Shortell's Framework for Change, this study implemented an organizational assessment to inform the future development of an electronic cigarette cessation curriculum for the Caja Costarricense del Seguro Social in Costa Rica. This research study found that the CCT program is very structured and offers high-quality treatment for conventional smoking cessation. The program has a procedural manual that is present in the daily practice among the CCT coordinator and practitioners. However, electronic cigarette use has no treatment protocol in the CCT program, the procedural manual, or the daily clinical practice. Additionally, most practices used for conventional tobacco cessation are also

used for electronic cigarette use. However, the literature suggests that electronic cigarette cessation services should be tailored, and one element in particular, screening, should be modified to be specific to electronic cigarettes and differ from conventional smoking screening.

This study provides evidence that CCT coordinators and practitioners have some knowledge about electronic cigarettes, but it is not standardized among them. The majority of research participants stated the need for training in this area. Also, there is a lack of knowledge about electronic cigarette cessation treatments, hence this also needs to be incorporated into training. These gaps in knowledge among CCT staff should be addressed through a comprehensive and uniform training within the CCSS CCT. The comprehensive training should include the elements suggested above in the recommendations table. Furthermore, based on the practitioners' perspectives, electronic cigarette cessation training should be taught in a mixed modality manner (in-person and virtual) with a dynamic methodology focused on adult learning principles.

Although this study had limitations due to resources available, it is a positive preliminary step in the potential creation of a training curriculum and services for the CCT. It is the researcher's intention to take the next steps to disseminate the findings from this organizational assessment to the CCT program leadership and research participants in order to assist their program in advancing their work in this area, and thus, benefit the population in need of these services.

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APPENDIX
APPENDIX 1

GUÍA DE ENTREVISTA PARA LA COORDINACIÓN NACIONAL DEL PROGRAMA DE
CLÍNICAS PARA DEJAR DE TABACO

1. ¿Podría mencionar la diferencia en el proceso de atención a un fumador y a un usuario de cigarro electrónico en el programa CCSS-CCT?
2. Para usted ¿Qué tan necesario es el incluir el tratamiento para dejar de fumar cigarrillos electrónicos dentro del programa CCT?
3. ¿Qué fortalezas institucionales considera que tendría el programa de CCT para implementar un servicio de cesación para las personas que usan cigarrillos electrónicos?
4. ¿Qué barreras institucionales considera que tendría el programa CCT para implementar un servicio de cesación de cigarrillos electrónicos?
5. ¿Qué tipo de cambios serán necesarios para dar cabida a un servicio para dejar de fumar cigarrillos electrónicos? ¿Puede describir el proceso que será necesario para hacer estos cambios?
6. ¿Cuáles son los componentes que considera que deben estar presentes en un programa de cesación de cigarrillos electrónicos?
7. Considerando su percepción de los trabajadores del programa CCSS-CCT ¿Cuál sería el nivel general de receptividad para implementar un programa de cesación de cigarrillos electrónicos? ¿Sería la misma receptividad si se implementara un plan de estudios para aprender sobre cesación cigarrillos electrónicos?
8. ¿Qué tipos de incentivos existen para garantizar que la implementación del servicio de cesación de cigarrillos electrónicos sea exitosa?

9. ¿Qué tipo de apoyo o acciones puede esperar de los líderes de la CCSS para ayudar a que la implementación sea exitosa? ¿Espera contar con recursos suficientes si la CCSS-CCT decide implementar y administrar el servicio de cese de cigarrillo electrónico?

10. ¿Qué tipo de iniciativas o actividades de alta prioridad ya están ocurriendo en el programa CCSS-CCT? ¿Cuál es la prioridad de implementar un servicio de cesación de cigarrillos electrónicos en relación con otras iniciativas que están sucediendo ahora?

11. ¿Hay algo más que le gustaría agregar sobre este tema?

APPENDIX 2

INTERVIEW GUIDE FOR NATIONAL COORDINATORS OF THE TOBACCO CESSATION CLINIC PROGRAM

1. Please describe the difference in the care process for a smoker and an electronic cigarette user in the CCSS-CCT program.
2. How necessary is it to include electronic cigarette smoking cessation treatment within the CCT program? What institutional facilitators do you consider the CCT program would have if a cessation service for people who use electronic cigarettes is implemented?
3. What institutional barriers do you consider the CCT program would have if a cessation service for electronic cigarettes were offered?
4. What kinds of changes will be needed to accommodate an electronic cigarette cessation service? Can you describe the process that will be required to make these changes?
5. What kinds of high-priority initiatives or activities are already happening in the CCSS-CCT program? What is the priority of implementing an electronic cigarette cessation service relative to other initiatives that are happening now?
6. What are the components that you consider must be present in an electronic cigarette cessation program?
7. What do you think would be the general level of receptivity in the CCSS-CCT program by the practitioners who would be implementing an electronic cigarette cessation program? An electronic cigarette cessation curriculum?
8. What kinds of incentives are there to help ensure that the electronic cigarette cessation service implementation is successful if implemented?

9. What kind of support or actions can you expect from leaders in the CCSS to help make implementation successful?
10. Do you expect to have sufficient resources if the CCSS-CCT decides to implement and administer the electronic cigarette cessation service?
11. Is there anything else you would like to add on this topic?

APPENDIX 3

GUÍA DE ENTREVISTA PARA COORDINADORES DE CLÍNICAS PARA DEJAR DE FUMAR (PREGUNTA DE INVESTIGACIÓN 1)

1. ¿Cuánto tiempo tiene trabajando en el CCT de la CCSS?
2. ¿Cómo define el programa de CCT de la CCSS?
3. Describa el proceso por el que pasa un fumador una vez que decide comunicarse con su programa CCSS-CCT local para obtener servicios para dejar de fumar.
4. Describa el proceso por el que pasa un usuario de cigarrillos electrónicos una vez que decide ponerse en contacto con su programa CCSS-CCT local para obtener servicios para dejar de usar cigarrillos electrónicos.
5. ¿Qué prácticas actuales de la CCSS-CCT para fumadores convencionales cree que podrían aplicarse a un usuario de cigarrillos electrónicos?
6. ¿Cuáles son los componentes que considera usted que deben estar presentes en un programa de cesación de cigarrillos electrónicos?
7. ¿Cuán necesario es incluir el tratamiento para dejar de usar cigarrillos electrónicos dentro de su programa CCT?
8. ¿Qué facilitadores institucionales considera usted que tendrían los profesionales de la salud del CCT si se implementa un servicio de cesación para las personas que usan cigarrillos electrónicos?
9. ¿Qué barreras institucionales considera que tendrían los profesionales de la salud del CCT si se ofreciera un servicio de cesación de cigarrillos electrónicos?
10. ¿Qué tipo de cambios serán necesarios para materializar un servicio de cesación de cigarrillos electrónicos? ¿Puede describir el proceso que será necesario para hacer estos cambios?

11. ¿Cómo cree usted que la cultura organizacional de la CCSS (creencias generales, valores y suposiciones que adoptan las personas) afectaría la implementación de un servicio de cesación de cigarrillos electrónicos? ¿Puedes describir un ejemplo que resalte esto?

12. ¿Hay algo más que le gustaría agregar sobre este tema?

APPENDIX 4

INTERVIEW GUIDE FOR COORDINATORS OF LOCAL TOBACCO CESSATION CLINICS (RESEARCH QUESTION 1)

1. How long have you been working at the CCSS's CCT?
2. How do you define the CCT program of the CCSS?
3. Please describe the process that a smoker goes through once they decide to contact your local CCSS-CCT program for cessation services.
4. Please describe the process that an electronic cigarette user goes through once they decide to contact your local CCSS-CCT program for cessation services.
5. Which current CCSS-CCT practices for conventional smokers do you think could be applied to a user of electronic cigarettes?
6. What are the components that you consider must be present in an electronic cigarette cessation program?
7. How necessary is it to include e-cigarette smoking cessation treatment within your CCT program? What institutional facilitators do you consider the CCT health practitioners would have if a cessation service for people who use electronic cigarettes is implemented?
8. What institutional barriers do you consider the CCT health practitioners would have if a cessation service for electronic cigarettes were offered?
9. What kinds of changes will be needed to accommodate an electronic cigarette cessation service? Can you describe the process that will be required to make these changes?
10. How do you think the CCSS culture (general beliefs, values, and assumptions that people embrace) will affect the hypothetical implementation of an electronic cigarette cessation service? Can you describe an example that highlights this?

APPENDIX 5

GUÍA DE ENTREVISTA PARA TRABAJADORES DE CLÍNICAS PARA DEJAR DE FUMAR (PREGUNTA DE INVESTIGACIÓN 2)

1. ¿Cuánto tiempo tiene trabajando en el CCT de la CCSS?
2. ¿Cuál es su puesto (o trabajo) en la CCSS CCT?
3. ¿Puede hablarme brevemente sobre su nivel de conocimiento de los cigarrillos electrónicos?
4. ¿Cuáles son las mejores prácticas en el tratamiento de cesación de cigarrillos electrónicos?
¿Podría mencionar como se aplican estas en el programa CCSS CCT?
5. ¿Considera necesario un cambio en el programa de CCT de la CCSS para incluir servicios de cesación para usuarios de cigarrillos electrónicos? ¿Por qué?
6. ¿Qué ventajas y obstáculos institucionales considera que tienen los profesionales de la salud de la CCSS-CCT si se implementara un servicio de cesación para las personas que usan cigarrillos electrónicos?
7. ¿Cuáles son los componentes que considera que deberían estar presentes en un programa de cesación de cigarrillos electrónicos?
8. En el caso de capacitar a los profesionales de la salud del programa TMC de la CCSS para la hipotética implementación de un servicio de cese de cigarrillo electrónico, ¿cuáles serían los principales cambios que se deberían dar en el programa CCT de la CCSS?
9. En el caso de la capacitación de los profesionales de la salud en el programa CCT de la CCSS para la implementación de un servicio de cesación del cigarrillo electrónico, ¿cuáles considera que son los principales contenidos que se deben tener en cuenta?

10. Desde su punto de vista, ¿cuál considera que es la mejor modalidad (presencial, virtual sincrónica, virtual asincrónica, mixta), cronograma y metodología para implementar un currículo educativo para formar profesionales de la salud que laboran en el programa CCT de la CCSS?

11. ¿Hay algo más que le gustaría agregar sobre este tema?

APPENDIX 6

INTERVIEW GUIDE FOR CCT PRACTITIONERS (RESEARCH QUESTION 2)

1. How long have you been working at the CCSS's CCT?
2. What is your position (or job) in the CCSS CCT?
3. Can you briefly tell me about your knowledge level of electronic cigarettes?
4. Which best practices related to the treatment of e-cigarette cessation are currently implemented in the CCSS CCT program? Do you consider a change in the CCSS CCT program to include cessation services for electronic cigarette users necessary? Why?
5. What institutional advantages and obstacles do you consider the CCSS-CCT health practitioners would have if implementing a cessation service for people who use electronic cigarettes?
6. What are the components that you consider should be present in an electronic cigarette cessation program?
7. In the case of training health practitioners of the CCT program of the CCSS for the hypothetical implementation of an electronic cigarette cessation service, what would be the main changes that should occur in the CCT program of the CCSS?
8. In the case of the training of health practitioners in the CCT program of the CCSS for the hypothetical implementation of an electronic cigarette cessation service, what do you consider the main contents that should be taken into account?
9. From your point of view, what do you consider the best modality (face-to-face, virtual synchronous, virtual asynchronous, mixed), schedule, and methodology to implement an educational curriculum to train health professionals who work in the CCT program of the CCSS?
10. Is there anything else you would like to add on this topic?

APPENDIX 7

BORRADOR DE INVITACIÓN POR CORREO ELECTRÓNICO PARA LA ENTREVISTA

Asunto: Solicitud de entrevista sobre evaluación de su experiencia trabajando para el programa de “Clínicas de Cesación de Tabaco”

Estimado [Coordinador del CCT de la CCSS o Profesional de la salud],

Como estudiante de DrPH en la Universidad de Albany SUNY, estoy realizando un proyecto de investigación que evalúa las condiciones organizacionales actuales para el desarrollo futuro de un plan de estudios para dejar de fumar cigarrillos electrónicos para profesionales de la salud en el programa CCT de CCSS. Le escribo para solicitar su participación en una entrevista conmigo sobre este tema.

Nuestro objetivo es evaluar las condiciones organizacionales actuales para el desarrollo potencial futuro de un plan de estudios para dejar de fumar cigarrillo electrónico para los profesionales de la salud en el programa CCT de la CCSS y proponer un conjunto de recomendaciones para implementarlo. Sencillo: Queremos saber cuál es su punto de vista en relación con las prácticas sistémicas y organizacionales relacionadas con el abandono del tabaco, con especial atención a los cigarrillos electrónicos en las Clínicas de Cesación de Tabaco de la CCSS, y sus conocimientos, prácticas y necesidades actuales en relación para dejar de fumar cigarrillos electrónicos. Nuestras preguntas de investigación pueden evolucionar a través de los conocimientos que proporcione. Sin embargo, nuestras preguntas de investigación actuales se centran en explorar las prácticas sistémicas y organizacionales relacionadas con el abandono del tabaco, con especial atención a los cigarrillos electrónicos, comprender el conocimiento, las prácticas y las necesidades actuales relacionadas con los practicantes de CCT para el abandono del cigarrillo electrónico y definir

cuáles son las recomendaciones específicas. para un currículum de cesación de cigarrillo electrónico o servicios para las clínicas de cesación de la CCSS.

Para ser elegible para participar, usted debe:

(a) Haber trabajado en una Clínica de Cesación de Tabaco de la CCSS por lo menos un año.

¿Está disponible en las próximas semanas para compartir sus ideas a través de una entrevista conmigo? Si está dispuesto a participar, por favor hágame saber su disponibilidad.

La entrevista debe durar menos de una hora y se puede realizar por teléfono o Microsoft Teams en su conveniencia. Estaremos grabando entrevistas para garantizar que nuestras notas sean precisas, pero las grabaciones se eliminarán al final de este proyecto (para XXXX).

Gracias por tu tiempo.

Sinceramente,

Jeancarlo Córdoba, MPH

jcordoba@albany.edu

Estudiante de DrPH con concentración en Comportamiento Social y Salud Comunitaria

Universidad de Albany, Universidad Estatal de Nueva York

+506 8331-3227

APPENDIX 8

DRAFT E-MAIL INVITATION FOR INTERVIEW

Subject: Interview request regarding your experience working at the “Clinicas de Cesacion de Tabaco” Program

Dear [CCSS’s CCT Coordinator or Health Practitioner],

As a DrPH student at the University at Albany SUNY, I am conducting a research project assessing the current organizational conditions for the future development of an electronic cigarette cessation curriculum for health care practitioners at the CCSS’s CCT program. I am writing to request your participation in one interview with me regarding this topic.

Our goal is to assess the current organizational conditions for the potential future development of an electronic cigarette cessation curriculum for health care practitioners at the CCSS’s CCT program and propose a set of recommendations to implement it. Quite simply: We want to know about your point of view related to systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes at the Clinicas de Cesación de Tabaco de la CCSS, and your current knowledge, practices, and needs related to electronic cigarette cessation. Our research questions may evolve through the insights you provide. However, our current research questions are focused on exploring the systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes, understanding the current knowledge, practices, and needs related to electronic cigarette cessation CCT practitioners, and defining what the specific recommendations for an electronic cigarette cessation curriculum or services for the CCSS cessation clinics are.

To be eligible to participate, you should:

(a) Have worked at a Clinica de Cesación de Tabaco de la CCSS for at least one year.

Are you available in the next few weeks to share your insights through an interview with me? If you are willing to participate, please let me know your availability.

The interview should take less than an hour and can be conducted via phone or Microsoft Teams at your convenience. We will be recording interviews to ensure that our notes are accurate, but recordings will be deleted at the end of this project (by XXXX).

Thank you for your time.

Sincerely,

Jeancarlo Córdoba, MPH

jcordoba@albany.edu

DrPH student with a concentration in Social Behavior and Community Health

University at Albany, State University of New York

+506 8331-3227

APPENDIX 9

RECORDATORIO POR CORREO ELECTRÓNICO PARA LA ENTREVISTA

Asunto: Recordatorio de entrevista

Estimado [Coordinador del CCT de la CCSS o Profesional de la salud],

Está programado para una reunión por TELÉFONO/TEAMS (según el correo electrónico anterior) el XXXX a las XXX. Por favor, avíseme si ya no está disponible en este momento.

La entrevista debería durar menos de una hora y se realizará por teléfono o Microsoft Teams (según el correo electrónico anterior). Estaremos grabando entrevistas para garantizar que nuestras notas sean precisas, pero las grabaciones se eliminarán al final de este proyecto (por XXXX).

Nuestro objetivo es evaluar las condiciones organizacionales actuales para el desarrollo futuro de un currículo de cesación del cigarrillo electrónico para los profesionales de la salud en el programa CCT de la CCSS y proponer un conjunto de recomendaciones para implementarlo. Este es un estudio cualitativo, y nuestras preguntas de investigación pueden evolucionar a través de los conocimientos que proporcione. Sin embargo, nuestras preguntas de investigación actuales se centran en explorar las prácticas sistémicas y organizacionales relacionadas con el abandono del tabaco, con especial atención a los cigarrillos electrónicos, comprender el conocimiento, las prácticas y las necesidades actuales relacionadas con los practicantes de CCT para el abandono del cigarrillo electrónico y definir cuáles son las recomendaciones específicas para un currículo de cesación de cigarrillo electrónico o servicios para las clínicas de cesación de la CCSS.

El formulario de consentimiento informado se adjunta para su revisión y brinda información adicional sobre el estudio.

Gracias por tu tiempo.

Sinceramente,

Jeancarlo Córdoba, MPH

jcordoba@albany.edu

Estudiante de DrPH con concentración en Comportamiento Social y Salud Comunitaria

Universidad de Albany, Universidad Estatal de Nueva York

+506 8331-3227

APPENDIX 10

E-MAIL REMINDER FOR INTERVIEW

Subject: Interview Reminder

Dear [CCSS's CCT Coordinator or Health Practitioner],

You are scheduled for a PHONE/ TEAMS (based on a previous e-mail) meeting on XXXX at XXX. Please let me know if you are no longer available at this time.

The interview should take less than an hour and will be conducted via phone or Microsoft Teams (based on the previous e-mail). We will be recording interviews to ensure that our notes are accurate, but recordings will be deleted at the end of this project (by XXXX).

Our goal is to assess the need and current organizational conditions for the potential future development of an electronic cigarette cessation curriculum for health care practitioners at the CCSS's CCT program and propose a set of recommendations to implement it. This is a qualitative study, and our research questions may evolve through the insights you provide. However, our current research questions are focused on exploring the systemic and organizational practices related to tobacco cessation, with particular attention to electronic cigarettes, understanding the current knowledge, practices, and needs related to electronic cigarette cessation CCT practitioners, and defining what the specific recommendations for an electronic cigarette cessation curriculum or services for the CCSS cessation clinics are.

The Informed Consent form is attached for your review and gives additional information on the study.

Thank you for your time.

Sincerely,

Jeancarlo Córdoba, MPH

jcordoba@albany.edu

DrPH student with a concentration in Social Behavior and Community Health

University at Albany, State University of New York

+506 8331-3227

APPENDIX 11

University at Albany

CONSENTIMIENTO INFORMADO PARA LA PARTICIPACIÓN EN INVESTIGACIÓN

Este consentimiento informado se encuentra en consonancia con la Ley n° 9234 “Ley Reguladora de Investigación Biomédica” y el “Reglamento de Investigación Biomédica de la Caja Costarricense de Seguro Social”.

Título del estudio: Programa para dejar de fumar cigarrillos electrónicos en la Caja Costarricense del Seguro Social (CCSS)-Costa Rica: una evaluación para guiar el desarrollo futuro de una intervención educativa para los profesionales de la salud de la CCSS

Investigador Principal: Jeancarlo Cordoba, MPH
Correo electrónico: jcordoba@albany.edu
Número de teléfono +506 8331-3227

Co-investigador principal: Christine Bozlak, Ph.D., MPH (asesor de la facultad)
Correo electrónico: cbozlak@albany.edu
Número de teléfono: +1 518-402- 0299

Número de estudio del IRB: [22X292]

Soy estudiante de la Escuela de Salud Pública de la Universidad de Albany. Este documento que usted está empezando a leer se llama CONSENTIMIENTO INFORMADO. Mediante este documento, se le está invitando a usted a participar en un estudio de investigación que estoy realizando. Este documento tiene información importante sobre la razón para realizar este estudio, lo que le pediré que haga si decide participar en este estudio y la forma en que usaría la información sobre usted si decide participar en el estudio.

Información Básica sobre el Proyecto

Este estudio de investigación se realiza como parte del proceso final del Doctorado en Salud Pública con énfasis en Comportamiento Social y Salud Comunitaria. El proyecto en sí pretende realizar una evaluación organizacional para conocer sobre el estado y las necesidades de servicios de cesación para personas usuarias de cigarrillos electrónicos. Las personas participantes del estudio serán trabajadoras del Programa de Clínicas de Cesación de Tabaco de la CCSS (CCSS-CCT), de las cuales se espera aprender sobre los procesos actuales, sus conocimientos generales del tema, así como sus percepciones con respecto a las necesidades educativas para la futura implementación de un currículum educativo en cesación de cigarrillos electrónicos. Aproximadamente unas 30 personas trabajadoras del CCSS-CCT tomarán parte de este estudio.

Su participación en este estudio es voluntaria. Su decisión de participar o no, no afectará sus derechos como trabajador de la CCSS. Con su decisión, usted no renuncia a sus derechos o a la potestad de hacer algún reclamo legal. Si usted decide participar en este estudio, es libre de cambiar de opinión y retirarse en el momento que usted así lo quiera

Propósito del Proyecto

¿Por qué he sido elegido como participante este estudio?

Se le pide que participe en un proyecto de investigación de investigación sobre las condiciones organizacionales actuales para el posible desarrollo futuro de un plan de estudios para dejar de usar cigarrillos electrónicos para que los profesionales de la salud lo implementen en el CCT de la CCSS. A través de este estudio, propondré un conjunto de recomendaciones para un potencial currículo educativo en el futuro.

El propósito del estudio es realizar una evaluación organizacional inicial para informar el posible desarrollo futuro de un plan de estudios para dejar de fumar cigarrillos electrónicos para la CCSS en Costa Rica.

¿Qué haría usted si decide participar en este estudio?

Si usted decide participar en el estudio, se le pedirá que participe en una entrevista vía Microsoft Teams sobre su punto de vista sobre las prácticas sistémicas y organizacionales para dejar de fumar en las clínicas de cesación de la CCSS, con especial atención a los cigarrillos electrónicos, así como sus conocimientos, prácticas y necesidades actuales relacionadas con la capacitación sobre el abandono del cigarrillo electrónico.

Tiempo de estudio: la participación en el estudio le llevará aproximadamente 60 minutos de su tiempo.

Ubicación del estudio: Todos los procedimientos del estudio se llevarán a cabo a través de la Plataforma Microsoft Teams.

Me gustaría grabar en vídeo esta entrevista para asegurarme de que recuerdo con precisión toda la información que me proporciona. Mantendré estas grabaciones en una computadora segura protegida con contraseña y en el sistema de almacenamiento One-Drive de la Universidad de Albany, y solo tendrán acceso Jeancarlo Córdoba, investigador principal, Christine Bozlak, coinvestigadora y presidenta del comité de disertación; Jaime Caravaca, miembro del comité de tesis y Tomoko Udo, miembro del comité de tesis. Si prefiere no ser grabado en video, tomaré notas en su lugar.

Puedo citar sus comentarios en presentaciones o artículos resultantes de este trabajo. Se utilizará un pseudónimo para proteger su identidad a menos que solicite específicamente que se le identifique con su verdadero nombre.

¿Cuáles son los posibles riesgos o molestias?

Su participación en este estudio no implica ningún riesgo físico o emocional para usted más allá del de la vida cotidiana. Los temas de la entrevista le piden que discuta su punto de vista. Además, su decisión de participar o no, no afectará su conexión actual o futura con cualquier persona en el programa de Clínicas de Cesación de Tabaco de la CCSS o cualquier otra entidad/agencia relevante. Su nombre no se asociará con los resultados presentados de este estudio.

Existe la posibilidad de que se presenten otros riesgos o molestias que el investigador no conoce. El investigador lo evaluará para ver si usted está expuesto a cualquier otro riesgo o molestia.

Al igual que con todas las investigaciones, existe la posibilidad de que se viole la confidencialidad de la información que recopile de usted. Para proteger su información, tomaré medidas para minimizar este riesgo, como se explica con más detalle a continuación en este formulario.

¿Cuáles son los posibles beneficios para mí o para los demás?

No es probable que obtenga ningún beneficio directo por participar en este estudio de investigación. Este estudio está diseñado para realizar una evaluación organizacional inicial para informar el desarrollo futuro de un plan de estudios para dejar de usar cigarrillos electrónicos para la Caja Costarricense del Seguro Social en Costa Rica. Con esta investigación, el campo del control del tabaco aprenderá contribuyendo a la base de conocimientos de la investigación sobre los servicios para dejar de usar cigarrillos electrónicos. Además, este estudio puede dar lugar a futuros esfuerzos para brindar acceso a intervenciones de cesación para la población que actualmente usa cigarrillos electrónicos, lo que resultará en una mejor calidad de vida, un mejor estado de salud, una reducción de la mortalidad y una mayor esperanza de vida, pero también reducirá la alta carga financiera, costes para los usuarios a la nicotina, el sistema sanitario y la sociedad.

¿Cómo protegerá la información que recopila sobre mí y cómo se compartirá esa información?

Los resultados de este estudio pueden ser utilizados en publicaciones y presentaciones. Los datos de su estudio se manejarán de la manera más confidencial posible. Si los resultados de este estudio se publican o presentan, no se utilizarán los nombres de las personas ni otra información de identificación personal.

Para minimizar los riesgos de confidencialidad, se almacenará toda la información del estudio en una computadora segura protegida con contraseña y en el sistema de almacenamiento One-Drive de la Universidad de Albany. En el momento de la entrevista, el investigador le asignará al participante un código identificador; este código se utilizará para identificar al participante en grabaciones de video, transcripciones e información demográfica.

Si un participante revela cualquier información de identificación en la entrevista, la información de identificación se eliminará de la transcripción escrita. Asimismo, los datos electrónicos serán desidentificados antes de ser almacenados. Todos los archivos digitales estarán protegidos con contraseña y solo el investigador y el director de tesis tendrán acceso completo. Los nombres de los participantes no aparecerán en ningún hallazgo o publicación de este estudio.

Durante la entrevista, si creo que tiene la intención de hacerse daño a sí mismo o bien a otros, se lo notificaré a las personas apropiadas con esta información.

Información financiera

La participación en este estudio no tendrá ningún costo para usted. No se le pagará por participar en este estudio.

¿Cuáles son mis derechos como participante de la investigación?

La participación en este estudio es voluntaria. No tiene que responder ninguna pregunta que no quiera responder. Si, en cualquier momento y por cualquier motivo, prefiere no participar en este estudio, no dude en no hacerlo. Si en algún momento desea dejar de participar, por favor

dígamelo. Podemos tomar un descanso, detenernos y continuar en una fecha posterior, o detenernos por completo. Puede retirarse de este estudio en cualquier momento y no será penalizado de ninguna manera por decidir dejar de participar.

Si decide retirarse de este estudio, los investigadores le preguntarán si se puede utilizar la información que ya ha recopilado de usted.

Durante el estudio, puede que aparezcan nuevos detalles acerca de los riesgos o beneficios de participar en él. De ser así, esta información se le dará a usted. Usted puede decidir no seguir participando en el estudio, desde el momento en que reciba esta nueva información. Si a usted se le da nueva información, y decide continuar en el estudio, se le solicitará que firme el consentimiento informado.

¿A quién puedo contactar si tengo preguntas o inquietudes sobre este estudio de investigación?

Si tiene preguntas, puede hacerlas ahora. Si tiene preguntas más adelante, o bien si cree que ha sido lesionado como resultado de su participación en este estudio, puede comunicarse con Jeancarlo Córdoba al correo electrónico jcordoba@albany.edu, número de teléfono +506 8331-3227, o mi asesora de la facultad, la Dra. Christine Bozlak en cbozlak@albany.edu, número de teléfono +1 518-402- 0299.

Si tiene alguna pregunta sobre sus derechos como participante en esta investigación, puede comunicarse con la siguiente oficina en la Universidad de Albany:

Institutional Review Board

University at Albany
Office of Regulatory and Research Compliance
1400 Washington Ave, ES 244
Albany, NY 12222
Phone: 1-866-857-5459
Email: rc@albany.edu

O bien con el Área de Bioética del CENDEISSS de la Caja Costarricense de Seguro Social, el cual se encuentra localizado en las instalaciones del CENDEISSS, contiguo al Hospital México, al teléfono 2519-3044 o a la dirección electrónica bioetica@ccss.sa.cr. Además, usted puede comunicarse con el Consejo Nacional de Investigación en Salud (CONIS) del Ministerio de Salud al correo electrónico: conis@misalud.go.cr o al teléfono 2257-7821 Ext. 119.

Consentimiento

He leído este formulario y se me ha explicado el estudio de investigación. Se me ha dado la oportunidad de hacer preguntas y mis preguntas han sido contestadas. Si tengo preguntas adicionales, me han dicho a quién contactar. Acepto participar en el estudio de investigación descrito anteriormente y recibiré una copia de este formulario de consentimiento.

Nombre del participante (letra de imprenta)

Firma del participante

Fecha

Correo electrónico

Teléfono

APPENDIX 12

University at Albany INFORMED CONSENT INFORMATION FOR RESEARCH PARTICIPATION

This informed consent is in accordance with the Costa Rican Law No. 9234 “Biomedical Research Regulatory Law” and the “Biomedical Research Regulations of the Costa Rican Social Security Fund (CCSS)”.

Study Title: Electronic cigarette cessation program in Caja Costarricense del Seguro Social (CCSS)-Costa Rica: An assessment to guide the future development of an educational intervention for CCSS’s health practitioners

Principal Investigator: Jeancarlo Cordoba, MPH

E-mail address: jcordoba@albany.edu

Phone number: +506 8331-3227

Co-Principal Investigator: Christine Bozlak, Ph.D., MPH (faculty advisor)

E-mail address: cbozlak@albany.edu

Phone number: +1 518-402- 0299

IRB Study Number: [22X292]

I am a student at the University at Albany School of Public Health. This document that you are beginning to read is called INFORMED CONSENT. Through this document, you are being invited to participate in a research study that I am conducting. This document has important information about why I am doing this study, what I will ask you to do if you decide to participate in this study, and how information about you will be used if you decide to participate in the study.

Basic Information about the Research Project

This research project is carried out as part of the final process of the Doctorate in Public Health with an emphasis on Social Behavior and Community Health. The project itself intends to carry out an organizational assessment to learn about the status and needs of cessation services for people who use electronic cigarettes. The people participating in the study will be workers of the CCSS Tobacco Cessation Clinic Program (CCSS-CCT), which will provide information on the current processes, their general knowledge of the subject, as well as their perceptions regarding the educational needs for the future implementation of an educational curriculum in cessation of electronic cigarettes.

Purpose of the project

Why are you doing this study?

You are being asked to participate in a research study about the current organizational conditions for the potential future development of an electronic cigarette cessation curriculum for healthcare practitioners to implement at the CCSS’s CCT program. Through this study, I will propose a set of recommendations for a potential future curriculum.

The purpose of the study is to conduct an initial organizational assessment to inform the potential future development of an electronic cigarette cessation curriculum for the CCSS in Costa Rica.

What would you do if you decided to participate in this study?

If you decide to participate in the study, you will be asked to participate in an interview via Microsoft Teams about your point of view on systemic and organizational practices for smoking cessation in CCSS cessation clinics, with special attention to electronic cigarettes, as well as their current knowledge, practices, and needs related to e-cigarette cessation training..

Study time: Study participation will take approximately 60 minutes of your time.

Study location: All study procedures will take place through the Microsoft Teams Platform.

I would like to video-record this interview to make sure that I remember accurately all the information you provide. I will keep these recordings on a secure password-protected computer and the University at Albany One-Drive storage system, and they will only be accessible by Jeancarlo Córdoba, principal investigator; Christine Bozlak, co-investigator and dissertation committee chair; Jaime Caravaca, dissertation committee member, and Tomoko Udo, dissertation committee member. If you prefer not to be video-recorded, I will take notes instead.

I may quote your remarks in presentations or articles resulting from this work. A pseudonym will be used to protect your identity unless you specifically request that you be identified by your true name.

What are the possible risks or discomforts?

Your participation in this study does not involve any physical or emotional risk to you beyond that of everyday life. The interview topics ask you to discuss your point of view. Furthermore, your decision on whether or not to participate will not affect your current or future connection with anyone at CCSS's CCT or any other relevant entity/agency. Your name will not be associated with the findings presented from this study.

There is the possibility of other risks or discomforts that are not known to the principal investigator. The principal investigator will evaluate you to see if you are exposed to any other risks or discomforts.

As with all research, there is a chance that the confidentiality of the information I collect from you could be breached. To protect your information, I will take steps to minimize this risk, as discussed in more detail below in this form.

What are the possible benefits for me or others?

You are not likely to have any direct benefit from being in this research study. This study is designed to conduct an initial organizational assessment to inform the future development of an electronic cigarette cessation curriculum for the Caja Costarricense del Seguro Social in Costa Rica. With this research, the tobacco control field will learn by contributing to the knowledge base of research on electronic cigarette cessation services. In addition, this study may result in future efforts to provide access to cessation interventions for the population currently using electronic cigarettes, resulting in a higher quality of life, improved health status, reduced mortality, and increased life expectancy, but also reducing the high financial costs for those addicted to nicotine,

the healthcare system, and society.

How will you protect the information you collect about me, and how will that information be shared?

The results of this study may be used in publications and presentations. Your study data will be handled as confidentially as possible. If the results of this study are published or presented, individual names and other personally identifiable information will not be used.

To minimize the risks to confidentiality, I will store all the information from the study on a secure, password-protected computer and the University at Albany One-Drive storage system. At the time of a key informant interview, the researcher will assign the participant an identifier code; this code will be used to identify the participant on video recordings, transcripts, and demographic information.

If a participant discloses any identifying information in the interview, the identifying information will be deleted from the written transcript. Likewise, electronic data will be de-identified before being stored. All digital files will be password-protected, and only the researcher and dissertation chair will have complete access. Participants' names will not appear in any findings or publications from this study.

During the interview, if I think that you intend to harm yourself or others, I will notify the appropriate people with this information.

Financial Information

Participation in this study will involve no cost to you. You will not be paid for participating in this study.

What are my rights as a research participant?

Participation in this study is voluntary. You do not have to answer any question you do not want to answer. If, at any time and for any reason, you would prefer not to participate in this study, please feel free not to. If at any time you would like to stop participating, please tell me. We can take a break, stop and continue at a later date, or stop altogether. You may withdraw from this study at any time, and you will not be penalized in any way for deciding to stop participation.

If you decide to withdraw from this study, the researchers will ask you if the information already collected from you can be used.

During the study, new details may become available about the risks or benefits of being in the study. If so, this information will be given to you. You can decide not to continue participating in the study, from the moment you receive this new information. If you are given new information, and decide to continue in the study, you will be asked to sign the informed consent.

Who can I contact if I have questions or concerns about this research study?

If you have questions, you are free to ask them now. If you have questions later, or if you believe you have been injured as a result of your participation in this study, you may contact

Jeancarlo Córdoba at jcordoba@albany.edu, phone number +506 8331-3227, or my faculty advisor, Dr. Christine Bozlak at cbozlak@albany.edu, phone number +1 518-402-0299.

If you have any questions about your rights as a participant in this research, you can contact the following office at the University at Albany:

Institutional Review Board

University at Albany
Office of Regulatory and Research Compliance
1400 Washington Ave, ES 244
Albany, NY 12222
Phone: 1-866-857-5459
Email: rco@albany.edu

Or with the Bioethics Area of the CENDEISSS of the Costa Rican Social Security Fund, which is located in the CENDEISSS facilities, next to the Hospital México, at the telephone number 2519-3044 or at the electronic address bioética@ccss.sa.cr. In addition, you can contact the National Health Research Council (CONIS) of the Ministry of Health by email: conis@misalud.go.cr or by phone 2257-7821 Ext. 119.

Consent

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form.

Participant's Name (printed)

Participant's Signature

Date

E-mail address

Phone Number

APPENDIX 13

Tabla 13 Ejemplos de Guías para las Prácticas de Cesación de Tabaco basado en el Manual de Procedimiento de las CCT

Categoría	Tema	Ejemplos
Prácticas de cesación de tabaco actuales CCSS	Estructura y Organización CCT	“El equipo interdisciplinario que conforma las CCT está integrado por profesionales en medicina, psicología, trabajo social, farmacia, enfermería general y de salud mental, terapia respiratoria, terapia física y nutrición”
		“Dicho equipo tiene la responsabilidad de brindar de tres a cuatro talleres al año de terapia grupal para los usuarios tabaquistas, de ocho semanas de duración cada uno y garantizar el seguimiento de los usuarios por un periodo no menor de un año. Además de brindar una atención individualizada en los casos que no califican o no pueden incorporarse a una terapia grupal”
		“El orden de las charlas es sugerido, se puede readecuar según las necesidades y disponibilidad de los profesionales, se pueden agregar otros temas adicionales, sin embargo, se debe tener en cuenta que no se pueden omitir las que se mencionan en este manual”
	CCT Access	“En relación con la vía de ingreso, el usuario (asegurado o persona trabajadora de la CCSS), puede llegar por iniciativa propia, o con una referencia de cualquier nivel de atención de la Institución o una referencia del médico responsable de Atención Integral al Trabajador a solicitar información e inscripción a la oficina dentro del horario de atención que establece la Clínica de Cesación de Tabaco. El personal le brindará la información, lo inscribirá en una base de datos y le explicará los procedimientos a seguir para la selección.”
CCT Pre-treatment	“...el personal de la clínica según la distribución de trabajo que establece el coordinador se pone en contacto con cada usuario vía telefónica y se programa una cita para la entrevista motivacional individual o grupal...La entrevista motivacional es un requisito y se lleva a cabo unas semanas antes de incluir al usuario en terapia grupal o individual, de acuerdo con sus necesidades. La entrevista tiene una duración aproximada de 30-60 minutos y abarca aspectos de salud física y mental, así como características de la dependencia a la nicotina.”	
CCT Treatment	“Como material de apoyo se utilizará el documento Manual de Proceso Exitoso en la Cesación del Tabaco, signos externos, entre otros; que se le hará llegar al usuario por medio de una cita presencial o entrega a una persona designada. Adicionalmente se pueden grabar las charlas y se le entregan al usuario en un dispositivo de almacenamiento de USB. Cabe destacar que la Institución dispone de una plataforma virtual donde se pueden acceder los videos de todas las sesiones programadas según	

	<p>tema a tratar y videos motivacionales relacionados, o en la plataforma de YouTube en el micrositio de CCSS.”</p> <p>“Terapia grupal: Se utilizan dos tipos de tratamiento: el psicosocio-educativo y el farmacológico, ambos se pueden realizar en modalidad presencial o teleconsulta.</p> <p>El programa cognitivo-conductual de la clínica se basa en la teoría racional emotiva de Albert Ellis, que, entre otras consecuencias, puede ayudar al usuario a dejar la dependencia tabáquica y a mantenerse sin fumar. (Ellis A. & Gieger R. 1990)</p> <p>El usuario recibe información sobre los efectos nocivos del consumo de tabaco, así como sobre las estrategias disponibles para resolver el estrés y otras emociones negativas sin necesidad del tabaco.</p> <p>En la modalidad grupal se conforman grupos de 15 a 20 usuarios en un esquema de tratamiento psicosocio-farmacológico, con una duración de ocho a nueve sesiones, siendo una vez por semana. En esta modalidad, cada sesión tiene una duración aproximada de 3-4 horas, y está dirigida por profesionales capacitados en terapia de grupo junto al apoyo del coordinador de la clínica.</p> <p>El tratamiento farmacológico se prescribe, en caso de ser necesario, de manera paralela al tratamiento psicológico para atender la dependencia física a la nicotina.</p> <p>Para determinar si un usuario requiere de terapia farmacológica, se analizan los niveles de la dependencia física (Prueba de Fargerström)”</p>
	<p>“Terapia Individual: La estructura de una terapia individual se basa en los mismos principios que la terapia de grupo: educativa, motivacional, cognitivo-conductual y farmacológica... Intervención:</p> <ul style="list-style-type: none"> • Consta de 8 sesiones. • Cuatro sesiones semanales. • Cuatro sesiones quincenales durante dos meses.”
CCT Follow-up	<p>“Después de finalizar las ocho o nueve sesiones de la terapia grupal, los usuarios asistirán al menos a cuatro citas de control durante un año para dar seguimiento (puede ser por profesional en medicina, psicología, trabajo social, enfermería especializada en salud mental y psiquiatría o terapia respiratoria), además de citas individuales con psicología, trabajo social, farmacia y nutrición de acuerdo al caso. Se les refuerza las estrategias para la prevención de recaída”</p>

APPENDIX 14

Table 11 Ejemplos de entrevistas al Coordinador Nacional y los Coordinadores CCT acerca de las Practicas Sistemicas y Organizacionales relacionadas con la Cesación de Tabaco en las CCT

Categoría	Tema	Fuente de informacion	Ejemplos
Practicas actuales CCSS en Cesación de Ta-baco	Estructura y Organización de CCT	E02201	“bueno, básicamente el programa de clínicas de cesación de tabaco es un programa institucional a nivel de la, de la, de lo que es la Caja Costarricense del Seguro Social, es un programa especializado y muy específico en lo que es la atención de lo que es la dependencia del tabaquismo, cuyo objetivo principal es básicamente la cesación, la erradicación.”
		E02201	“es brindado a través de un equipo interdisciplinario, que se capacite para ese fin en el tema específico de lo que es el tabaquismo, y prácticamente este es abrirle las puertas a las personas que fuman y que quieren dejar de fumar”
		E07062	“¿cuál es el objetivo? ¿que queremos?, y es eso, o sea brindarle un apoyo interdisciplinario al paciente abarcando los tres tipos de adicción que ya conocemos verdad, en tabaco y es un apoyo durante la clínica, antes de la clínica, y después de la clínica, con el único objetivo de que el paciente se mantenga a largo plazo para dejar de fumar.”
		E05022	“El programa de cesación de tabaco en la CCSS está regido por un manual, verdad, entonces por ejemplo, la primera sesión nosotros hablamos sobre las reglas grupales verdad, qué significa ir a la clínica, qué se permite, que no, no estar con el celular, poner atención, que no pueden faltar a más de 2 sesiones, luego las reglas generales, luego porque nacen las clínicas de cesación, entonces nosotros hablamos un poco cómo salió la ley, porque es nació la ley #9028 que es la que nosotros tenemos en Costa Rica, verdad”
	Acceso a CCT	E07062	“bueno cuando la persona quiere dejar de fumar tiene varias formas de acceso a la clínica, una es que vaya donde algún profesional de la salud y le diga que quiere dejar de fumar y entonces que ese profesional le haga una referencia, o simplemente le diga dónde está la clínica, que nos contacte por redes sociales, en las redes las redes sociales del hospital o que venga directo a consultar, también existe el contacto boca a boca que también es una parte importante de los pacientes que llegan, que es diay los fumadores normalmente se reúnen a fumar verdad, y entonces cuando se desgrana la mazorca cuando alguno de ellos

			deja de fumar saben que vinieron a la clínica y que dejaron de fumar a través de la clínica, entonces ellos también refieren”
		E10192	“bueno el ingreso en la clínica es totalmente voluntario; la vía de entrar puede que el paciente solicite una referencia en una clínica, o un EBAIS, en alguna consulta especialista, etcétera, o incluso que el mismo paciente vaya y se anote directamente con la secretaria en el hospital”
	Pre-Tratamiento CCT	E10192	“una vez que el paciente se anota, entonces se le asigna una cita dónde se le hace una valoración inicial mediante una entrevista estructurada, donde se toman varios datos personales, de salud, se hacen algunos tamizajes, depresión, ansiedad, del grado de dependencia nicotínica, del uso otros otras drogas, o de alguna otra sustancia, en qué etapa está, cómo desea que le ayudemos, y finalmente después de este proceso de entrevista inicial se le ofrece algún tipo de ayuda, ya sea que quiera participar de un grupo, o alguna otra terapia individual”.
		E18133	: “exacto, en ese momento, cuando ya el paciente tiene su formulario lleno, se hace como un día de recepción, digámoslo así, donde ya se recibe al junto con los demás, se revisan los temarios que hay en el formulario que son para detectar por ejemplo síntomas depresivos, síntomas adictivos, el tipo de adicción, si es más físico o alguna otra del paciente, y para conocer otro tipo de patología del paciente que tal vez el mismo paciente, entonces de ahí si cumple todos los requisitos, en el caso nuestro, se le da una cita con el médico para hacerle una valoración inicial, y determinar si ese paciente podría hacer una terapia grupal, o sí por diferentes razones debería de trabajarse primero individual, de hecho no es nada raro que algunos pacientes dejen en la consulta individual el fumado mientras que otros lo dejarán en la terapia grupal, ¡diay! cada quien tiene una mente diferente ¿verdad?.
		E19183	“Si en esta evaluación inicial nosotros detectamos que te podrías beneficiar de algún medicamento, por ejemplo, para poder ayudarte en el cese del tabaco entonces también lo valoramos, la médico te va a dar información ¿verdad?, decirte que se trata de un medicamento, y cuáles son los posibles beneficios, si hubiese algún tipo de efectos secundarios, y te derivamos con el farmacéutico para que también te den entonces toda la que es la atención farmacéutica, entonces el farmacéutico te va a explicar cómo tomar el medicamento, qué cuestiones evitar, te va a aclarar dudas, etcétera.”
	Tratamiento CCT	E13282	“El tratamiento grupal se basa en el abordaje de la dependencia psicológica, social, y física al tabaco, entonces los participantes asisten a ocho sesiones de terapia grupal, que en el caso de nosotros son los martes de 8:30 de la mañana a 11 de 12 del día, dependiendo

			del tema, ahí se van abordando no solamente estilo psicoeducativo ¿verdad?, sino también un abordaje digamos individualizado de las necesidades de cada uno, y en este proceso ¿verdad?, en este proceso de las ocho sesiones se espera que el paciente establezca lo que es el día D, y pueda dejar de fumar, darle un acompañamiento”
		E20203	“Es un programa precisamente para el cese del consumo de tabaco, muy exitoso, sí, nosotros lo hemos visto porque la parte grupal es muy valiosa para el empoderamiento y la autoconfianza de los que participan, creo que ese es el mayor trabajo, el más fuerte, cuando ellos hacen alianzas con sus compañeros a nivel grupal se motivan más, y ahí se trabaja toda la parte motivacional”
		E19183	“y si no se pudiera hacer grupal pues entonces igual le damos seguimiento individual, y a lo largo de ese proceso de las ocho sesiones esperamos que establezcas lo que es el día D verdad, que es el día de dejar de fumar, entre más pronto mejor, para que tengas más acompañamiento por parte de la clínica mientras estás tratando de dejar de fumar”
		E01111	“en estas sesiones entonces se aborda en conjunto con trabajo social, psicología y la parte médica, y se van desarrollando temas que ya todas las clínicas están digamos uniformadas las presentaciones y bueno se le da la posibilidad de que si la persona necesita apoyo digamos de la parte farmacológica, entonces se le da tratamiento, y cuando ya concluye el programa le idea es que la persona haya dejado de fumar a la última sesión ¿verdad? entonces se le al paciente da un reconocimiento, un certificado.”
	Seguimiento CCT	E07062	“Luego pasan las ocho sesiones, una vez por semana, y después de eso en la octava sesión les entregamos a todos una cita de seguimiento con neumología, a la totalidad de los pacientes que completaron el curso, y el médico lo va a valorar, si tienen antecedentes de alguna enfermedad pulmonar les manda a exámenes de seguimiento de laboratorio, radiografía de tórax, TAC inclusive si fuera necesario, y el médico los va a ver aproximadamente al mes de haber terminado el curso, a los seis meses y al año, si tiene alguna patología respiratoria continúa en seguimiento con él, y si no se da de alta al año, si el paciente tiene algún trastorno psicológico de ansiedad, principalmente de depresión no, porque se refieren a psiquiatría, pero si tienen algún trastorno que todavía está pendiente de manejo continúan en seguimiento con psicología hasta que la psicóloga determine que están aptos ya para darse de alta, o reenviar a el área de atracción que le corresponde, y si el paciente es un paciente estable, que no requiere seguimiento de psicología, ni de neumología, entonces yo le doy seguimiento, alguno del equipo de trabajo le da seguimiento

			hasta completar el año, eso es con respecto al seguimiento establecido con respecto a los profesionales”
		E10192	“y después de eso se hace un seguimiento mensual, a los 3 meses, a los 6 meses, y al año, y ya después de este proceso lo que hemos optado es por seguir haciendo unas actividades que se llaman reuniones de exhumadores, donde nos reunimos por lo menos unas 3 veces al año, todas las personas que han dejado a fumar, por alguna vía, independientemente del tiempo de cesación.”
		E18133	“Ya después, el paciente, tomando en cuenta que hizo una terapia grupal, que esa es la que dura aproximadamente ocho o nueve semanas, posteriormente, el paciente continúa con un seguimiento individual y utilizando otros servicios, ya sea como salud mental, psicología, porque parte del programa a mí me gusta decirlo de la siguiente manera, queremos enseñarle a las personas a que dejen de fumar y aprendan a vivir que esa es otra cosa muy importante, y al fin de cuentas también todas estas valoraciones son una oportunidad de mejorar la calidad de vida en todo aspecto del paciente, y después de esas sesiones se continúa el seguimiento del paciente hasta cumplir un año de abstinencia, trabajando temas como por ejemplo, la prevención de recaídas, el manejo del estrés ante situaciones nuevas en su día como un no fumador.”

APPENDIX 15

Table 12 Ejemplos de Practicas en las CCT relacionados con Cigarrillos Electrónicos proveídos por la Coordinación Nacional y los Coordinadores Locales de las CCT

Categoria	Tema	Fuente de in- formacion	Ejemplos
Practicas actuales en Cigarrillos Electrónicos	Acceso en CCT para Usuarios de Cigarrillos Electrónicos	E05022	“en realidad nosotros metemos a la clínica de cesación a las personas que inclusive tienen 6 meses de haber dejado de fumar, o sea si son personas que utilizan cigarrillos electrónicos pueden entrar al programa, o sea si han fumado y lo cambiaron por ejemplo por cigarrillos electrónicos nosotros también los incluimos en el programa porque sabemos que pasar de cigarrillo electrónico al cigarro nuevamente es muy fácil, es casi que, eso es lo esperable, entonces sí, sí se considera para que entren a la clínica de cesación.”
		E06022	“igual, el mismo proceso, ya sea que el EBAIS lo detecte, o que si llega la persona, la psicóloga por ejemplo, si me pide siempre referencia, entonces usualmente si el paciente no viene con referencia, yo le hago una referencia ya sea a mano o por EDUS en el momento que los valore y lo mando ¡verdad!, y si es en ese momento a mano se la hago ¡verdad!, yo soy un poquito más flexible en eso verdad, pero exactamente sería el mismo, sea una persona que quiera dejar de vapear sería exactamente el mismo proceso.”
		E10192	“No, sigue exactamente el mismo proceso porque actualmente la política de nosotros como CCSS, lo que hemos estado hablando con las coordinaciones, es que diay no fumo no vapeo, estamos tratando de igualar el tabaco con el vapeo, entonces esa ha sido nuestra política y sí hemos tenido algunos pacientes que están.... Pues creen y utilizan el vapeo principalmente como alguna forma para dejar de fumar, pero este igual entran al sistema totalmente igual que cualquier otro tabaco común.”
		E03271	“No, no hay ninguna diferencia porque ¡diay! se trata la misma dependencia a la nicotina”
		E20203	“Vieras que para los cigarrillos electrónicos, nosotros digamos, no es un criterio de ingreso a la clínica todavía, es que lo que pasa es que nos apegamos mucho digamos al manual, más bien dentro de las alternativas verdad, cuando se habla del cese de tabaco y se encuentran por ejemplo estos aparatos que se utilizan mucho ahora, y como

			reducción del daño, y no al consumo directo, pero sí, aquí no se trabaja realmente solo con ese criterio, no, de momento no.”
Pre-Tratamiento en CCT para Usuarios de Cigarrillos Electrónicos	E07062	“exactamente igual, es exactamente los mismos requisitos, el paciente busca ayuda de la forma en las que te mencioné antes, referido, que vengan solo, se ha referido por otro ex fumador, o que venga a la recepción de consulta externa a preguntar si atendemos pacientes con fumado electrónico, y seguimos el mismo procedimiento, se le da una cita conmigo, o con alguno del equipo que le explica en que consiste el programa, se le da cita con psicología, y se le da cita con el neumólogo, que va a definir si requiere o no usar tratamiento, la vareniclina, igual pasamos el cuestionario donde medimos el nivel de Fagerström, qué nivel de Fageström, bueno supongo que sabes verdad, va dirigido más a la adicción física, algunos de estos pacientes tienen niveles de adicción física altas, entonces si el médico considera que necesita vareniclina lo enviamos a farmacia también, y lo metemos en el mismo protocolo de uso de tratamiento que un fumador regular, participar en el curso y el seguimiento es igual”.	
	E13282	“Sí, pasaría por el mismo proceso, ingresaría igual, ya sea con vapeo o con cigarro electrónico pasaría por el mismo proceso, sí tenemos como, digamos no hay instrumentos que yo sepa, como para cuantificar ¡verdad! a nivel de un dispositivo de estos, qué tanta nicotina consumen, pues lo hacemos ahí con una multiplicación ¡verdad!, pero no es como algo exacto, pero el proceso sí sería básicamente el mismo.”	
	E15023	“Ok, bueno, nosotros todavía no hemos tenido pacientes que usan cigarrillo electrónico exclusivamente, hemos tenido unos cuantos que usaron o han usado cigarrillo electrónico en un intento por dejar el cigarro convencional, pero después vuelven al cigarrillo convencional, todavía no hemos tenido pacientes que usen cigarrillo electrónico exclusivamente, si alguien quisiera hacerlo si tendría que pasar por el mismo proceso porque estrictamente hablando la adicción es la misma.”	
Tratamiento en CCT para Usuarios de Cigarrillos Electrónicos	E07062	“de hecho en el curso que está en este momento actualmente tenemos un fumador de IQOS, supongo que ya los conoces, tenemos un fumador de IQOS que desde enero, no, desde diciembre del año pasado, suspendió el cigarro completamente y pasó únicamente a los IQOS, disminuyendo la exposición a la combustión y el médico decidió que era necesario que tomara vareniclina, entonces en este momento está tomando vareniclina, ya dejó de fumar, ya suspendió el IQOS y estamos en el protocolo exactamente igual, igual que con un fumador de cigarro convencional.”	

		E18133	“entonces en esencia viene siendo una atención muy similar, con la diferencia de que se le hace énfasis en que entienda de que este método por popular que sea no es un método de cesación que sea avalado por la CCSS”
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APPENDIX 16

Table 13 Ejemplos de Conocimientos de los Profesionales en Salud acerca de los Cigarrillos Electrónicos y la Cesación de Cigarrillos Electrónicos

Categoría	Tema	Fuente de información	Ejemplos
Conocimiento acerca de cigarrillos electrónicos	Conocimiento personal acerca de cigarrillos electrónicos	E08092	“Actualmente, bueno, conozco que la técnica que se utiliza para que funcione es a base de una batería que calienta, o que le da energía para calentar una resistencia, y luego esta resistencia se encarga de calentar y evaporar un líquido tipo aceite, que se vuelve gas, y la persona lo inhala ¡verdad!, y en ese líquido, o en ese aceite, podrían venir cualquier tipo de sustancias, y que pues digamos, sí, cuando de nicotina se refiere ¡verdad!, podría decir que entonces hay en diferentes concentraciones, o sea existen de diferentes concentraciones de nicotina, inclusive algunos que dicen cero, y que en realidad no tienen cero sino que tienen cero punto algo ¡verdad!, este pero bueno no, no sé, digamos en cuanto al cigarrillo electrónico digamos en la parte teórica eso es lo que conozco, sé que existen con sabores, sé que hasta con otros productos como CBD, como THC y otras sustancias”
		E16033	“ bueno, en realidad conozco poco, sé que se utilizan con bueno... con una base de... algunos con una base de agua, otros con una base de... como de algún tipo de aceite, y algunos usan estos aceites como de aromas, como de sabor, nada más, y los de nicotina que vienen como graduados en la cantidad de nicotina que tienen, realmente no sé cuál es el sistema, si es un sistema de... digamos que quema el aceite, o que tiende a hervir, no, no sé, no sé realmente cómo funciona a la hora de inhalarlo, y que expulsan verdad, realmente sé muy poco.”
		E22273	“ Bueno de los cigarrillos electrónicos verdad hemos llevado algunas capacitaciones, llevamos una capacitación con la clínica de cesación, muy general ¡verdad!, nos hablaron de los diferentes dispositivos que se hacen para el vapeo ¡verdad!, nos estuvieron hablando las diferentes sustancias, de sus características muy particulares de un dispositivo a otro dispositivo, que no va siendo lo mismo ¡verdad!, la forma en que se da la quema, o la combustión, de las diferentes fórmulas que se utilizan ¡verdad!, que no hay alguna regulación de que deben ser ciertas sustancias, en ciertas concentraciones, ¡verdad! las diferencias que hay entre filtros, que unos no utiliza filtros, otros sí,

			otros utilizan algunas otras temperaturas, no hay estudios todavía de la evidencia de estas sustancias a largo plazo, mediano plazo ¡verdad!, todavía no hay una regulación muy estable sobre este tema de los vapeadores ¡verdad! ”
Conocimiento acerca de cesación de cigarrillos electrónicos	Conocimiento personal acerca de cesación de cigarrillos electrónicos	E14282	“No, pero hemos aplicado el mismo tratamiento, o sea, nosotros consideramos que son prácticamente las mismas adicciones ¡verdad!”
		E04311	“Prácticas de cesación, no, tengo que aceptarlo, no sé, no sé cómo hacerlo, siento que hay una dependencia psicológica importante, y siento que se debería trabajar muy parecido a la parte de la cesación de tabaco, de acompañamiento con grupos de apoyo, con más con psicología, yo creo ese tema ya es como de rebeldía, y de otra parte de moda verdad, también entonces yo no sé, no, no, no sé cómo no hemos tenido experiencia por ahora, creo que hasta ahora ya en las clínicas están aceptando personas que quieran tratar la dependencia al vapeo, y ya hasta ahora verdad, en el EDUS podemos ver, incorporada a esa pregunta, y eso para mí ha sido súper buena herramienta, porque sí creo que digo entre una realidad que había que entrarle verdad, entonces no tengo experiencia.”
		E21273	“Bueno, vieras que realmente nada, realmente no me he puesto a investigar, ni he leído mucho sobre eso la verdad, por lo menos al momento, creo que, ¡día! que es algo que es como una parte que dejamos olvidada, porque siempre uno se enfoca en cigarro, en el cigarro y en el cigarro, pero probablemente esto va a ser el nuevo problema que vayamos a tener a largo plazo verdad, o en unos años, que tal vez no tan a largo plazo, quizá sea más a corto plazo que sea empezar a trabajar dejar esta adicción, pero si todavía, la verdad, nunca, no sé... ni he leído nada acerca de... si, no, no, en realidad no.”

APPENDIX 17

Table 14 Ejemplos de Prácticas relacionadas a la Cesación de Cigarrillos Electrónicos basado en la Perspectiva de los Profesionales de las CCT

Categoría	Tema	Fuente de información	Ejemplos
Prácticas actuales en Cigarrillos Electrónicos	Tratamiento de CCT para Usuarios de Cigarrillos Electrónicos	E08092	“bueno básicamente se estaría manejando de la misma manera, muchos de los pacientes que vapean son de primera mano tabaquistas de cigarrillos convencionales ¡verdad!, del cigarrillo corriente, y que actualmente digamos están fumando los dos productos, ¡día! básicamente porque cayeron en la trampa de haber intentado dejar el cigarrillo convencional a través de un cigarrillo electrónico, y que posteriormente pues no lograron desaparecer de su dependencia física, fueron requiriendo mayores dosis de nicotina y ya el presupuesto no les alcanzó para estar solamente vapeando, entonces ¡día! son personas que están, digamos, que actualmente están vapeando y además fuman cigarrillo convencional, y se están manejando actualmente igual, pues digamos se determina el nivel de dependencia física, se valora si existe la necesidad de utilizar algún tipo de fármaco.”
		E09172	“De hecho dentro de las charlas que se dan, está dentro de eso, una charla sobre vapeo y cigarros electrónicos, que nosotros lo tenemos desde hace tiempo digamos, se está dando esa charla a pesar de que tal vez no haya ningún paciente consumiendo cigarro electrónico, pero sí siempre digamos.... porque normalmente como que creen que pasar de uno a otro es mejor, y que me puedo quedar tal vez con el otro, como ya no me fumo un cigarro convencional, si no me quedo con el cigarro electrónico, y todo esta bien, entonces desde hace ya tiempito, se está manejando la charla esta de cigarros electrónicos, también hay un video sobre eso también, sobre el cigarro electrónico, que puede causar, y que ahorita no se tienen los estudios suficientes, entonces todo eso digamos nos ha permitido también tener experiencia”
		E11212	“Tendríamos que conocer muy bien la historia de ese paciente, porque si en el cigarrillo electrónico solamente utiliza nicotina entonces probablemente que nosotros podríamos abordarlo con vareniclina, esto le hablo hipotéticamente porque no he encontrado un caso así, la idea de las clínicas de cesación de tabaco es no dejar al paciente que tiene un deseo de suspender el consumo, entonces sería como si se me presentara un

			caso de esos, sería llevarlo a la reunión del equipo para ver nosotros como lo manejamos.”
		E12242	<i>“bueno al menos en mi caso, como yo brindo una atención en todo tipo de adicciones yo prefiero que sea un abordaje individual, porque es otro proceso, son otras emociones, son otras otra sintomatología la que tiene el usuario, u otro tipo de características que no pertenece al grupo.”</i>
		E21273	<p>“Bueno en realidad fue hasta hace poco que empezamos como a hablar un poco más del tema en el taller ¡verdad!, ya que es algo pues relativamente nuevo, realmente yo lo incluí como un poquito en la charla ¡verdad!, para aclarar a los pacientes que nosotros, bueno, que no es un tratamiento para dejar de fumar, porque hay muchos pacientes llegaban a uno con la idea de que estoy intentando dejar de fumar.”</p> <p>Personal Translation of the following cite: “tratamientos de vapeo no tenemos ningún lineamiento de que nos diga de que hay alguna terapia ¡verdad! para seguir, o algún protocolo que seguir para quitar el vapeo ¡verdad!.”</p>
		E22273	“tratamientos de vapeo no tenemos ningún lineamiento de que nos diga de que hay alguna terapia ¡verdad! para seguir, o algún protocolo que seguir para quitar el vapeo ¡verdad!.”

APPENDIX 18

Table 15 Ejemplos de las Necesidades de los Profesionales de las CCT basado en los Servicios de Cesación y el Entrenamiento en Cigarrillos Electrónicos

Categoría	Tema	Fuente de información	Ejemplos
Necesidades	Necesidades de los Profesionales en Salud	E14282	“entonces sí necesitaríamos mucha formación para atender esa población, yo creo que no es algo solo en cesación del tabaco y cigarrillo electrónico, sino a nivel de todos los servicios de salud, hay que saber entrarle a la población más joven diferente, porque uno lo ve casi que es población que no consulta, sí yo siento que eso es lo más preocupante”
		E22273	“lo que deberíamos trabajar mucho es en la capacitación del personal, verdad, porque ya ha estado una infraestructura ahí, en donde se puede ir cómo culturizando este nuevo tema verdad, es más fácil llegar a diferentes zonas del país verdad, si ya empezábamos a formar un equipo que no existiera, un ente rector ¡verdad!, central que tuviera que implementar en cada una de las diferentes zonas, en los centros de atracción, en cada uno de los niveles de atención”
		E23303	“Cómo te comentaba creo que también hay que capacitar al personal ¡verdad!, para qué este se empiecen a implementar, y la población tiene mucho desconocimiento de estos nuevos dispositivos, no lo ven como una dependencia, la ven como una alternativa sana ¡verdad!, como algo que a futuro no va a pasar nada.”
		E11212	“pero a nivel ya central en las clínicas debe de haber un cambio en la visión de lo que es una clínica, y montar en realidad un equipo para una clínica, porque si no hay un equipo con un espacio delimitado, con un tiempo determinado, los resultados siempre van a ser pobres, entonces para mí es primordial eso, y obviamente tener una capacitación, tener un tiempo para capacitarse, pero que sea una capacitación de un nivel adecuado ¿verdad?, yo le puedo decir que por lo menos nosotros cuando fuimos a capacitarnos, ahí sí tenían una capacitación estructurada, pero fue únicamente de una semana, y en esa semana viajábamos desde acá hasta el hospital XXXX y llegábamos de una a tres, de una de la tarde a tres de la tarde, entonces era muy poco tiempo”

		E15023	<p>“yo creo que el problema es ese, concientizar a la población general, el apoyo que tienen las clínicas de cesación de tabaco existe institucionalmente, no hay ningún problema, nosotros tenemos mucho mucho apoyo, a veces algunas están renquitas porque somos los mismos haciendo muchas cosas, pero tenemos el apoyo suficiente para dar pasos serios en las sesiones, logísticamente también tenemos los materiales que tengamos ahí, tal vez necesitaríamos material específico del cigarrillo electrónico, impresos, que tenemos mucho de tabaco pero de cigarrillos electrónicos que me acuerde ahorita, no me acuerdo de haber visto ninguno, hay apenas una mención en los panfletos grandes, entonces necesitaríamos algo de información para darle a la gente, pero lo que se necesitaría sería reorganizarnos, completar esa capacitación y buscar a la gente, no esperar a que la gente venga, como le digo tal vez dependiendo de la cantidad que vengan se pueda hacer grupos diferenciados, pero con la experiencia que tenemos aquí de cuánta gente llega, yo creo que debería incluirse en un grupo convencional, que podría funcionarnos bien.”</p>
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APPENDIX 19

Table 16 Cambios Propuestos para el Programa proporcionado por los Coordinadores y Profesionales de CCT para incluir un Plan de Estudios y Servicios para dejar de usar Cigarrillos Electrónicos

Categoría	Tema	Fuente de información	Ejemplos
Cambios Propuestos	Cambios a Nivel Individual	E17063	“Sí creo que debemos pues revisar un poco más ¿verdad?, sobre lo que es los cigarrillos electrónicos ¿verdad?, nos falta ponernos a estudiar un poquito más porque el tabaco es algo como de muchísimos años, de más cotidianidad ¿verdad?, y tenemos muchísima información, esto es algo más nuevo, y si tenemos que empaparnos un poco de cómo llegar, desde cómo trabajarlo, cómo impactar en esta nueva población, pero como fortalezas si creo que hay un equipo consolidado, listo, y anuente para trabajarlo.
	Cambios a Nivel de Equipo Médico	E04311	“bueno gracias a Dios, eh, la composición de la clínica ¿verdad?, viene incorporada con la parte de psicología, siento que hay que incorporar a salud mental, en estos programas salud mental es vital, es una figura que realmente está avanzando en otras áreas, y me parece que sí es una persona clave, creo que el equipo por lo menos el equipo nuestro incorpora a farmacia, terapia de respiratoria, neumología, psicología, y el médico, bueno ahí neumología o nosotros, ¿verdad? pero yo sí creo que en esta línea del vapeo, hay que meterle más a esa línea la parte de psicología, de salud mental”
		E02201	“volviendo al tema de los de los contenidos, obviamente tienen que ser contenidos más específicos, tendrían que ser espacios de discusión, por ejemplo, donde se hable sobre mitos, incluso un apartado específico, por ejemplo, a nivel grupal, donde se discuta ¿por qué yo decidí como persona consumidora consumir la nicotina a través de un dispositivo como éste? ¿Verdad?, ¿que me llevó a ello? y eso nos puede servir incluso hasta en términos investigativos ¿verdad?, en determinar un poco sobre ¿ah bueno la gente está consumiendo porque, por ejemplo, si fuese el caso, la publicidad está pegando fuerte, o porque tenemos la presión social, o el tema de publicidad engañosa. de que al menos yo creía que esto no hacía daño, por ejemplo, y entonces eso nos va a ayudar en las políticas institucionales y nacionales de salud, para poder hacer campañas de prevención, y saber por dónde atacar, por dónde mitigar, por dónde reducir ese impacto, para que no hayan nuevas personas o personas

			que debuten con el uso de esos dispositivos, y consumiendo nicotina a través de esos dispositivos. Eso podría ser una de las cosas allí.”
Cambios a Nivel Organizacional	E01111		“no estoy, no no no, la verdad es que no estoy muy segura, o sea me parece que debería estar como un poco más enfocado en una población más joven, que es la que, que es la que normalmente, de hecho nosotros la mayoría de pacientes que tenemos son un poco más mayores, y son este muchas veces porque ya lo tienen que operar para una cirugía y ocupan dejar de fumar una cosa así, y el cigarrillo electrónico normalmente los más jóvenes, pero inclusive nosotros en ese sentido tenemos una restricción porque la clínica, un requisito es que sea mayor de 18 años, entonces en ese caso sí me parece que debería haber una flexibilidad para adolescentes, que también usan un poco más me parece.”
	E02201		“Obviamente habrá que hacer sus adaptaciones en las entrevistas, dirigirlo más hacia por ejemplo, ¿qué aspecto le llevaron a consumir o a cambiar? si es que cambió la persona del cigarrillo tradicional al electrónico, o si ya fue que hizo debut propiamente con electrónico. Todo eso es parte de lo que sería el historial de consumo, la razones que llevó a esa persona a consumir, la o lo que está subyacente allí también, y creo que eso es parte fundamental explorarlo también en una entrevista. No solo decirle a la persona, que venga aquí hay un grupo, y en ese grupo métase ahí como un rebaño, todos juntitos, y sin conocer algunas particularidades. Más bien, esas entrevistas previas creo que nos ayudan incluso, primero filtrar porque tienen ese fin, pero también nos ayudan a canalizar cuáles son los puntos a reforzar, a tener en consideración, cuando ya la persona inicia en ese proceso propiamente, por ejemplo el día D, que ya no esté fumando y está enfrentando por ejemplo, el periodo de abstinencia, y cómo lo enfrenta, cómo podemos nosotros ayudarles allí, creo que sí es fundamental que mucho de ese procedimiento establecido se utilice y que sea adaptado a lo que es los sistemas electrónicos de administración de nicotina o los cigarrillos electrónicos en general.”
	E03271		“¿en qué sentido? porque la gente que vapea son más jóvenes, entonces probablemente lo que yo pensaría que podía variar es ¿cuál es el enfoque hacia la población joven para motivarlos a que deje de fumar? porque igual que con el cigarro normal verdad, convencional, hay poca percepción de riesgo, sobre todo ahí está el problema, ¡ya!”

		E12242	“Sería un abordaje diferenciado, porque por ejemplo, sabemos que el programa de intervención para cese de tabaco es como muy estructurado, únicamente para ese consumo, ¿verdad?, y es únicamente el cese total, entonces hay que valorar realmente las características del cigarrillo electrónico para ser abordado de forma diferente, no, no creo que sea como el mismo tipo de charlas, con las mismas características, creo que ahí sí tiene que cambiar algo, e incluso separar a los fumadores de cigarrillo convencional porque van a decir “¿yo en el mismo grupo? ¿yo eso lo dejó hace un montón!”
		E15023	“entonces sí, habría que hacer una campaña previa para incluir, o sea para llamar a esa gente, para cuando vengan entonces ya los podemos incluir en un programa bastante similar, tal vez como le digo una sesión o dos sesiones extras para ellos si fueran bastantes”
		E19183	“exacto, exacto, sí, porque por ejemplo, nosotros tenemos charlas digamos, que el programa como tal nos ha facilitado ¿verdad?, y bueno uno digamos en realidad es como muy poquito lo que hemos tenido como que adaptarlas a la población, pero ya están como más estructuradas, el manual, digamos que es el manual que le facilita uno la CCSS, el manual sí está pensado específicamente para que sea tabaco ¿verdad?, tabaco convencional, entonces yo me imaginaría dándole ese manual a una persona que lo que fuma es un cigarrillo electrónico y probablemente no se sentiría como tan identificado, porque va a encontrar más información relacionada con el cigarrillo convencional que con el vapeador o el cigarrillo electrónico.”
	Cambios a nivel del ambiente cultural	E05022	“entonces en este caso habría que ir casi que a buscar un poco más dónde están ese tipo de fumadores verdad, de consumidores de cigarrillos electrónicos, y atraerlos”
		E07062	“bueno, el primer cambio fue en mentalidad ¿verdad?, porque inicialmente tuvimos algunas experiencias ahí cuando apenas empezaron a aparecer los cigarros electrónicos, en donde, pensamos que la sustitución de nicotina que ya se usan en otras presentaciones, era una buena opción utilizarla en un cigarro electrónico ¿verdad?, entonces ya después que vimos que simplemente estábamos cambiando una adicción por otra entonces ese fue uno de los primeros cambios que tuvimos que hacer, en el concepto que teníamos de los cigarros electrónicos como un dispositivo alternativo para cese tabaco, a lo que es realmente”

APPENDIX 20

Table 17 Examples of Participants Contents Proposal for an Electronic Cigarette Cessation Curriculum^{viii}

Category	Theme	Data Source	Examples
Electronic Cigarette Cessation Curriculum	Electronic Cigarette Cessation Curriculum Contents	E23303	<i>"Well, we should be very clear, very very clear, on the difference between one thing and another, that is, what is the difference between an electronic cigarette, a vape and a conventional cigarette, right? This is basic to be able to start, after we should have a lot of experience in group therapy, in how a group is managed, what is, let's say, the profile of a smoker, and above all, handle this very well with the studies of Prochaska and Di Clemente, of motivational therapy, that we know that very well, right? And the importance of doing an initial motivational interview with the user, and the success they may have in the process to be able to conclude it satisfactorily, and everything that has to do with the type of this addiction, right? Because we could say, well yes, it's an electronic cigarette, but people don't know what the scope of the electronic cigarette is, right?, including many professionals, so we have to be well informed on the matter so that the patient can benefit from it."</i>
		E16033	<i>"Oh, I think that, well, the chemical part, very important, the products that are used, how they are used, right? If it's true, well, the flavor part, if they really are oils, if the water base is really water-based, or does it have some other additive, right? Let's say what, what is the scientific part? What has been discovered that produce? Right? What is the reality, studies? I don't know if there are already studies regarding what diseases, or what vaping is causing, right? Basically, that is, that is what helps one to defend oneself a little in these topics."</i>
		E11212	<i>"... even there, we could talk in that training about how many sessions we can give them, if that patient who is going to be an ex-smoker of electronic cigarettes is going to go to the same clinics as ex-smokers of conventional cigarettes, who is going to manage these patients after they finish the sessions? Because now ex-smokers are theoretically left for 1 year with the group of ex-smokers, and they are managed by nursing, but we have had many, and we still have only one nurse, who is not for the clinic, who cares for ostomies, who attends to other types of programs, talks to pre-surgical patients, there is no time for that with them either, so all this should be well</i>

^{viii} For the table with the original quote examples in Spanish refer to Appendix 21

			<i>established, at least evidenced, it should be evidenced so that it is present the program to the institution.”</i>
		E12242	<i>“;diay!, obviously the contents would be what electronic cigarettes are, the different types of electronic cigarettes that have been around over time, the type of substances that an electronic cigarette can contain, are these substances registered at the national level or not? Are all the components of an electronic cigarette known? What is the percentage of that substance or nicotine in that cigarette? Uh, what else could I think of, now, the approach protocol for those patients who have the electronic cigarette from a psychological point of view, from a pharmaceutical point of view, from a medical point of view, what conditions must that patient meet who is going to come to the clinic to request help to stop using electronic cigarettes?”</i>
		E04311	<i>“wow! They would have to start us with chemistry, I think because we are very bad in that part, right? I think that when there are so many different components, I really think they should give us a little talk on basic chemistry, to start , then yes, then diay! these other strategies that I think work, right? In the psychology part, comment a little on that part, and in the part I think maybe like psychiatry, right? They reinforce us a little”</i>
		E03271	<i>“...the focus programs for the electronic cigarette have to be on the conventional cigarette, just introducing what are the differences of this, and explain a little differently the why’s; why are there toxins? why are there carcinogens? what are the differences? right? What is tobacco? Well, among those, what is heated tobacco? the vaporizers? So why do you have to include that? because normally people don't know, I would say it's like the main component, right?</i>

APPENDIX 21

Table 18 Propuesta de Contenidos para un Curriculum de Cesación de Cigarrillos Electrónicos

Categoría	Tema	Fuente de Información	Ejemplos
Curriculum en Cesación de Cigarrillos Electrónicos	Contenidos del Curriculum de Cesación de Cigarrillos Electronicos	E23303	<p>“bueno deberíamos de tener muy claro, muy muy claro, la diferencia entre una cosa y otra, o sea, cuál es la diferencia entre un cigarrillo electrónico, un vapeador y un cigarrillo convencional ¿verdad?, eso es básico para poder empezar, después deberíamos de tener muchísima experiencia en terapia grupal, en cómo se maneja un grupo, cuál es digamos como el perfil de un fumador, y sobre todo manejar muy bien esto de los estudios de Prochaska y Di Clemente, de la terapia motivacional, que conozcamos muy bien eso ¿verdad?, y la importancia que tiene el hacer una entrevista inicial motivacional al usuario, y el éxito que pueda tener en el proceso para poder concluirlo satisfactoriamente, y todo lo que tenga que ver con el tipo de esta adicción ¿verdad?, porque podríamos decir, bueno sí, es un cigarrillo electrónico, pero la gente no sabe cuál es el alcance del cigarrillo electrónico ¿verdad?, inclusive muchos profesionales, entonces tenemos que estar bien informados en el asunto para que el paciente se vea beneficiado en esto.</p>
		E16033	<p>“ay, creo que bueno, la parte química, muy importante, los productos que se utilizan, cómo los utilizan ¿verdad?, si es cierto que pues la parte de los sabores, si realmente son aceites, si realmente la base de agua es base de agua, o tiene algún otro aditivo ¿verdad?, digamos qué, ¿cuál es la en la parte científica?, ¿que se ha descubierto que producen?, ¿verdad? ¿cuál es la realidad, estudios?, no sé si ya hay estudios con respecto a que enfermedades, o que está provocando el vapeo ¿verdad?, básicamente, o sea, eso es lo que le colabora a una a defenderse un poquito en estos temas.”</p>
		E11212	<p>“...inclusive ahí podríamos en esa capacitación a hablar sobre cuántas sesiones podemos darles, si ese paciente de que va a ser exfumador del cigarrillo electrónico va a ir a las mismas clínicas de ex fumadores de cigarrillos convencionales, ¿quién va a manejar después de que terminen las sesiones a esos pacientes?, porque ahora los ex tabaquistas se les deja 1 año teóricamente con el grupo de extabaquistas, y los maneja enfermería, pero se nos han hecho muchos, e igual tenemos una sola enfermera, que no es para la clínica, que atiende ostomizados, que atiende otro tipo de</p>

			programas, de charlas a los pre-quirúrgicos, tampoco hay tiempo para eso con ellos, entonces todo eso debería de estar dejarse bien establecido, por lo menos evidenciarse, debería de evidenciarse para que se le presente a la institución el programa.”
		E12242	“¡diay!, obviamente los contenidos serían qué son los cigarrillos electrónicos, los diferentes tipos de cigarrillos electrónicos que ha habido a través del tiempo, el tipo de sustancias que puede contener un cigarrillo electrónico, ¿son o no son esas sustancias registradas a nivel nacional?, ¿se conocen todos los componentes de un cigarrillo electrónico?, ¿qué cuál es el porcentaje de esa sustancia o de nicotina en ese cigarrillo?, eh qué más podría yo pensar, ahora, el protocolo de abordaje a esos pacientes que tienen el cigarrillo electrónico desde el punto de vista psicológico, desde el punto de vista farmacéutico, desde el punto de vista médico, ¿qué condiciones debe reunir ese paciente que va a llegarnos a la clínica a solicitar ayuda para dejar el cigarrillo electrónico?”
		E04311	“¡wow! tendrían que empezarnos como por química, yo creo porque estamos muy mal en esa parte ¿verdad?, yo creo que a la hora de haber tantos componentes distintos, de verdad, yo creo que nos deberían de dar una charlita de química básica, para empezar, luego sí luego ¡diay! estas otras estrategias que creo que funcionan ¿verdad?, en la parte de psicología comentar un poquito esa parte, y ya en la parte creo que tal vez como de psiquiatría ¿verdad?, que nos refuercen un poquito”
		E03271	“...los programas de enfoque para el cigarro electrónico tienen que estar en el de cigarro convencional, nada más introduciendo cuáles son las diferencias de esto, y explicar un poquito diferente los por qué; ¿por qué es que hay tóxicos?, ¿por qué hay cancerígenos?, ¿que son las diferencias? ¿verdad? ¿que es el tabaco?, bueno entre esos ¿qué es el tabaco calentado? ¿los vaporizadores? Entonces, ¿porque hay que incluir eso? porque normalmente no se sabe, yo diría que es como el componente principal, ¿verdad?”

APPENDIX 22

Table 19 Examples of Participants Proposals for Methodology, Schedule and Modality for an Electronic Cigarette Cessation Curriculum^{ix}

Category	Theme	Data Source	Examples
Electronic Cigarette Cessation Curriculum	Methodology of Electronic Cigarette Cessation Curriculum	E16033	<i>"Also, yes, I think that case studies, well I don't know if there really are any kind of studies, let's say, of the patients, if there is evidence and so on, but actually in case studies, personally I like them a lot, they force you to read, they force you to put it into practice, and I think it's quite nice, and the theoretical part, well, the person who always comes and explains everything to you is also quite interesting, right?"</i>
		E04311	<i>"I believe that working in a team often means that one learns from other people, so I think so, a little work in a group of 3, the group of 3 does to develop a topic, to make a presentation, these things, although it is heavy work for all of us who are studying, it is the only way for one to really do things seriously, so let them do it, it can be done now with zoom, that division of classes is done, and these 3 leave to do this job"</i>
		E09172	<i>"I think that for me the best way, although this is also personal, is as a workshop type, which is more participative, right? It also depends on where one is, if it were virtual, one can.... So it seems to me that a workshop would be better because you can also share and express these different opinions"</i>
		E12242	<i>"I prefer the workshop modality, in reality the construction of knowledge is essential, and the case study can be done together with the workshop modality, so in reality there are different educational techniques, but I prefer doing, the same that I believe that all the trainings need a masterful part, right? Because if I don't know what an electronic cigarette is, it's better for an expert to explain it to me, right? construction of knowledge."</i>
	Schedule for Electronic	E23303	<i>"Well, taking into account the scarce resources of the CCSS, so I don't know what the scope of the training would be, but I think that one week would be</i>

^{ix} For the table with the original quote examples in Spanish refer to Appendix 23

Cigarette Cessation Curriculum		<i>enough to carry out an intensive process, from seven in the morning to four in the afternoon, right?, with a theme, let's say a well-structured planning, right?, well done, and I think that would be enough, because each one in their area is well trained, we are all professionals, right?, it would be how to refine details.”</i>
	E18133	<i>"At the organizational level, if you consider making a change to the electronic cigarettes part, you could consider doing something like this, not once a year, but during the year two or three times to update the entire population, because it is not a lie that is going to take time, to be all standardized, how we are standardized right now, well, to a certain extent it can take time.”</i>
	E11212	<i>"No, no, that would be it, for me a survey should be done, if it is a person who has experience in a tobacco cessation clinic, the training is faster because they already handle at least some theoretical concepts as well as approaching the patients, so for me it would be a training that could be 15 days, a month, it wouldn't be like that much"</i>
	E04311	<i>“It is that if we do it too long, people are going to leave it lying around, so it also seems to me that at least, like the tobacco cessation clinics, 8 weeks, each week we see a topic that we even have to address then with the people, and do it a little more as if it were a clinic, right? The program is going to be prepared, right?”</i>
Modality for an Electronic Cigarette Cessation Curriculum	E11212	<i>“Virtual courses are very, very useful, I feel that for me personally they are more gainful than face-to-face courses, why? because they take away travel time or take away a lot of time that was there as wasted, and aside from that, it forces the student more to learn, to do jobs, to do them practically by the student”</i>
	E04311	<i>"Well, since I'm taking the master's degree and it's virtual, definitely the asynchrony makes one start, that is, it's helping a lot, so I think that the people who have the possibility of enrolling in this virtual modality, right? Virtual asynchronous and maybe face-to-face yes, a little of both, but the asynchronous virtual seems fantastic to me, if it were a requirement, let's say passing this module is a requirement, yes, but do it at some point and then come to the face-to-face class, or something like that, that is combined, but I think that what we are going to have to accept is reality, it is what has to happen, and no way, it is working, right?"</i>
	E12242	<i>“It could be hybrid, but I think we have to go back to face-to-face, actually, I have taken a lot of virtual training, and I don't deny it, one really is sometimes in</i>

			<p><i>training and is watching the cell phone, is watching television, or is watching something else, and is not really focused, whether it is interesting or not, on the training, especially if we are at home, the truth is even worse, at work sometimes and it is not always possible, because like happened before they knocked on my door, so actually it can be hybrid in the sense that it is the main training, like the main components face-to-face, and then putting them into practice and commenting on the experiences.”</i></p>
		E22273	<p><i>“I think that now the use of resources, and part of the good that happened with the pandemic, right? It is a bit the increase in technology that we began to use in the institution, right? Well, on our part in pharmacy, we were in charge of pharmaceutical care, right?, a program that we have, and we began to see it virtual and we began to see it in person, right?, in person we did notice that adherence is a little higher, right?, the people mostly users and depending on learning abilities, if there is a disability or something like that, it is still better to be in person, right? But by professionals that we also had to train or give some type of attention, we saw that there is a territory problem, right? Because we serve people from all over the country, it was easier to reach that type of people. diay! for virtual talks, then diay! we take the time, we see that the professionals from the cessation clinic obviously connect to the internet, from different places, uh, we have different clinics or professionals who can take that time, right?, so diay! to get there faster, from different places, I think the virtual sessions help a lot in that.</i></p>

APPENDIX 23

Table 20 Ejemplos de Propuestas de Participantes para Metodología, Cronograma y Modalidad para un Curriculum de Cesación de Cigarrillos Electrónicos

Categoría	Tema	Fuente de Información	Ejemplos
Curriculum en Cesación de Cigarrillos Electrónicos	Metodología del Curriculum de Cesación de Cigarrillos Electronicos	E16033	“Además, si creo que los estudios de caso, pues no sé si ya realmente hay algún tipo de estudios digamos, de los pacientes, de si hay pues evidencias y demás, pero en realidad en los estudios de caso, en lo personal me gustan mucho, lo obligan a leer, lo obligan a una a poner en práctica, y me parece bastante bonito, y la parte teórica pues siempre la persona que llega y te explica todo también pues es bastante interesante ¿verdad?.”
		E04311	“yo creo que trabajar en equipo genera que muchas veces uno aprenda de las demás personas, entonces, yo creo que sí, un trabajito de un grupo de 3, hace el grupo de 3 para que desarrollen un tema, para que haga una presentación, esas cosas aunque es un trabajo pesado para todos los que estamos estudiando es la única forma de que uno realmente haga las cosas en serio, entonces que se hagan, se puede hacer ahora con zoom se hace esa división de clases, y estos 3 se van a hacer este trabajo”
		E09172	“yo creo que para mí la mejor manera, aunque diay también eso personal, es como tipo taller, que es como más participativa ¿verdad?, a veces el solo estar como escuchando a alguien hablar pues como que uno tal vez se pierde, o depende también de donde uno esté, si fuera virtual, puede uno.... entonces me parece que un taller sería mejor porque también se pueden compartir y expresar este diferentes opiniones”
		E12242	“yo prefiero la modalidad taller, en realidad la construcción del conocimiento es primordial, y estudio de caso se puede hacer junto con la modalidad taller, entonces realidad en son diferentes técnicas educativas, yo prefiero haciendo, igual es que creo que todas las capacitaciones necesitan una parte magistral ¿verdad?, porque si yo no sé qué es un cigarrillo electrónico es mejor que un experto me lo explique ¿verdad?, entonces en realidad es una modalidad de taller con un poquito de magistral ¿verdad?, y sobre todo la construcción del conocimiento.”
	Cronograma para un	E23303	“bueno tomando en cuenta los recursos escasos de la CCSS, entonces no sé cuál sería el alcance de la capacitación, pero yo creo que una semana sería suficiente para

Curriculum de Cesación de Cigarrillos Electrónicos		poder llevar un proceso, de siete de la mañana a cuatro de la tarde, intensivo ¿verdad?, con un tema, digamos una planificación bien estructurada ¿verdad?, bien hecho, y que yo creo que eso sería suficiente, porque de por sí pues cada uno en su área está bien capacitado, todos somos profesionales ¿verdad?, sería como afinar detalles.”
	E18133	“a nivel organizacional si se plantea hacer un tema de cambio hacia la parte de cigarrillos electrónicos se podría plantear hacer algo así, no una vez al año, sino durante el año dos o tres veces para actualizar a toda la población, porque pues no es mentira que va a tomarse su tiempo, a que todos estemos estandarizados, a cómo estamos estandarizados ahorita, pues hasta cierto punto puede tomar su tiempo.”
	E11212	“no, no, ahí sería, para mí debería de hacerse un sondeo, si es una persona que tiene experiencia en una clínica de cesación de tabaco la capacitación es más rápida porque ya maneja por lo menos algunos conceptos tanto teóricos como de abordaje de los pacientes, entonces para mí sería una capacitación de podría ser 15 días, un mes, no sería como tanto”
	E04311	“es que si lo hacemos muy largo la gente lo va a dejar tirado, entonces también me parece que por lo menos, igual que las clínicas de cesación de tabaco, 8 semanas, cada semana se ve un tema de los que inclusive tenemos que abordar después con la gente, y hacerlo un poquito más como si fuera una clínica ¿verdad?, y tal vez captemos también a la gente que trabaja en clínica, de una forma como más proactiva sabiendo que algún día va a terminar, y que además te va a quedar el programa preparado ¿verdad?”
Modalidad para Curriculum de Cesación de Cigarrillos Electrónicos	E11212	“los cursos virtuales son muy muy provechosos, siento que para mí personalmente más provechosos que los cursos presenciales, ¿por qué? porque quitan el tiempo de traslado o quitan el muchísimo tiempo este que había ahí como perdido, y aparte de eso obliga más al estudiante a aprender, a hacer trabajos, a hacerlos el estudiante prácticamente”
	E04311	“bueno como estoy llevando la maestría y es virtual definitivamente la asincronía hace que uno arranque, o sea está ayudando mucho, entonces yo creo que las personas que tenemos esa posibilidad de matricularnos en esa modalidad virtual ¿verdad?, de virtual asincrónico y tal vez presencial sí un poquito de las dos, pero el virtual asincrónico me parece fantástico, si fuera un requisito, digamos pasar este módulo es requisitos, sí, pero hágalo algún momento y ya después viene a la clase presencial, o

			algo así que sea combinado, pero creo que es la realidad lo que lo que vamos a tener que aceptar, es lo que tiene que pasar, y ni modo, está sirviendo ¿verdad?.”
		E12242	“Podría ser híbrido, pero yo creo que tenemos que volver a la presencialidad, en realidad he llevado muchísimas capacitaciones virtuales, y no lo niego uno realmente a veces está en la capacitación y está viendo el celular, está viendo el televisor, o está viendo otra cosa, y realmente no está concentrado, así sea interesante o no, en la capacitación, más si estamos en casa la verdad todavía peor, en el trabajo a veces y no siempre se puede, porque como ahora me tocaron la puerta, entonces en realidad puede ser híbrido en el sentido de que sea la capacitación principal, como los principales componentes presenciales, y ya llevarlos a la práctica y comentar las experiencias.”
		E22273	“Yo creo que ahora la utilización de los recursos, y parte de la bueno que pasó con la pandemia ¿verdad?, es un poco el aumento de tecnología que empezamos a utilizar en la institución ¿verdad?, bueno de nuestra parte en farmacia, nosotros estuvimos relacionando un poco la atención farmacéutica ¿verdad?, un programa que tenemos, y la empezamos a ver virtual y la empezamos a ver presencial ¿verdad?, en presencial sí notamos que la adherencia es un poquito mayor ¿verdad?, todavía la gente más que todo el usuario y dependiendo de las capacidades de aprendizaje, si hay alguna discapacidad o así, es mejor todavía la presencial ¿verdad?, pero por profesionales que también nosotros tuvimos que capacitar, o darle algún tipo de atención, vemos que este problema de territorios ¿verdad?, porque nosotros atendemos gente de todo el país, era más fácil llegar a ese tipo de personas ¡diay! por charlas virtuales, entonces ¡diay! tomamos el tiempo, vemos que también los profesionales de la clínica de cesación obviamente se conectan a internet, a diferentes lugares, eh tenemos diferentes clínicas o profesionales que pueda sacar ese tiempo verdad, entonces ¡diay! para llegar más rápido, de diferentes lugares, creo que las sesiones virtuales ayudan mucho en eso.

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