Tobacco and Nicotine Products: The Times Are A'Chainging

Video Transcript

Speaker 1: The use of tobacco and its by-products continue to create serious health compromises to those addicted to their use. Over the years, there have been many iterations of nicotine delivery systems, each capable of causing an addiction and all exposing their users to different degrees of harm. This course will help wade through the various types of tobacco products on the market, the discussion of the most recent impact of e-cigarettes and JUULs on adults as well as youth and young adults. The ultimate goal of this course will be to help dental healthcare professionals work with their nicotine addicted patients to help them quit the use of these unsafe products. Getting patients to quit is a truly gratifying experience and will positively impact not only them, but their families and friends as well.

Speaker 2: You know, if you were to follow a busy doctor as he makes his daily round of calls, you would find yourself having a mighty busy time keeping up with him. Time out for many men of medicine usually means just long enough to enjoy a cigarette. And because they know what a pleasure it is to smoke a mild, good-tasting cigarette, they're particular about the brand they choose. In a repeated national survey, doctors in all branches of medicine, doctors in all parts of the country were asked, "What cigarette do you smoke, doctor?" Once again, the brand named most was Camel. Yes. According to this repeated nationwide survey, more doctors smoke Camels than any other cigarette. Why not change to Camels for the next 30 days and see what a difference it makes in your smoking enjoyment? See how Camels agree with your throat, see how mild and good tasting a cigarette can be.

Speaker 1: As you can see, in 1955 there were more people smoking cigarettes than there were people not smoking cigarettes. That ad that you just watched was recorded in the late 1940s. So, in looking at this chart you can see that the ages of 25 to 44 well over 60% of the people were smoking. But we have made progress. As you can see now in 2018, the numbers have radically declined. Between the ages of 25 to 64, the numbers now hover between 17 and 18% as opposed to the 60 something percent. So why do we bother even discussing all of this? Well, the following slides will reinforce that point. People who are dying of lung cancers, or even just as bad, suffering for many years with COPD and not being able to breath at all or dying of lung cancers. And this now is somebody who is suffering.

Speaker 1: As painful as it is to watch that and if I made you watch that for half an hour, you'd probably find that really difficult to watch. Imagine having to live every second breathing like that and suffering without any chance of feeling better again and having to suffer for the rest of your life that way. That's part of the reason that we're doing what we're doing and trying to get people to stop using cigarettes and we'll discuss later to break the nicotine habit as well.

Speaker 1: Let's also discuss now the impact of, of using tobacco products on oral health.

I put this cartoon in, basically to show that somebody who's still smoking that the likelihood of them having a successful outcome with dental treatment and even overall dental health will be diminished by their using those products, regardless of whether they're brushing and flossing or not. We notice that the use of tobacco products are certainly compromising ones oral health. We see higher incidences of cleft lip and palate, dental caries, periodontal disease, leukoplakia, and oral cancer. There's been a systematic review of the use of tobacco products and the incidence of cleft lip and cleft palate and clearly there's an increased association between the two. Here are these three studies that were done in China to show that, that certainly if a woman is pregnant, there's more likelihood of her getting to have children with oral cleft lip and cleft palate. In addition, they also found that the woman breathing in second hand smoke could even increase the incidence of these, these problems.

Speaker 1: We find there's a higher incidence of dental caries. We find that there's a higher in incidence of periodontal disease. Here's one. I tried to get an example of as healthy of gingival I could find and this is someone who smoke two packs a day and you can see how it's been compromising their periodontium as well. We've noticed that there's an increase in periodontitis amongst people who are current smokers as well as people who are former smokers and again, even breathing in second hand smoke can compromise someone's periodontium. They found that smokers are more likely to suffer periodontal diseases as it promotes growth of periodontal bacteria and weakens immunity and that's even breathing in second hand smoke. We also know that there's delayed healing after extraction and other oral surgeries. There's a reduced success for various dental procedures that includes implants, causes bad breath, stained teeth and tongue, and a diminished sense of taste and smell. We also find that post surgery, patients show less pocket reduction, less gain in clinical attachment, less gain in bone height. And the use of chewing tobacco certainly can cause gums to pull away from the teeth and compromise the periodontium as well.

Speaker 1: This is an example of someone who's chronically chewing tobacco. You can see how they've lost bone and are trapping food. This is a patient who presents with chewing tobacco. You can see it's on the upper right side where he's keeping the chewing tobacco, and I've warned the patient that if this progresses it could become malignant. We did biopsy it to confirm that it hadn't gotten to that point yet.

Speaker 1: There are various studies to show that if one smokes or uses tobacco products, the likelihood of having a successful implant is diminished. In 2004, the Surgeon General's report concluded that there's sufficient evidence to infer a causal relationship between smoking and periodontitis. 3% of all cancers, or oral cancer and there's and 18% increase risk for smokers. Various risk factors include tobacco use, excessive alcohol use, viral infections, HPV subtypes 16 and 18, sunlight, excessive exposure to UVA and UVB light, immunodeficiency, and poor nutrition. I've been lecturing about 20 years now on this subject and this number has not really significantly gone down. It's about 53,000 new cases of oral and oropharyngeal cancers in the United States every year. One person dies every hour in the United States from oral cancer. This is a patient who smoked two packs of cigarettes a day. She lost half of her tongue had to have a graft from her arm to replace part of her face and ultimately died after two years of suffering. Her husband who smoked two packs a day also was unwilling to or unable to stop smoking given the significant addiction that he had, and he ended up passing away because of cardiac disease.

Speaker 1: This is a young man who chewed tobacco and was unable to stop. By the time his parents and he realized it, he had gotten significant cancer on the tongue and passed away right before he was going to graduate high school. I was given this CAT scan by a dental residency program and this is how a patient presented to the ER. As and you can see how much of a compromise his mandible has gotten because of this oral cancer and he passed away two months later.

Speaker 1: I want to briefly go through the history of tobacco use. You can trace history

of tobacco to about 5000, 3000 B.C. when it was first cultivated in the Peruvian, Ecuadorian Andes. There are about 64 species of tobacco plant, but we only use two. One's nicotiana rustica and the other is nicotiana tabacum. Nicotiana rustica is stronger and harsh and it's got 20 times more nicotine that tabacum and it's grown in eastern Europe and Asia and it was used in the shamans in South American. Nicotiana tabacum is milder, comes in multiple varieties and that's what you see mostly used in cigarettes. The shamans who were doctor-priests used the tobacco in religious rites as well as in medical treatment. They used it as a mild analgesic and antiseptic, they treated toothaches by wrapping the leaves around the tooth and they also used the leaves and the juices to apply it to wounds that they thought would heal faster.

Speaker 1: Jean Nicot was the French ambassador of Portugal and he basically brought back the seeds of tobacco and grew it back in France, treated Catherine de Medici who was the queen of France at the time and along with Nicolas Menardes, who was a physician in Spain, said that they could cure cancer, bad breath, and other diseases and as it turned out, those are the things that tobacco caused. But regardless, we named nicotine after him and that is the addictive drug that we find in tobacco. James "Buck" Duke in 1889 a successful tobacco farmer in North Carolina formed the American Tobacco Company and he used to have people work in his factory that produced about 200 cigarettes an hour. He then became friends with James Bonsack, a Virginia inventor who created the cigarette rolling machine, and that machine created 200 cigarettes in a minute. Well, Duke bought two machines and he started mass producing cigarettes and he produced 10 million cigarettes in his first year and by the fifth year, he had produced a billion cigarettes.

Speaker 1: Well, you can see how the nature of using tobacco products changed at that point and then it reached its peak around 1960s and then started diminishing when the Surgeon General's Report stated that it was causing lung cancer. Now, we can produce about 20,000 cigarettes in a minute. Let's go over tobacco and nicotine products which is constantly changing. We have cigarettes, we have little cigars, small cigars, regular cigars, and premium cigars. We have less commonly seen Beedis and Kreteks and Cloves cigarettes, hookahs, and now electronic cigarettes and JUULs. Smokeless tobacco products or plug tobacco, loose leaf tobacco, twists, those are forms of chewing tobacco. We have snuff and we have dissolvable products as well as heat-not-burn products, which are the latest iteration from the tobacco companies.

Speaker 1: Well, it takes about five seconds when you take a puff of a cigarette for it to reach your brain and for it to cause dopamine to be released. It's about 7000 chemicals in cigarette smoke that includes 80 carcinogens, we have benzene, formaldehyde, strychnine, and Polonium 210 just as a few examples. It's about 1.2 billion people who smoke in the world. In the United States, there's about 38, 7, almost 38 million people that are 18 years or older that are smoking. That comes out to about 15.5%, but we have 16 million Americans that live with a smoking related illness. And you can see by ethnicity the people that smoke the least are Asians and the people who smoke the most are Native American Indians. Also, you can see from this slide that the people who can least afford it and smoke the most are the ones who have the least insurance coverage. You can also see from this slide that people who have the most education are the ones who smoke the least.

Speaker 1: Let's discuss quickly cigars. This is an advertisement from many years ago that shows that a cigar can be a healthy cigar. The prevalence of cigar usage is about 12.3 million people over 12 years of age. About 9% of high school boys use cigars, 6.3% of high school girls, and at that 1.5% middle school students. All cigars whether they inhale or not are exposed to smoke and it's toxic to the cancer-causing chemicals affecting the lips, the tongue, and the throat. So, cigars are not safe to smoke.

Speaker 1: Let's talk a little about smokeless tobacco. Well, there's about 900,000 high school students that use smokeless tobacco

and about 210,000 middle cools, middle school students. Comes in various forms, snuff or Snus, chewing tobacco which is dip, pinch, or rub, and then RJ Reynolds came up with Orbs, sticks, and strips. Well smokeless tobacco has about 3000 chemicals of which 28 are known carcinogens and some of them are arsenic, cyanide, and Polonium 210. Takes a little longer. It takes about three to five minutes for it to get a hit in dopamine release in the brain when you use smokeless tobacco 'cause it has to be absorbed through your mucosal. And snuff tobacco is finely grounded moist, fire-cured tobacco and it comes in a pouch or can and you can tuck the pouch or shreds between your cheek and your gum and it's buffered to be more alkaline and it gets more easily absorbed in your oral mucosa. Snus is basically the Swedish word for snuff. Scandinavian Snus is steam pasteurized and it's moist powered tobacco, has less nitrosamines and again, it's placed as a small bit of it in between your lip and your gums. And they don't spit that out.

Speaker 1: There are about 280,000 high school students that use Snus and about 50,000 middle school students that use Snus. As of October of this year, the tobacco companies that sell smokeless tobacco and Snus are now able to say that it is essentially less harmfully than traditional cigarettes. It doesn't mean that it's harmless because there's still a higher incidence of oral cancer in these products, but they are now allowed to say that it's less harmful than cigarettes. Chewing tobacco comes in loose leaf, twists, and plug form, and if you dip or chew eight to ten times a day, that's equal to the nicotine content of 30 to 40 cigarettes a day. This is just another variation on the them. These are orbs, sticks, and strips from RJ Reynolds. They're basically giving you tobacco or nicotine through your oral mucosal as you use that.

Speaker 1: Let's discuss tobacco harm reduction and go through the history of it. Basically, what the tobacco companies are saying is if you use these heat-not-burn products, because they're not combusted, they're safer to use than cigarettes. But, all of these products attempt to simulate smoking cigarettes. If we go back to 1988/89 the Premier cigarette was invented by RJ Reynolds. They spent about $300 million making this product and you can see if you look at it, it creates and aerosol and the problem with it was it tasted terrible, it smelled terrible, so they abandoned it pretty quickly. Then we get to 1994 through 2015 with RJ Reynolds and they introduced it in 94 and in 2015 as different products. Well, again it heats tobacco and it is not combusting tobacco. But JAMA study that was done in 2017 said that it still had similar levels of cancer burning chemicals as, as similar to regular cigarettes. So, they re-branded it and then after 2015 they abandoned it.

Speaker 1: 1998-2006 you have Phillip Morris and they made the Accord cigarette. Again, you'll see that it's similar to an e-cigarette and it generates the tobacco flavor to aerosol for inhalation, but again what happened is their VP of research and development said that it had not been proven safe for a substantial reduction of certain harmful compounds have not been proven to lead to a reduction in smoking related diseases. So, that was the kiss of death for the Accord cigarette as well. Then we get a statement by Mitch Zeller from the American Legacy Foundation and he said, "I am not a knee jerk opponent of safer cigarettes if the science could demonstrate in fact that harm had been reduced, but it's very tricky. If there's a generally safer cigarette would it create a disincentive for existing tobacco users to quit? That's unintended consequence number one. And number two would it created new incentive for a non-smoker or someone who had already quit to want to smoke again thinking that they didn't have to worry about any of the health consequences of tobacco use?" This now sounds very similar to what's happening with e-cigarettes and kids smoking e-cigarettes that never would've used tobacco or nicotine products in the first place.

Speaker 1: Electronic nicotine delivery systems or e-cigarettes. Well, Herbert Gilbert was generally credited with the creation of the first device and that closely resembled the modern one and he did that in 1963. That was followed up by a development by Hon Lik in 2003 in China. He was a pharmacist. His dad died of lung cancer and he was a smoker and

he was looking for a safer way to get nicotine. What are they? Well, they're basically battery powered nicotine delivery systems and they produced heated aerosol instead of smoke. Here are some examples of how they've evolved. Liquid in e-cigarettes is propylene glycol and/or vegetable glycerine or glycerol, nicotine and that ranges from 0-36 milligrams per milliliter, various flavorings, and additives.

Speaker 1: Nicotine and nicotinic salts. Nicotine was first isolated in 1828 in Heidelberg, Germany. It's a clear liquid, it's poisonous alkaloid, it's a natural insecticide, and you also find it in addition to tobacco in tomatoes, potatoes, and eggplant, but they have insignificant concentrations. Nicotine naturally occurs as a base in tobacco. And it- 1960s Phillip Morris, scientist added ammonia and they created unprotonated or free based nicotine, which is similar to free base in cocaine, making it more basic and lipid soluble and easier to be absorbed in the lungs. The nicotine in cigarettes is and most e-liquids is freebased nicotine and freebased nicotine easily passes through the blood brain barrier and inhaling freebased nicotine is harsh to the mouth and to the throat. The nicotine binds in the brain at the alpha four beta two receptor site. People say that nicotine is basically a benign substance, but it's not. It affects the blood, the lungs, the muscles, the gastrointestinal system, joints, the central nervous system, the heart, and the endocrine system.

Speaker 1: So how do people use e-cigarettes? Well, they slowly and steadily fill the mouth and they hold that for about three to five seconds, then they inhale it in the lungs and exhale through the nose and mouth, and they'll get to feel a hit in about 30 seconds. And after about three to seven draws, they take a break. So, what is the hype about e-cigarettes? Are e-cigarettes safer to use than cigarettes? Are they effective smoking cessation aids? Well, the tobacco industry is certainly now going to promote them. These are examples of the advertisements for e-cigarettes. In 2014 and that's earlier on, the New York Times said that the major producers of e-cigarettes are targeting young people. They were giving away free samples at music events and sporting events and they were advertising on the radio and television that was oriented towards the youth. There's are again, examples of advertising for e-cigarettes and you can see who their intended audience is.

Speaker 1: Let's now discuss the prevalence of e-cigarettes. Well, this is showing the number of adults using e-cigarettes and you can see that the number is increasing and it's mostly for younger people that the increase is seen. It's estimated that about 10.8 million adults in the United States are vaping and if we look at this chart from the Journal of American Medical Association, you can see that there's a radical change as we get to 2018 to 2019 how vastly increased the numbers of people who are in high school and middle school are using e-cigarettes and vaping. I should say that e-cigarettes and vaping are pretty much the same thing. This just shows again how the number of high school kids are now using them every day. And this is our dilemma, will e-cigarettes serve as an introduction to cigarettes for children? Well, in a, in a study that was done b- eh, and published in JAMA in January of 2018, they found that the use of e-cigarettes, hookahs, non-cigarette combustible tobacco or smokeless tobacco increased the likelihood of kids using cigarettes within a year and the more of these products that they use, the more likelihood that they would use cigarettes.

Speaker 1: So are they safe? Well, there are now 15,000 e-cigarette flavors out there. There are many harmful chemicals in them, including which are diacetyl, 2,3 Pentanedione, and acetoin. A lot of these products and these flavorings are used for food additives, but again there's a big difference between eating something and then combusting it and inhaling it. The FDA has analyzed some samples of these e-cigarettes and what they've found is that the propylene, there is propylene glycol, there's nitrosamines though and there are other toxic chemicals and carcinogens and they've even found traces of tobacco. Another problem is that they found that nicotine exposure during adolescence which is a critical window for brain development may

have lasting adverse consequences for brain development. Adolescents have an increased risk because their brains are still developing and are particularly sensitive to nicotine. And also e-cigarettes can poison. Sadly, back in 2015 a one-year old boy died from ingesting the liquid nicotine because they didn't have safety caps on the bottles. And e-cigarettes can explode. Well, the first death was noted May of 2018 when an e-cigarette exploded and killed a man in Florida. In February of this year, again an e-cig- cigarette exploded in the face of a young man.

Speaker 1: So, are they safe? EVALI, electronic cigarette and vaping associated lung injury. November of 2019, 49 states, the district of Columbia, and one US territory have reported 2172 cases of EVALI and 42 deaths have been reported from 49 states, DC, and the Virgin Islands. These are symptoms that we should be looking for in our patients who are using e-cigarettes. They may have shortness of breath, night sweats, low oxygen levels, and hazy spots on lung x-rays. These symptoms can mimic the flu. Healthcare providers evaluation patients suspected to have EVALI, should ask about the use of e-cigarettes or vaping products in a non-judgmental and thorough manner. We're also finding now that vitamin E Acetate which is added to the liquid may be related to this EVALI outbreak. October 8 of 2019, a Bronx teen was confirmed as the first New Yorker to die of a vaping related illness. We're now seeing that there's an increased risk of vaping with heart attacks and depression, an increase in the likelihood of stroke, an increase in seizures, an increase in neurological damage and this may be related to various heavy metals that are released when the are breaking down in the e-cigarette hardware.

Speaker 1: We're noticing a risk of compromised brain development and even a risk of vaping affecting fertility. But are they safer than cigarettes? Well in this journal their conclusion was, at present the research on e-cigarettes is fragmentary and incomplete. There has been no systematic review of its safety. So, are e-cigarettes are real tobacco cessation aid? Well, this was a study done in 2018 and among adults 58.8% of e-cigarette users also smoked cigarettes. Among young adults, 40% of e-cigarette users also smoke cigarettes. And in 2019, this was a statement from the American Lung Association, "The FDA has not found any e-cigarette to be safe and effective in helping smokers quit. If smokers are ready to quit smoking for good, they should talk with their doctor about finding the best way to quit using proven methods and FDA-approved treatments and counseling."

Speaker 1: But e-cigarettes are certainly profitable. This is just a review of some of the finances involved and you can see that millions and millions of dollars are involved in the sell of e-cigarettes and now we're seeing that it's becoming billions of dollars. JUUL labs was valued at $15 billion in September of 2018 and then Altria purchased 35% stake in JUUL labs in September and they paid $12.8 billion for that. And then as of December of 2018, JUUL's labs was now valued at $38 billion.

Speaker 1: So, what war JUULs? Well in 2007, Adam Bowen and James Monsees founded Ploom Labs. They then created the PAX vaporizer and introduced JUUL e-cigarettes in 2015 at PAX Labs and they spun that off in 2017 to JUUL Labs. JUUL's hardware is made in Shenzhen, China and the JUUL pods are made in the United States and they're highly concentrated nicotine vaporizers and you can insert a flavored pod into the stick. In 2007, JUUL Labs mixed freebased nicotine with benzoic acid, creating a nicotinic salt in a biologically accepted liquid. This combination can be absorbed readily and is inhaled smoothly. It delivers twice the concentration of nicotine as other e-cigarettes and mimics the speed of absorption of that of regular cigarettes. This chart shows the absorption rates. In 2015, the majority of companies had a one to two percent nicotine concentration. JUUL Labs released its five percent nicotine pods and in 2019, competing brands are now trying to reach the five to seven percent range of nicotine concentration. This makes it potentially addictive to nicotine naïve teenagers. JUULs can be mistaken for USB sticks and it can be charged in a computer.

Speaker 1: So, let's talk about the latest status of JUULs and e-cigarettes. Well, 2017 USA

Today: New Vaping Has Gone Viral on Middle, High School, and College Campuses. Flavors like crème brulee, mango, and fruit medley. 2018, JUUL's has a 72% market share of the e-cigarette market. 2019, Wall Street Journal: JUUL's marketing practice under investigation by FTC. CNN, lawmaker asks FDA to crack down on JUUL's fraudulent medical claims. That's September 5 of this year. New York Times, JUUL replaces its CEO with a tobacco executive, September 25, 2019. Vaping in the boys' room, school grapple with surge in teens' use of e-cigarettes. JUUL is sued by school districts that say vaping is a dangerous drain on school resources. JUUL maybe be harder than quitting cigarettes. E-cigarettes giant JUUL suspends sells of several flavored vape pods. JUUL's meltdown causes tobacco giant Altria $4.5 billion. Altria Group said Thursday that it had devaluated its investment in the vaping company, JUUL Labs by $4.5 billion, a move that reflects deepening turmoil in the e-cigarette industry.

Speaker 1: But we do still see that the most common brand of e-cigarettes that are used by high school kids are JUULs. And the flavors that are most used are mint and menthol. JUULs has terminated the online sells of their fruity flavors, but the company still sells mint and menthol and tobacco pods online and in retail outlets and these are the flavors that are most used by kids. JUUL Labs and PAX Labs split into two companies in 2017. JUUL focused on e-cigarettes and PAX makes vaporizers and empty pods and focuses on the marijuana vaping business. Well, PAX vape pods are filled with cannabis leaves and oils and consumers have even figured out how they could hack into the pod and insert their own blends, and this creates a problem because 75% of EVALI patients have been tied to using products contain THC.

Speaker 1: So, what cost are we risking kids' lives at this point by using e-cigarettes and JUULs?

Speaker 3: Um, yeah. When, when Jack approached me with this interview, I was very hesitant at first at how it would uh, affect my, my college admissions and, and just how people perceive me through the internet and what- and what like whatever. But then like, like, he gave me a couple days to think about like, like why to do it and like in those next two days I just like I just looked around and like, like I see that like all of my friends, like all of my best friends are like addicted to nicotine.

Fletcher Faden: Yeah. What am I doing? Where does this go?

Fletcher Faden: Should I just clip it to my sweater?

Fletcher Faden: My name is Fletcher Faden and I'm (laughs) 16 years old. I'm 16 years old. Um, I think I started JUUL probably like end of sophomore year. So that'd be a- about like last year or last summer. And uh, yeah all the people in my grade started using it.

Speaker 5: Can you just talk, just talk regularly straight ahead?

Jack Solomon: My name is Jack Solomon. I'm 15 years old and I am JUUL user. We got them from an older kid and we, he was teaching me how to use it and stuff. And I got the hang of it like I was able to like inhale the smoke without coughing and get a nice head rush and I was like, "This thing is priceless. It's amazing." And I was like, "I gotta show all my friends what this thing is."

Fletcher Faden: There had been times in the past where I've been juuling during class and I juuled pretty much every moment where I wasn't in class.

Jack Solomon: I think that kids leaving school, desperately needing pods happens a lot and it shouldn't happen, but kids are very addicted to these e-cigarettes and need this stuff to be satisfied.

Fletcher Faden: People will go during class, people go to the bathroom, people go between classes, people go in the car while they're driving home, any, pretty much any moment where they can be um, away from uh, the eyes of parents. They'll just be juuling and, and like all day. Certain people will go through a

full pod a day, which is like about the same nicotine content as a pack of cigarettes.

Speaker 6: Yeah.

Margarida F.: Hi, my name is Margarida and I'm 14 years old and I use the JUUL. Some times during class, like I'll leave if I get really stressed like, it's kinda like my go-to. Like, I kina need it. It's just a part of my life now that like, I know it's bad, but I can't stop.

Sylvia Lazar: Yeah. I'm Sylvia and I'm 14 and I've been using the JUUL for nine months. When I'm doing my homework every night, I'll be writing and then all of a sudden I'll want a JUUL rip and I'll have my pencil in my right hand and my JUUL in my left.

Margarida F.: Some of my friends have tried using cigarettes and it's because they have been juuling because they're so used to juuling that they just think it's okay to use cigarettes.

Sylvia Lazar: If you banned um, most of the flavors like fruit flavors or just like food flavors, I think that not as many kids would try it 'cause it's not as like appealing.

Jack Solomon: If there were no flavors, kids would not be as attracted to these JUULs.

Fletcher Faden: Banning e-liquids would, would force a lot of kids to make the right choice. I, I for sure think that.

Speaker 3: This is a message to all people who think that personal freedoms trump public health. Um, you're gonna let kids get really sick if this continues. I guarantee the amount of nicotine that's going to these kids' system will result in something bad, that I just can't see how it won't and, and something's gotta happen soon. Something's gotta happen soon.

Speaker 1: So, basically the problem is and this now Ira Sachnoff, President of Peer Resource Training and Consulting in San Francisco, "Nobody's quite sure what to do with those wanting to quit, as this is all so new." So, the problem is we don't know how to work with teenagers and young kids to get off of their nicotine addiction. And the problem is we need to start banning these flavored e-cigarettes. Are we willing to take the chance with all vaping products? But big tobacco never quits. We now have Accord revisited. We have heat-not-burn products and these systems use actual tobacco, but they're not combusted, and the constituents are heated to 350-degree fahrenheit and aerosolized. The device is then removed and smoked like a real cigarette. 1994, Phillip Morris international introduced the IQOS. They spent $3 billion developing these products. It's a pen like electronic device. You can see its sleek battery case and an electronically controlled heating blade. It offers rolls of tobacco resembling small cigarettes called Heet sticks and market them under the Marlboro name. And here are some takeaways about IQOS. They're intended for exclusive use with the IQOS holder, the Heet sticks, the Heet sticks will use menthol flavors that have been shown to attract young users making cigarettes easier to smoke and harder to quit.

Speaker 1: IQOS is marketed as sophisticated, high-tech, and aspirational, raising concern about the appeal of new heat-not-burn tobacco products to youth and young adults. Research shows that IQOS may have lower levels of some intoxicants than cigarettes but can still expose users to higher levels of other intoxicants. IQOS could expose users to lower risks of some diseases, but higher risks of others. In April of 2019, the FDA said, while its decision "permits the tobacco products to be sold in the United States, it does not mean that these products are safe or FDA-approved." But, please let's not forget about the impact of cigarettes. There are seven million people in the world that die from tobacco related illness per year and every six seconds, someone's dying in the world from tobacco related use. It's calculated that one billion people will die in this century from tobacco use. And tobacco is the single greatest cause of disease in the United States and is responsible for 480,000 deaths annually. And 16 million Americans are living with smoking related illnesses. And you can make a difference, a brief three-minute conversation with a healthcare provider followed by a referral to cessation services can more than double the chances of quitting.

Speaker 1: Smoking quit lines are telephone-based resources and they're available in every state, the District of Columbia, Puerto Rico, and Guam. Internationally in Asian languages, these numbers are available. And smoking cessation resources could be web supported, text message, and there are different apps as well. There's a new truth initiative e-cigarette quit program for young t- young kids, and young adults and that's through text. So please stay in your comfort zone when you speak to your patients and feel free to refer them to the people who are experts at getting people to stop using tobacco products.

Speaker 1: To help patients stop smoking is priceless and you will feel and amazing sense of accomplishment. When you can get people to stop smoking or using these products, it affects them, it affects their families, their children and also their friends as well. Thank you.