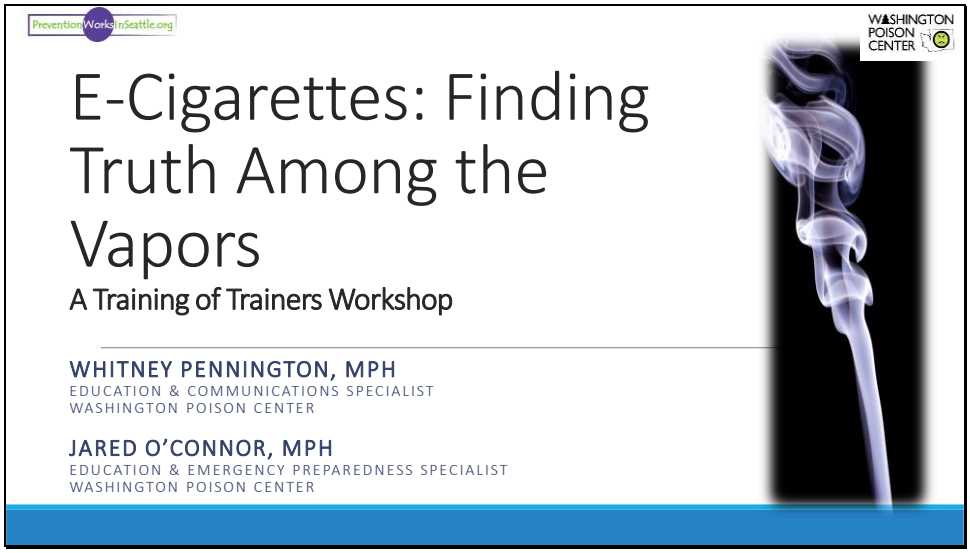
Slide 1

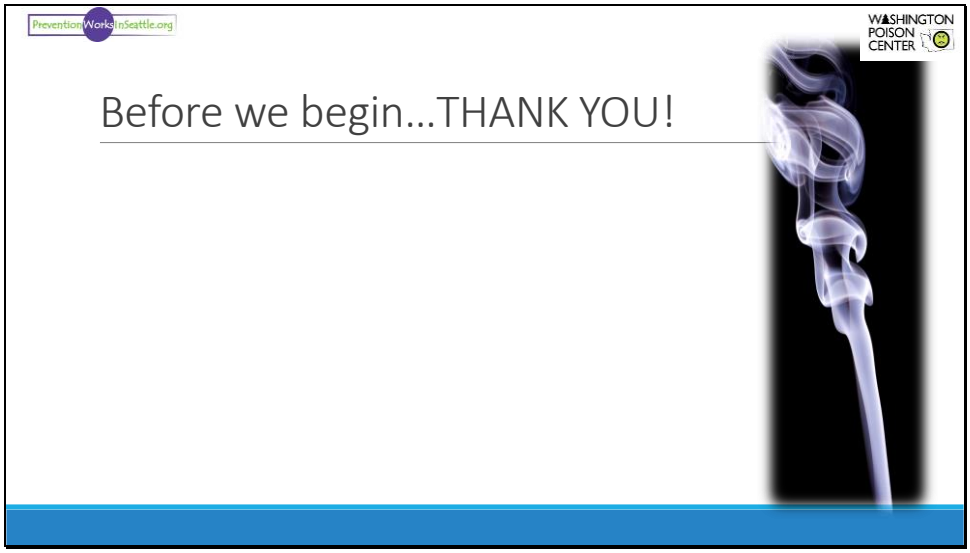


Adjust information as appropriate here to add presenter's information

Good (morning/afternoon/evening), and thank you so much for being here. My name is () from (), and I am excited for us to spend the next () minutes together talking about an important prevention issues that has really risen to the forefront over the last year or so.

For TOT: How many of you have gone through some kind of training of the trainer workshop? Great, then you know that over the next 2.5 hours, we're going to be going over a lot of information. To help, you have a copy of these slides with a space to take notes. Remember that the goal of a training of trainers workshops is that those in attendance have feel capable of communicating the part of this presentation that resonates most with you and not necessarily for you to internalize every single point, especially not on the first pass! As you prepare to share this information with your networks, you will have access to this presentation with my "script" or notes written in.

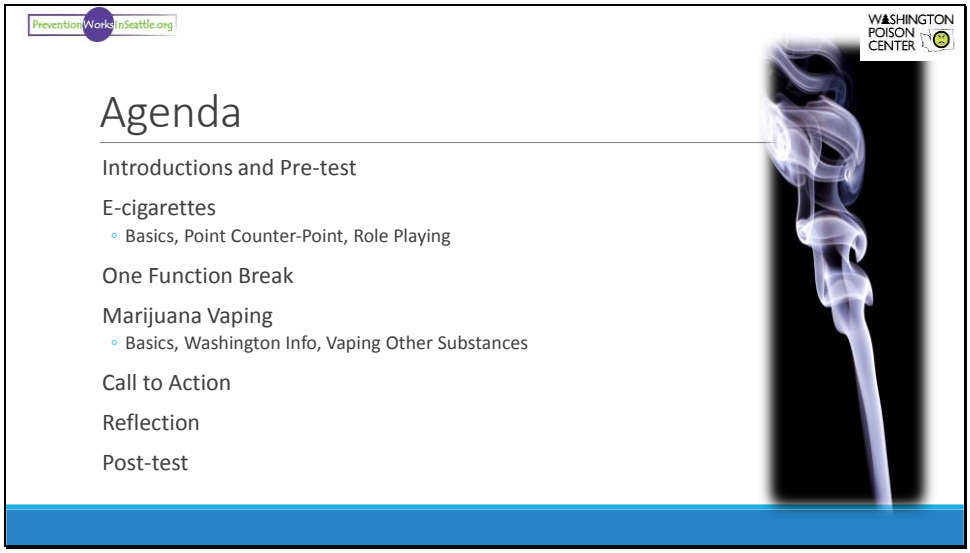
Slide 2



For Presentations HIDE SLIDE: You can offer a word of thanks during the opening slide

For TOT: Thank everyone for committing the time. Thank any other relevant groups (e.g. the person who invited you, the person providing space or snacks, etc)

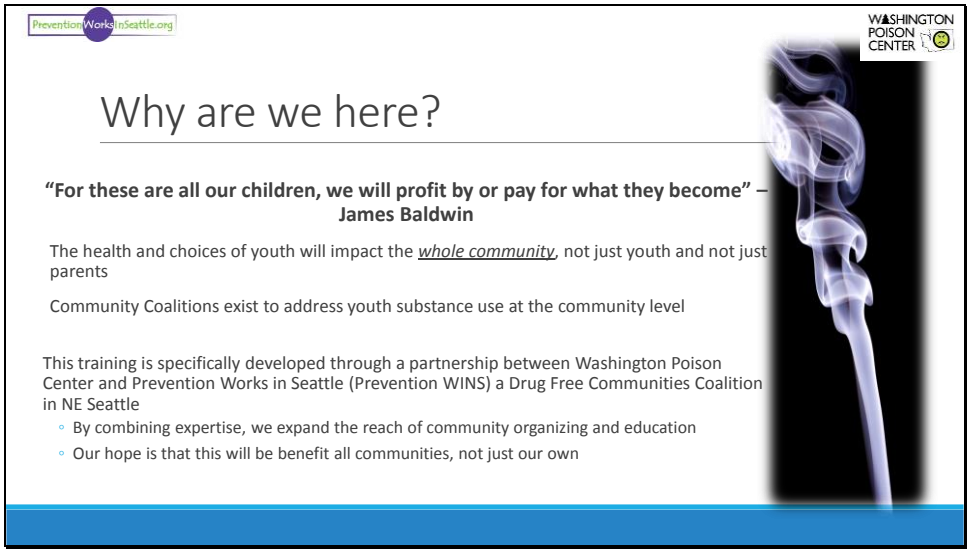
Slide 3



For Presentations: You may HIDE SLIDE or adjust to reflect what parts you will be speaking about

For TOT: We're going to start today by doing some introductions and getting to know one another. Then we will have a pre-test. The goal of the tests is to be able to gage how well we do at meeting out goals and objectives. That will helps us this first time especially. We will then go into the e-cigarette basics, talk about some of the contentious issues with e-cigarettes, talk about how to speak to those issues with current research, and then do some role playing at having conversations with this information. After a break, we will pick back up talking about vaping other substances, specifically marijuana. There isn't a whole lot of research here, but I will share what we do know. After that we will talk about what each of us can do about the issues and wrap up by reflecting –I personally find that taking the time to reflect helps to cement some of the information. Then we will finish with a post-test to see how well we did at meeting out goals and objectives.

Slide 4

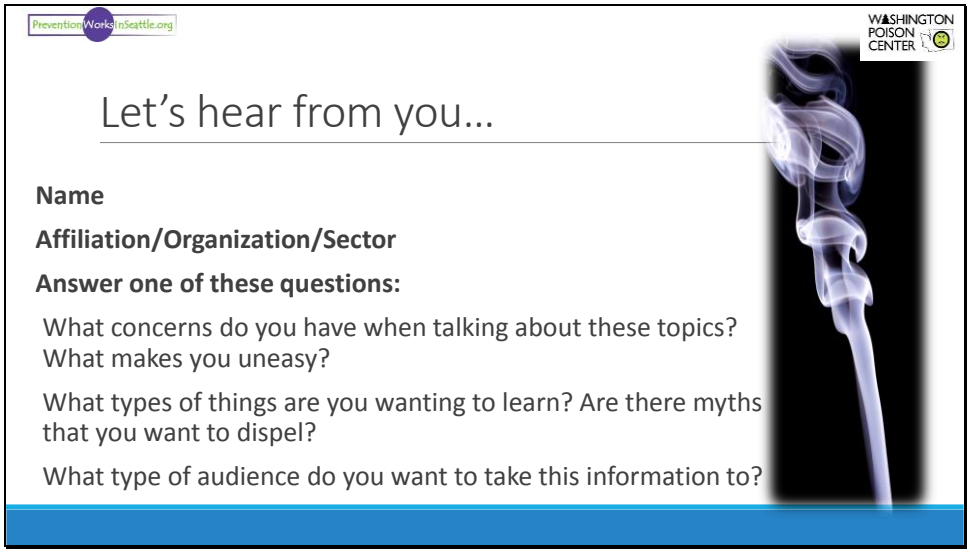


For ALL: Read the quote. You may even read it twice

What did James Baldwin mean by "we will profit by or pay for what they become"? I think he's speaking to relevance of community—that the actions and choices of youth impact everyone because we are all so interconnected. That we can't say youth issues are just for the schools or just for parents to deal with. Who/what the youth become, is also what we become—our collective future hangs in the balance. After all, this is why we're here: coaltions exists to address youth substance use and access at the community level involving people from all sectors—not just parents and schools

And one of the benefits of community level action is that we get to combine our expertise! Specifically, we can think about this training created out of the partnership and community work of Prevention WINS in NE Seattle and the Washington Poison Center who's physical location is in the specific NE Seattle area. By coming together we combine and share our expertise thus we can expand the reach of community organizing. Moreover, this particular issues is one that affects more than just our community, and we find that we can share beyond just NE Seattle.

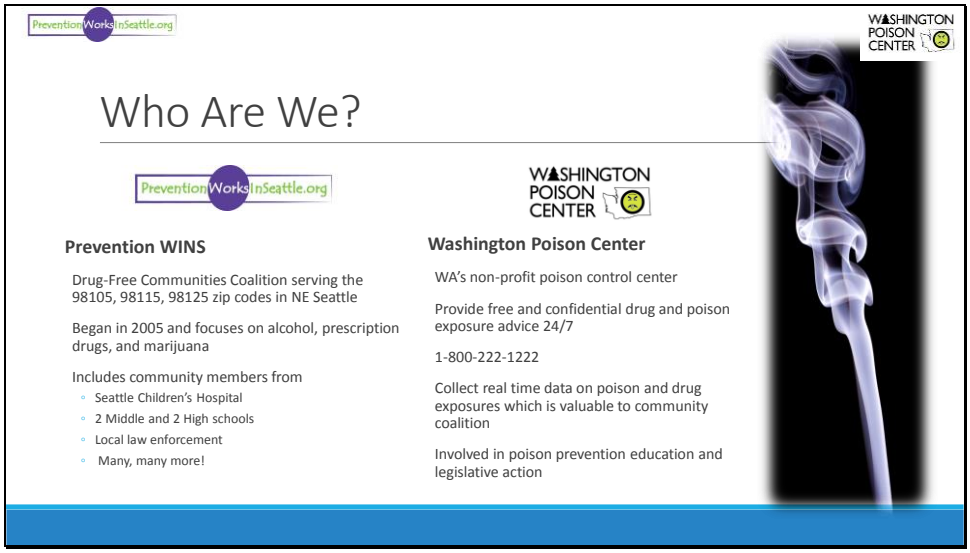
Slide 5



For Presentation: Depending on your setting, you may not have time for this activity and thus HIDE SLIDE. You will be responsible for determining if you have the time and the audience is of the appropriate size to take the time for everyone to speak

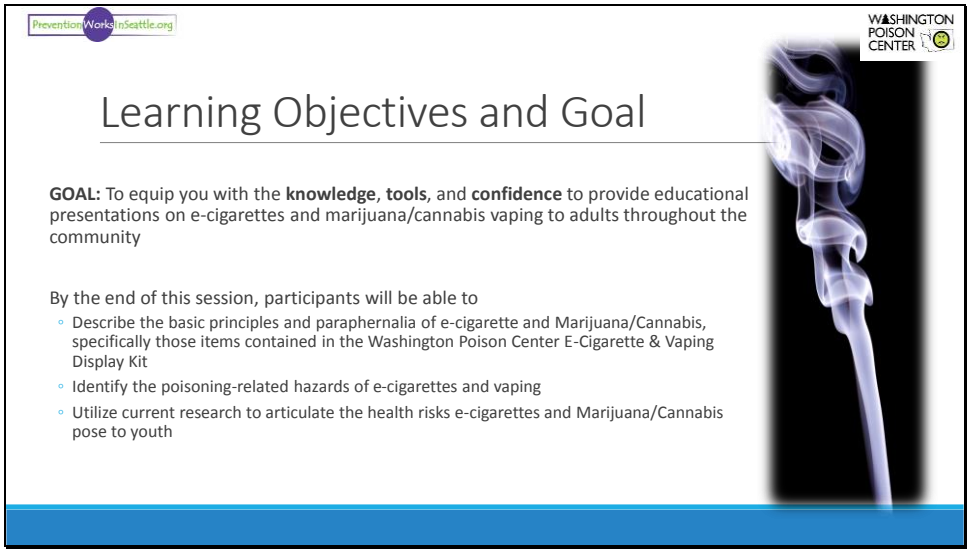
For TOT: I would like for us to do some introductions. Please take a minutes to say your name, and the organization or community sector you represent. Then I want you to answer one of these 3 questions. Read questions. These questions are two-fold, not only do they get us all introduced and talking, but it gives me a chance to hear about the specific concerns you have in this community and will shape some of my talking points. Let's start with…

Slide 6



Presentations: You can adjust to fill in the information about your coalitions

Slide 7

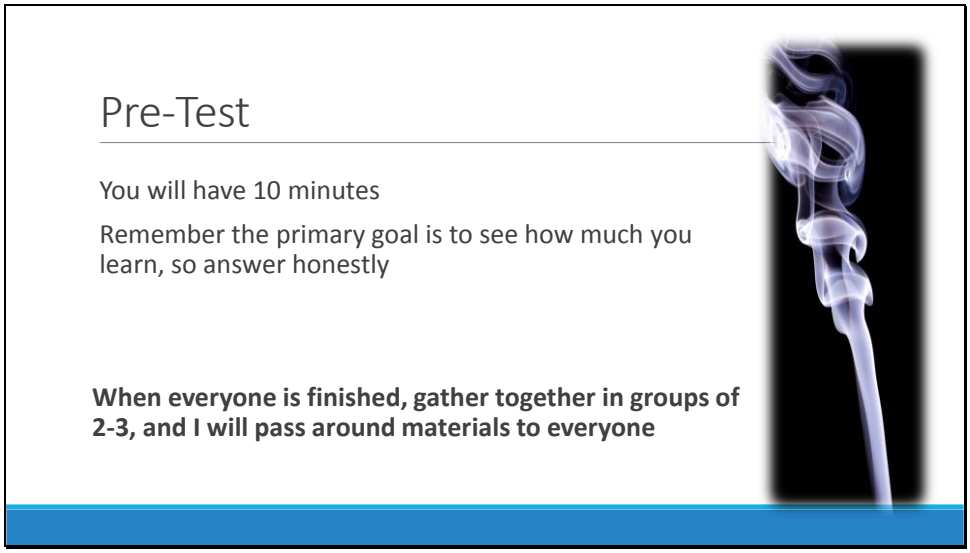


For PRESENTATIONS: HIDE this slide; you may also recreate to list the specific learning objectives of your presentation

For TOT: read/paraphrase the goals and learning objectives. Then add the caveat.

Caveat: There is a TON of information in this presentation. A lot. It took several people several months to bring all of this together. The expectation is not that you will be able to go out and give this 2 hour presentation verbatim tomorrow. We will all find particular things that resonate with us and the role that we have in the community. THOSE are the things that you will be able to talk about and those are the types of groups that you will want to connect with. Please do not feel daunted by the quantity of information about to come at you. In that vein, we want this to be more of a conversation and discussion—if you have questions or thoughts at any time, please speak up!

Slide 8



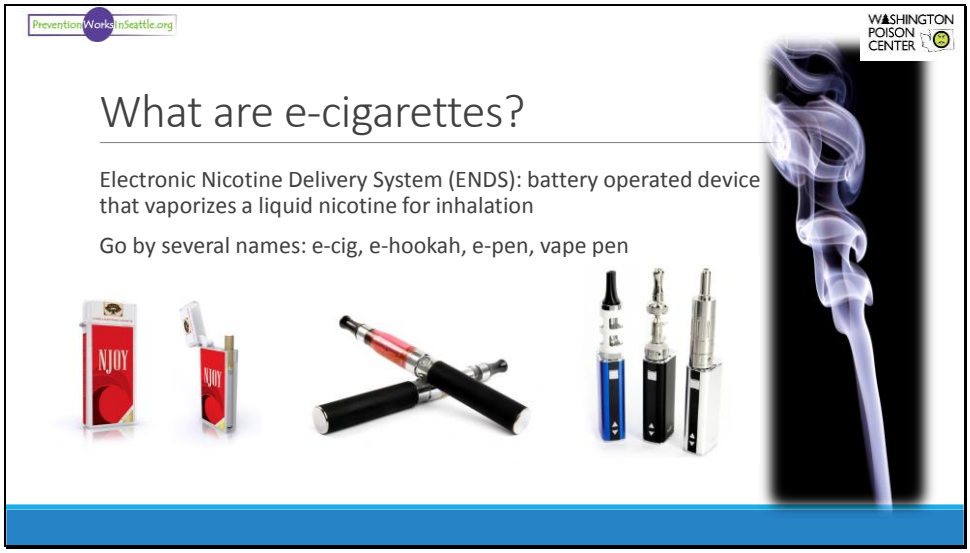
For Presentation: HIDE SLIDE

For TOT: Pass out pre-tests. While they are working on pre-tests, you can set-up the rest of your materials.

Slide 9

For Presentation AND TOT: Raise your hand if you've seen something about e-cigarettes in the media, popular press, social media, etc. Looks like all or almost all of us have. Concerns about e-cigs has really expanded in the media recently, especially the last 6 months or so. Issues that are trending include the discussion on if it's really safe, how does it impact kids, and how are other countries responding.

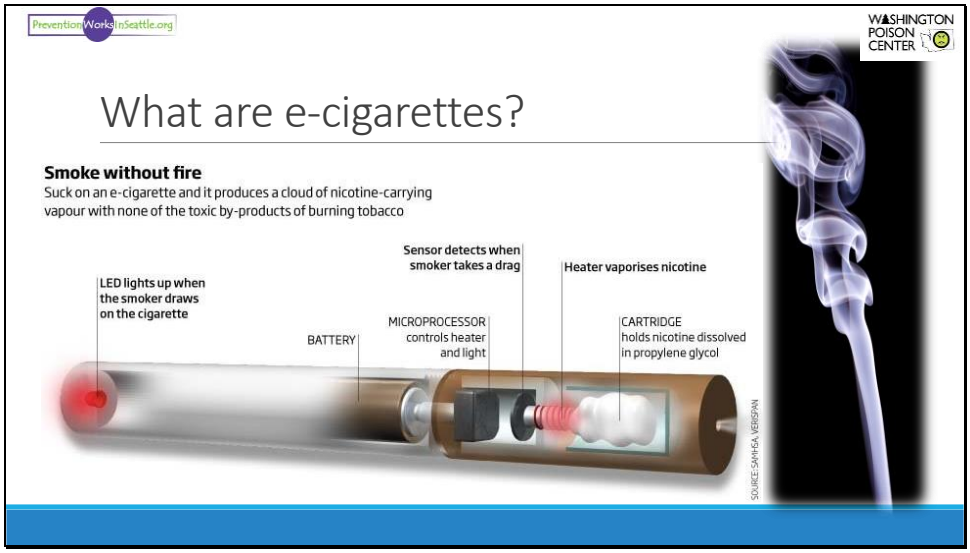
Slide 10



Read definition. This is in contrast to smoking where one lights the tobacco plant on fire, and as it burns in a combustion reaction, the nicotine is heated and released form the plant. It is inhaled along with the smoke and all the other chemicals we now know are contained within cigarettes. Vaping is an alternative where oils are inhaled without the use of a combustion reaction.

The actual devices go by several names: e-cigarettes, e-hookah, e-pen, vape pen, mod, tank, and on and on. Of note is that there are two ways to use the word vaping, and both will be used throughout this presentation. There is vaping, the process of vaporizing something, making it from a liquid into a gas, and then there is the act of vaping, or using one of these devices.

Slide 11



[Have them pick up their devices] Everyone should be able to hold one of some kind. In the next slide we will talk more about the differences between all of these different devices, but they all have the same basic functions: battery, atomizer, liquid cartridge. The battery is the power source and you can buy rechargeable and one-time use devices. It powers the atomizer, which is basically the heating element that both heats the liquid and help is become aerosolized droplets that can be inhaled. Then the cartridge holds the liquid nicotine solution.

Note that this schematic is from a manufacturer. Specifically read the caption and not that it is not necessarily true—we have some evidence, that we'll talk about later, that the vapor is not necessarily "with non of the toxic by-products" of burning tobacco.

Slide 12

Step through each type, and have the groups with each of these show their product as you go.

Minis or Ciglikes are disposable, one time use. Many times there is no ON switch and one would simple tag a drag, or breath in, and the unit will turn on. They have all the same parts as the schematic: a power source, heating element, and liquid cartridge, we usually just can't see if because they are covered to look like cigarettes. Some will even glow when one uses them to look more like a traditional cigarette. Something like the NJOY or the larger 700 puff version is going to cost $5-$10. Prompt: what are some of the hazards of this product? Potential answers: not very sturdy and thus could break open spilling liquid; no control over power to turn on and off, shameless cigarette look alike totally contrary to smoking cessation push; very concealable

Mid-size rechargeable: This is probably the most familiar looking. These have that refillable liquid cartridge that holds 3 milliliters of liquid nicotine. You can unscrew them (try it!). It has an "on" button, and usually has a "safety lock" whereby you have to hit it 3-5 times in succession to make it power up. This type of device varies in price. The ones you all have are about $20 from a convenience store. You can buy them for as low as $7 online, and they get more expensive in vape shops. Prompt: what are some of the hazards you see with this? Potential answers: refillable and thus can be filled with anything; one must handle the liquid; could break open; idea that it's "child safety locked" is foolish—consider that we have a tendency to make calls on cell phones when they are in our purses or pockets; fire hazard

Mod or Tank: these are essentially a battery box with a liquid cartridge screwed on top. These are more high powered, and offer more user adjustments. This type of thing typically requires

some user assembly. The idea behind having higher power is that better battery allows you to have a better quality heating element. With a better quality element, you get a better quality vapor—meaning that it's an even temperature and has an even, efficient delivery of nicotine. In that sense it has more of a feel of a traditional cigarette. These are much more costly—and are going to cost over $100. People working in vape shops have said that anyone who is serious about quitting cigarettes will need to use this kind of device. Using a pen will never feel the same and thus the person is more likely to seek out cigarettes to get the right nicotine buzz. Prompt: What are some of the hazards here? Potential answers: more power is a greater fire hazard; the dangers of working with an electrical unit and not really knowing what you're doing

Albuterol inhaler look alike! It is basically mid-size pen shrunken down and covered by the body of an inhaler. You would turn it on and inside the liquid is vaporized and then comes out of the mouth, where that red dot is. This product is called the Puffit Discrete vaporizer. Again this is more costly--$75 at the cheapest. What are some of the hazards here? Potential answers: dangers of confusing it for an actual inhaler; hazard in that it could get in to more places where is could be dangerous (e.g. on an airplane)

Slide 13

The devices also pose a fire hazard. The first video provide a great explanation of how the devices containing lithium ion batteries can explode when they come in contact with other metals. These stories are both of devices exploding in pockets, but they have causes serious damage when exploding in people's hands, faces, and cars.

Brooks Stroman: http://www.kiro7.com/news/local/kirkland-mans-vape-pen-battery-explodes/373773562

Kentucky Convenience Store: https://www.youtube.com/watch?v=k1LjSuq0rk8

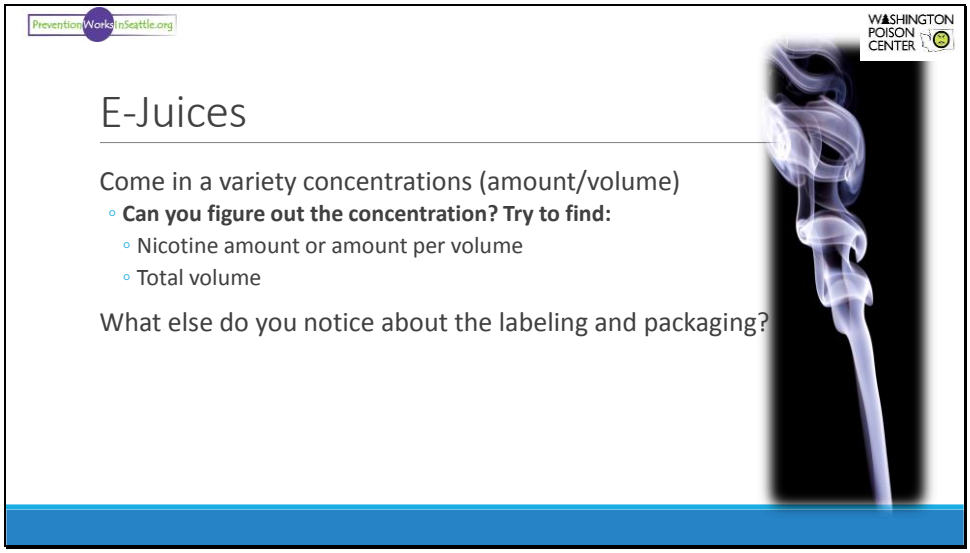
Slide 14

The liquid that is vaped generally contains 4 ingredients, and is called "juice", "e-juice", or "e-liquid".
-Nicotine: This essential oil is extracted from a plant source (most likely tobacco). It's an stimulant drug that gives one a buzz or focus similar to caffeine, but it is way more addictive. One use of nicotine is as a pesticide because it acts on the central nervous system. When exposed to too much, it's a central nervous system depressant meaning one gets really sleepy, breathing and heat rate slow, and some kids who've been exposed to high amounts are very lethargic and cannot be aroused. They become almost like limp rag dolls. Some case reports suggest that as little as a mouth full (~1 teaspoon) is enough of an e-liquid to be lethal to a child. One of the other things to consider with liquid nicotine is that it's an oil, which means it's good at entering the body through the skin. This is especially true in kids—there nice soft skin is actually much more porous than adults. A child can experience serious medical issues just by touching it.

Propylene glycol and vegetable glycerins are added to help disperse the vaporized nicotine into droplets that are easily inhaled and the keep it all well mixed together as a miscible, shelf stable liquid.

-Flavor: **What flavors do you guys have?** everything from grape to gummy bear to lemon drop martini and even chocolate. Cross-encouragement of other addictive behaviors. My co-workers went and actually vaped some of the "zero nicotine" flavors in their field research and say that it tastes exactly as it smells. Can you all smell them?

Slide 15



Go over how to read a label and interpret the amount of nicotine
Prompt audience to try to determine the amount of nicotine and total volume of liquid to come up with a concentration. Some bottles are marked and some are not. Here are the key concepts to highlight if not done so through discussion
--generally in nicotine concentration comes increments of 6: 0mg, 6mg, 12 mg, 18mg, etc
--bottles will generally just say XXmg nicotine without giving that in a volume unit; they really mean XXmg nicotine IN EVERY 1 MILLILITER OF LIQUID
--Bottles contain 15ml of liquid, so the total amount of nicotine in each bottle is generally much higher than the simple number listed on the label

Prompt: What are some of the other things about the labels that could also be of concern? Possible answers: cartoony nature, lack of warning labels, child resistance, smell, tiny print, etc; overall similarity in shape and style to candy

*Some may notice there seems to be a high-end and low-end product; typically there are "house juices" on the cheaper side. These are liquids that were diluted and flavored in the store made from concentrated liquid nicotine bought in large volumes. As opposed to those made and bottled by a specific producer or brand off site.

Slide 16

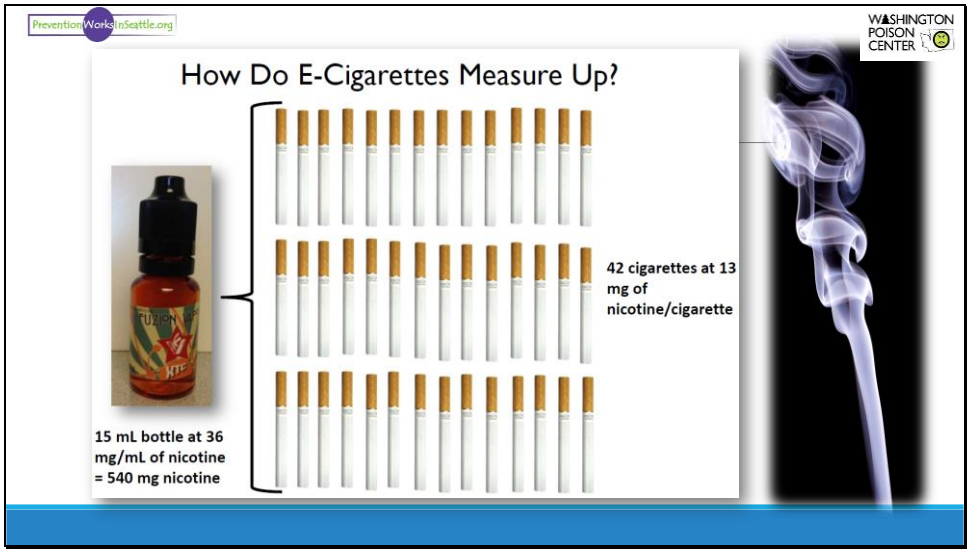
Start by describing the nicotine levels in a typical pack of cigarettes, then talk through the math comparing a low- and high-concentration e-liquid alternative. For reference, users say that to achieve the same feel as a cigarette, initially one will have to use a liquid with a concentration of 18-24mg/ml

Combustible cigarettes are anywhere between 8-20mg Nictoine per cigarette. When we do the math comparing a low-dose to a high-dose nictotine concentration, we can see that it is possible to purchase liquids where one bottle is the equivalent to nearly 2.5 boxes of cigarettes. So aside from the massive notice dose, what are some of the problems you see with this?

One issue is price: in WA, cigarettes are taxed at about 97% of their value, meaning half of what you pay is the price of the cigarette and the other is a tax to provide a barrier to entry. A box of cigarettes costs between $8-10 in Washington. How much do you think a bottle of juice costs? As low as $9! Some of the higher concentration of nicotine liquids are more expensive, but we're look at maybe $15. When we compare the cost with the nicotine amount, that means it's cheaper. In the high dose case we're getting 2.5 box of cigarettes for the price of 1.5.

Another thing to consider is time: initial studies on timing show that a single 3ml refillable cartridge could takes on average, 5 hours to vape. This means that in every 15ml bottle, there is somewhere around 25 hours worth of vaping time. This means one is actually spending more time breathing in the heated vapors, which have their own deleterious effects on constricting the airflow in our lungs.

Slide 17



This is just another example for you to see: that high dose liquid (36mg nicotine/ml) is equivalent to smoking 42 cigarettes. Also note the flavor of this liquid “XTC” or Ecstasy—a good example of the cross-promotion of unhealthy behaviors

Slide 18

Prompt: What do you remember about tobacco ads before they were banned? What strategies were used? Who was targeted? Allow discussion.

Currently there are no regulations on Ecig ads, especially where youth are concerned, where the master settlement of 1998 prohibited marketing especially appealing to youth. We're going to watch a few e-cig ads. Take notes or jot down words, images, reactions. We will watch all of these in succession and then have a discussion.

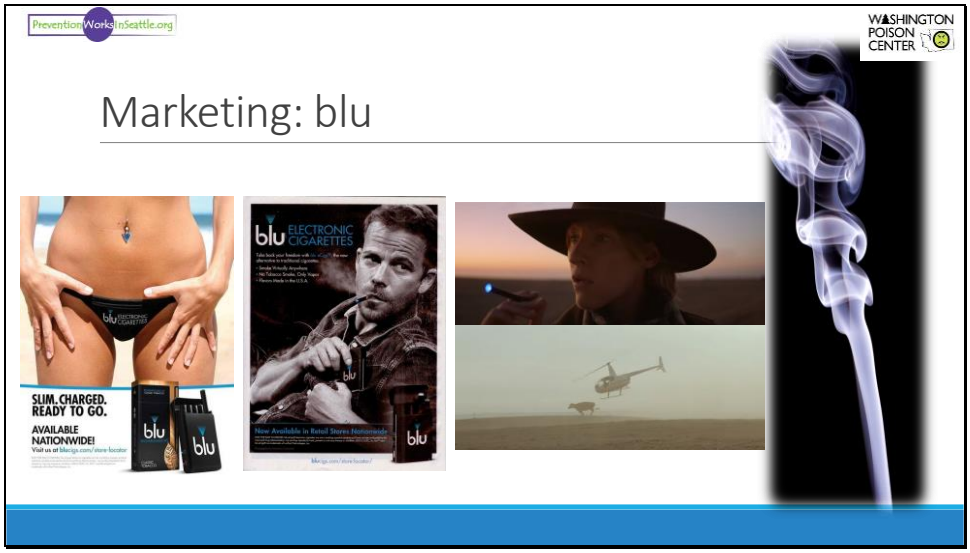
What did you notice? Who is the focus/target? What did the people look like? What "norms" were promoted? What ideas were being sold? Was is it creative/sneaky or pretty shameless?

Notes:
Vapor Couture ad is just so blatant
Venus Vapor: similarity to Marlboro man!
Vuse: "tobacco experts" Who is this? RJ Reynolds! RJ Reynolds has been fined to doing things like giving out free cigarettes at youth events and knowingly and willingly violating the Master Settlement Act that banned marketing towards youth ☺
Green Smoke: guy that says "never done this, but it's something I could get in to"

For those who have the desire to talk about how to talk about these issues with youth, this is one such entry point. Tobacco companies market towards youth and even have referred to them as "replacement smokers". They know they need youth to stay in business and are overt

about appealing to them. How does it make you feel to know that they just want you for profit? To know that they are trying to take advantage of you?

Slide 19



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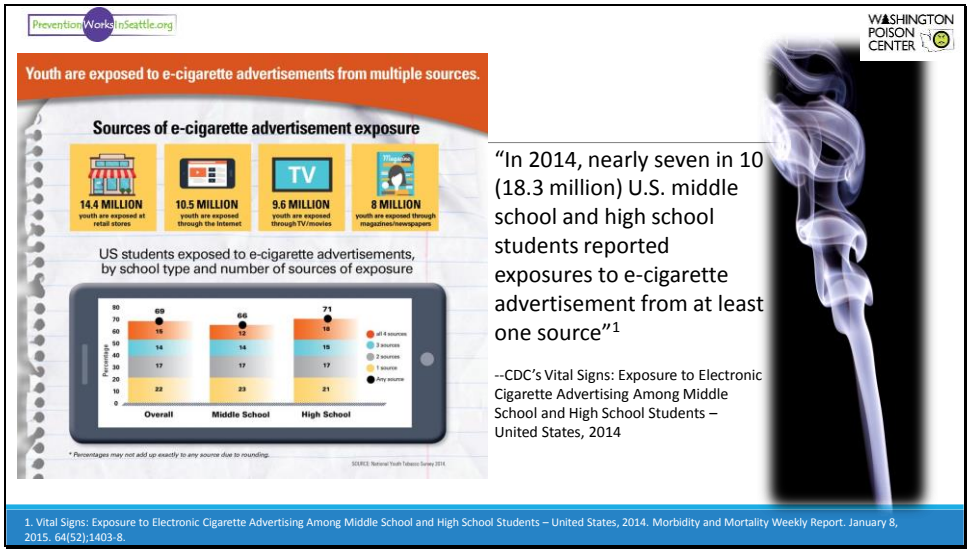
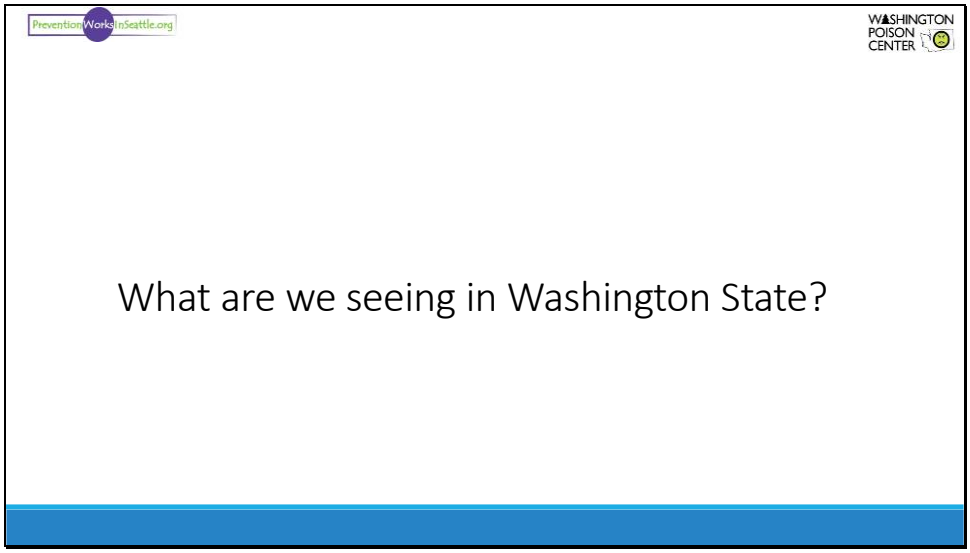
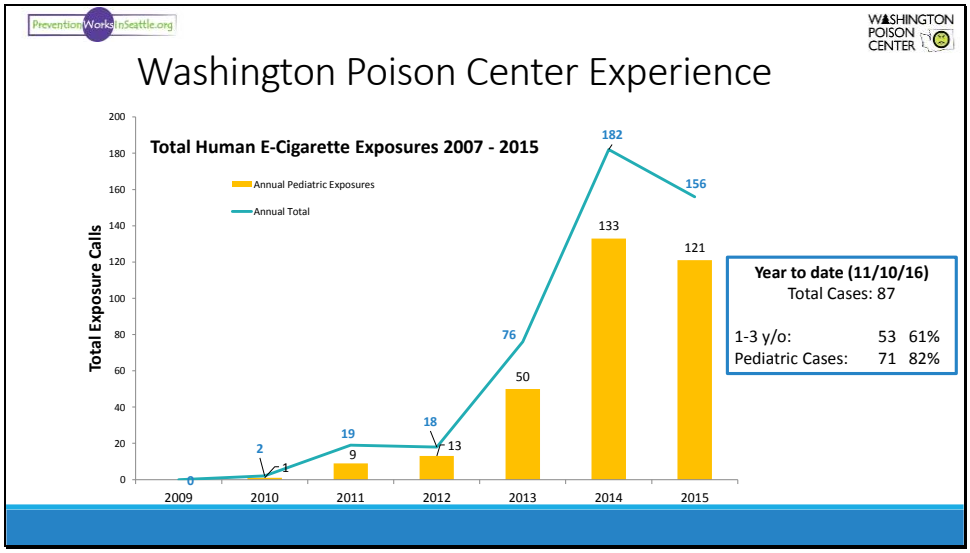

PreventionWorksInSeattle.org
Youth are exposed to e-cigarette advertisements from multiple sources.
Sources of e-cigarette advertisement exposure
14.4 MILLION
youth are exposed at retail stores
10.5 MILLION
youth are exposed through the Internet
TV
9.6 MILLION
youth are exposed through TV/movies
8 MILLION
youth are exposed through magazines/newspapers
US students exposed to e-cigarette advertisements, by school type and number of sources of exposure
Percentage
69
66
71
Overall
Middle School
High School
* Percentages may not add up exactly to any source due to rounding.
WASHINGTON POISON CENTER
"In 2014, nearly seven in 10 (18.3 million) U.S. middle school and high school students reported exposures to e-cigarette advertisement from at least one source"[1]
--CDC's Vital Signs: Exposure to Electronic Cigarette Advertising Among Middle School and High School Students – United States, 2014
1. Vital Signs: Exposure to Electronic Cigarette Advertising Among Middle School and High School Students – United States, 2014. Morbidity and Mortality Weekly Report. January 8, 2015. 64(52);1403-8.

Slide 21


PreventionWorksInSeattle.org
WASHINGTON POISON CENTER
What are we seeing in Washington State?

Slide 22

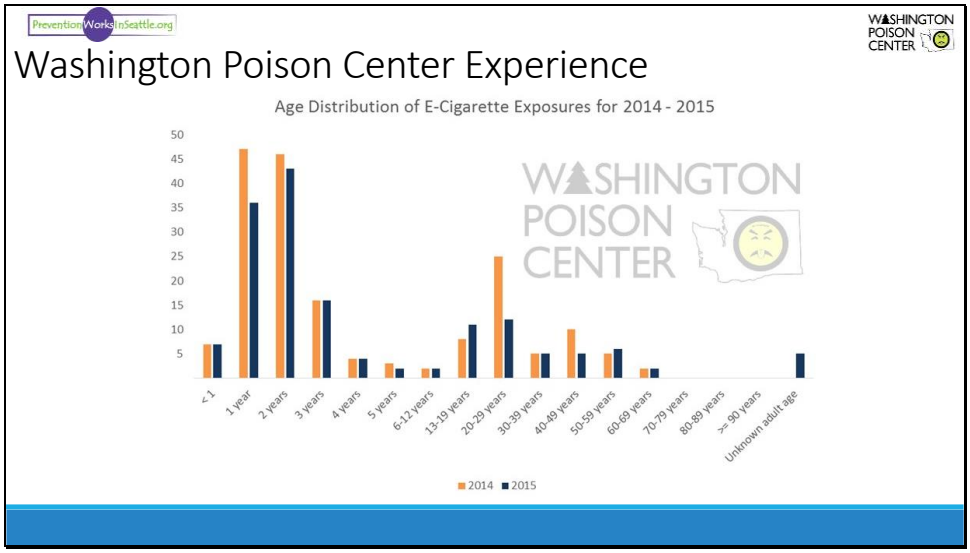


E-cigarette devices, as far as we know, were developed by a pharmacist in China around 2004. There are also thoughts they the technology was devised by the tobacco industry many, many years ago. Regardless, they hit the market in the US around 2010.

This is specific data from the Washington Poison Center. Washington Poison Center receives about 55,000 exposure related phone calls each year, in light of that, this green line that shows the total number of calls related to e-cigarette or liquid nicotine products over the last few years really doesn't seem like much. But the most striking thing is the jump from 76 in 2013 to 182 in 2014! The orange bar underneath show the number of those cases that occurred in children 19 and under. So as you can see, this is definitely a growing issue.

So far in 2016, the number are down – 79 to date as of late September. But still 80% of those are in kids, and a lot of them

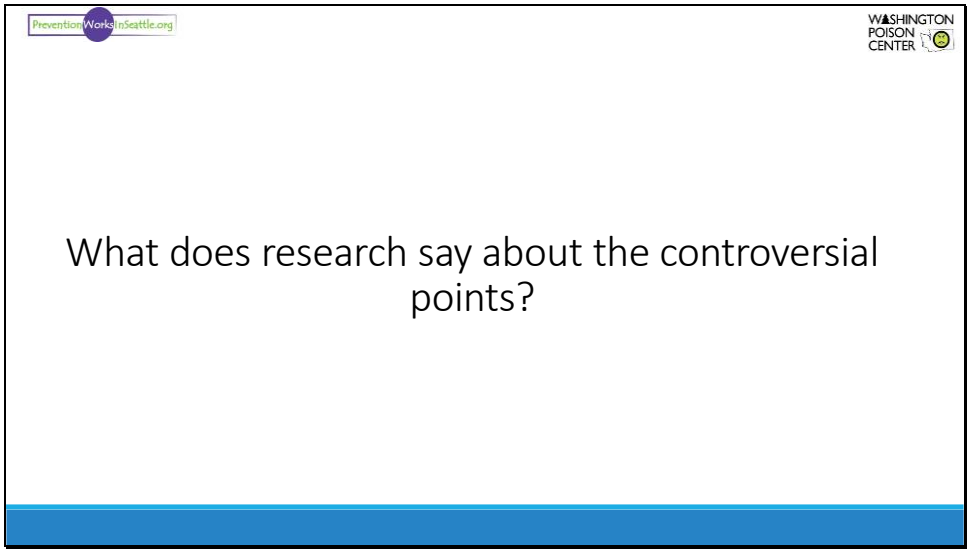
Slide 23



The chart on the left shows the breakdown of these calls by WA county. These are not incidence (standardized by population size) so you can see that more calls are coming from the more densely populated areas. It's also interesting to see Pierce Co. at the top of the list—they have a good number of stores and produces in their county as well as high rates of other tobacco use

The chart on the right shows the breakdown of the cases in children by a specific age group. Not surprisingly, the 1-3 year olds, the ones who are curious, touch and taste everything, are the most common. But the "Teens" are the next highest. It's not reflected in this data, but this past spring, spring 2015, the poison center was consulted on a cluster of cases from Spokane where a school administrator had discovered that students were selling drops of the liquid nicotine and putting it in each other's sodas/drinks.

Slide 24



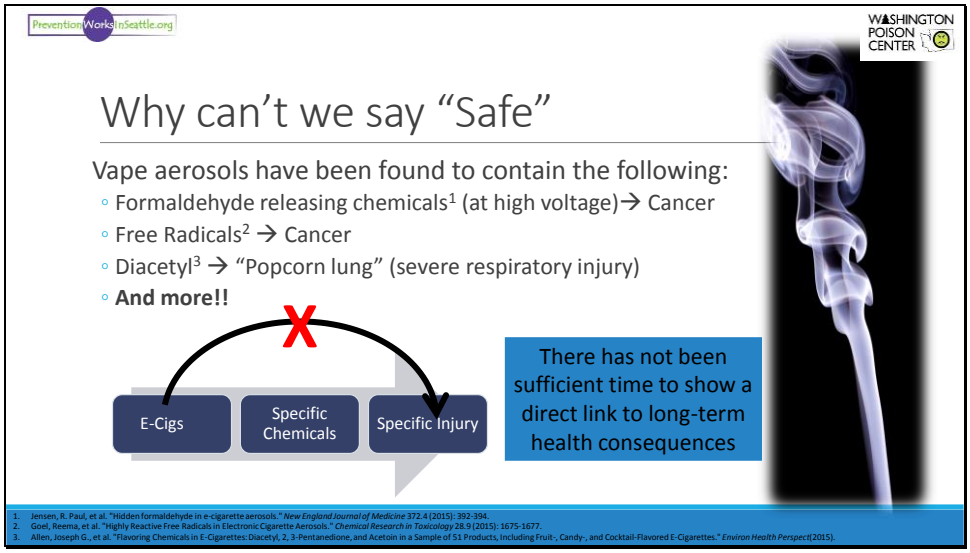
Now we're going to do a bit of a point, counter-point exercise. We're going to look at 4 specific "pro-vape" arguments and see what new research and information we have to address those issues. For the most part, this is data that comes from 2015. There is a LOT of data rolling out about these issues—things are literally coming out on a weekly basis.

Slide 25

This is the number one argument—using e-cigarettes is less harmful than cigarettes. And that lacking all other evidence, this is enough to say they are safe for widespread use. What do say to that? I'm always a fan of the argumentative approach where you give a concession right away. And so I would say cigarettes contain over 7000 chemicals, so vaping probably isn't as harmful as smoking just based on that sheer numbers game. BUT we do have some evidence to show that it is completely safe. Safer does not mean safe. In other words, cigarettes are one of the absolute worst things for us. We know this. We have done lots of work and major lawsuits have taken place to show us this. By saying they are safer, we may not be saying much—it doesn't take a lot to be safer than cigarettes.

Yes, this doesn't sit well with some people in that we don't go far enough to totally nix e-cigs; but the reality is for youth, they want the truth. And this is it.

Slide 26



So what sort of literature or research can we draw upon for this? Several things:

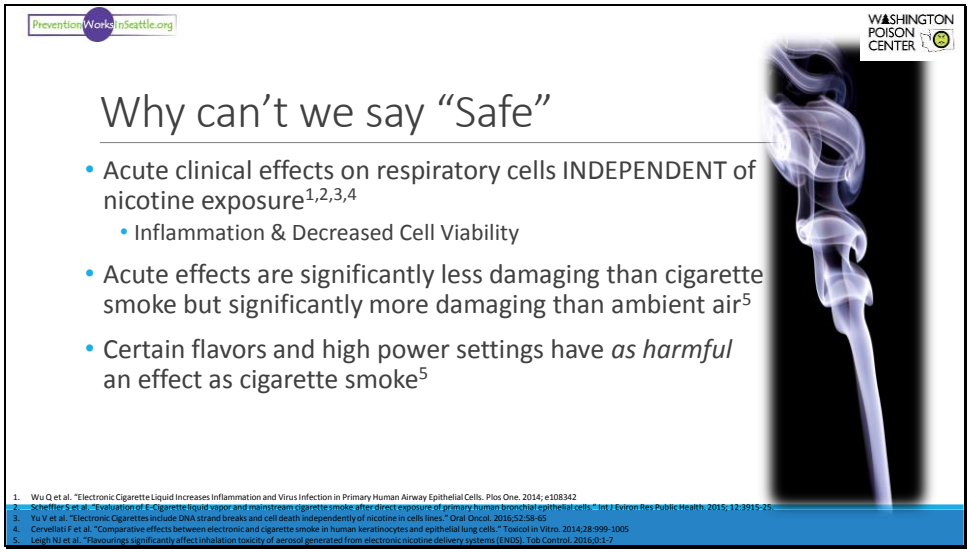
First: the flavoring agents and the propylene glycols used in the liquids, have not been sufficiently tested for their safety when inhaled. We have some data on what happens to the body when these substances are eaten and ingested, but not when we breathe them in.

Second there are now more and more papers, some of them as recent as early December 2015, that illucidate an intermediate link between e-cigs and long term injury by showing that e-cig vapors contain chemicals we know are associated with specific injuries in another setting. So for example, vapors have been found to contain formaldehyde releasing chemicals which have been proven carcinogens, free radicals which are a specific oxygen atom that cases cellular damage that leads to cancer, and most recently a chemical diacetyl that leads to bronchitis obliterans, or "popcorn lung", a form of irreversible lung damage.

Right now there hasn't been enough time for studies to establish a direct-link between e-cigarettes and any long-term health outcomes (positive or negative) that is to say, no one can say what e-cigarettes do to the body after years of use because they haven't been on the market that long. Think about the diagram: We know that e-cigs lead to exposures of a specific chemical. And we know that in other settings these specific chemicals have led to irreversible injury, even death. What we can't show right now is that e-cigs will lead to the same things, but we can make some assumptions using this pathway.

One note--the Formaldehyde study: these chemicals are released ONLY when the devices are used a very high voltage. Opponents state that nobody vapes at this temperature because it will taste bad (a state known as “dry vaping”); we will discuss later where this might be relevant

Slide 27



So what sort of literature or research can we draw upon for this? Several things:

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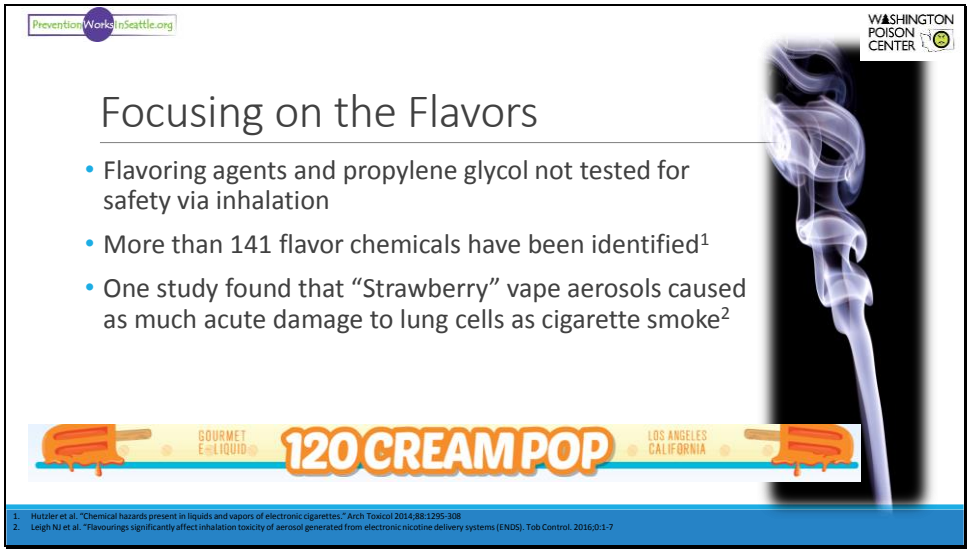

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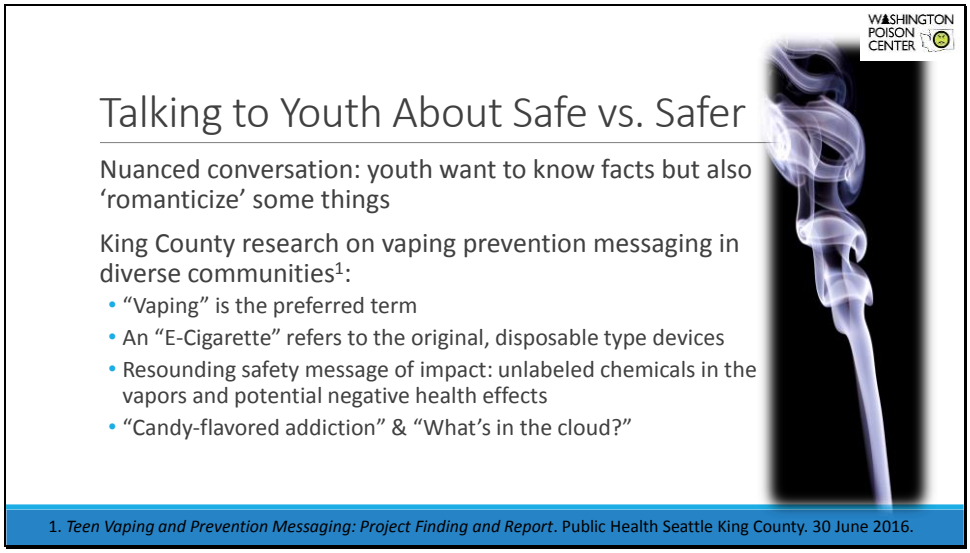
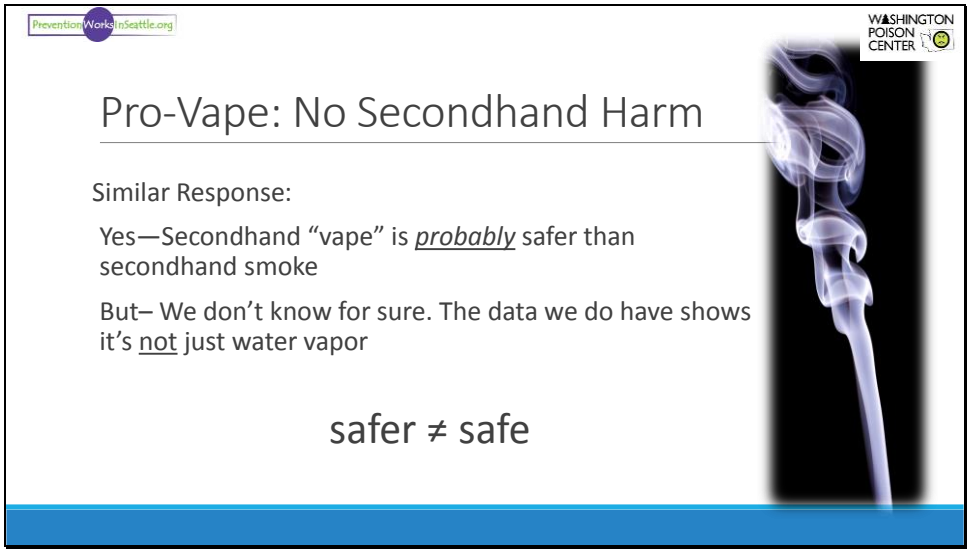


For a copy of King County's report, please contact Lindsey Greto with Public Health Seattle King County at Lindsey.Greto@kingcounty.gov or 206-263-7886

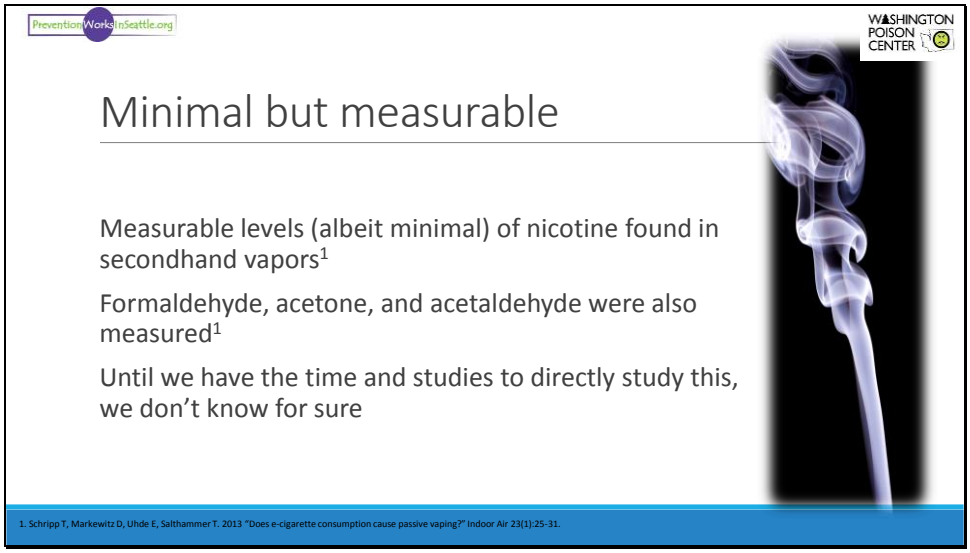
Slide 31



A similar argument is that there is not second-hand harm from exposure to vapors as there is for second-hand smoke. We know that those who have been exposed to cigarette smoke second-hand suffer from the same injuries and deaths as smokers themselves. Think back to our schematic of a vape pen that said that you can enjoy the vapors without the harms from smoking, and as we just discussed this isn't really true.

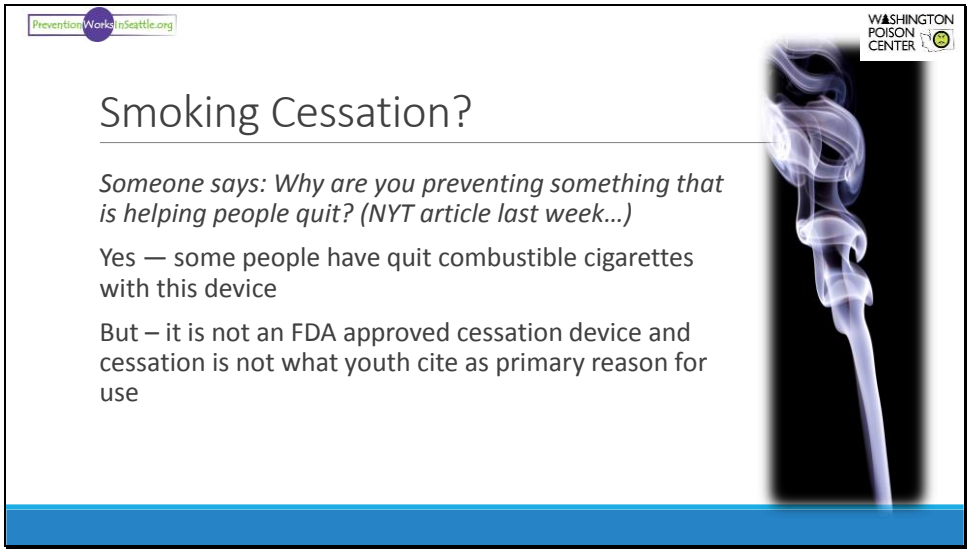
We're in a similar situation when we think about the second-hand harms. Since cigarettes are so bad, it's probably also true that second-hand vape exposure is not as bad as second-hand smoke exposure. We don't know for sure, but we have some evidence that shows it's more than just water vapor. Again, safer does not mean safe

Slide 32



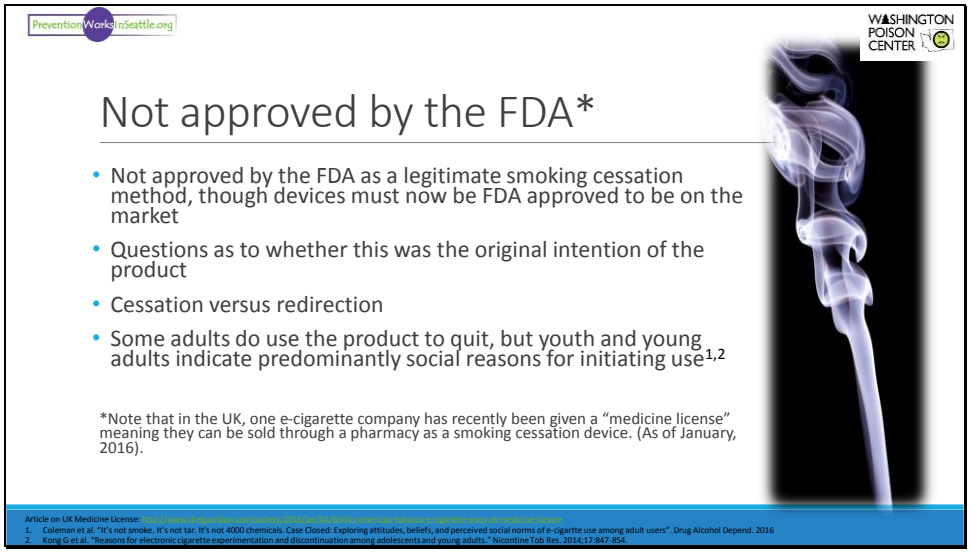
Specifically this study looked at what was in second hand vapors. And they found not only nicotine, but formaldehyde, acetone, and acetaladehyde; these are all things that also exist in cigarette smoke. Yes, they are present in much smaller amounts, but there are there and until we've had the time to see the long-terms effects, we can't say that it's in a "safe" amount

Slide 33



Vaping community touts vaping as a smoking cessation method. Anecdotal evidence suggests people have decreased or given up combustible cigarettes with help from e-cigarette devices. However, in order to be a 'smoking cessation device' you do have to go through a process and be approved by the FDA. E-cigarettes have not been approved.

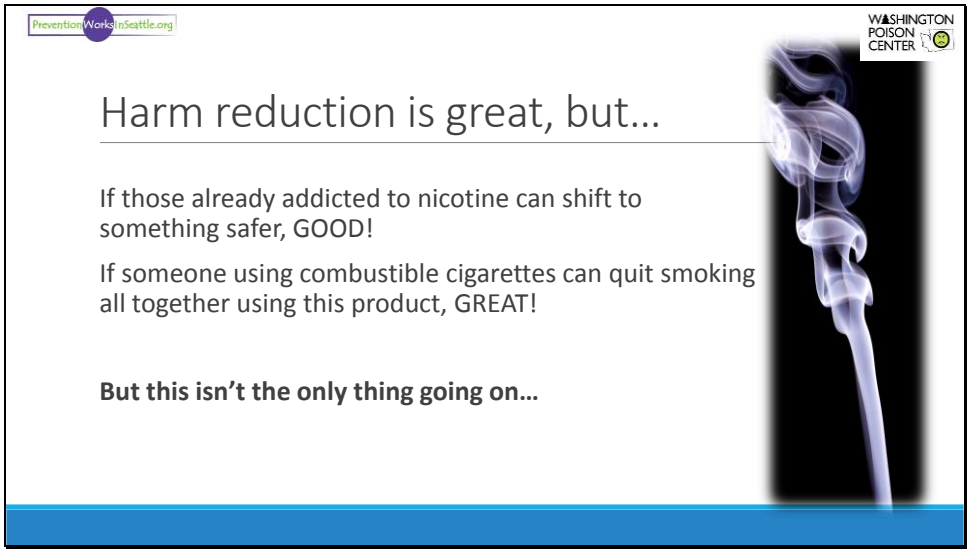
Slide 34



Again, the FDA has not approved the device as smoking cessation. There are questions as to whether the original inventor really created and intended for the device to be for quitting smoking, and most of the time people are shifting from one from of nicotine to another, and really, one from of tobacco to another since tobacco is most likely the source of the liquid nicotine. Not to mention now there are stealth means of being "discrete"

Guardian article on medicine license for e-cigs in the UK: http://www.theguardian.com/society/2016/jan/04/british-american-tobacco-e-cigarette-wins-uk-medicine-licence

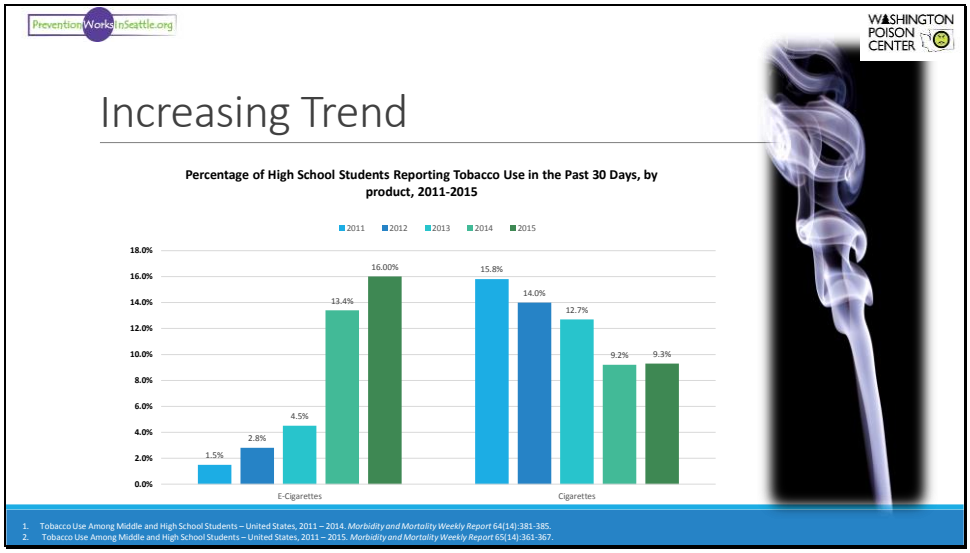
Slide 35



In certain settings, even as an unapproved smoking cessation device, the idea of a "healthier" alternative to communities that are heavily embroiled in tobacco use is appealing. These devices most likely can serve a purpose to reduce the harms caused by smoking in areas where asking someone to quit will not happen. So if people can switch to something else, good. If people can quit all together, great! But if this was the case, the only thing happening, we wouldn't be here! I'm not so sure there are too many groups out there having 2.5 hour long trainings on nicotine gum…

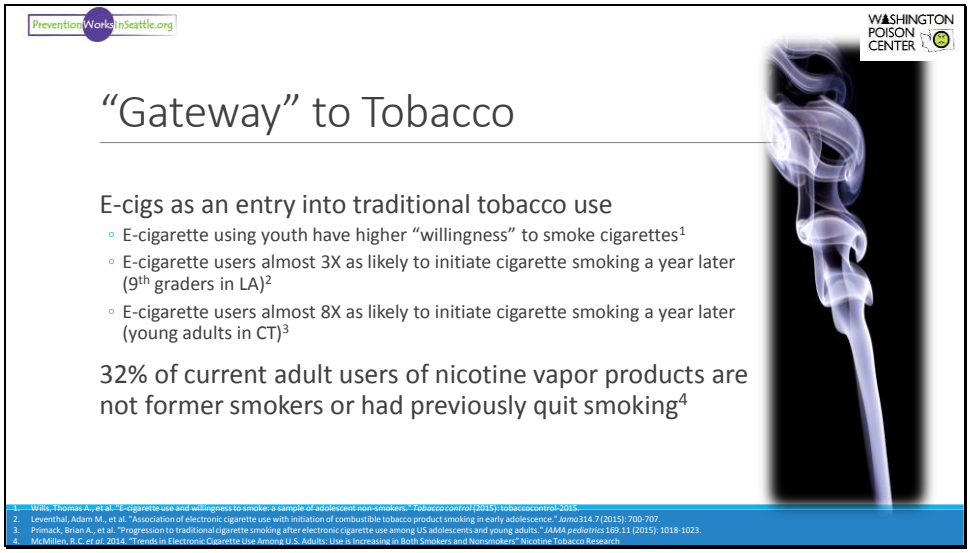
So what else is going on?

Slide 36



We have an increasing trend of people using these products, specifically use. Read the quote. You can see from the graph, on the left is the increase in use of e-cigs while on the left is the decrease in smoking. And everyone's big question is: are the two linked? Will the increase in e-cigs lead to an increase in the use of other tobacco products, something many people have worked so hard to reduce.

Slide 37



There is now evidence that the answer is "yes", that e-cigarettes are a gateway to initiation of other tobacco products, specifically in youth. There are a couple ways of estimating this.

One is by assessing one's willingness to smoke—being less like to give a definite no to questions about the likelihood one would smoke in the future or smoke if friend or influences smoked. Many years of work has gone into studies that show that this holds true for cigarettes, those with initial higher willingness scores are more likely to initiate smoking when followed over time. New research shows that youth who use e-cigarettes have higher willingness scores to use other forms of tobacco.

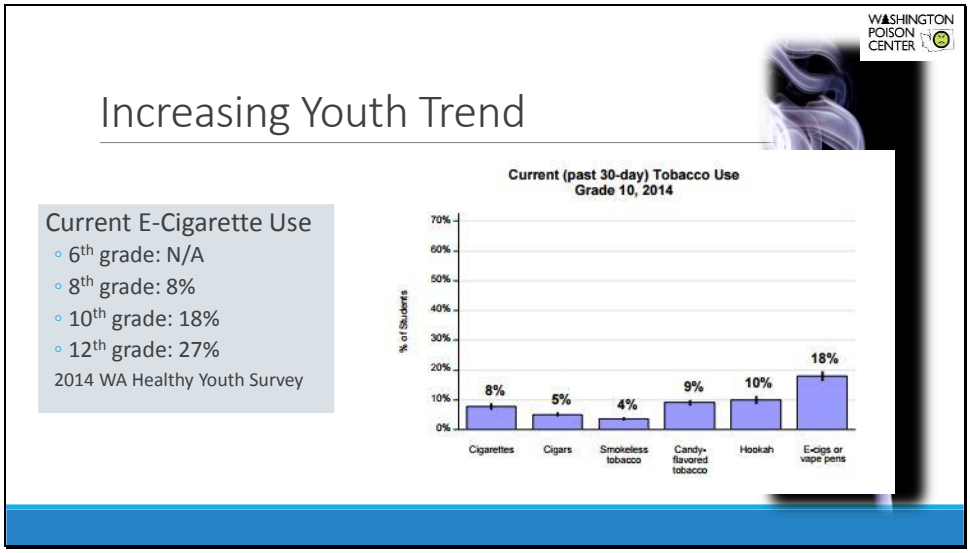
Two newer studies have actually followed e-cig and non e-cig using high schoolers for a year. In one study, those using e-cigs were 3x more likely than their non e-cig using peers to have started using some other form of tobacco over the course of that year and in the other study they were 8x more likely to initiate tobacco use.

NOTES:
The Leventhal study took place in Los Angeles, CA with 9th graders from many backgrounds. Their analysis controls for the various other influencing factors on tobacco use (parental use, socio-economic status, etc).

The Primack study took place in Connecticut and the initial group of students were those who were identified as not having any outside risk-factors for smoking initiation. This group also had

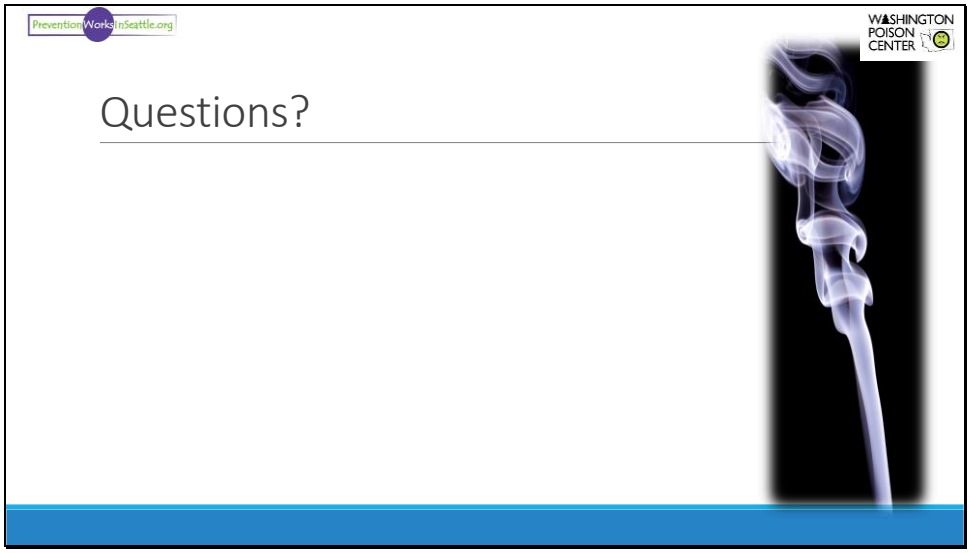
a VERY small sample size of e-cig users at the start, so the results (8x more likely) may not be very robust. It is not overly generalizable given the population they started with, especially to low-income communities.

Slide 38

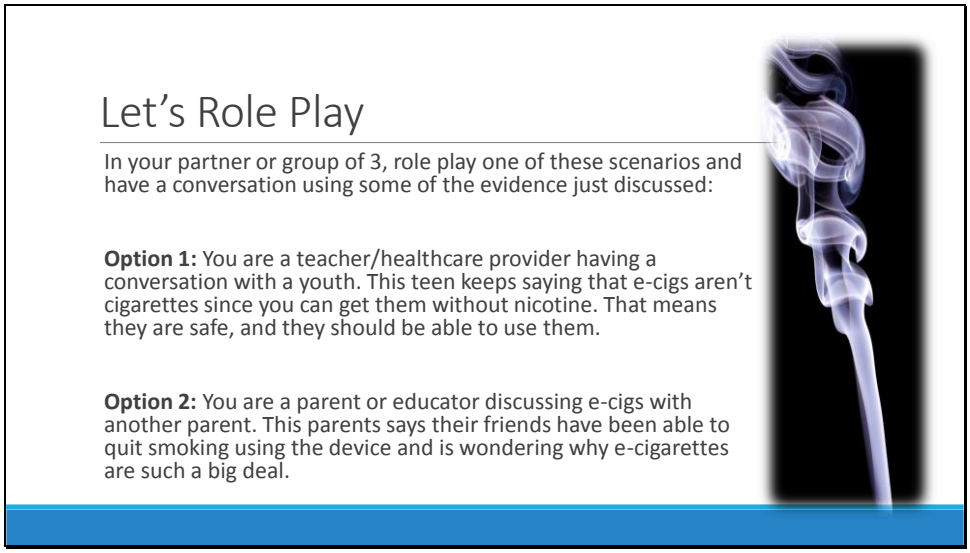


Is this happening here? We don't know. But this is data from the 2014 Washington Healthy Youth Survey, that for the first time in 2014 asked students about their use of e-cigarettes. The graph shows the answer for 10th graders—a somewhat ominous 18% had used a device in the last 30 days. And for each grade level (except 6th grade), the incidence of vaping was higher than the incidence of smoking traditional cigarettes. It will be interesting to see over the next few years if cigarette use increases as we would expect it to in light of this gateway research.

Slide 39

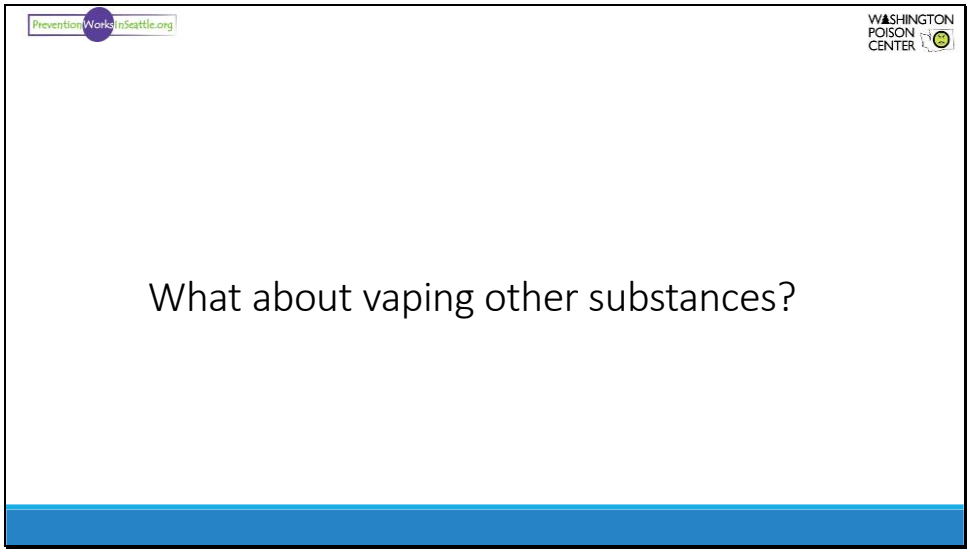

PreventionWorksInSeattle.org
WASHINGTON POISON CENTER
Questions?

Slide 40



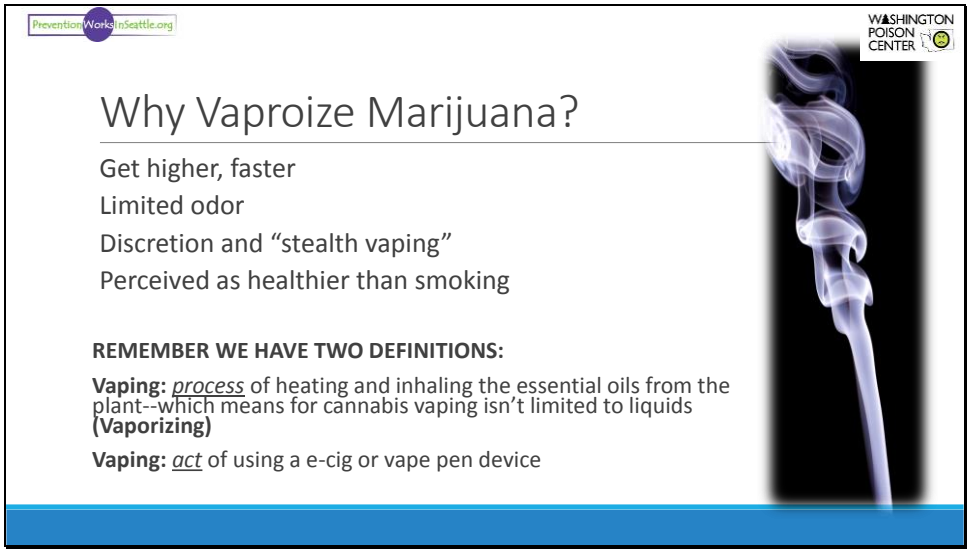
One of you bring up the pro-vape points (e.g. it's safer, less second-hand harm, smoking cessations, etc) while the other uses this research or data to redirect.

Slide 41



With the advent of vaping devices, there has been a lot of talk about what else one can do with these devices. We're going to spend a little time talking about vaping other substances, mostly marijuana.

Slide 42



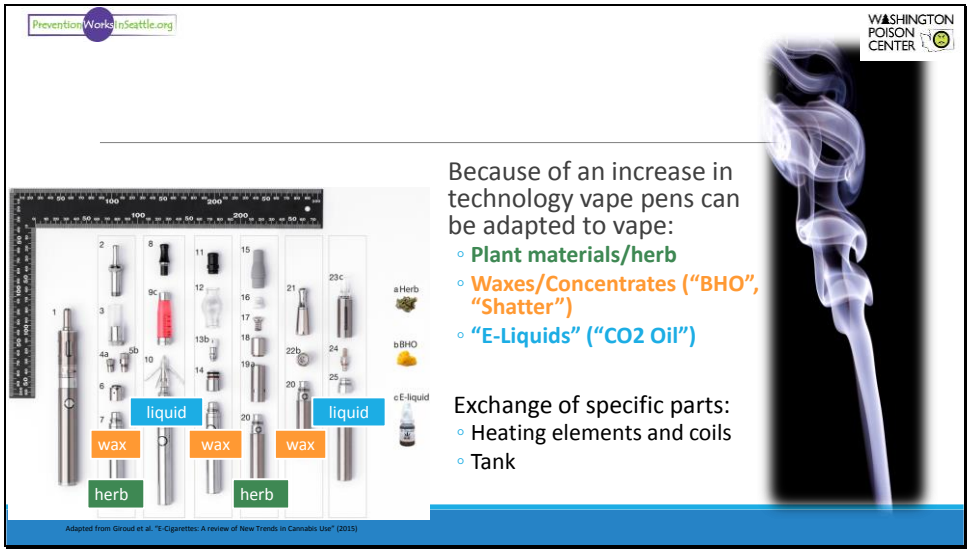
Why vape marijuana? Most of these perceived benefits are compared with smoking marijuana.

First of all, the form of marijuana that is vaped is very concentrated, so by vaping, one can get higher, faster. Vaping delivers a higher concentration of THC for each "hit". Also, if this form that is vaped is processed correctly, there will not be the same skunky odor of smoking. There is also the advantage of discretion. Similar to many of the ways we indicated that using e-cigs can be discrete, the need to be discrete when using marijuana seems to be more pronounced – probably because of laws and culture. "Stealth vaping" is not just the idea that you can hide these small devices but that there seems to be a correlation between the amount of time one holds his or her breath after taking a hit, and the amount of visible vapors exhaled. So, if I can take a hit and hold my breath long enough, when I finally breathe out, there will be no visible exhale.

As with using e-cigs, vaping marijuana is also perceived to be "healthier" because one is avoiding inhaling the smoke and other particles released during a combustion reaction when say smoking a joint.

In this section I'm going to be using both definitions of "vaping" so just a reminder: we can talk about the process of heating and releasing essential oils from the plant (vaporizing) and also use vaping to refer to the act of using a "vaporizer". A note here that the essential oils from marijuana are a little different than nicotine, so people have been found to vape more than just liquids.

Slide 43



The majority of the information in this section comes from a paper by authors in Switzerland who did a lot of combing of the internet to see what the trends are in vaping marijuana. Included in that is this graphic, which shows the different adaptations now available to your standard re-chargeable mid-size vape pen to make it suitable for vaping three different kinds of marijuana: plant materials, waxes/concentrates, and e-liquids. Prompt: Look at the pens we have and the parts on this graphic. What is the same and different? Unscrew yours and look at the parts

Slide 44

To get more acquainted with the “vapable” marijuana substances, we’re going to watch a video. This is a video by Leafly, an company that is the “yelp” of marijuana. They review stores but also put out a lot of promotional and informational content. While it is in the “pro-cannabis” camp, the content is still accurate. We’re going to watch this video. It is dense, especially if a lot of this is new, so we will debrief after watching it.

Watch whole video, and then us a flipchart or discuss what was talked about for each concentrate:

Kief: dry-sift/pollen; this is the pollen from the cannabis flowers, which is where the vast majority of the THC/CBD (psychoactive ingredients) is found; freezing the plant with dry ice makes it easier to remove this pollen

Hash: oldest forms of concentrate; compressed pollen (kief); high quality is called bubble-melt because it melts and disappears as vaporized

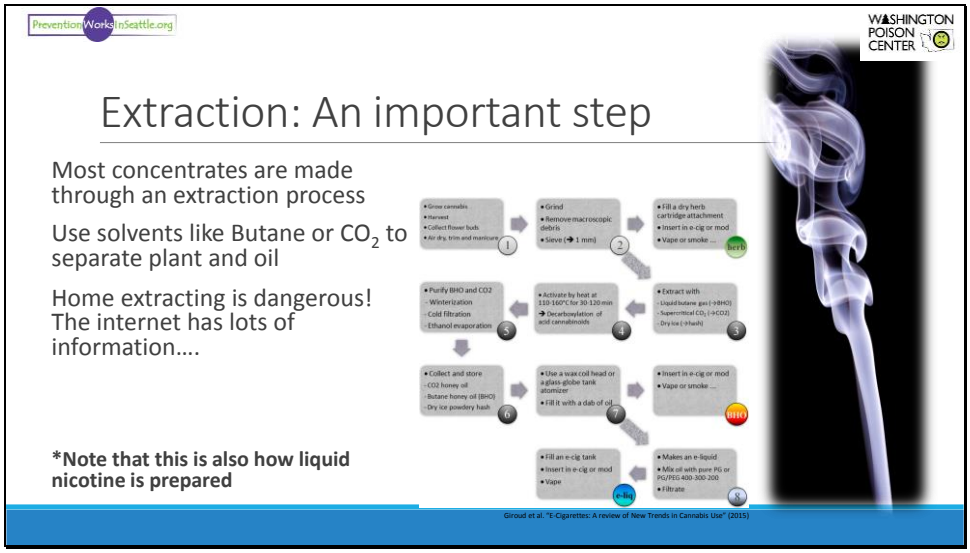
Hash Oil: the essential oils from the plant removed; most widely used way of removing the oil from the plant materials is to use the solvent butane, hence giving the name butane hash oil (BHO); sticky or oily at room temperature (think about butter or coconut oil); can also be brittle like candy; has names like honeycomb or shatter

CO2 Oil: removes the essential oils using a “super critical fluid extraction” (CO2); leaves an amber oil often used as an “e-liquid”; thought to be more safe than BHO

CBD Oil and RSO: specifically looking at removing the CBD cannabinoids, this is the cannabinoid thought of to have therapeutic properties instead of psychoactive ones; this becomes more tar-like; **note that you need to start with a more CDB rich strain

Tinctures: cannabis medicine; alcohol extraction to pull out CBD; add drops under the tongue.

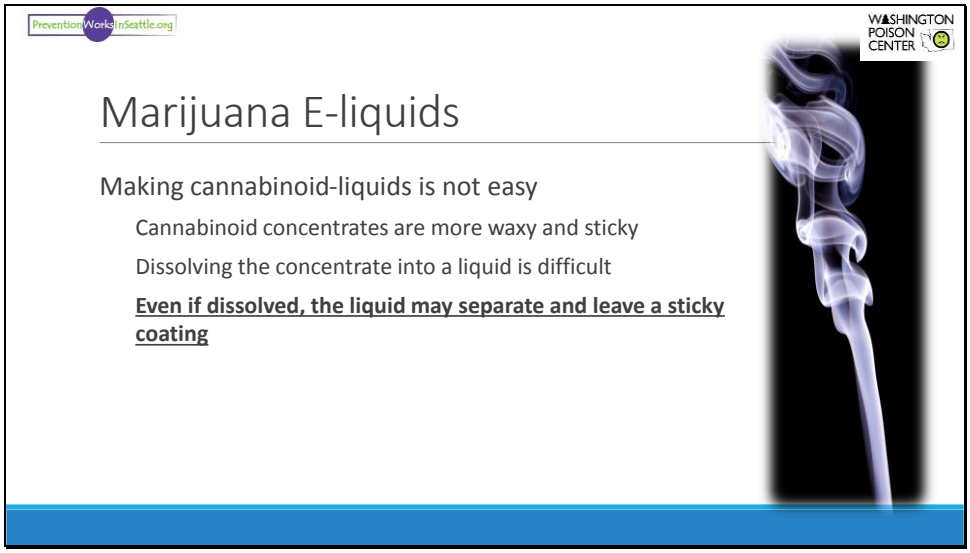
Slide 45



This is how we get from a grown plant to the “vaped” substances. It’s an involved process. This is just looking at the 30,000 foot level

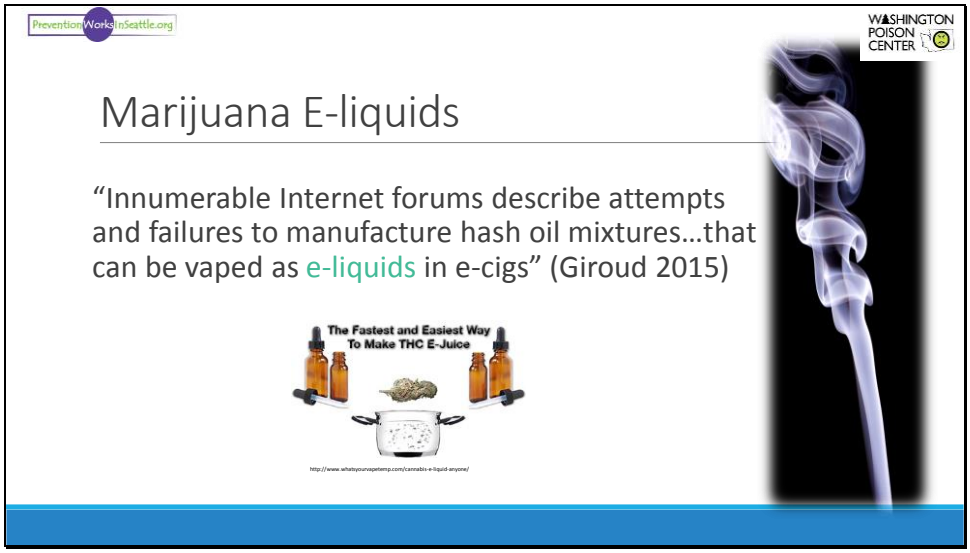
Broadly speaking we have herb/plant materials that go through a multi-step process using heat , filtration, and other compounds (like butane or CO2) to remove the oil from the plant materials. This leaves us with a substance that is really just the active ingredients (psychoactive or medicinal). This is where things get dangerous, especially if using butane, but there are videos and information on the internet on doing it at home. Note that this is also how you would get the nicotine out of the tobacco plant too

Slide 46



So what does vaping these substances actually entail? Starting off with e-liquids. One way to make a liquid is to take the butane hash oil (BHO) and try to mix it into a liquid to dissolve it. The problem is that the BHO concentrates are waxy and thus don't like to dissolve into a liquid—think about oil and water separating or a vinaigrette salad dressing before you shake it. As a result, these liquids don't' mix well, have a tendency to separate, and leave behind a sticky film.

Slide 47



Read the quote from Giroud. The internet has lots of "hacking" kinds of information, including how to add your BHO to a nicotine e-liquid or recipes for concocting something with things from your kitchen.

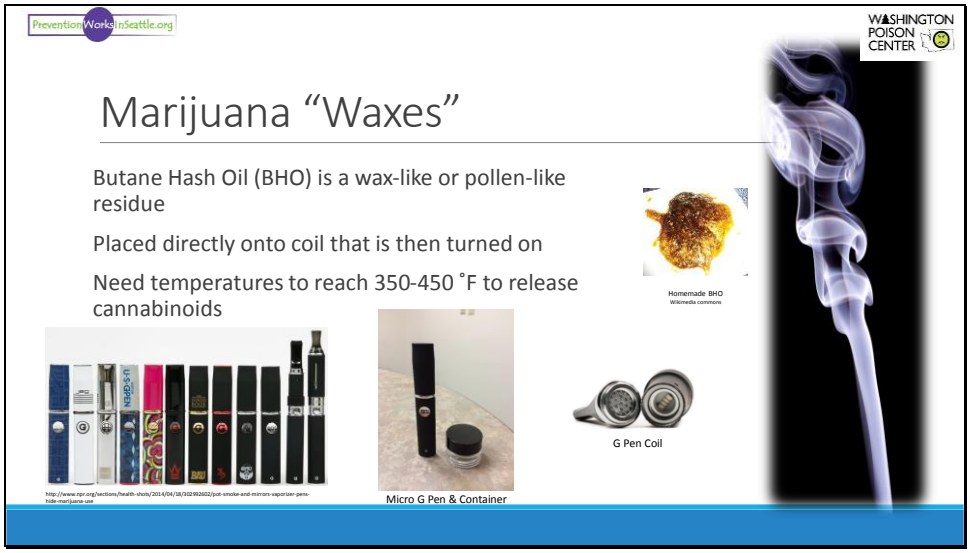
Slide 48

This is why the CO2 oil extraction method is important. This process extracts a concentrate that can be mixed into a liquid, and this is much of what's available on Washington's retail market. It is often called "honey oil" or "flower oil", and the devices used mirror the trends we talked about for e-cigarettes.

There are one-time use options, like the JuJu Joints where everything is ready to go for you in a cig-like look. Then there are refillable options where you have the pen part that contains the battery power and heating element, and then you can keep repurchasing cartirdges that screw into your power source. Note that this liquid is amber colored and that this flat style mouthpiece is often used for these devices.

Also like the graphic with all the pen parts showed, here are some specific tank and heating elements that one would switch onto a reuseable pen. Specifrcally this is from a brand called Grenco, who sells different parts for its G Pen to vape each of the marijuana substances we'll talk about. The photo on the left is of the parts for e-liquids. You can buy this set-up on the internet for $20-$30.

Slide 49

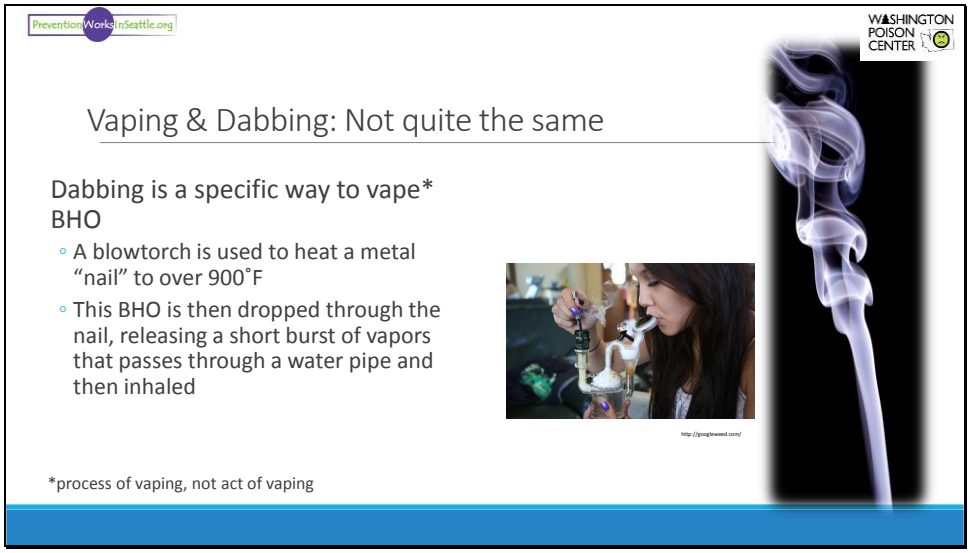


Next is vaping waxes, which I think is the most widespread and originally popular marijuana vaping technique. Grab your devices that look like this. Open them up and take them apart and tell me what you see? You should see metal coils. In this device you would place a small amount of BHO (wax, shatter, honeycomb) onto those coils. Then the device heats it to 350-450 degrees to vaporize the THC. This give you a good sense of how potent it is too—just look how small the chamber and coils are!

Accompanying this is the small glass container used to store your concentrate.

What comments do you have about the size and shape of these devices?

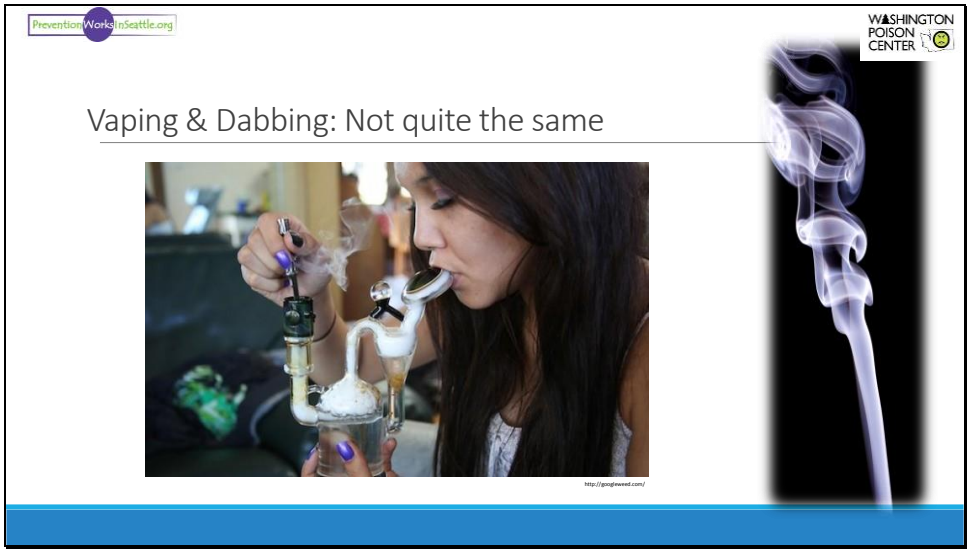
Slide 50



We're going to divert here briefly to mention dabbing. How many have heard of dabbing? What have you heard about it? It has a reputation of being very dangerous.

So what is it? Well it's a specific way to flash vaporize BHO. It's done using this sort of rig/ water pipe pictured to the right. You start by using a blow torch to heat a metal head to 900 degrees. Once it's hot, you use a tool (often referred to as a nail) to drop a small bit of BHO (often called "dabs") into the rig. It's so hot that it immediately vaporizes shooting the vapors down through the pipe, over some water to drop out any heavy impurities and potential cool it a bit, and then you inhale through a mouthpiece on the other side.

Slide 51



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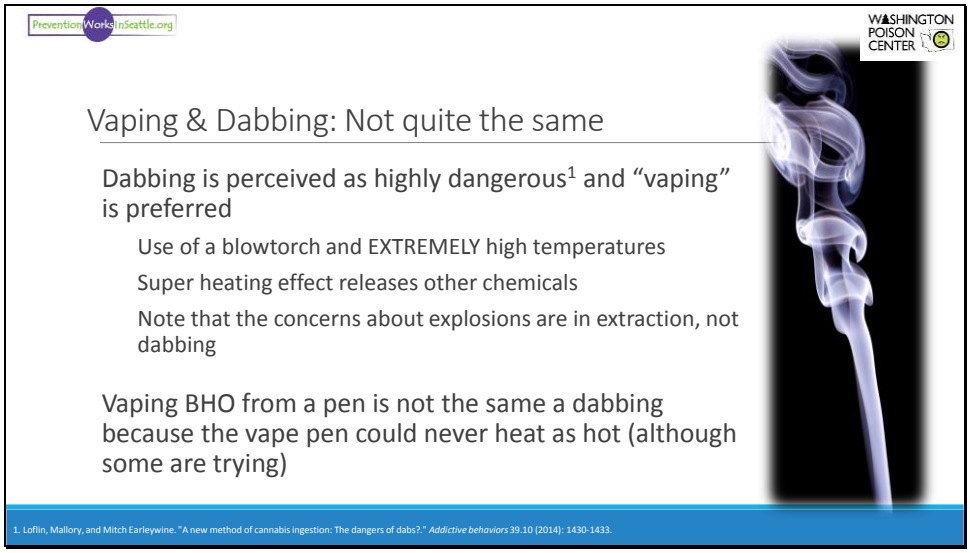

It is perceived as very dangerous because of the high temperatures involved. Not to mention the fire hazard of using a blowtorch. Note that there is a lot of talk about explosions related to dabbing, but the most serious concern of explosion is actually during the extraction process. The BHO, if made well, shouldn't have any explosive butane left in it when dropped into the rig.

Some of the dangerous that may arise are related to the high heat used. Remember that the point of vaping is to release the essential materials without combustion or smoke. Well when you heat something to 900 degrees, there might be a sizzle when the BHO is dropped in, which is the sign of a combustion reaction. You also have to consider what off-gassing might occur from the metal when heated that high. What happens if it melts a little? What chemicals might I be inhaling from that as well?

Two reasearchers did a survey of marijuana users and found that this "dangerous" perception held for marijuana users as well and they users preferred to use a more traditional vape device over dabbing. However, this is probably age dependent and reflects only that one instance in time. As we know, trends change.

A final reminder that dabbing is a way to vaporize the oils, but it's not technically considered "vaping" in the means of using one of these devices to vape. Because of the temperature difference, one of these devices will never heat something that high.

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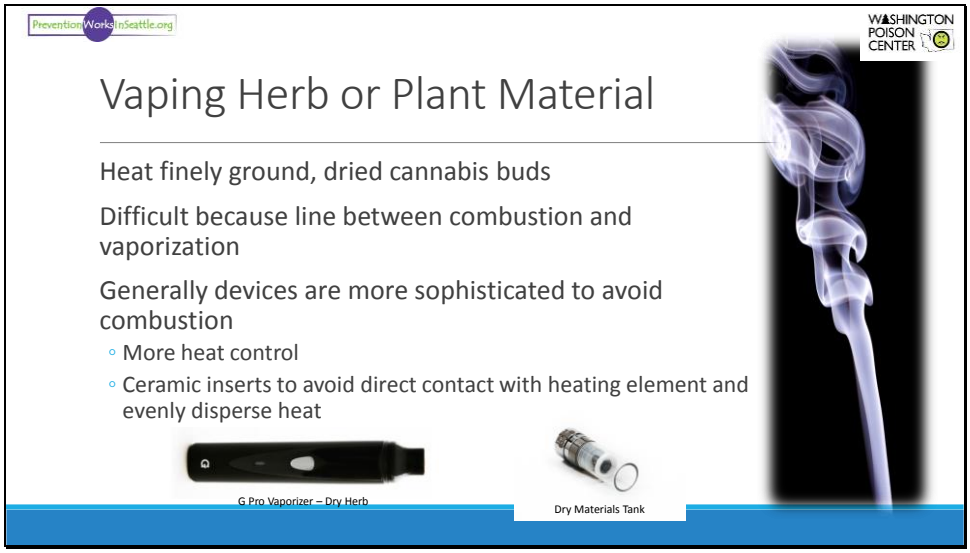
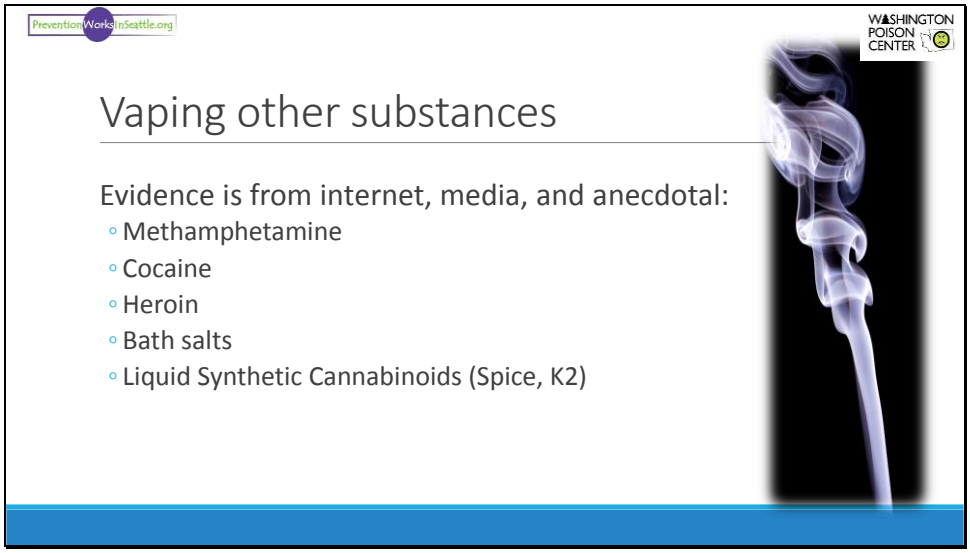


Lastly, there is the vaporization of dried herb. This is where finely ground cannabis flower buds are ground down and inserted into a specific chamber on a device or pen. I don't know about you, but the first think that I think about when I think of heating any sort of dried plant materials is fire. To avoid the ignition and combustion of the materials, these devices are more sophisticated. They need to heat hotter than the 190 degrees of vaping nicotine liquids, but also cannot get too hot as to start a fire. So in order to do that one usually has greater heat control and the heating elements have ceramic inserts to disperse heat. This is the same idea as many stove coils---the ceramic evenly distributes the heat which prevents one single spot from getting to hot and causing ignition.

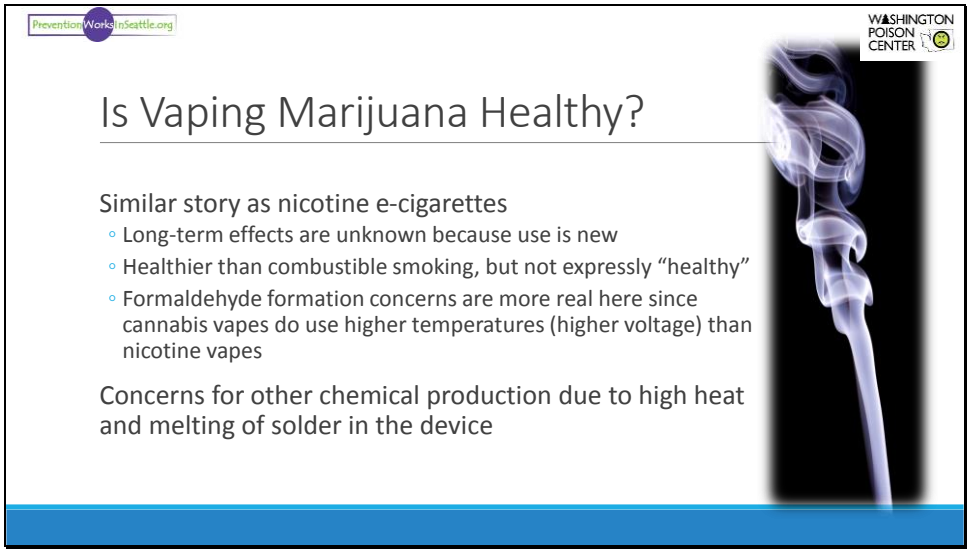
Here we have two products: on the right is the specific tank and element we'd screw onto that same micro g pen unit. The left is a specific device from the same company meant exclusively for dry herb. It has control over temperature where the white on button changes color for the specific temperature setting.

Slide 54



There is not a lot of evidence in the literature showing how these devices might be used for even more substances, but there is information and stories on the internet and through popular press that highlight uses for these substances (read list)

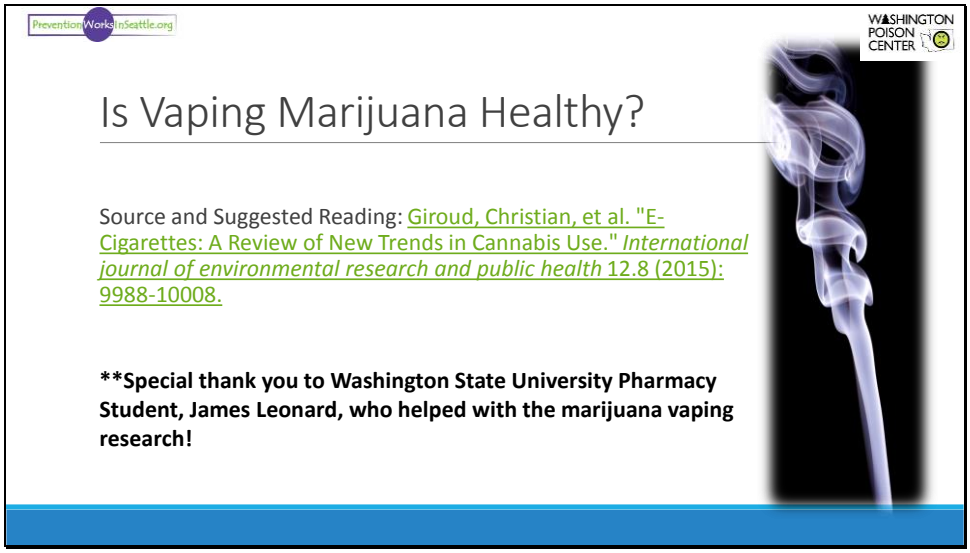
Slide 55



Is vaping marijuana really healthy? Well, it's much the same story as with e-cigarettes. We don't know what the long-term health effects are because there hasn't been enough time for any effects to have taken place. We can make a similar assumption that by avoiding "smoke", it is probably better for our lungs, but this does not make it healthy.

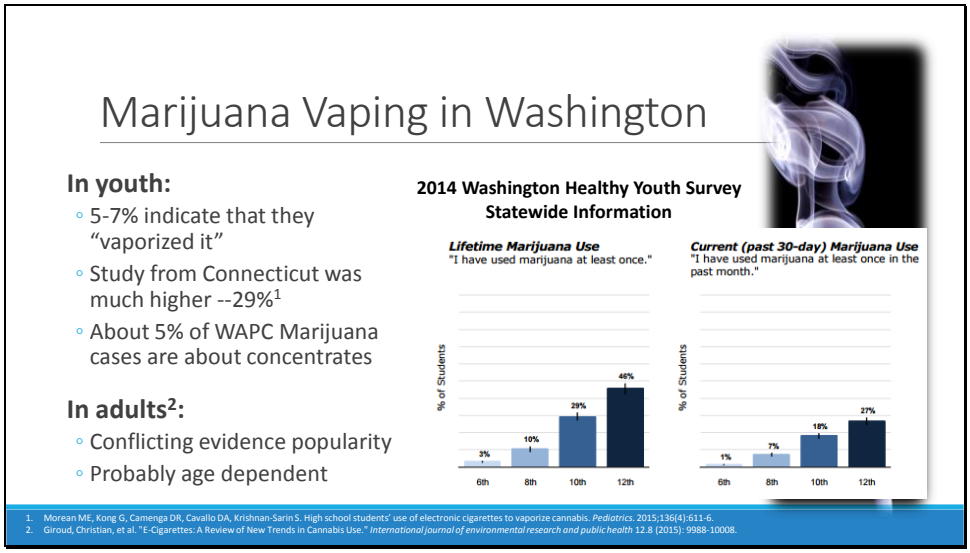
And when we think back on the studies of liquids vaped at high temperatures releasing formaldehyde, it was unrealistic for e-cigs but with marijuana vaping, one does need this higher temperature. Another thing to consider is that at high temperatures, one should consider what is happening to the parts inside of a electrical device. SO when you heat up the solder inside, are other chemicals off-gassing?

Slide 56



Two additional notes here: I really suggest reading this paper. There is some analytical chemistry in it looking at whethere e-liquids contain what the labels say, but the majority is a good summary of everything related to e-liquids. Also, a special thank you to WSU pharmacy student James Leonard who helped do the research for this portion of the training!

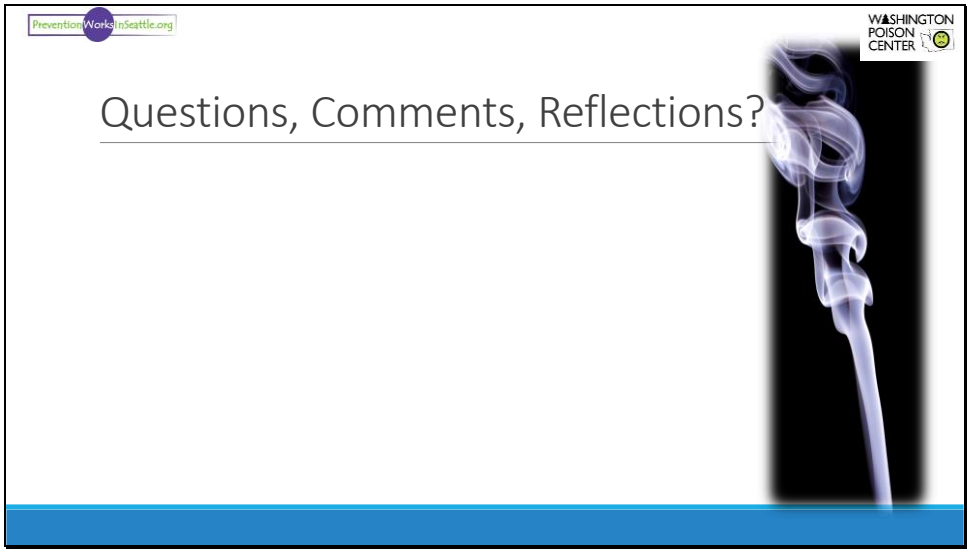
Slide 57



Finally—what is the landscape of marijuana vaping in adults? The 2014 Washington Healthy Youth survey asks the form of marijuana used, and across the various ages, 5-7% of students say they have vaporized marijuana. This is consistent with a national survey that indicated 5% of marijuana using youth had vaped it. In terms of cases from the poison center, a rough look at our data for 2015 shows that our calls related to concentrates are also around the 5% level.

Giroud et al. also did a survey of marijuana users to see vaping was popular. Their very basic survey of adults in the UK revealed that vaping cannabis was not terribly popular. But this was mostly done in adult and in the UK, so it's not certain how applicable it is to our setting. We know that the popularity and use is probably age dependent.

Slide 58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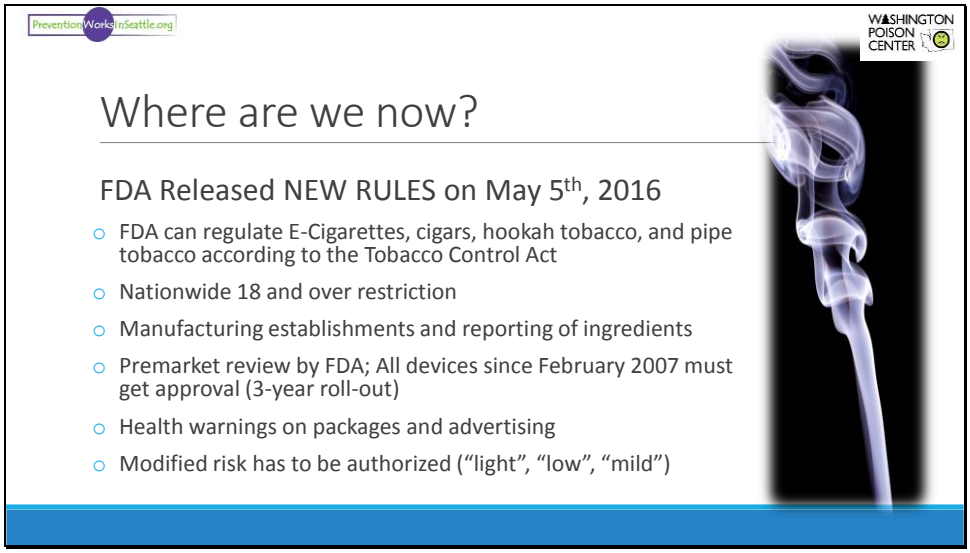
Questions, Comments, Reflections?

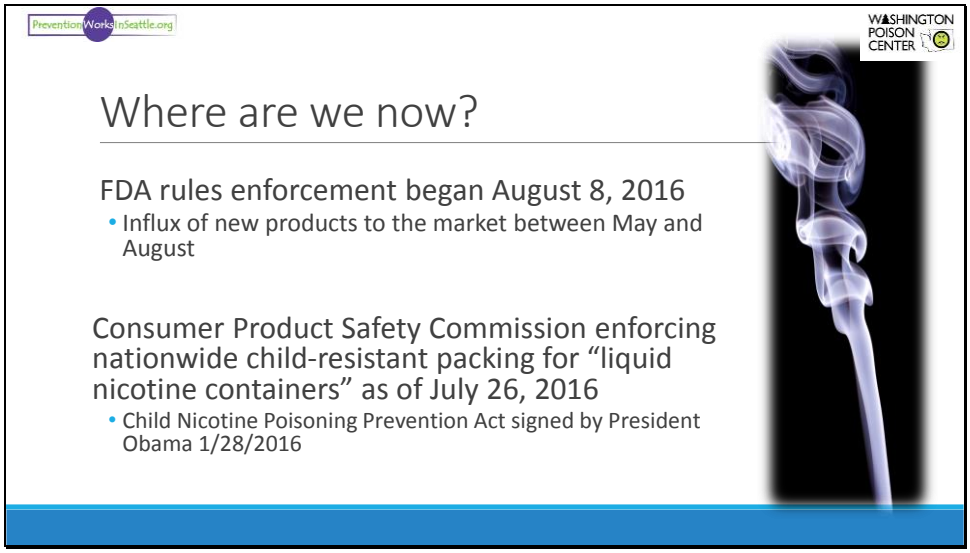
Slide 59



http://www.fda.gov/TobaccoProducts/NewsEvents/ucm499383.htm

http://www.fda.gov/TobaccoProducts/Labeling/RulesRegulationsGuidance/ucm388395.htm

Slide 60



https://finance.yahoo.com/news/e-cigarette-makers-rush-products-110001914.html

http://www.cpsc.gov/en/Regulations-Laws--Standards/Statutes/Poison-Prevention-Packaging-Act/Child-Resistant-and-Senior-Friendly-Packages-packaging-guide/

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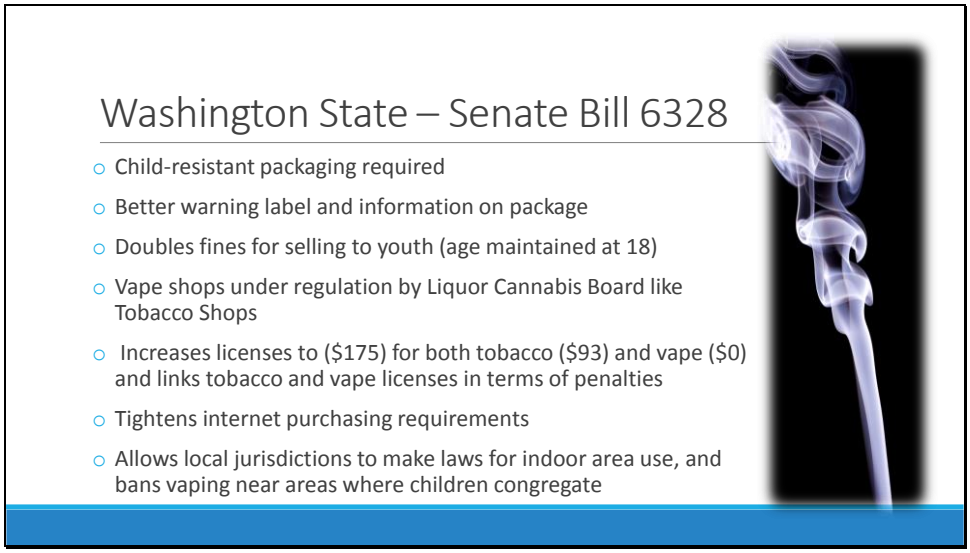
Where are we now?

State legislation has sought to address…

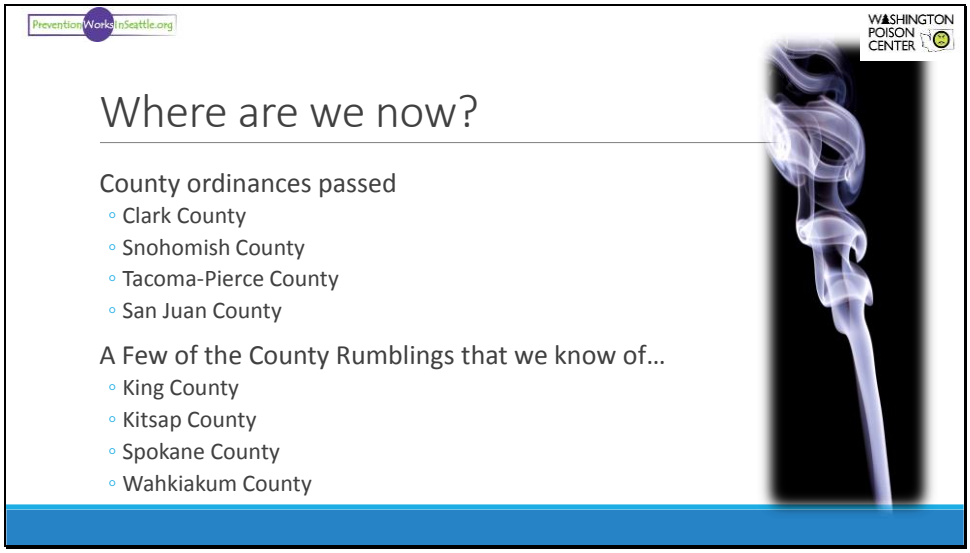
- Taxes
- Age restriction
- Labeling
- Child-resistant packaging
- Appealing packaging/Cartoony nature of labels
- Flavoring

Slide 62



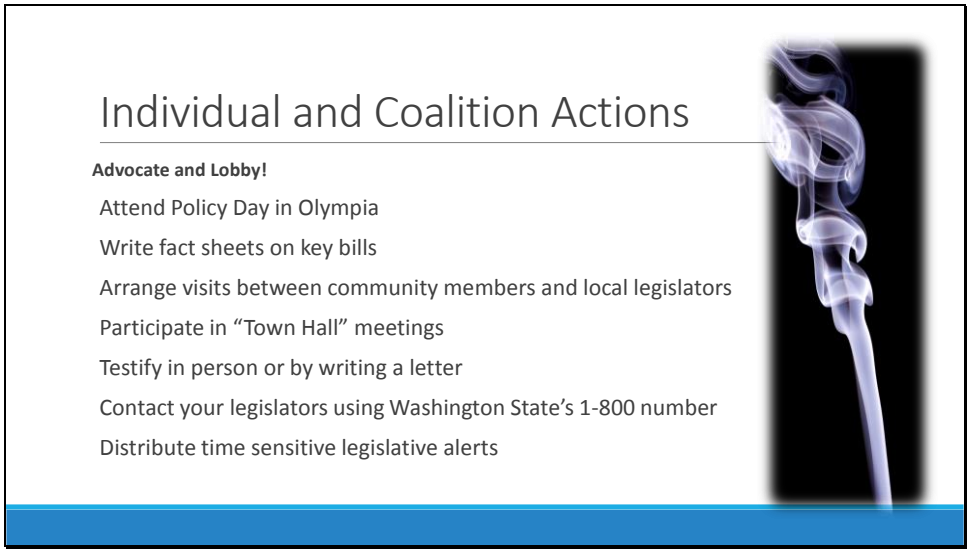
Find more information on this bill here:
http://healthygen.org/sites/default/files/SB6328_Information.pdf?utm_source=Health+Policy+News+You+Can+Use%3A+April+4%2C+2016&utm_campaign=HPN+2016+-+April+4&utm_medium=email

Slide 63



There are sure to be more, but here is what the poison center has been involved in and/or knows about!

Slide 64



For those people who are "public" or "government" employees, there are ways to "educate" so that you don't risk being accused of lobbying. For example: You can send data and say to "consider" the data as law makers make decisions.

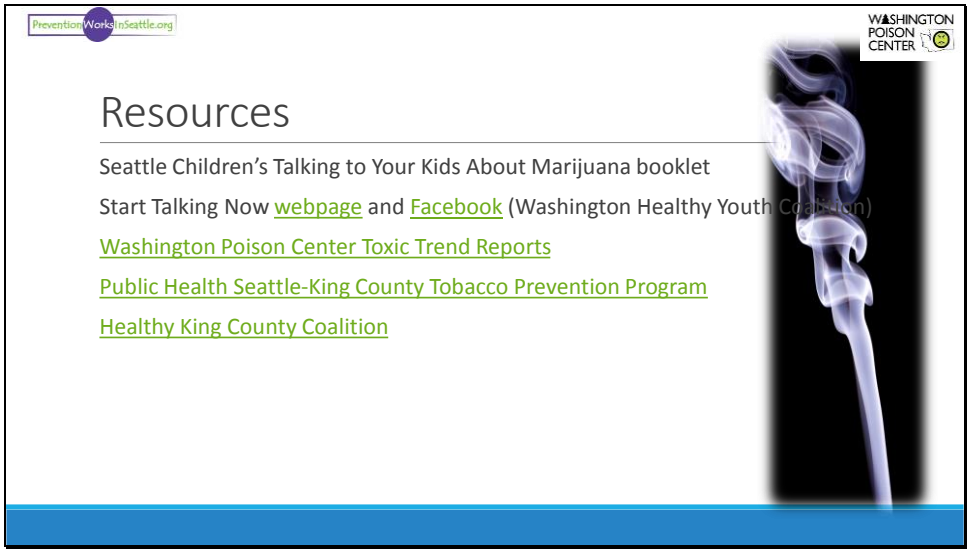
Slide 65

More Individual and Coalition Actions

Have a voice in the community!

- Publicize national and local reports
- Write Letters to the Editor, call in on radio shows
- Use social media
- Write articles for your other community involvements (PTAs, faith groups, community blog, etc)
- Encourage student journalists to cover the stories
- Post on community bulletin boards

Slide 66


PreventionWorksInSeattle.org
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Resources
Seattle Children's Talking to Your Kids About Marijuana booklet
Start Talking Now webpage and Facebook (Washington Healthy Youth Coalition)
Washington Poison Center Toxic Trend Reports
Public Health Seattle-King County Tobacco Prevention Program
Healthy King County Coalition

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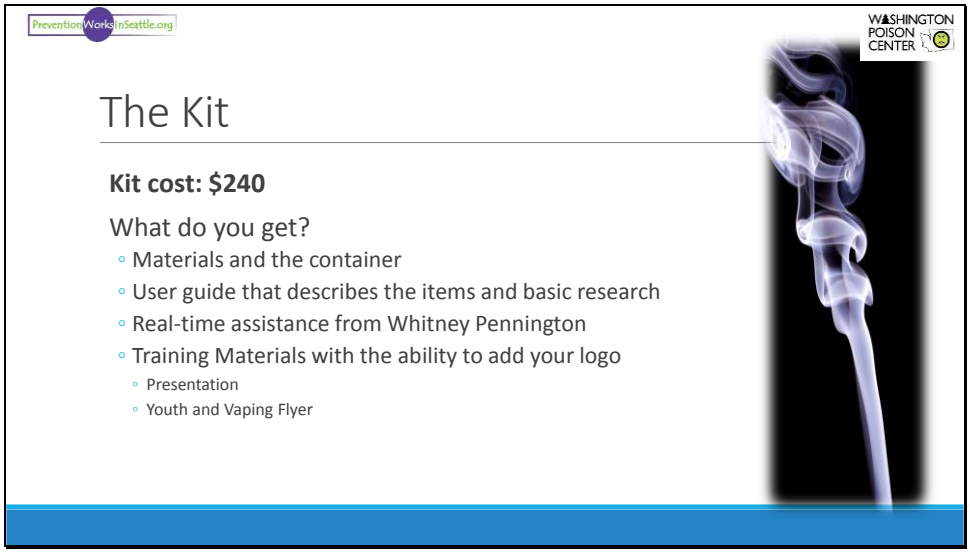

For Prevention WINS Discussion: Are there concerns about having a kit? Any concerns about using it? Storing it? Using on school premises? How should the kits be shared and utilized by Prevention WINS members?

Slide 68

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Information Reflection

What topic, idea, or tidbit resonated the most with you?

Is there a topic that you know you'd like to present on? Why?

What are you motivated to do?

Slide 69

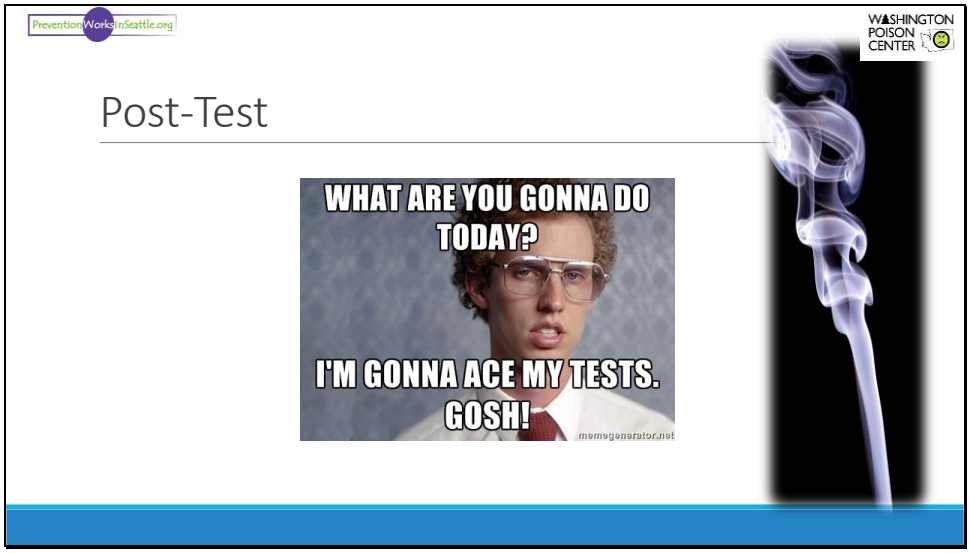
You are now trained!

Example Expectations

You will need to collect the following information each time you present

- When
- Where
- Number in attendance (both youth and adults)
- Length of presentation
- Feedback
- Implement a brief survey with the audience

Slide 70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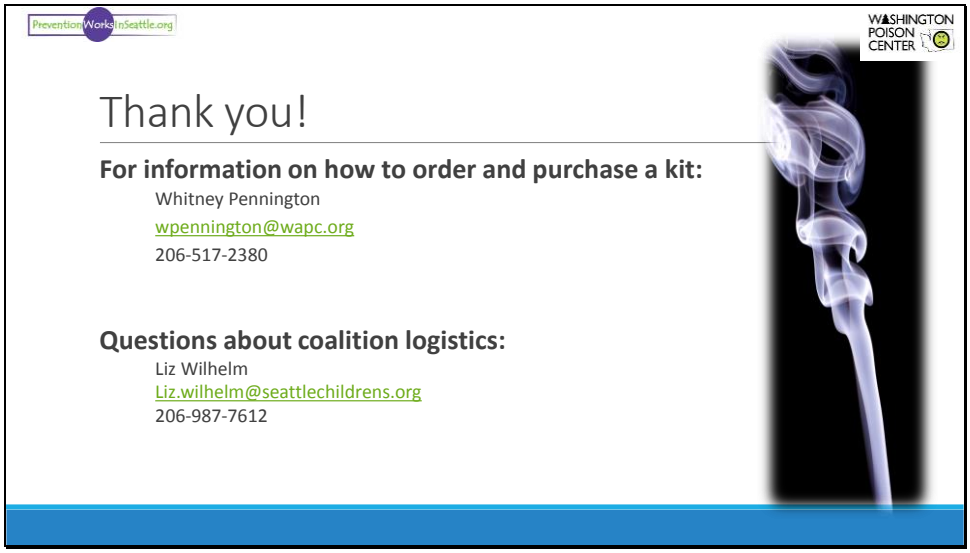
Post-Test
WHAT ARE YOU GONNA DO TODAY?
I'M GONNA ACE MY TESTS. GOSH!
memegenerator.net

Slide 71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Thank you!
For information on how to order and purchase a kit:
Whitney Pennington
wpennington@wapc.org
206-517-2380
Questions about coalition logistics:
Liz Wilhelm
Liz.wilhelm@seattlechildrens.org
206-987-7612