

E-Cigarettes – Risks of Teen Vaping - Frankly Speaking EP 28

Transcript Details

This is a transcript of an episode from the podcast series “Frankly Speaking” accessible at Pri-Med.com. Additional media formats for this podcast are available by visiting <http://www.pri-med.com/online-education/Podcast/e-cigarettes-frankly-speaking-ep-28>

Dr. Frank Domino

Sally is here for her yearly physical. You ask her how things are going and she tells you she's concerned about her 15-year-old son. She's recently learned that he has started vaping. Sally wants to know what you think about vaping, and if it's dangerous. She also wonders, if it's better than smoking, right? With me today, is Susan Feeney, Coordinator of the Family Nurse Practitioner Program at the University of Massachusetts Medical School, Graduate School of Nursing. Welcome to the show, Susan.

Susan Feeney:

Thanks, and it's good to be here.

Dr. Domino:

Great. So e-cigarettes, vaping, this has grown incredibly quickly in our society. Can you tell us a little bit, Susan, about what vaping is and how it relates to our clinical care of patients?

Susan Feeney:

Sure, just a little bit of historical background. 2007 is when vaping or e-cigarettes came into the US market, and primarily, they were there as an aid to help people who smoked, as a smoking cessation aid, but since, it has really blossomed, specifically in the teen years. In fact, over the past, since 2011, the rate has gone from 1.5% of teenagers using these to 16%...

Dr. Domino:

Wow.

Susan Feeney :

Yes, in 2015, so it has really taken off. And just to give you some background too, there's all kinds of different nicknames. There's e-cigs, e-hookahs, hookah pens, vapes, and vape pens, and there are some they called mods, and these are customizable cartridges that are more powerful, and they vaporize more powerfully, and so they can be used for multiple purposes. This has really turned into, what is now being described as a public health concern, that the number of people who are getting involved.

Dr. Domino:

It's quite interesting. There's a vaping store on my corner now. I can't imagine a whole store devoting to this. Vaping is very popular and it seems quite popular with teens. Why do teens find this so popular?

Susan Feeney:

Well, first of all, just to go back to your story about the vaping stores, there's 460 brands on the market of this type of device. The tobacco companies are also involved with making them and they seem to be popular, because what the teenagers are saying, is there's actually a pleasurable contraction of their throat that occurs when the vaping substance hits their throat. So they don't describe it as a high, but as a type of pleasurable experience. And they've also started something called dripping, which is where they take the e-liquid that's in the cartridge, and put it directly onto a heating coil, and then breath in that vapor. That vapor is the vaping, and it has a much higher density, and so that pleasurable feeling supposedly is greater, and they're not actually smoking it, but inhaling like a vapor.

Dr. Domino:

Wow, so let's take a tough situation and make it even worse. That's wonderful.

Susan Feeney:

Exactly, exactly.

Dr. Domino:

It's great to be a teenager.

Susan Feeney:

Yeah. [chuckle]

Dr. Domino:

You mentioned that it's now a public health issue. Can you tell me a little bit about why it's a public health issue and what we, as providers, should be thinking about?

Susan Feeney :

Well, there's a couple of concerns. There is, first of all, the e-cigarettes have various ingredients in the liquid that is then vaporized, and certainly, there's less toxic chemicals in that, than in a cigarette, but there is acetone.

Dr. Domino:

Polyethylene glycol.

Susan Feeney :

Polyethylene glycol, and formaldehyde, and arsenic, and there's also nicotine. Not all of the cigarettes have nicotine, but it turns out, when it is vaporized in that way, it is more highly absorbed into the body, so the thought is, it's going to be more addictive. And so if you have teenagers using this, and becoming exposed to these toxic chemicals... And we're not quite sure, if they're dangerous to be inhaled, but one might think it could be. Some of these things might be harmless in ingestion, but may not be in inhalation. So that in itself is a public health concern, and I think, because of the increase in the kids using this, and now, with the new study coming out showing that there's an increased risk for children or teenagers who use e-cigarettes, to then

eventually start smoking cigarettes, which we know are dangerous, that's one of the most important health policy issues.

Dr. Domino:

That's very interesting. This recent systematic review and meta-analysis found that adolescents using vaping tools actually have a higher rate of smoking.

Susan Feeney:

Right

Dr. Domino:

And you said at the very onset, that smoking... That the initial motivation around vaping was to help people quit smoking. I thought they were helpful.

Susan Feeney:

Well, I think they are helpful. There's actually been some evidence, that for people who are smokers, who are addicted to, as we call combustible cigarettes, that there has been a positive influence, and that people have been able to quit smoking, and they're less dangerous than cigarettes. But certainly, people who are not smoking, it doesn't appear to be a healthy option. And one of the things that they find, is all the things that make smoking appealing, the hand-mouth activity, the social activity, the marketing, that they appear to be marketing to children, all of this makes it very desirable for the teenager.

Dr. Domino:

It's interesting that they're also marketing to a younger population, in much the same way, we found cigarettes were being marketed to teenagers, back in the '80s and '90s.

Susan Feeney:

That's right, they actually use flavoring and some of the flavoring is sort of horrifying. They use bubble gum, and candy flavors, and certainly, adults wouldn't be the demographic that they're

going after.

Dr. Domino:

Wow, I had no idea. It sounds like vaping is becoming very popular, especially among adolescent populations. It sounds like what they're inhaling is somewhat concerning, although not necessarily proven to be dangerous, and that adolescents, being adolescents, are going to try to make it even more exciting with their use. Now, what do we tell Sally today?

Susan Feeney :

Well, I think what I would tell her, is that this is something she may want to discourage him doing. That, from what we know, at least we know that it increases his risk of starting to smoke cigarettes, and that we don't know, but we think it might be harmful to inhale some of these ingredients, and that teenagers, due to their developing brain, tend to have a greater propensity to become addicted quicker to things, as we know with opioids, and texting, and things like that. The other thing that was brought on in the research, is that it's not really clear, even when they say there's no nicotine, that there can be traces of nicotine in there, because it's all created in the same area, and so even a small amount of nicotine on a regular basis can be addictive. I would really encourage her to get more research. I would give her some of this information that we have and have a frank discussion. The FDA, in 2016, determined that this was a tobacco product, because it had nicotine. It is regulated, in that sense, and you have to be 18 to actually get it.

That is clearly... Industrious kids are gonna find a way to get that. But the FDA is trying to control this substance, and indeed, I think we need to start looking, as providers, also looking at the policy level, at ways in which we can bring this to light, so the public understands the risks.

Dr. Domino:

I think it adds another layer of issues we need to screen our adolescents for, about their use. It is very concerning to me. I had no idea, that even the ones without nicotine, could run the potential of causing dependence and addiction.

Susan Feeney:

Right, and it's also in the addictive behavior of inhaling, and that's what they were saying, is that's why it's so... There seems to be that link between these and smoking cigarettes, is that it's an easy leap.

Dr. Domino:

It's an easy leap. Great. Any final thoughts on vaping and the systematic review, Susan?

Susan Feeney:

Well, I think what was positive, is at least it gives us some sort of information that... 'Cause it just never seemed like a good idea, but we didn't have a lot of evidence. This really does help us see that this is, in a way, a gateway into tobacco use, which we know is a very bad behavior to take up, and that the teen group is very vulnerable. And so I think it's a good tool in our toolbox, to help us educate our patients, and to make us aware of the dangers, and then to be vigilant, and see what comes out with, what these substances, when they're inhaled, are there some untoward effect? That there are some studies coming out now, that there's definitely toxic effects with inhaling these things in an aerosol. I think that we just have to remain vigilant.

Dr. Domino:

Great. Well, thank you so much for bringing this article forward, Susan, and all this information around vaping.

Susan Feeney :

My pleasure.

Dr. Domino:

Practice pointer. 20% of adolescents who vape run the risk of developing dependence and addiction. Screen your teenagers for vaping and remind them of this danger. Join us next week, where we try to compare and contrast the breast cancer screening guidelines typically followed in the United States.