Howard Farran: Okay. Today we are going to have a very fun hour with Leslie Canham. Not only is it an honor to have her not only a Dental Town Townie, but she is the moderator of Infection Control on Dental Town. We have 47 forums – endo, perio, pedo one of them is regulation. And thank you so much for moderating the Infection Control. I got out of school in '87. You have been in dentistry forever. Your dad is a dentist. He was a general dentist for 25 years and an endodontist for 25 years so you were genetically born and bread into dentistry. In my walnut brain it seems like this big impact was kind of in response to HIV back in the late '80's. Would you agree that is what really launched it into the stratosphere?

Leslie Canham: I think so. Because blood born pathogens were particularly important when HIV was discovered and when it is discovered to be present in blood and body fluids. It was pretty important in dentistry that we do something to protect ourselves and protect patients from patient to patient infection transmission.

Howard Farran: That was a weird. Time. That was a weird time. I believe it was 1979 when they kind of thought something was going on in a hospital in LA because two men were dying of cavity sarcoma. They had low T-cell counts. What statistically got their attention was you should have been 70, 80 or 90 and immune compromised. They were young males and they were both gay. And they thought that was – those were so rare to be young and gay that that started the detective work. Then the first guy to die in my dental school graduation class the year after we graduated actually died of AIDS. We got out of school in 87 with our eyes wide open like what is going on. Then the government stepped in and OSHA got really huge and it has all been a good thing. All people don't like competition. They don't' like checks and balances. Everybody is always bad mouthing the government. There is nothing wrong with the government they just don't want any competition. They don't want checks and balances. Let me just ask you right out of the gate how is the profession of dentistry as far as OSHA compliance and infection control? What letter grade would you give us?

Leslie Canham: Well, I would say that we all want to think we are doing the right thing. But I also find that many times offices are not 100% in compliance with conducting the training and having safety plans.

Howard Farran: And look at the backlash. I know a lot of friends that know the big story in the news with the oral surgeon in Oklahoma and they say he was just a good ole country boy and he thought he was doing everything right and it was just a disaster. And he actually surrendered his license. He surrendered his license because he basically was a good oral surgeon, a good ole boy, but he wasn't dotting the is and crossing the ts and some people were getting infection. This needs to be more serious than it is. So walk us through. So walk us through – you have been consulting on this since 1991, which is amazing since you are only 29 years old. Walk us through – when you go into your average dental office what are they doing? What are they not doing? Talk to us.

Leslie Canham: Okay. What I find when I visit dental offices is again everybody thinks they are doing all of the things they should be doing and protecting themselves and their patients. But the training is not present. They are not conducting the blood born pathogen training or spending the time and devoting the detail to infection control. For example, one thing I do when I conduct training off the bat I ask everybody who is in the clinical area, dental assistants, hygienists and sterilization techs to tell them I want you to tell me how long you are supposed to leave your disinfectant on your surface wet in order for it to do its job. Write that number down. How many minutes, how many seconds, what do you think? And then we collect all of that information, read it in front of the group. The numbers vary from one minute to 10 minutes, five

minutes, three minutes. And then what we do is we bring out the disinfectant container and we read the manufacturer's directions. And people are often surprised that they are not using the products the way that they are designed to be used to prevent infection transmission. Even as basic as disinfecting surfaces.

Howard Farran: And is it still your favorite go to is still just standard household bleach and Lysol for surfaces?

Leslie Canham: I'm sorry. Could you repeat that?

Howard Farran: Is your standard go to for surface disinfection still Lysol spray or bleach? Diluted bleach?

Leslie Canham: Generally I pick a product that is a tuberculocidal product. I like the popular products. And I don't know if it is okay to name names, but.

Howard Farran: Because my viewers they want to implement this stuff today. No politics involved. Mention names. What would you do?

Leslie Canham: You look at the manufacturer's label kill claim. It has to be effective against salmonella, cholorrhecious[ph]. It has to be effective against sudonomius[ph] originosis. It has to be effective – I prefer a TB kill claim because I know that is a standard benchmark. If you can kill TB you can kill a number of pathogens. I like a product to have a disinfectant and be a detergent. So it is considered one step. In other words you don't have to use Lysol and another cleaning agent to do the job. You have a disinfectant that is both a surfactant and a disinfectant. So you are using one product to clean and disinfect the surfaces.

Howard Farran: And explain to everyone what your definition of detergent is. That is just degrading bulk material? What is – what do you mean detergent?

Leslie Canham: A detergent – a disinfectant or a soap. Something that cleans the surface. Now I know for a fact that Lysol doesn't have a surfactant or a detergent in it. You can't use it to clean a surface. It is pretty good. It has high ratings as a disinfectant. But you would have to use something else to clean the surface in order to disinfect the goop that is underneath the stuff that is on the surface.

Howard Farran: So when you walk into a dental office and you have an outstanding course that has been on Dental Town and viewed thousands of times on this but what would you – and by the way that would be a great lunch and learn for your staff. Send someone out for sub sandwiches and watch your tape. But walk us through when you go into a dental office what you would tell the average dental office. Walk them through your program.

Leslie Canham: Okay. The first thing I want to tell people is that you got to have safety plans. And if there is an exposure incident, someone gets stuck with the contaminated item has a patient's blood on it that incident should take five minutes to handle. And doctors should not be taken away from production time for an afternoon to deal with an employee who has been injured. It should take five minutes and everybody should know exactly what to do. So having an exposure incident protocol and I discussed exposure incident protocols with every OSHA training I do we walk from first aid to how to determine whether the patient has infectious disease to how to ask the patient to have blood tests if they don't know their status to what kind of a healthcare facility to go to. I like my offices to have that healthcare facility already decided in advance and maybe a little map with turn by turn directions from their parking lot to the hospital or the facilities parking lot so that not only does the patient know exactly where to go for testing, but the employee knows

exactly where to go. I like them to have all of the paperwork ready to go so again, doctor or office manager doesn't have to spend 20, 30, 40 minutes gathering documentation that someone who is injured can provide first aid for themselves, grab their paperwork and know exactly where to go. If the patient agrees to blood testing the patient follows shortly behind that. And doctor can get right back to work to whatever they were doing without losing a beat.

Howard Farran: Go through – so when they go to a facility let's say I just got poked by a needle and I live in Phoenix. Let's say it is not a high class person in Phoenix. Some low life from the surrounding suburbs like Scottsdale. That is an inside joke. What would you recommend? I would go to this facility and get my blood drawn for testing or what would happen?

Leslie Canham: Let's take an incident. Imagine I am your dental assistant. Other than you the doctor. Because OSHA doesn't care about the employer. I'm sorry, but OSHA is concerned about employees. Of course, I am concerned about my employer, but let's work from a position of where the regulations fall. I get stuck with an instrument. The first thing I want to do is step aside, provide first aid for myself and let you know or let my supervisor know what happened. The next thing I want to do is I want to make sure that you don't use the instrument that I just got stuck with. If I step aside and provide first aid for myself what is to stop you from grabbing that same instrument that poked me with my blood on it and using that on the patient? Now we have got an exposure incident where you might have to make notification to the patient that they got exposed to somebody else's blood. So we make sure that part is taken care of. Then I want to make sure the next step is to evaluate the risk of the injury. Did I get stuck with a contaminated instrument? Was it clean? If it was clean, if it was sterile, if it was not in contact with the patient's blood we don't have an exposure incident. I get hurt. I get a band aid. I come back to work. We go on with our day. But if there was blood from a patient on that instrument. Or if I think there might have been blood on that instrument then we need to go to the next step which is to determine the risk. And the first step would be to check the patient's health history. We don't want to assume anything. We want to start out with what information they have given us. If they don't have indication that they have hepatitis or HIV, which is commonly one of the history intake questions on your health form for new patients and for periodic exams. If they don't indicate then the next step is the patient needs to be asked if they know their status of Hepatitis or HIV. That is where I would hope that either doctor or office manager or supervisor would feel comfortable asking the patient those really – that is a difficult question if you think about it. Because you don't want to accuse them of lying on their health history form. Yet OSHA requires that information be gathered so the employee can know exactly what the next step is.

Here we go. I am going to give you just a little bit of a script of what I like to say if I am you and I am the dentist I am asking the patient. I would say Mrs. Jones, my assistant Leslie just got stuck with an instrument. It has some of your blood on it. And in this practice we follow all regulations, infection control protocols and OSHA requirements. So I need to ask you a few questions about your health in order to respond to this incident. Is that okay? Now Mrs. Jones is likely to say yes. That's fine. Well, Mrs. Jones the first question is have you ever been diagnosed with hepatitis or HIV? Again, Mrs. Jones is likely to say no. But maybe she has been diagnosed and didn't want to tell you and is willing to fess up. And since she now has exposed her blood to another person she may say yes, actually I didn't want to indicate that on my health form. I wasn't sure if I would be discriminated against, but yes. I am. Okay. Very good information for me to have if she has hepatitis or HIV I need to know for my health what I am going to do when I get to the healthcare provider. If she says no then your next question, well, Mrs. Jones, I need to ask you if you would be willing

to have a blood test to determine if there is anything in your blood that could cause infection or my assistant Leslie. Because if there is there are medications she can take that would prevent infection. However, those medications need to be initiated promptly to be effective. Now, Mrs. Jones you won't have to pay for your blood test. We will take care of the cost. And the results are not revealed to anybody but you, the healthcare provider and if Leslie needs to take medication she would be told what the results of the test are so she can make a decision to what post exposure medication would be beneficial to prevent infection. Would it be okay for me to send you over to our healthcare facility? And hopefully the patient would say yes.

If the patient says yes you send them on their way to the healthcare facility you have chosen in advance. That you have a map with turn by turn directions from your parking lot to the parking lot of the facility and you call in advance and let that facility know that you are going to take care of the cost of the blood draw and that your employee and patient are on their way right now.

Howard Farran: Is this usually like an urgent care? Or is like a family physician? Do some specialists do this? I have heard some people say that their oral surgeon handles the protocol in a small town. Have you heard of that or?

Leslie Canham: The best is to refer the patient and the employee to an outpatient occupational facility that is geared to handle work related injuries. The second best choice would be a hospital. These choices are because first of all they are going to know how to handle a work related injury for the employee, workers compensation.

Howard Farran: What would you google? An outpatient what?

Leslie Canham: An outpatient occupational center.

Howard Farran: Is that what you would google? You are from Coperopolis[ph] California outside of Reno and Tahoe?

Leslie Canham: Yea, we are actually outside of Stockton, California. It is a small town. I would google. I actually check with my local hospitals first. And I would say do you have an outpatient occupational center connected with your hospital? In our town they do. They call it Job Care or Prompt Care, but it is for work related injuries. Now the reason I like to go to a place like that is if I go to a hospital I might be third, fourth, fifth in line of triage. And same with the patient. There could be the cardiac case, the accident victim. And the needle stick from the dental office a lot of times gets the low man on the totem pole. An outpatient occupational center is going to treat the injury with the respect it deserves. They are going to promptly conduct testing. They are going to read the results immediately. And more importantly they are going to have the post exposure prophylaxis right there to administer to me if I need it so that it can be effective.

Howard Farran: Give us specifics for what post prophylaxis medication will they give for what diseases?

Leslie Canham: Let's assume that I am a dental assistant that has been immunized for Hepatitis B.

Howard Farran: Okay there is Hepatitis A, B, C we only have a vaccine for B?

Leslie Canham: For B. And B is the one that is of most concern in dentistry because it is a hardy virus or any medical field. It can persist and drive blood for up to a week. And if you are exposed to hepatitis B virus

occupationally as a dentist or hygienist or assistant and you are not immune you have a 30% chance of a acquiring the virus. That is why OSHA requires the dentists to offer Hepatitis B vaccination at no charge to their clinical employees.

Howard Farran: What percent of the 150,000 dentists in the United States do you think are vaccinated for Hepatitis B.

Leslie Canham: I don't know the specifics, but I know there are a lot more and as dentists enter dental school it is a requirement for dentists and hygienists it is part of the matriculation process. You have to get your vaccinations and be tested for Hep B.

Howard Farran:I got all my staff vaccinated for that back in the day. And also my babies when they were born I did that too. It wasn't even covered by the insurance. I think I had to pay $189 extra per child. B is the main Hepatitis and that is the only one the vaccine is for. What if that patient had HIV? What would the outpatient protocol what would they do then?

Leslie Canham: Well the post exposure prophylaxis is a combination of different anti retrovirals. I know in the past it was fondly called the AIDS cocktail. The CDC has a recommendation for healthcare providers who are exposed to HIV positive patients' blood through an exposure incident and of course any healthcare facility is going to follow the US Public Health Department CDC guidelines for post exposure prophylaxis. That does change periodically and in San Francisco they have the HIV hotline physicians all over the country would call there or call CDC to find out what the latest, greatest post-exposure prophylaxis is.

Howard Farran: Is that a one time cocktail or is that something they are going to have to take daily or weekly for a long time or?

Leslie Canham: It is my understanding that the sooner someone presents to the healthcare provider and it is determined they want to partake in the post exposure prophylaxis that there is an immediate prophylaxis, AIDS cocktail so to speak, that can be taken within two or three hours of the exposure incident. And then I understand that if you miss your time frame there is another month long regime that you could initiate. But again those regimes are changing based on science and pharmaceuticals. That is why the healthcare facilities will be prepared. Any hospital, any outpatient occupational center will be abreast of the most current post exposure prophylaxis.

Howard Farran: Is Hepatitis B and HIV basically the two main things they are worried about or is there anything else that pops up here?

Leslie Canham: Well, Hepatitis C is certainly probably even more likely that a person would be exposed to and acquire infection than HIV. Now Centers for Disease Control does have some statistics. If you are exposed to a person that has Hepatitis B and you don't have immunity infection results could be up to 30% chance of acquiring infection. That drops down all the way to about 3% for a patient who has Hepatitis C. C as in cat. Hepatitis C just isn't that easily transmitted in dentistry. Again, the chances if you are exposed to a patient who has Hep C you could get possibly 3 to 4% chance of acquiring the infection.

Howard Farran: So is Hepatitis C more of an STD then? Is that the transmission route mostly? Is Hepatitis C more like an STD? Is it more a sexually transmitted disease than something you catch at the dentist's office?

Leslie Canham: That is something that is not as easily transmitted in dentistry. Is that what you are asking?

Howard Farran: No. How is Hepatitis C generally transmitted?

Leslie Canham: Hep C, Hep B and HIV are all transmitted through blood and body fluid. Usually in dentistry exposures are caused by sharp injuries and needle sticks. The needle sticks the narrow, small, tiny bore of the needle even if the syringe has had a little bit of blood aspirated from the patient transmission for Hep B and Hep C could occur these ways. With HIV it is not as likely. In fact, the chance of getting HIV as a result of a needle stick or a cut drops all the way down to like .3%. 0.03%. And on top of that since HIV has been discussed in the United States back as far as I can see – 1981 – that there has never been anyone in dentistry who has been infected with HIV as a result of an occupational exposure to a patient's blood. Now of course we have had the other direction where a dentist has been accused of transferring HIV to patients. But this was different. That was back in Florida with Dr. David Acer[ph] and the events that occurred there. The Centers for Disease Control could never actually identify for sure modes of transmission or whether those patients indeed did acquire the infection at Dr. David Acer's office.

Howard Farran: Let's talk about that just for a minute because we have been around the block a few times. I am 52 years old – that was back in – David Acker in Florida that was what 19?

Leslie Canham: It was in the '80s.

Howard Farran: Yea. It was in the 80's. But the follow-up to that story was I believe it was like five years later wasn't it there was a story out that university I believe it was University of Gainesville they were purging charts and they found out that she had been treated twice for perianal genital warts? Wasn't that the story? So she could have got that –

Leslie Canham: There was some blow back on that. First when Centers for Disease because – Centers for Disease Control conducted their initial investigation they couldn't find the mode of transmission. But later they said the evidence shows there were two people who were likely infected as a result of care at his office. And that the investigation after the fact there was evidence that he made statements that no one would recognize HIV unless a college student and a grandmother were infected. And in his office two of the patients that acquired HIV likely from his care were a college student and a grandmother.

Howard Farran: Okay so there were three people in his office not just Kimberly Brogalis[ph]. There were three people.

Leslie Canham: There was actually several people. And there is a good report on the CDC website regarding that Florida incident. You can google that on CDC.

Howard Farran: Could you post that on Dental Town? I would love to read that.

Leslie Canham: I would be happy to. I also am quite honored to have met some of the investigators who actually investigated that case from the CDC investigative team through another organization. OSAP the organization for safety asepsis and prevention. And at our last infection control symposium one of the investigators of that event actually did speak and present a plannery session explaining what it was he saw and what the interview process was and how that all came to fruition. The year before in San Diego at our infection control symposium they had the CDC investigator who investigated the AIDS case and the outbreak as you discussed in your most recent article on Dental Town. His character was portrayed as one of the CDC ___[00:23:35].

Howard Farran: Great movie. A must watch movie. I want to make one plug for our viewers. Not just the United States, but around the world. The fact that America – I have worked with the CDC too on water fluoridation issues. To think that a country like America has 330 million people and we spend 1.70 trillion on healthcare, yet we only have 15,000 people at the CDC I mean we spend 99% of our money treating disease and we don't even spend 1% on understanding it, research prevention. The CDC should have more people than NASA. I don't really care if a man lands on Mars. I don't care. All that money should be in the Centers for Disease Control. Those people are so overly worked, underly funded. That place needs to have 50,000 people tomorrow. And no one realizes that until they are on their death bed. And those guys at the CDC they look at the American Healthcare System and it is amazing they even have morale to keep going on because it is just so unorganized.

Leslie Canham: CDC is incredible. Anybody who has the opportunity to visit CDC in Atlanta you can actually see how quickly they respond to outbreak. You can look at the history of legionella disease and how they discovered that at a hotel and boiled it down to a water born outbreak. And just most recently with the Ebola. Years ago we would say if someone has Ebola that is it. They are toast. And here look at this how quickly not only they responded, but they were able to cure and release individuals who were infected.

Howard Farran: The greatest infection story I am trying to think of the name of the book and it is sitting over there on my bookshelf. The great flu epidemic of 1917 where basically 5% of the planet died was that the Spanish Influenza?

Leslie Canham: The Spanish Flu, yes. Spanish Flu.

Howard Farran: There is a book on it. And it was trace – I am from Kansas. It was the biggest detective work in the world. It was traced back to a farm boy in Kansas. He got the virus from a pig and then he was drafted to Leavenworth in Kansas which is where the first big outbreak was. And then they are moving all of those troops around during a war just spreading this disease all over the planet and it was the most amazing book I had ever written. To think that was over 100 years ago we will probably see that again won't we? Because everybody was saying that was all caused because World War I was moving all of these infected people around. Well, today there is 27,000 flights a day on the planet. So if a virus breaks out in Hong Kong could be in San Francisco and New York and LA 15 hours later.

Leslie Canham: Absolutely.

Howard Farran: The next Spanish Influenza could be a disaster.

Leslie Canham: You know, I think the evidence today that people listen to CDC's recommendation and the public health department is when we had the swine flu outbreak just recently in 2009 I believe it was. There were public announcements immediately. There were information on the CDC website for healthcare providers to learn to recognize signs and symptoms of influenza. There were people who were told that they are sick don't go to work. Get vaccinated for H1N1. Avoid close contact with others. Wash your hands. I saw alcohol hand sanitizers in places that I had never seen it before. I actually conducted a lecture in Boston right at the – in April right when the swine flu outbreak was indicated and I was asked to change my lecture from plain infection control to how a professional should respond to swine flu. On my way on the shuttle to the lecture there was alcohol hand sanitizer that was duct taped to the shuttle bus. So as people come in they would sanitize their hands right away. People really paid attention this time. I think that

people will pay attention in the future when they realize that something like the Spanish flu outbreak could occur again.

Howard Farran: Let me talk about that because I have been in more dental offices than I can count. I don't even want to know how many dental offices I have been in. And sometimes you see the dentists walk out of the room and they go to that light sensored and it looks like a little whipped cream on his hand. And he does this. And then puts on the new gloves. Let's face it. You have been a dental assistant for a long time. Washing your hands after you take off the gloves you really got to spend a lot of time drying because it is really hard to put on a glove on a damn hand. It is tough. And then – but when you do that hand sanitizer thing it is probably a disinfectant. It sounds like from earlier it is not a detergent. But is that acceptable to take off your glove do the hand sanitizer thing and then put on other gloves? Or do I need to stick them under the water and get them all wet with soap and wash them?

Leslie Canham: There is no doubt that soap and water is the best way to clean your hands. It is not only the friction of rubbing your hands together, but the lather pulls the transient floor away from your skin and you rinse it down the drain. It is washed off with the lather. There is no doubt that soap and water is the best way. However, there is a great article on the CDC website on hand hygiene for healthcare professionals.

Howard Farran: Can you post that too?

Leslie Canham: Be glad to do that.

Howard Farran:I mean there are 2,000 posts a day. We have 3.5 million posts. Do you realize that when you make a post above the post there is a little box that says forward and if you click that you can type in a name – you can type in Howard@downtown.com and it will email me the link?

Leslie Canham: Great. Yes.

Howard Farran: Can you do that? I want to read it again. That is a dilemma a lot of dentists have. You are saying you do have to stick your hand under the water with soap and wash?

Leslie Canham: Yes. And when your hands are not visibly soiled and contaminated no visible blood or debris or dental materials hand sanitizer is actually a better disinfectant for your skin. It is a better sanitizer so if you use a product that is designed for healthcare providers it is not only going to have the right alcohol content, but it is also going to have emollients and moisturizers and keratin and liposomes so you don't dry your skin out. An alcohol hand sanitizer is appropriate to use in between glove changes, but not when hands are visibly soiled or contaminated. Of course it dries quickly.

Howard Farran: You are saying you could – when I take off my gloves when I am doing a hygiene check or you are going into a filling or a crown whatever there is nothing under your glove, right?

Leslie Canham: Well, gloves don't have the integrity that you think they do.

Howard Farran:I am saying – but you are saying you don't really have to wash with soap. You could do the hand sanitizer.

Leslie Canham: You could use a hand sanitizer absolutely.

Howard Farran: Could I ask you an embarrassing question? It is probably too much information and you probably wouldn't have accepted this interview from me in my request – being 52 I have heard this discussion a lot of times. It is an inappropriate discussion, but I have heard it a lot of times. Good, intelligent people – like last night I was at the ASU football game, okay? And when you go into public restrooms I know I have taken a shower. I know when I go to the bathroom I have to touch myself. I know what I am dealing with. But I don't want to go touch all those knobs. A gazillion people just did their business and now they are all touching these knobs and turning them off. I would rather just touch myself and leave then go touch all that infected stuff and doorknobs and all that stuff. Tell me, am I wrong? When I go to the ASU game and turn those handles a thousand other men have just gone to the bathroom and touched those handles. So if I wash my hands and then I turn that off and then I go hit that blow-dryer button aren't I more dangerous touching all of that stuff just to rinse off my hands because I touched my genitalia? Is it better to just leave and get over it?

Leslie Canham: When you turn the water on your hands are contaminated. There is no doubt about that. An electric eye or automatic sensor would be ideal. Barring that and barring any paper towels that you could use to turn the water on and off with if you just have a blow-dryer to blow-dry your hands that does create a dilemma. Of course washing hands prevents transmission of feces and other bacteria yucky stuff to other people. So yea you got to wash. Then after washing hands if there is any way you can use a barrier to turn off the water with that would be perfect. Barring a barrier what I would do is turn the water off. I guess you have to let yourself out of the restroom so you might have to hold the handle of the door to open the door and get out. Then afterwards I would use an alcohol hand sanitizer on your hand. Because certainly I don't want to have what was on that handle of that door or on that sink on my skin.

It is funny because that translates to a dental office. Think about this – you wash our hands. You turn the water on with your contaminated hand. And then you turn the water off with your clean hand but you just contaminated your hand. And then you put on your gloves. And then bacteria can colonize readily in that warm, moist environment. You think you're clean, but you may have introduced bacteria to your hands.

Howard Farran: Let me tell you another thing that makes me think about this in public places. I'm still reading that the number one largest cause of death in the United States is heard disease. I forgot the number. Number two is cancer. But number three is hospital transmitted infections. I mean gosh you go into a hospital – that is my mindset of a public bathroom. I am sharing with 1,000 people. I just want to get in and get out. I'm not worried about me. I am worried about all of them. And going into a hospital and here in Phoenix, Arizona, I got to tell you something that just blows my mind. If you ever get the chance to go to Intel, because Phoenix is big Intel plants. Where they make those chips is like 100,000 times more sterile than where they do in open heart surgery in a hospital. I mean it is crazy meticulous. The air is filtered to less than a part per million and all of that kind of stuff. And then you go to a hospital and a surgeon gets out of a car, walks through a parking lot, goes to all of these doors, washes his hands for 10 minutes and he still has tennis shoes on. Then they cut open your chest start doing all of these surgeries. Then I read data that some say 300,000 Americans die each year from an infection they caught at the hospital. First of all, is that true? Are you reading that?

Leslie Canham: I am reading that. Also this is a very big point in our infection control symposiums that not only is there medical errors that occur in hospitals, but there is all nosocomial infection. And it is getting better. Physicians are getting better about washing hands. Healthcare providers are getting better about disinfecting surfaces and not cross contaminating. But still it is a concern. And I like to say boy if I get hurt

take me to a dental office for my emergency care. Don't take me to an emergency room. I am afraid to go there. I am afraid of getting a hospital based infection transmission.

Howard Farran: Even the air ducts of their central air. I mean they don't even do the basic. I mean they are pulling air out of a room on a return vent and then blowing air. I mean there is – they are just stirring the whole hospital just for temperature control. I mean I think of the money that could be saved if our hospitals were like an Intel chip plant. I just think of 300,000 people each year that wouldn't be dead.

Okay so when you go into an office keep going through your program.

Leslie Canham: When I go into an office the first thing I want to make sure is that everybody understands that they are exposed to blood and body fluid and that we have to constantly be thinking about ways to prevent not only exposure to ourselves like needle sticks and cuts, but also cross contamination. I want to make sure that everybody knows exactly what to do if they get stuck with an instrument again so we can get that protocol in motion and get on with the rest of our day of dentistry. I want to make sure that people understand how to use their equipment and use their disinfectants properly. I am often times surprised I see that some of the same mistakes that were made in that Tulsa, Oklahoma office are also mistakes that are being made in dental offices around the country.

Howard Farran: Go through his mistakes because this was an oral and maxillofacial surgeon. This guy had 12 years of college. You aren't dealing with a dummy, but stuff happens. Go through specifically what mistakes was that office doing that general dentists are doing from coast to coast.

Leslie Canham: I am going to start out with the grave errors because I do want to point out that 99% of the dental practices in the United States are following appropriate infection control protocols and feel like they are doing the right thing. His office was a bizarre and different circumstance because first of all his biggest error was he was allowing his unlicensed dental assistants to not only determine amounts and dosages of sedation medication but actually to administer that sedation medication. And the interview with the Public Health Department and the Dental Board that ensued after the announcement was made or rather after the investigation was conducted was that the dental assistants were using some of the sedation medications from a single use file over and over again from multiple patients. So they would go back into the sedation vial to gather more sedation meds for more than one person. They would insert the same either needle or syringe into that vial. That was a pretty grave error and violates the one and only infection control for needles. Where you use one needle, one syringe one time only.

Howard Farran: Their thinking was probably just saving money, right?

Leslie Canham: I would think if I was a dental assistant I would be trying to save my doctor money too and the propofol is expensive. Sedation med. I might have been thinking that. Untrained staff was not only determining the amount of dosage but also drawing from vial. And they were administering the sedation medications for the doctor. They are not nurse anesthetists. They are not anesthesiologists. They are not dentists. They are dental assistants. The injection protocols were out of order and unsafe needle practices.

The next thing that the dental board found was again something that is unique to this office and not practiced around the country. They were not properly sterilizing instruments. They had instruments that were rusty, corroded. They were not spore testing. They hadn't conducted spore testing on their sterilizers for six years.

Howard Farran: How often should a spore test be done?

Leslie Canham: Well it should be done weekly at least. And with every implantable device every load that has an implantable device and that device is quarantined until the spore testing reveals there is no positive growth.

Howard Farran: If someone is not spore testing give them names. Now they can go find all of this on Dental Town. They can take our online Dental Town course. They can also go to LeslieCanham.com. C A N @leslie L E S LI I E Canham C A N H A M .com. Now on that website would you have names of spore testing companies with websites and addresses and emails or?

Leslie Canham: I would be happy to provide that information if I don't have it posted on my website, but there are a number –

Howard Farran: Could you give one name so at least someone has somewhere to go?

Leslie Canham: SPS Medical is one.

Howard Farran:SPSmedical.com

Leslie Canham: Yes. And Chuck Hughes is the educator for that company. Another company Crosstechs recently started spore testing. And they are a wonderful company with lots of great education for healthcare providers and dental providers.

Howard Farran: Now for my viewers I always take a transcript and put it in the notes of the podcast. Most dentists tell me when they are listening to a podcast a lot of my friends say they will come home on Saturday and they got to do three hours of housework. They got to do laundry, cleaning, vacuum. And they just take their iPhone, turn on the podcast. So a lot of our viewers are listening to this while they are multi tasking. They might be on a bike ride. They might be at the gym. So all of this will be in the notes. Leslie can you email me to add to the notes some specific your website link? Do you let anyone email you?

Leslie Canham: I would be happy to email you the information you request. Sure. Anyone can email me and ask me questions. I am more than happy to respond to questions.

Howard Farran: So we will have some notes in the transcript where they can start a spore testing done.

Leslie Canham: Right. They can do mail away program. They can do onsite incubation.

Howard Farran: What if they want to just buy a protocol or a kit or a plan to implement in the office? Do you recommend someone coming into the office like you? Do you sell a program? A tape? A CD rom, something? Is your Dental Town online course enough or what do you recommend for that?

Leslie Canham: Certainly a Dental Town online course. I have got one coming up in January on the Hazard Communication Standard which is part of OSHA. There is going to be one on HIPAA coming up. The online course on blood born pathogens is still – even though it was written many years ago it is still very effective today. If someone wants personal guidance they can contact me. I can consult with them by phone or by Skype. I can also come onsite in the office and help them train up their OSHA coordinator. Make sure that they have got all of the systems in place so they know how to handle OSHA ongoing.

Howard Farran: And if someone is a meeting planner for their study club or dental meeting how long of a program do you recommend? Is it a half day? Full day? What does it take if you came to the Dental Society and a dentist could take his whole team there how long do you need him for? Is that a half day or a whole day or?

Leslie Canham: I can fit to the meeting planner's schedule. So I could do a 90 minute program on OSHA. I can do a six hour program on OSHA.

Howard Farran: What do you really recommend though?

Leslie Canham: I really recommend to really get a clear comprehension and understanding about a three hour program is good.

Howard Farran: So a half day.

Leslie Canham: About a three hour program. Yes.

Howard Farran:I interrupted you as usual. You were going back through the Oklahoma – when you walk into the average dental office you have said everybody thinks they are doing a good job. We think we are all clean and doing a good job. But go through again what our mistakes are. You said the grave errors. What are more grave errors or what are more average errors that you see?

Leslie Canham: Just to touch on the Tulsa, Oklahoma even when I said that there are some parallel errors I talked about the things that were grave errors. The parallel errors in Tulsa, Oklahoma they found organized and unorganized and unlocked medication cabinets. When I conduct training in dental offices one of the things I ask dentists to do is go through their emergency medical kid. Take a look and see if there is organized medications, if anything is expired, needs to be replaced and I know that in Tulsa they had expired medications that were continuing to be used. So in a dental office we want to make sure that not only are the medications we are using up to date and current, but the anesthesia if we are using local anesthesia we want to check that container every time we open it to make sure it is not expired. Every time we open up a container of disinfectants we want to check the expiration date. That is an area I could see could use a little bit more attention.

I also find that some of the improper sterilization techniques that they found in Tulsa, Oklahoma I find in dental offices. For example, they found improperly wrapped instruments. When I go to dental offices many times I find instruments that are either poking through the sterilization bags or are unwrapped and stored in a way that they could get contaminated. Sometimes I find that they are overloading the sterilizer which can prevent the steam, the chemical vapor or the heat from actually penetrating into the sterilization pouches and touching the instruments and achieving sterilization.

Howard Farran: Let's get specific. Do you like the bag systems of instruments or do you like the trade cassette systems?

Leslie Canham: I like both. I love cassettes. I think they are simple, easy. Keep the instruments organized, protect the instruments. Safer for use. But there is a place for the sterilization pouches as well.

Howard Farran: For like a basic mirror explorer perioprobe?

Leslie Canham: In a pouch.

Howard Farran: In a pouch? And as far as cassettes – name brands. What are your favorite cassette systems?

Leslie Canham: I like Hugh Fredie[ph] cassettes. I like the guarantee that comes with them and they are easy to use.

Howard Farran: Okay. And back to the autoclave. There are several different types. Like you said there are steam heat, there is chemical. Can you go over the autoclaves and tell us what is your go to autoclave and the pros and cons of a – what are they steam and heat or ethylene oxide or what is it?

Leslie Canham: The majority of offices are using steam sterilization today. So some offices are using dry heat. A lot of offices like the dry heat. Other offices sometimes they have these special instruments that could be rusted or corroded in steam prefer the dry heat. The majority of offices I would say 90% of the offices that I consult with and visit have steam sterilizers. And they vary anything from a statem to a chamber type sterilizer like a Lisa or a Midmark. I know that Cycan makes a Bravo which is similar to a Midmark. So steam sterilization is again my favorite.

Howard Farran: Why do you think orthodontists like dry heat?

Leslie Canham: Pardon me?

Howard Farran: Why do you think orthodontists like dry heat over steam?

Leslie Canham: With the type of instruments that they use sometimes the steam can dull the sharp cutting edges of their instruments. Also some of the instruments that they use are really more – better designed to be sterilized in a dry heat sterilizer. That is what I find. However, if they can purchase instruments that can withstand the steam and that they can do things like use a surgical milk dip bath to prevent corrosion and rust and switch over to a steam sterilizer.

Howard Farran: Now there is also another one. Is it an ethylene oxide or some – there is another one that they used to use it was a gas.

Leslie Canham: I don't often see that in dental offices. I have seen that in medical facilities.

Howard Farran:I always saw it in the dental school. My dental school had a big gas chamber.

Leslie Canham: The basic one that I have seen that is chemical is the chemical vapor like a Chemclave. The Harvey Chemclave has been the one. That was actually the fist table top sterilizer. I remember when my father told me in dental school they introduced this thing that looked like an aqua lung. He said this is the first table top sterilizer. Before that they were using only specifically cold sterile. The Chemclaves and the chemical vapor because they use formaldehyde are phase out very quickly in dentistry as we try to move toward greener dental settings.

Howard Farran: Yea. Formaldehyde. You wouldn't want to be breathing that in vapor your whole life. I remember my anatomy physiology teacher she had dissected patients soaked in formaldehyde for 40 years and she was saying she was getting some peristhese in her fingertips and seeing strange colors in her eyes.

She thought she had been exposed to too much formaldehyde just working on dissected bodies her whole life.

What is more low hanging fruit? I only got you for 12 more minutes. Give my listeners some more meat and potatoes for the last 12 minutes.

Leslie Canham: Okay. One of the things that is important to remember is that OSHA training is not about keeping the OSHA inspector out of your office or pleasing them when they come in. It is about building your confidence of your team so that people know not only what to do do protect themselves but they know that their employer is concerned about their well being when it comes to infection transmission. If you can give the confidence to the team that they are doing the right things and that ongoing training is available they work more safely, your office is more productive, their confidence level is high. And when patients see that patients have more confidence in the doctor. When patients see that the office is following infection control protocols anything from hand hygiene to wearing appropriate personal protective equipment; gloves masks, protective eyewear, clinical jacket. They know that this office pays attention to detail. And with what patients can see on the outside all the way from the time they come into your reception room and maybe see the alcohol hand sanitizer and the box of tissue paper that you have and the little waste basket that you have in the reception room for them. This all conveys a message of a culture of infection prevention and safety. For me as a team member I love knowing that my boss is more than willing to provide me with the training and the education that I need to work effectively and safely.

Howard Farran:I want to add to that because you know I still do clinical at least three days a week. I had a patient last month and whenever I get a new patient I always say did you just move to Phoenix? Are you changing dentists? Why did you leave your last dentist? Did you move? What is going on? I had a lady last month she was probably 48 years old and she said when I saw the dust on the baseboards I thought oh my god what are they going to be sticking in my mouth. She equated – and your staff, hygienists, receptionists, assistants. They are not used to home cleaning like a cleaning service. And so they might not be regularly doing the dusting on the baseboards and the ceiling fans. I have always had a professional cleaning service come in every night after work and I love what you just said about hand sanitizers at the door. Now I want to put one outside of my office before they even walk in the door. Or first thing inside.

I also want to say one thing. I think most dentists have a very bad attitude about OSHA. Whenever OSHA comes up it is always government and I pay too much taxes. You guys got to remember I got four boys and three out of 1,000 miners die on their job each year. Three out of 1,000 agriculture workers die each year. My oldest boy works construction and they lose three out of 1000. If it wasn't for OSHA my boy might be in a field that maybe 12 out of 1,000 die each year. I don't want a crane falling on my boy's head. This OSHA stuff is about competition and checks and balances. I love what the message is it is not we are not doing this for fear of the OSHA inspector. We are doing this for all the right reasons. We should create a culture. I think it is good business too. I think it is big money. I think if your patients come in and feel safe and they don't have to worry that it is a dirty office. And that guy from Oklahoma that has been all over the news I mean you don't have the patient that missed that story right?

Leslie Canham: No. Absolutely not. It is on their mind when they come in and see you. Is it possible that I could get Hepatitis or HIV as a result of my care here? What is different between your office and that office?

Howard Farran: Yea. Absolutely. I only got you for eight more minutes. Wrap this up for eight minutes. Tell us some more. I think we covered all the low hanging fruit. Go up the tree a little further and grab some more fruit.

Leslie Canham: Okay. I think the team has to be conveying that message of infection prevention and safety. Of course the doctor has to make that training available. But there are resources that team members can go to. First there is Dental Town. There is OSAP organization for safety asepsis and prevention and there is Center for Disease Control. Even the OSHA website has some incredible information. And I also think that we all need to have maybe even at our morning meeting at our morning huddle have current information about outbreaks. For example, what would you say to a patient that walks in your office and says can I get Ebola from a dental chair? Or can I get MRSA from the dental chair? Now that is a pretty simple response and certainly you would say we practice infection control protocols. We do everything we use disinfectants. But everybody on the team should be able to say our office is practicing the very best infection control for your safety. We continually upgrade our knowledge on infection control protocols. We are constantly reviewing the different products available to make infection control safer. We use appropriate disinfectants that take care of MRSA and bacteria and –

Howard Farran:I am going to stop you right there. MRSA is all over the news. Now MRSA is a staph infection?

Leslie Canham: Staph bacteria.

Howard Farran: Is MRSA just a particular type of staph that is – that is the big one you are always hearing on the news and the hospitals. Have you heard any MRSA cases in a dental office?

Leslie Canham: Yes. There can be actually because patients can be colonized with staph bacteria and many people one in three people is colonized with staph bacteria. Of course far fewer are colonized with MRSA probably you know 30% of the people who visit your practice have staph bacteria. Maybe 1% have methicillin resistant staph bacteria. And so we want to make sure that when our patients ask can we get MRSA from the dental chair that our answer is no. We disinfect with products that kill MRSA and we use the right product for the right amount of time every time.

Howard Farran: And once you get MRSA that is a hard one to kill isn't it? They say that is as tenacious as a scorpion and an ant and a cockroach.

Leslie Canham: It can be killed easily with disinfectants as long as you are using the right product. You can't just go to Walmart and buy any old disinfectant. It has got to be a hospital grade disinfectant that is EPA registered so you have the registration number. You know you are using something appropriate for healthcare settings.

Howard Farran: Right on. Okay so five more minutes. Give me some more.

Leslie Canham: Okay. So not only is the team well-versed in infection control, but they can answer questions when a patient – hey, what if someone asks your dental assistant is MRSA a virus or a bacteria? Well let's say a MRSA outbreak is in the school system in Phoenix. It is the talk of the town. Kids are coming home with letters from the school talking about how they are addressing a MRSA outbreak. So at your morning huddle bring up information to your healthcare workers about MRSA and discuss at your morning

meeting what it is, it is a bacteria, how to kill it and what we do in a dental office to prevent transmission. We use barriers. We use disinfectants. So when that first patient comes in and says hey, I just got this notice from my kids' school about MRSA. Or I just got the notice about whooping cough outbreak or I just got this notice. Whatever is relevant in the news with regards to infection transmission your dental team should be aware of it and have the right answers so when patients ask those questions they have – they sound like they know what they are doing when it comes to preventing infection transmission.

Howard Farran: And prevention is the key. I want to say something I thought was amazing. I have had the honor to lecture to dentists in 50 countries. Last month I was in four continents. And one of them was Africa. And what I think is so interesting about going from the United States to Africa and I was in Australia and others America women are so into their hair. A lot of women they are always getting their hair done maybe once a month and they might spend 10 minutes on it every morning. In Africa the women are just as beautiful, but because they are in a jungle environment with so much stuff their culture is all the women are like me. They all buzz their hair. They just buzz it off because they don't want to have to deal with bugs in their hair, lice, ticks. You walk under a tree and you don't know what fell into your head and you can't see it through hair. It was a beautiful culture of everyone getting rid of their hair so they don't have to worry. Prevention. They don't want to find out that their baby had a tick on their head and they didn't see it underneath a bunch of hair. I felt also in this interview I feel bad for our listeners from Oklahoma. They might be embarrassed of what happened there. I just want to remind everybody around the world that Brad Pitt was born in Shawnee, Oklahoma. They got a bright star.

Leslie, thank you so much for spending an hour with me. It has been an honor. Thank you so much for being the moderator of infection control on Dental Town. Please make those couple of posts you are talking about. Email me anything – I want my viewers in this transcript to have – to go to action if they need to do this. So if you have any websites, names, numbers so they can implement a plan and get it going faster, easier, higher quality and ___ send it to me and it will be in the transcript. Thank you for making that course on Dental Town. If you ever want to make another course or do another podcast it would be an honor.

Leslie Canham: Thank you very much and you are quite the interviewer. Make it easy to talk to you.

Howard Farran: Oh thank you, Leslie. Have a great day.

Leslie Canham: Thank you. Bye, Howard. Happy Birthday.

Howard Farran: Oh thank you. Bye-bye.