

# Aligning the Dental Hygiene Diagnosis with the 2018 AAP Classification of Periodontal and Peri-implant Diseases

## Video Transcript

Marianne Dryer:

Hello, welcome to this presentation on the new AAP classification system, it was rolled out in 2018, and I've been presenting on this topic for about two years now, My name is Marianne Dryer, I'm very happy to present this to you. Uh, after presenting the uh, AAP classification updates for the past two years, my focus has become to try to align this new system within your practices certainly, but also with dental curriculums. So I'm going to give you the high notes, I'm gonna try to portray to you certainly what I got from it. I spoke with some of the workshop attendees that created this system, and um, just try to enjoy it, there is a lot of information we're going to put together in one hour, and um, I hope you do get a lot of information out of it. I'll provide my email address at the end if you want any copies or anything or um, further information.

So I would like to certainly thank Crest Oral-B for having uh, me do this for you, having me speak on this subject. I'm always honored to do anything for Procter and Gamble. They're a great company. Uh, and I'm honored to speak for them. So again, my name is Marianne Dryer and I am an educator. Uh, and I've also been a um, curriculum developer and a national and international speaker for uh, Dentsply Sirona. My heart and my passion is in uh, dental education. Uh, I thoroughly love it. And I'll tell you, this new AAP system is, is just fantastic. And it really provides super great communication tools. And it is just aligning into the curriculums very nicely because i- it truly gives the students a way to develop their

understanding of perio, but perhaps more importantly, it allows them to explain to their patients and have a system to follow to do so. Um, I can't say enough about what the AAP and the EFP, the European Federation, um, has brought to the table with this new system. So I know a lot of you are out there saying, "I don't want to change, it's too much change." But make a decision after this hour, and you might have a little bit different feelings on it.

So I'm going to go over basically, the historical timeline. How did this AAP/EFP classification system come to be? How many years was it in the making? What is the thought process behind it? We're going to discuss the new staging and grading system because therein lies the beauty. The whole term of staging and grading is really the essence of this system. And I think you'll certainly leave with a good understanding of that part. We're going to talk about how by staging and grading people, how that's going to benefit their care and management of their care. It's going to help you to develop a prognosis, which I think frankly, we've been weak on, we haven't been delivering a great prognosis. Perhaps we do a good diagnosis. But I'm not sure we're taking each individual person to their own individual prognosis.

And that's also a part of the system, which is really very cool. We're gonna evaluate treatment modalities that are evidence based protocols for specific types of periodontal disease, according to this new classification system. And one thing I'll tell you right away, the old system was just, it was just too big. It was, you got lost in the

categories and the subcategories. This really defines it much smoother, much cleaner, and you're then able to really provide the correct treatment based on this new stage and grade, a- and more importantly, a treatment that the patient is going to understand and is going to really be motivated to uh, enroll in the treatment and, and wo- work towards better oral health. Uh, I'm convinced of that.

So I'm sure that the majority of you have seen this slide before, that basically half the country or the United States anyway, is walking around with periodontal disease. And, you know, I've showed this slide so many times that I get a little bit, I guess apathetic to it, but when I speak to large audiences, and this slide goes up there, it- it always surprises me that there is a look of, "Okay, so tell me something else." And I just, I want us all as dental clinicians, to truly look at that. This is our wheelhouse, it is our profession, and, and really dental hygienists, this is on you to work with your docs, to work with the periodontist, to work to get these numbers down, because something's not happening, something's not working in the right direction. Otherwise, we wouldn't have these type of numbers. And we have all kinds of challenges today, you know, to keep people out of dental offices, certainly, but we've got to move that needle, we have to do something different to change that.

Periodontitis has been identified as the second most frequent modifiable, support more, modifiable contributor to systemic inflammation. Diabetes, you know, we're talking about that with COVID-19, and you might be surprised to know that obesity is the first modifiable contributing factor. So keep that in mind as we go through this. What can we help our patients do? What are their risk factors that lead them to this periodontal status? And how do we incorporate this in this new system? We do so with the grade, which, um, again, this is, is a great part of the system. So what are the new updates all about and why do we have to change? How long has it been since the AAP has updated periodontal disease classifications, and if this was a live CE, a live webinar, I- I'd be pulling you and, and getting some answers, but you may be surprised to

know, it's been since 1999. And you know, that's a long time ago, 1999. That's the last time the AAP rolled out a, a new classification system. And I'm going to walk you through that 1999 system. And I think that you'll walk away with having an idea of why people were not naturally using it. And, and unfortunately, the numbers are low of clinicians that were applying the AAP system. And we have to do that, we have to get calibrated. And I think again, this system helps with that.

So we have to change, and one thing I'd like to kind of keep as the thread or as a message through this program tonight, or today, whenever you're watching it, is that the RDH, the registered dental hygienist, needs to own the change. I- I'm going to, I'm gonna put that out there. And I'm gonna wager that, that some of you RDHs take this on and own changing your practice, to own incorporating the new classification system, be the owner in the practice, be the gatekeeper. You know, train your docs, train your other hygienists on how to use it. And, and own it. I mean, this is really no simpler way to say it um, because, you know, our docs have a lot going on with their operative, with running a practice, and you know, it's hard to bring new things in, it really is, and if all the hygienists are kind of sitting back waiting for the doctors to adopt this, I'm gonna challenge you to turn that, turn that around a little bit and, and, and you try to own it.

There is um, links to a lot of the documents that I'm going to show you tonight and I will, at the end, let you know how to get those and again, provide my email address because the AAP and the EFP have put out some beautiful documents that you can simply download, laminate and have them chairside. So I highly recommend that you do that. Again, I think I said at the beginning, the new updates are intended to enable a proper diagnosis and prognosis, but they're also helping to improve the clinicians understanding of disease progression and risk factors. And, and that statement is not meant to be condescending in any way.

And I think that most of us that are practicing like to think that we understand the disease progression, but I think we're finding out things,

you know, every day, we're certainly finding out that oral risks, systemic involvement, new entities, cancer, Alzheimer's, um, that is connected. So you know, I think it, it pushes us to understand the, the progression a little bit more so, but it absolutely positively forces us to bring the risk factors in and do something with it, because I- I think, I think hygienists anyway, really like to talk about risk factors, sleep apnea, smoking, perhaps, but, you know, what do we do with that information afterwards? After the patient leaves, are we really doing anything with those, that risk factor information? And I think that we need to do so.

And then ensure implementation, that's a big part of it too, of appropriate treatment. Let's be doing the right treatment. And, and, and let's also try for tonight's purposes of this presentation to remove the concept [inaudible 00:09:23] we are treating patients too early, we're treating periodontal disease too early. Because you know what? We're, I think we're waiting too long, and I think that's why those numbers are up so high, because we're letting it slide. We're watching it. And we all know what happens when you watch something long enough, it gets worse. I love this sentence on kind of some phraseology with this new system. The new classification helps to stratify periodontitis patients to explore the influence of treatment on systemic disease. How cool is that? So basically what that's saying is, let's treat their perio, let's treat their gingivitis, let's treat, you know, what's going on with them from a periodontal standpoint, from an inflammatory standpoint, and let's see what happens with their systemic disease. So let's put what we're doing in front of the systemic disease. And we're called to do this. So, so keep that in mind as well, when we go through the program.

The workshop uh, was held in Chicago back in 2017, actually, the, the program or the system rolled out in 2018. Uh, and it truly was a global effort. You know, we like to think in terms of the AAP all the time, the American Academy of Periodontology, and they certainly had a big part in this, um, but there were more than 100 experts from Europe, Asia, Australia, and

the Americas. And what they did was they conducted literature reviews, they took the evidence, they looked at research, they looked at systematic reviews, they looked at meta-analysis, they only took the best research over the past 20 years, because remember, things haven't changed or been updated from a system standpoint. And this classification system was developed and based and grounded in the research. So when we tell our patients what stage and grade they are, what classification they are, this is not something that we learned 20, 30 years ago, it's not what our docs believe, it's not, you know, um, it's just something that we've read, this is established in the evidence and uh, it truly does simplify and streamline the classification of periodontal disease.

Again, this multi-recategorization dimensional staging and grading framework is among the 2017's most major feature, the concept of staging and grading. I want you to think about staging this way, staging a patient indicates the severity of the disease, and that is determined by, by clinical attachment loss, not pocket depth. And that's where you kind of, kind of wiggle in your seat a little bit and have to get a new look on things. And also the complexity of the disease. Okay? And more so, the complexity of disease and management, and that's where you start talking about the pocket depths, because you're navigating around tissue, inflamed tissue, and you know, furcation involvements. But keep in mind, the clinical attachment loss is what we're really looking at. And when you hear the term staging, I want you to think about cancer, because we did adopt this nomenclature from the oncology world. Okay? So if you are a stage three cancer, you know intuitively that's not good, similar with a stage three perio. And so is it meant to elicit fear? No, but it's made to make some terminology and phraseology that the whole medical community can understand. If we really want to do this interprofessional referring people to their endocrinologist, to their GP, for that matter, get the diabetes under control, we need to start using languages and classification systems that our medical peers are going to understand. So that's a brilliant part of this.

As far as the grading goes, the grading considers supplemental biologic characteristics and risk factors of that patient in estimating the rate and the likelihood, the likelihood of periodontitis progression, because we know we have one person that maybe smokes, um, diabetes, etc. and one that does not, the progression is likely to go faster in this patient, but are we, after this point in time, truly giving that a classification, giving that a, you know, um, a place where the patient can understand it, but more importantly can understand how to work towards getting that better. Okay? So think of it this, staging equals severity at disease presentation, plus the complexity of disease management, where you're grading is your information on biological features of the disease, the rate of progression plus a risk assessment. That's how you're going to get your grade.

So take a gander at this, this is the 1999 AAP classification of periodontal disease and conditions. So a lot of entities there, we have the gingival diseases of course, we have chronic, we have aggressive, those type of categories have been removed from the main system now because there really wasn't enough true evidence to support one had real distinguishing features over the other. So in order to not confuse or truly water down the classification of periodontal disease, those have been removed from major categories. Uh, perio is a manifestation of systemic diseases. Absolutely, we've kept that in there and, and, and really kind of put some more um, descriptives around it. NUG or NUP, necrotizing perio, that's still in there.

And it- it turns out, we're probably under diagnosing that condition. A lot of stress going on, we need to be looking more for those alternative periodontal situations. Abscesses, uh, we'll talk about where that's kind of gone into as far as a category endo uh, lesions, um, subcategory or contributing factors, certainly. Um, and then we'll talk about acquired uh, deformities and conditions as well. But to look at this list right out of the gate, I can see why clinicians are not saying, you know, my patient has a [inaudible 00:15:47] two, a level two chronic periodontitis. They have aggressive

periodontitis, you know, type, it's just everybody was calling it something different, and, and that just doesn't work, or everybody was using insurance phraseology, um, you know, and that doesn't work either. We need to be on the same page from medical, dental standpoint.

So this is our new system, the 2018 system. We have, for the first time, have a, have a category of actual health, because if we don't know what health is, how would we really define disease or Gingival diseases, we have health, we have gingivitis up in that top category. Um, and we're going to spend some time talking about gingivitis and Gingival disease because I- I think that's the disease we need to focus on. That's your pre diabetes, pre heart disease. We got to get on top of that a little bit tighter. And then perio broken down to NUP, necrotizing perio, straight periodontitis, which used to have subcategories of chronic and aggressive. Perio is a manifestation of systemic disease and periodontal abscesses and endodontic periodontal lesions are all under that periodontitis umbrella. And then we have periodontal manifestations of systemic and developmental and acquired conditions, that's a little bit different, that stretches beyond, that gets into genetic disorders, etc. That's a little bit different than the one in the category before it. Uh, but it also contains your mucogingival deformities and conditions, traumatic occlusal forces, we all know those have something to do with the instability of the periodontal um, um, factor with the patient. The periodontal apparatus is the word I was looking for. We know that traumatic occlusion, um, tooth and prosthesis related factors can all have something to do with bone support loss um, attachment loss.

And for the first time, we are rolling out a new Peri implant disease and conditions classification. And that's a long time coming, we really need to start classifying our implants. And what this forces us to do, this new system, is take a very hard look at the implants separate from the rest of the mouth. So we're going to stage and grade our patients, so then, we're going to do our implants separately. So um, that's kind of exciting news. To look at

periodontal health, a pristine patient has no attachment loss, no bleeding, no anatomical loss of periodontal structures. I'm not a pristine clinical health. I have a little bit of recession on my premolar. Um, and you're hard pressed to find a pristine clinical healthy patient. I think most people that are in the dental profession, I like to think anyway, are clinically periodontally healthy, so there's no signs of inflammation, which will be redness, swelling, certainly, an edema or pain. You might have a little bit of abstraction or recession. Um, but from an inflammatory standpoint, clinical periodontal health does not exhibit inflammation. And that's a good picture of somebody that's clinically periodontally healthy.

Also, we have a sub category which is really very interesting, periodontal health on a reduced periodontium. So within that category of health, we talk about people that have health and no clinical attachment loss. But what about those patients that have clinical attachment loss, that they come in and they're pristine, you know, those are the patients whom I feel like, you know, you don't have a whole lot to do on them and it, and it can be frustrating, but they're not healthy, like 1110 healthy and yet they are healthy, they're not bleeding, the tissues are nice and tight. There's no edema, no, no exudate, etc. But they're never going to be back to square one. What this patient is, is a periodontal patient in remission. And that again is a really cool part of this. We want to get our periodontal patients into remission, into periodontal health, but we have to place that caveat of on a reduced periodontium, because these people are susceptible to slipping down that slope.

So they're not considered just regularly healthy, but we now have a category to put them in and describe them into, those will be your 4910s, and not your 1110 gymnastic coding, it's 4910 and, you know, I'm hearing that the CDT codes are going to catch up with this and get in alignment with it, because we need to do and call things what they are and treat them for what they are. And sometimes our, our, you know, we get handcuffed a little bit with coding because it restricts us to, to really, um, you know, utilize benefits and we know the

benefits supplement um, in our health and for our patients, but they can, you know, drive us sometimes and so we don't necessarily want that.

And then we've got the gingivitis patients. The workshop addressed unresolved issues with gingivitis. So you know, we still consider somebody to have localized or generalized but, you know, at what point do we treat gingivitis? Do we, do we do it differently than a 1110? And, and I think that that's a slippery slope, and we really haven't been defining that and treating that and maybe providing home care that's appropriate for your gingivitis patients. I truly believe that's where the heroism is. Look at these gingivitis patients, get on it early, and I think they wouldn't be saving a lot more dentitions. We are also looking at defining a gingivitis case, so we're going to be using phraseology going forward of, you know, Mr. Jones, you have a case of gingivitis, just like you have a case of the flu. So we're going to treat that case of gingivitis to try to get you back to clinical health. So the diagnosis of dental biofilm induced gingivitis, which is generally the reason for uh, for periodontal disease or for gingivitis, is graded. We're not staging gingivitis, we're just grading it, and that's based on extent and severity.

And here we're looking at the patient's bleeding on probing score. So when only a few sites or less than 10% are affected, we're going to call this incipient gingivitis, and I know many of you are very familiar with the word incipient, and that's a powerful word because it, it helps us to explain to our patients, "You know, Mr. Jones, you're in the very early stages of periodontal disease, you're in the incipient stage of gingivitis. You're just at the beginning, I want you to do some different things at home. Um, I- I want you to use a good power toothbrush, I'm going to put you on a special toothpaste that's going to help reduce your inflammation."

And really, we also need to tell our patients how much biofilm is in their mouth, where it is, and give them a number, bring back the plaque score, quantify a percentage to say you have a 42% plaque score, which whatever way you do, you go about getting that, whatever

product that you use, I think people work well with numbers. They're motivated by numbers. I never want to see my cholesterol get high, although sometimes it does, and I'm motivated to get that number down, I think people behave better with numbers, if you will. So try thinking about that a little bit more so, and certainly providing a bleeding on probing score. Most softwares will do that for you and provide that for you um, these days. We also want to let our patients know that incipient gingivitis can rapidly produce to localized and then to generalized.

So, you know, we need to get on it, and we need to get on it pretty quickly. Similar to the implants, we want to get it the very early stages. The good news is gingival disease is preventable. Yes, we've been saying that for years. The good news is we can turn this around, and then we talk about perio and it's not so much good news. Well, we, we are going to have some good news with perio now because we are going to get you in remission. So that's a good buzzword to bring in and if you take nothing away from this uh, presentation, get your patients into remission and get that uh, incipient gingivitis under control.

I think we all know that regardless of the cause, extent or the severity of gingivitis, the treatment remains the same. The treatment remains the same. You're going to be removing the calculus, the mineralization, the plaque biofilm, you're going to be uh, providing polishing. Where things need to elevate, a- and I'm just going to come right out and say it, we're not doing a super good job with home care. I- I know many of you probably are, but that's another reason that number is so high. We've got to spend time at the beginning of the appointment, at the beginning of the appointment, seeing what's going on, giving them an opportunity to disclose somehow, whether you're using a disclose in toothpaste, whether you're using a UV light, a, you know, one of the red dye situations even, um, intraoral camera, let- let's get a plaque score, let's find out what's going on, and let's teach some home care at the very beginning. I think we all know the beauty of power brushes. I mean, hands down, the evidence is there.

So we really need to be getting our patients on power brushes, especially if they have incipient gingivitis, gingivitis, and certainly perio. But it's not a given to just give it to them and say, you know, "See you, see you in six months," you need to show them how to use it. Take the time to really show how to adapt it. Okay? Think about it like a physical therapist, a physical therapist is not going to, you know, give you some type of a, of a um, piece of equipment and say, "Okay, take this home and use it," you have to show them um, a- and I want to bring that back stronger than it is right now.

I know we have a lot on our plate and dentistry is challenging these days, but uh, I- I think this is imperative. I truly think things aren't gonna get better if we don't, you know, treat our patients at the very beginning, the early stages and let them know, let them own their disease. Let them own their high cholesterol levels, let them own their blood pressure numbers, that they, they, I think that they're not going to own this until they really have a good number and a good conceptual understanding of where they lay in that spectrum.

After the power burst thing, we can look at what are you, what are you recommending for toothpaste? And, and this is going to be very brief because we're going to get on to the next um, component of this but this is super important, what are you recommending for toothpaste and why? If you really want to get on top of gingivitis, if you really want to beat this incipient gingivitis, certainly teach them how to mechanically remove the plaque biofilm, but you know that's old school thinking that it's all about mechanical, we need to look at what's out there for chemicals, we need to have a new found, in my opinion, respect for stannous fluoride, and stannous fluorides are not all the same. You know, they may have the same percentage, certainly a lower percentage, the 0.45%, is in most of the toothpaste, but is it bio available? Is the stannous that you're recommending for gingivitis, and for perio even? Is it, is it bioavailable? Is it effective? Because all toothpastes are not made alike, there's certain toothpaste that has ingredients and carriers and um, certain anti microbials and antibacterials

that, that hit this virulent bacteria, that hits this plaque in a different way.

So, you know, look into your toothpaste, look into the research. So understand your science, there's a lot of good science out there. After gingivitis and periodontal health, we look at periodontitis and its categories as well as the manifestation of systemic disease. So as I said, periodontal disease now defined as periodontitis necrotizing, in that manifestation of systemic conditions. And I want to ask you to think in your head for a second, how many cases do you think of periodontitis are a result of a systemic condition? I get answers all over the board to this, but I'll tell you, it's about 25%. And I think that that is modest. Um, just think about your non responders, you're treating them the same way, you're using the same instrumentation, the same products, the same, you know, treatment, hopefully, consistently in a calibrated sense, some don't respond. So we got to get those antennas up and, and figure out why they're not responding.

Accounts for more than one third of the classified cases. So it's actually higher than the 25%. But they have a major impact on the loss of periodontal tissue and support. So again, if we look at the true manifestation of systemic diseases, we don't just simply look at diabetes, and obesity, for example. Genetic disorders can do a number on the clinical attachment level, producing clinical attachment loss. Immunological disorders, um, connective tissue disorders, endocrine disorders, we really want to take a very, very thorough medical history because genetic disorders and um, autoimmune type conditions can really affect the periodontium. Again, this was based in the literature. This was based in looking at the science, looking at the systematic reviews, looking at what the research tells us post treatment, what's working, what's not, what types of patients fall into these categories. So you can be confident that this information is very accurate and very up to date.

Some of the other conditions we talked about earlier, um, again, the perio endo abscess certainly plays a- a role in clinical attachment loss. We need to be able to understand

that relationship and talk about it and send it for appropriate treatment. Mucogingival deformities, we know to look at the frenums, to look at a polling situation to assess the vestib-vestibular depth. And again, those traumatic occlusal forces is super important to evaluate and certainly your doctor as well. But I think we need to ask ourselves as dental hygienists when we're looking at perio and we're trying to classify or diagnose perio, are we assessing our patients accurately? Because we're not going to get the correct classification, I don't care how great the classification system is, we're not going to get the right one, if we're not assessing correctly. And that goes back to probing, and you know, I still find it hard believe, to believe it's 2020 and we're still using a tiny metal stick to go around 900 times to get these numbers. I- I truly believe this is going to change soon.

Um, there's some cool research out there, but right now is what we have, and so we better be doing it right. We better be doing it effectively, thoroughly and consistently, and in a calibrated sense with our doctors. I hear all the time that hygienists are off where the doctors are as far as probing, and look at this beauty, the calibration probe. Okay, the neighbors probe, the furcation probe, how are you measuring a furcation if you don't have a furcation probe? I- I- I also asked for show of hands how many of you were using the furcation probe, um, um, 5% maybe, and, you know, that's, that's disheartening, I guess, and maybe because I'm in education, I teach at a dental hygiene school, I like to think everybody's using, you know, what they need to be, but sure, you can assess a furcation with a straight probe, but you're doing more of an approximate. I- I don't want an approximate when I go into my doctor, I- I want a definitive understanding of what class of disease, what level of disease I'm at. So pick up your furcation probe and try to really assess what's going on.

The other benefit of that or the, the other aspect of that is, I think we forget our anatomy over the years. I really do, I think when we leave dental hygiene school, in, you know, unless you're in a true perio office and you're seeing flaps, I think we forget where furcation entrances are, how challenging they are to

access or how shallow that area is really. And you could start dipping into that furcation um, involvement and are you instrumenta- ins- using your instrumentation appropriately in writing that anatomy and figuring out where to go based on anatomical remembrance?

So, you know, again, you've got to understand where you are in order to effectively navigate where you are. I love this slide because it- it gives you kind of a little bit of quiz, of a quiz for yourself. If we're looking at the mesial furcation on number 14, do you remember that you can only access that to measure it or to do instrumentation from the lingual? Okay, you cannot access that mesial furcation from the buccal because of the size of that mesial root. Okay? So if you're doing quad scales and you're jotting a lot of money for quad scales and you're doing quadrant number, you know, one or uh, two, I hope you really remember how to navigate there, a- a- and navigate effectively because you're not going to access the area correctly if you don't get in touch and, and get intimate, if you will, with the patient's anatomy. We wish that their tissues could be pulled up and work on them thusly, but we cannot. Buccal furcation, that's a straight furcation. And your distal furcation, fortunately, can be accessed from the buccal or the lingual, the distal furcation is easier to get to, and that's from the root anatomy.

So this is a very cool app. It's free. It's comes for your iPhone, your Android and it takes you down memory lane as far as dental anatomy. So for example, if you're going to do a quad scale and know, you know tooth number 14 has six millimeter pocket, pop it out. Pop it out, look at the size of those roots. Okay? Get familiar with it again, look at that lingual concavity, look at that lingual concav- or the palatal con- concavity on that lingual root. Okay? Look at our why that mesial root is, that's why you cannot access it. This is a very cool free app. Uh, and I'm happy to give you the information on that um, going forward.

On your implants, we could talk all night about implants or all day. Why do I keep saying night? Maybe because it's night here. Um, your periodontal implant diseases and conditions

are classified into basically four categories, we have peri-implant health, which is what we really hope all of our implants are. That's beautiful tissue, uh, no exudate, no bleeding of course. Um, you know, the X rays look really good, the- the bone level staying pretty much the same. We then have mucositis, peri-implant mucositis, which is comparable to your gingivitis. Um, try to be careful though equating that too tightly because the research shows us that a mucositis goes into an implantitis like 40% faster, if not more, than a gingivitis goes into a periodontal disease, and that's got to do with apparatus attachment, um, you know, it's got to do a lot of features that, that, that truly an implant is much different than a natural tooth, and I know that makes sense to you in simplistic forms, but, um, you know, we're finding more and more about the different type of plaques, the bacterial, the sub gingival environment. Um, but mainly, it's got to do with that the implant is about 80% less attachment apparatus. So they are, they're damaged, they are more susceptible. So you're going to go from a mucositis to an implantitis that much quicker, so got to get on mucositis early, early.

And then we have peri-implant soft and hard tissue deficiencies, which is more on the periodontist level, perio level when we start talking about um, bone grafting, etc. um, and more bone augmentation type things. This is a great picture, I think, it's very simple but it proves the point, your healthy tooth on the left. Look at all those fibers, all those, all those different types of fibers, your uh, horizontal, your um, see I'm going to go blank now. Yeah, all those fibers. It is night, it's getting late here. Transseptal fibers, shoppies fibers, all the fibers that support the tooth, they go in all different directions. And you can see the two uh, implants to the right have not nearly the attachment apparatus. Perpendicular fibers, horizontal fibers, oblique fibers, I knew it would come back to me, point is, if you're going to probe, you got to probe gently. 20 grams of pressure. And you ask yourself, "How do I know what 20 grams of pre- pressure?" Use a little scale and you can figure out how hard you're pressing with the probe. It's a very permeable circular epithelium. So we need to be careful with implants and not cause harm.

Use a good probe. Use a plastic good probe. I still believe in that. There's no definitive guidelines, if you will, unfortunately, at this point that say you can use plastic versus metal. I think we're still kind of working on those guidelines. Some people are fine with using metal, you know, it's really up to your doc and to your, the periodontist or the oral surgeon that placed the implant. Um, I like these type of probes because they're color coded and you can see them real well. And they have a little bit of pliability. You don't want too much pliability. Um, but it's nice because of that profile emergence to be able to get around that implant. And remember, you're never going to get an accurate probe reading like you do with the tooth, but you can certainly get a baseline and then be able to check uh, from there on, so you should be probing about once a year with an implant.

Okay, these are the forms, I'm checking the time here. These are the forms that you can download from the uh, perio.org website. And uh, one is the staging form, one is the grading. Again, you can back to back them, you can laminate them, they're beautiful to have chairside. I'm going to go talk about the staging one first. So if you look at the staging, classification chart, it's a little overwhelming, you kind of look at it and go, "Oof, all those words," I recommend you draw a red line, physically draw a red line, on the, on the ones that you download and separate stage two and stage three. Why do you say? Because for the hygienists, you're going to be doing stage one and stage two non-surgical periodontal debridement. Okay? Those are your quads scale, stage one and stage two, okay? Stage three and four, three is you're going to start looking at probably entertaining and referral. Um, and taking a closer look at what's going on with the periodontal loss. Stage four, they're set up to be [inaudible 00:38:25]. So, stage four is serious, and we have no business frankly, hygienists, doing periodontics and being, treating a stage four periodontal patient, but we absolutely treat the stages one and two.

So let, let's look at this one by one. At the beginning, I told you that severity with staging has to do with clinical attachment loss at the

greatest site. And that makes this a little bit simpler. We're gonna go right to the worst site. That's what stage they are. We don't want to, we don't want to know about the minor sites, we want to know about them, but that's got nothing to do about, with their classification. So severity. Stage one is has one to two millimeters of attachment loss, that's not a pocket depth. Stage two has three to four millimeters of attachment loss. Radiographic bone loss, stage one, coronal, about 15%, stage two, 15% to 33%. You look at more local factors of complexity. Okay? Actually this shows your 15% bone loss, 33% and 50% up to 75%. So you want to start looking at your radiographs like this, block it off into three components if you will. Yes, this first line is at the CEJ, a third and a third. Okay?

So you could even say 33% bone loss, 70% bone loss and really look at it this way. This brings an important point up, you need to be taking good X rays, non X rays are elongated or foreshortened, we need more periapicals, perhaps to use this system effectively. Um, and that really is a whole different lecture we can talk about as far as getting good radiographs and comparing using radiographic bone loss to clinical attachment loss seen clinically. Also tooth loss, let's go back up for a second, I jumped ahead of myself, under severity, we have tooth loss due to periodontitis. Now this is new, this was not in the old system, we didn't take into consideration tooth loss, and what that means per patient's prognosis. So if you've no tooth loss from periodontal disease, again, that keeps you more in that stage one, stage two area. Less than or equal to four teeth, you're in the stage three. Five and above, you're in the stage four. So we got to start asking people, "Do you know why that tooth was extracted?" Start looking at their bone levels in relationship to tooth loss.

Again, back to complexity, probing depth, okay? So stage one, less than or equal to four millimeters is a stage one. And those are truly the hardest cases I think to classify correctly, because it's hard to distinguish a stage one from a generalized gingivitis or a gingivitis patient. So that's where you kind of really need to be good at determining clinical attachment

loss. And then we go down to extent and distribution. Okay? So back up to complexity for just a minute, look obviously, that we've got mostly horizontal bone loss in your stage one and two, and pretty modest pocket depths. We get over to stage three, we're looking at furcation involvement, we're looking at vertical bone loss. Stage four, we've got masticatory dysfunction, secondary occlusal trauma, bite collapse, etc.

So absolutely the worst end of the spectrum, and- and be careful to- to stage somebody a four if they're not really a four, because once you stage someone, you can't bring them back. So in other words, if you have a stage three cancer, your doc might get you into remission, but they're never going to get you to a stage two. So once you're a stage three of cancer, you just want to stay there, you want to get in remission. Same thing here. So once you're a stage three, you're not going to be a stage two, so care, be careful the way you stage and not stage too aggressively, um, unless you su- you know, you're sure that's what it is.

Extent and distribution, we absolutely still take that into consideration. Use it as a descriptor, is it generalized? Is it localized? What's the molar incisor pattern? What does the pattern of bone loss look like? Those are important entities when we do our description, along with our classification. So again, calculating radiographic bone loss, we need to start looking at radiographs differently. So when you go back into work, look at your radiographs, think about those red lines, think about these yellow lines, and there are some software programs that will help you do this, because it's really a great way to understand where that bone level is and where it should be. Start looking at your radiographic bone loss. Here's an example of a software that actually measures, pretty cool. It's a good board patient, actually too advanced, lots of calculus.

Also think of it this way. Stage one is your initial perio, and some of you have been calling it that. Stage two is your moderate, stage three is severe. And stage four, you put them in the car and take them to the periodontist. Stage four is um, severe with the potential for the loss of the whole dentition. So equate it to what

you know, but start using this nomenclature. Just dip your toes in, start looking at your patients now and say, and say are they a stage one or a stage two, because we got to get on board with this. The students are learning this coming out of the gate. They're not learning the old way and it's a powerful communication tool. Think about this, the staging system is designed to highlight the patient's most severe area of destruction, we talked about that a few minutes ago. So if you've got a patient that has periodontitis with a combination of generalized mild to the CAL, the pocket depths, to moderate, the localized severe destruction, okay? With clinical attachment loss greater than five, pocket depths greater than six, this patient is going to be generalized periodontitis stage three. We don't know about the missing teeth from this little blurb, but they're a stage three, I see the mild, they see the moderate, but this stage is the worst area.

And again, that can kind of make it a little bit easier. Grading, on your grading, I think to give you one kind of eyeball thing as I did with staging, look at the grade B. You want to look at everybody that sits in your chair as a grade B. Okay? And then take them one way, health, pristine, non-smokers, no diabetes, are over to C, where we have those type of risk factors. High HbA1c levels. So how do we give them a grade scientifically? And how do we give it based on the evidence? Well, we're going to look at the progression, go back to what's the likelihood of this person's going to progress, that's what grading is all about. It's like a mat-it's like a crystal ball. So primary criteria, what, what do we use? Okay? We can use direct evidence of progression. Okay? First item here. What does that mean? That means if Mr. Jones has been coming to your office for 10 years, you can look at 10 sets of radiographs from Mr. Jones, and you can see the progression direct evidence of bone loss. You know, these days we just don't have that type of longevity, a lot of, you know, areas are moving around. It's a transient um, you know, population that we have, so we need to go down to the indirect evidence. Okay?

Back up to the direct one if we have grade A, no loss, no obvious, direct observation of radiographic bone loss or CAL over the

past five years, that's, that's good, that's a good slow progression if none. B would be they have less than two millimeters over five years and C greater than two millimeters over five years. They're moving pretty quick with the progression, that's concerning, that's concerning. Indirect means you're gonna do a little bit of math, but I'm gonna make it simple. So if you don't have, you know, radiographs to base it on, or probe readings to kind of look at the, at- at long term or direct evidence, you're going to do the percentage of bone loss according to their age. Okay?

So this is where you can kind of factor in, "Well, well, Aunt Sue is 88 and she has bone loss," we're looking at that the same way as, you know, a 30-year old, you know, woman that's, that's basically healthy, but they're having those areas of, of rapid bone loss. So we've got to look at the age and take that into consideration from an osteo standpoint, uh, and in, in immunological and an inflammatory standpoint. So those numbers 0.25, 0.2521 and greater than one, I'm going to show you in just a second how to get to those numbers.

Case phenotype, that means basically, do they have a lot of heavy deposits on their teeth? Okay? And how is the tissue reacting to it? We all know those patients that are covered in plaque and calculus, and their tissues look fine. And then we have people that don't have practically anything on their tissues, and they're bleeding or they're, have rapid bone loss. So what is their case phenotype? What is their tissue texture tone look like? And we'll show you some pictures of that in just a few minutes. And then your grade modifiers. Your grade modifiers are what effect that primary criteria. So your smoking, your diabetes, there's only two things on there right now, on this grading chart. Why? Because these are the two things that all day long, the evidence is hugely there that these two things affect periodontal disease. Absolute. We also know that there are many other things that have very strong correlations. But remember, this system is based in pure evidence based science. So you're gonna see this list grow, certainly, but for right now, your two grade modifiers are smoking and diabetes. Again, I said Grade

A would be a slow progression, B would be moderate, and C would be a rapid progression.

Aids in the determining the likelihood of progression. So let's go through this again. Here's the radiographic bone loss that we talked about. Okay? So the first red line is at the CEJ, second is about 35% loss and third is about 70% bone loss, this patient is probably has about 50% bone loss. If this patient is 50 years old, we're going to divide 50 by 50, and we come up with a one. The one could be in this category here, a Grade B, or it could be in here, greater than one or one. If the person is smoking as w- as well, they go right into a C. So you have a little bit of wiggle room, but a 50 year old person should not have 50% bone loss. Okay? So we've got to grade people appropriately so we can motivate them to change, to change and eliminate those risk factors.

Again, case phenotypes, and it's the microbiome. How are the tissues reacting? Is it the micro flora? Do we need to do some salivary diagnostics? What's causing the tissues, is it a systemic disorder? Okay? That's gonna affect the progression of the disease. Therefore, we have to get to the bottom of it, whether it includes a medical referral, we have to get to the bottom of it. And your grade modifiers, again, smoking and diabetes, nonsmoker, less than 10 cigarettes a day, more. So light smoker, um, you're still going to be a B, okay? And we could talk all day long about smoking, but I'm just going to say one thing, there was a survey out in I think Dentaltown, and it spoke to how many dental clinicians are talking about smoking cessation with their patients, and not, you know, "Do you smoke? Not a good idea." Talking about, you know, "Let's, let's talk about the patch. Let's talk about the quit line. Let me help you. Let me help you with smoking cessation." If you do that alone, again, you're a hero, you're, you're doing a huge thing to get this disease under control. I- I believe from the instruments down, I- I understand that's not a perfect world or the real world, frankly, but you've got to spend five minutes talking to a smoker and try to get them to quit.

Diabetes, you should really truly should be asking A1c levels, okay? People know their

A, A1c levels and that gives a much clearer picture of their diabetes stability versus their glycemic index for that day. Okay? And anything greater than a seven, that's a problem. And here are your other risk factors that you probably thinking as we go through this information, "Sure." Obesity, osteoporosis, arthritis, inflammatory conditions, stress, you know, use your clinical judgment, evidence based dentistry is based on the best evidence out there, the clinician's judgment and the patient's needs and preferences. We're going to put all that together. But man, we have some very good evidence right now, got to use your clinical experience and your clinical judgment as well. So these are other things that could be considered factors for the grading.

All right, we're going to run through one patient and then I'm going to let everybody finish this presentation and be on with their days or evenings, so how to stage and grade a patient. Let's go back to this. We're going to look at staging as far as the severity of the disease at presentation. Okay? What is that clinical attachment loss at that appointment when you see them? And what's the complexity? How hard is it going to be to manage this disease? From an instrumentation standpoint? Do I need more time? See where I'm going with this. Do I need more time? Should it be coded differently? Okay? So stage your patient appropriately and then treat your patient appropriately. Grading, again, we just talked about that.

Okay. So, always gives me a nice deep breath when I see Hans, we're going to talk about Hans today. Hans is a 50-year old construction worker, he has bad breath and his wife wanted him to come in for cleaning. Receiving treatment for high blood pressure, depression, acid reflux and smoking cessation. Taking some meds that we know cause xerostomia certainly, um, Wellbutrin can be for the depression or the smoking cessation, uh, hydrochlorothiazide, these are all um, xerostomic drugs. He reports smoking a pack of cigarettes a day for the past 35 years and he also vapes cannabis and drinks three to four alcoholic beverages a day. Hans is having fun. On his dental history, the last dental visit was over 10 years, and he only

goes to the dentist when he's in pain or needed a tooth extracted.

Okay, past history of tooth loss, ding, ding ding. These are his dental or health benefi- uh, it's behaviors. He brushes one time a day, flosses when necessary, but he gets a cut using an essential mouthwash, maybe using it too much with the smoking to cover some odors. Calculus is generalized moderate to heavy, biofilm is light. Gingival description, we've got recession blunted interdental papilla, we've got a bleeding index of 55% and a plaque free score of 15%, so he's got 85% plaque, which obviously negates the biofilm generalized light. But anyhow, here's Hans's intraoral pictures. So hmm, not so McDreamy after all. Not good, not good.

So a lot of um, you just want to get that cavitron out. You just want to get [inaudible 00:53:59], not right now with the aerosol reductions but um, you just want to get going on this patient and take care of them, but they've got to own their disease, they have to understand their disease and we need to stage and grade them. So they have that, a cancer patient wants to know their stage and grade. Here's the uh, periodontal chart, pocket depths, gingival margin is recorded, which is nice. Um, you should really be having a recession, certainly, with your gingival margin, but also a positive gingival margin so you can know if there's a pseudo pocket there. So we've got lots of fours, fives, six, sevens. Okay? Let's look at the clinical attachment loss on the radiographs. So if you scan these radiographs and look at them, try to get your eyes to go to the worst spot, I'm going to give you a minute to move your head around and hopefully, you're going to end up with me down at number 27.

27 is one of those teeth that you're going to hold in place, and you're going to hold it still while you scale and hope that, to the Lord that that tooth doesn't come out when you're working on it, "Not on my watch," you say. That's bad, that's bad clinical attachment loss, and then he certainly has other areas of severe clinical attachment loss. So your mind should start clicking right now into the three or four category, you're, you're well out of a stage one and two. So his clinical attachment loss is

greater than five millimeters, and as you can see, stage three and four are both over five millimeters. Once you get over five millimeters, there's no point in really splitting hairs, getting it more definitive, you're going to be in the stage three or four. Same with the um, radiographic bone loss extending to the middle third of root and beyond. Same with both uh, categories.

Stage three, tooth loss less than or equal to four, five. What really delineates the two is your complexity issues. Okay? Certainly the loss of teeth from perio but uh, complexity issues is what's really going to put that patient into a stage four. Okay? And I believe Hans had a good bit of that, he had teeth greater than five missing from perio, it was decided. And, you know, he, he could go stage three or four in the complexity issues because there was some bite collapse, there was some flaring, um, but seen clinically, there wasn't perhaps enough to go with at stage three. So, you know, you can go back and forth on this, there's some subjectiveness in how you are grading someone or, excuse me, staging, and that's where you got to get with your office people, pull out some, some patients, get them on the, on screen and look at this patient and this patient, and try to calibrate on what you're staging and grading these people.

The only reason maybe this patient didn't automatically go into a full four, although I think this patient is a four because of the- the severity issues, um, remember, be careful when you call someone a stage four, that's, that's terminal. You know, it's very terminal, just like cancer. And then he's certainly generalized. So, because of the top three issues are, as far as the severity, all in stage four category, you're probably going to be looking at a stage four patient. As far as the grading, he

fell into a one because he was 50 years old and he had, certainly, 50% bone loss if not more, so he was easily more into the Grade C than in the Grade B actually, from a, from an indirect evidence of progression.

Um, he had destruction probably equal to his biofilm and calculus deposits. And he was a smoker, which can really quickly put somebody in a C category, and as far as we know, he didn't have uh, diabetes. So if I can have a drum roll, what do you think Hans is? 4C, not good. So, you know, truly these more difficult cases are, are easier truly to stage and grade, the, the challenge comes in on the easier lighter patients, those early stage ones is at a stage one or a stage two, that's where it gets a little more challenging. And you don't want to lose the whole picture here. The communication piece is, is big. And if we can give our patients that and get on the same page with each other as far as what we're looking at for risk factors and bone loss, I think that's a great thing. I think it's a good thing.

You know, I- I firmly believe that we've got to own this system, we have to adopt it. And I think the hygienists need to take control of this department, this area. I'm available to give resources to help, but I think the hygienists need to own this part of the practice and, and make sure that it's run well and everybody's on the same page. So with that being said, I am probably a little bit over the hour mark. I want to thank, once again, Procter and Gamble Oral-B Crest for asking me to do this presentation tonight, it's one of my favorite subjects, I'm very passionate about it and I hope you did receive some good benefits um, from the information. That is my email below. Um, I look forward to hearing from you with any questions or um, any other information you may like. Take care, namaste.