

How Mobile Technologies Can Change the Way We Interact with Our Patients

Video Transcript

Thank you so much for the introduction. I know the names are not easy to say. I will repeat it just for us to know. The name of the city is Caldas da Rainha. Rainha means queen. It was close enough. You'll be perfect in Portuguese in [foreign language 00:00:30]. [foreign language] Maximum, sorry. It's a city near Lisbon. One hour by car. Right now, it's very calm with all the situations we are living all over the world. I will speak on that at the moment. Hello and good afternoon. That's how I think we should start. The name was very nice.

She pronounced it quite perfectly. It's Mario. That's easy. Rui is the second name. Araujo is difficult for non-Portuguese speakers. Anyway, you will see during this conversation there will be some words that for me are difficult to speak in English. We are on the same boat together. I am really thrilled and happy to be here. It's really a pleasure. It's my second time doing the webinar. I don't know very well how this works. Let's see. This is the closest I have been to hosting a podcast or a radio show. I would love to be on those. It's a dream.

It will be fun, I hope. I hope you understand my English. At least if there is one person, from one person, I'm talking about the other side. Hi. Hello. I hope we'll have a good and terrible time at least for one hour talking about these things. The topic will be how mobile technologies can change the way we interact with our patients. I've been a dental hygienist for 27 years, so and so, a long time ago. Since 2001, I have been working with a great team of psychologists. They really helped me to see oral health in a different way.

In fact, it changed my way of looking at it. Today, I truly believe it's the way we interact with our patients that makes all the difference in the end. Did we help the patient? Will we make a point for the patient? Were we beneficial and benefit from the patient? They realize that. They understand that. They coped with us. That's the point. That's really what I believe nowadays. That is my mission as a dental hygienist. I don't want to say our mission because I know that everybody has their own opinion.

At least, let me share this in the beginning of this chat. Let me share some of these things with you. It's all about how we interact, how we make bridges with the patient. How these bridges help the patients to understand their situation and help them to make decisions. Those decisions will be beneficial for their health and life. It's a lot of my mission as a dental hygienist. That's what I try to teach to my students. Just before I move around, I can't resist talking a little bit about the actual situation in the world. What we are living.

Here in Portugal, we are at home for one month. It looks forever. At least for my kids, I have two teenagers. The little one is she loves. I'm okay. I have been working a lot. It's funny because we are going to talk about information, technologies, communications, being connected in this strange way. This need for connection that we have. It makes more sense than ever. It's important to be connected. Now we know how important it is to have somebody on the other side of the line because we cannot leave the house. I couldn't resist using these pictures.

I love photography. I really love photography. Those pictures about the whole movie theaters in the United States with this message. This motivational message called the ones who are going by or pass by and look. For me, it's amazing. I'm a Star Wars fan, that's why I picked this one. I think it's fundamental to be happy, to have hope and be ready to start again. It's good to feel the energy on the other side. It's good to feel the energy of these pictures. It's good to feel that there's so many outside.

We will get through this, Portland and the world. I really love this one. Quoting again Star Wars, "May the force be with us." Be safe and everything will be alright in the end. In the last few years, mobile technology has become more and more prevalent in our lives. Today, more than ever as I said, it has changed the way we relate with each other and the space in which we live. It's really a revolution with good things and bad things. Like [foreign language 00:06:21], everything in life.

One good thing is that mobile technologies are opening up new and innovative ways of delivering healthcare and improving dental health. We have a lot of data on this. We are humans. That's a meaning for not perfect. These are great tools. They are present sometimes. Too much present in our life. I'm going to define something that sometimes, I say to my kids, "Move over a little bit."

In fact, people keep their cellphones within their hand's reach on average, 58% of the time and spend more time with their phones than with their partners or even in their workplace. It's crazy. It's crazy. Now, it's a miracle because we need to communicate but it was crazy. It is crazy. Anyway, that's our reality. That's the present. Let's not forget that as humans, we change. All of us change. Every generation has a fight. Newspapers, comics and we think of Stan Lee biography and I'm really enjoying the book.

I was impressed that in the beginning of the last century, in the 20th century, people were against comic books. They thought it was an evil machine or weapon from the evil. They thought it would destroy the minds of young people. They go, "Oh, the strange things that

you could read in comics." There was this huge movement of fighting against comics. If we look to that innocent book today and all the comics they ever run, all the movies, we think, "Wow. How could this be a weapon to destroy youth?"

Then it was the movies and then it was the small computers and then it was the television and now, it's mobile phones. Every generation has a fight. These all are gifts. We have to adapt. We need to adapt. Remember, Charles Darwin. If we don't adapt, what happens? The question of the day will be why do we need this new technology in our house? Do we need them? Why do we need them? It's not an objective to sell you nothing. It's not an objective of this conversation to say, "Well, this is magic," or whatever. It's just a conversation.

I have this question. Do we need them? Let me show some arguments. You may believe. You may not believe it. You may agree or not. That's the good thing. That's life. That would be fantastic if we could have these arguments together. Let's look to some scientific evidence, figures and facts as a starting point of our conversation. We have been fighting the disease, oral health disease, periodontal disease for a long time. We have been having this fight for a long time. Most of the time, we have been using the same weapons and strategies over and over.

That's what we know. Something is not working. Because still when you look at this data, it's from three years ago. Eight out of 10 people aged 35 and over suffer from some kind of gum complaint. If we look at the data in Europe, United States, we have more than 50% of the population with gum problems, gingiva problems, periodontal problems if you want to call it that. On the other hand, if we look at our profession and I would say however, we have the knowledge and probably, we have the answers from the papers we read, on the things we learn in school.

We are trying to find data from 2020 and updated data. Not professional data but if we look at this phrase, repeated and individually tailored oral hygiene instruction is the key element in achieving periodontal health,

you would say, yes. Of course, we know that. Remember what I just said about the level of disease. This is not new. The article is published in the '40s, from the beginning before the first half of the last century. Almost 100 years ago. We are still repeating this kind of phrase in 2015 and 2020 in some articles.

It looks easy. We need to create repeated and individually tailored oral hygiene instructions. Super. If we have articles since the '40s, why is it still not working? What is the problem? Why is it so difficult to create this oral hygiene instruction? Because sometimes, we tend to forget one word. We tend to forget the word tailor. Yeah. We tend to forget the tailor. When I want to reflect about this topic, I always remember a poem from a poet that I really like. The poet is Robert Frost.

He wrote, "Two roads diverged in a yellow wood, and sorry I could not travel both." Two roads diverged in a wood. I took the one less traveled by. That makes all the difference. When we want to talk about repeated and individually tailored oral hygiene instructions, we need to believe in different strategies. We need to believe that it's not an easy road. It's not a clear road. Sometimes, it's a very strange road like the poet. It's one less trip in fact. We need to put ourselves on that road. We need to believe.

We need to have faith that roads would lead us to a place no matter what place but it leads us to anywhere. We need to believe in different strategies in order to help patients to change their behavior. We also need to believe that one size fits all strategy does not exist. It must be tailored. It must be adapted to the patient. Do not choose the same road over and over. Also, if we always choose the same road, imagine the places we missed. What happened? Sorry. In fact, sometimes, we start in the wrong way.

Because in fact, it's not what we do that will change the patient's future. It's what they do. It's not about us. It's about them. It's how they decided to change, how they decided to pay attention to us. It's always up to them. We are like the maestros. Of course, to activate, we

need to activate something on their brain, on their minds. To activate and improve attention, maybe we need to create dopamine in their brains. Dopamine, it's a neurotransmitter.

A chemical that helps our brain to regulate things like emotion, behavior, alertness, impulsivity. Get curious. I'm interested. Oh, gosh. That's exciting. Sometimes, we need to create that in the patient. If we activate, patients are always expecting. They will not pay attention. They think they know what we are going to say and just come to our appointments in a very passive way. They come for a cleaning. Just clean my teeth, please. I want to go away. Yeah, yeah, yeah. I know you are going to say I need to floss. Yeah.

Of course, the interproximal brush. Yeah, yeah. I know. I know. You're right. You're right. I will buy it. They expect that we say that to them. That's not what we do when we say repeated things. Doing cleanings is not really our mission. It's much more than that. It's to make a difference for the patient. It's to help them to be healthy. It's to help them to understand that oral health could be achievable. Oral health is much more than oral health. It's healthy. It helps in many, many ways. That's what we should do. That's what we must do.

How can we change our mind frame? How can we change the way we do things? The way we think about things? Many professionals have been writing about it. I love this quote. It's so true. It's from an amazing dental hygienist, Rebecca Wilder. It's really an amazing quote. Perhaps. You see, this is a difficult word. It will take a village of cross-disciplinary professionals and strategies to figure out how to promote behavior change to improve the oral health of our patients. Telling them to brush and floss just is not working.

Rebecca Wilder wrote this in 2013. I use it a lot in my lectures and with my students. Because telling people to do things is really not working. It's really more than that. Telling information is also not working. Just giving information is not working. Some information is okay but it's not enough. Sometimes, we tend to believe that enough and it doesn't mean also that because it's okay that it means a lot. It's a balance. It's

like the salt in the food. We need to know how much salt we have to put in.

However, the problem is, just giving information to the patient, it's still the most used technique by the healthcare professionals for health education. Giving information, giving orders, giving advice. Do this. Do that. Use this. Buy this. Do that. We tend to forget that it's about effective communication. It's both sides communicating. Both need to believe. Both need to agree. If I give you an order, it could get a reaction.

These psychology reactants sometimes make the patient say, "Yeah, yeah, yeah. You're too bossy. Okay. Just do your job. I want to go." It's better than nothing. Most of the time, we're going to help them to change oral health in their brains. We want to. In fact, we need strategies. We need different strategies and different tools for some patients that we can't reach the level of oral health. There will be patients that are very easy. There will be some of us.

They have 100% success and they don't need any kind of help. Their strategies are fantastic. I still have a lot of doubts. I still want to learn new things. Because there are always people I'm not able to reach in the way I want. Why just telling patients to do things is not working? As I told you, we need effective communication. Also, because patients are not passive identities. Look at me right now.

Many of you may already be thinking, "Yeah, yeah, yeah. Okay. The same mumbo-jumbo about psychology and all the funny diagrams that nobody understands. Come on. I just want a credit." Sometimes, the patient is like that. "Oh, okay. Yes, I know." I already said that. The way we behave, it's a secret. It's a really good secret but it's with millions of years. This is not easy to discover. We know that smoking is not good. We smoke. We still have a lot of people smoking. We know that we should exercise and we don't do it.

We know that we should protect the planet and we tend to forget because of other important things. It's not enough to know things. It's not

to read all the rules. Even today, we are saying to many people in the world, "Don't leave the house. Be protected." People just want to go out and go to parties and they die. It's strange how we behave. The behavior's model is like this one, backed with a great abundance of science to validate them. I know sometimes, they are weird. I really like them because they are like maps.

Maps to understand people's behavior, how we change the behavior. If we use them, if we dive a little bit into the model, into the theory, it could help us to understand how we can change our strategy. Different strategies. In oral health, the most used one is the first one. The transtheoretical model of behavior changes, yeah. I will not talk about it. Let me talk about another one. I will talk about the health action process approach. It's what I use in my PhD. I really like it as a model.

According to this model, I'm going to read you the definition and carry that to oral health. According to the upper model, health behavior is the result of a motivational phase where individuals form an intention to act. It's a result of a motivational phase where individuals form an intention to act. Followed by evolutionary, post intentional phase, which means by an action phase. Where after the intention, where the individuals plan to translate their intentions into actions and plan or to maintain their behavior change.

Their behavioral intentions are characterized. That's a difficult one. By explicit decisions to act and concentrate on a person's motivation for a certain goal. Although consider it a good predictor of behavior change, intentions are not enough or sufficient by themselves. With other processes being necessary to improve behavior implementation. Basically, what it's saying is we have some patients that are pretenders. They just come for appointments. They don't do anything. They don't want to change anything. We need to motivate them.

If you are able to motivate them, they become intenders. After, when they have the intention to do something, we have to start to help them to make them real actors in their oral health

stage. Three stages. What is the meaning of that? The meaning of that is sometimes, we think it's enough just to motivate because the intention they show to us, it will be enough for their real behavior. What science tells us is that intention is not enough to grow over the gap to start doing the real behavior we want for that patient.

We need strategies to motivate the patient. After the patient creates tension, we need other strategies to go over the intention to the action. When they are doing the behavior, we need another set of strategies to maintain the behavior. You see? It's like a football game. You need a strategy for the defense. You need a strategy for the mid fields. You need another strategy for the touchdown. You see? I didn't speak about European football. I like American football. That's why I use this example. It's like a game.

Again, like football, you have different teams. Because you need different mind frames, different strategies. Here, you have one professional. If you use the same strategy all the time of the process, there are more possibilities for us to fail. We need to understand that sometimes, we need to change a strategy. We have tools to motivate. We have important tools for the intention. When the patients are starting to think to do something and then we have other tools to help them to keep the link and maintain it. That would be another lecture.

We don't have time to do that. I will talk a little bit about those tools. For example, when the patients create the intention, it's really important that we help them to plan the future. One thing is to say use the floss. The other thing is say, okay. Let's try to use the floss just on the front teeth for one week. I'm just saying a silly example. It's the planning. You have them to go from intention to action. They try to understand. They need time to understand they are able to do things. Intention. Here we go. Okay.

We know that interaction with patients is most of the time unfortunately based on common sense. It's just because I know. This is the way

I talk. On the other hand, we have very strong science saying that behavioral intervention seems to be beneficial for patient adherence and may therefore improve for example, periodontal treatment success. We have a lot of problems because it's a chronic disease. We have to maintain this treatment for a lifetime. Common sense shouldn't be our strategy.

It should look a little bit to the science and see, okay. What science is telling us? What cues? What tips can I have from science that I can use in my clinic everyday? It is of fundamental importance that professionals come to understand and manage their clinical interventions through a more relational, psychological and communicational perspective. We are very good in clinical techniques. Let's be fantastic in relation, psychological and communication techniques.

With increasing the standard of health, we need to understand. We should increase our understanding about how behavioral relationships help us to reveal possible individual solutions. Understanding the behavior of the patients is an integral part of the process. This must be brought in focus in order to be more effective to controlling periodontal disease in this case. This kind of helping relationship we need to create with the patient, providing patients not only with motivational but also self-regulatory strategies. Risk awareness.

You need to do this because if not, you are going to have periodontal disease. Risk awareness is really very motivational. Not the best but it belongs to the motivational categories. Help them to plan. Help them to be aware of how good they are doing. It's a self-regulatory process. Those processes are different in different moments. We need to use them once in the beginning, others upfront. If we use all these things, we can create patients. They will be more active agents of their own process of change.

Being active in your own process of change, it's really the main goal. You need to be you in the role of the process. We as professionals, we need to help. After change, we need them to

maintain the desire of [inaudible 00:31:21]. It's very important. There isn't a life span. There is a time. It's not for one week or one month. If I want to control a periodontal patient for example, anytime, I need to be in tune with the patient for a long time. We need to change a little bit. Some of us, we need to think a little bit on these things.

Let's start. I'm talking too much about psychology. That's what I love. We need to start change when we're interacting with our patients in order to effectively modify their behavior. We must focus on the solution, not only on the problem. We need to believe that. We as professionals need to believe that. For example here in some countries like my country in Portugal, we focus on the problem. Because we either say, "The patients are always bad. Yeah. They never do nothing." This is focused on the problem. Yeah. Yeah. I tell them things.

We start thinking about the problem. Maybe we should start thinking about why. Why don't they do things? How can we help them? If we understand why they don't do things and are able to help them. That's a starting point. There are ways of approaching the challenge of health behavior change that make it less stressful for the professional, for us. With a greater potential for creating results. This thing that I'm saying is that we have this technique, sometimes, even if you don't have time in our appointments. They can be used.

Help is available in many ways. It's up to the patient to realize how and why he or she should or might change. The clinician role is to extract his ideas for change from the patient and then help them. One way that we can do this for example, the way I'm going to talk today or now, after now. One way we can do this is by changing the structure of our appointments and using different tools to help us to change our interaction with the patient. If we do this, we create something different on the appointment.

The patients say, "Look, this is new. I'm not used to this. Let's see what this goes to." Magic starts. This is the link with the topic today.

We need different strategies. Probably there are a lot. Let's talk about mHealth. Modern technologies. mHealth. The definition is the use of mobile and wireless devices to improve health outcomes, healthcare service and also health research. Since their introduction, this technology, this introduction to the global market during the 20th century, mobile devices have aimed to improve connectedness.

Perhaps the most recognized benefit of mHealth is its ability to keep us connected at all times and from all the distance. We have more time together. Even if you think about the bad things I would think, remember the generations and also, remember they are very good things on these technologies. It's a big, big business. Nowadays, we live in a world of so many advances in this world, the wireless, the mobile technologies and applications and apps as you want to call it. Computers.

The integration of mobile health into existing e-health services and the continued growth in the coverage of the mobile cellular networks and mobile technologies is either a reality nowadays. Billions of apps downloads on Google Play. Everybody has a telephone. It's clear. The value of this technology is clear. They already have an important role in providing patient education, facilitating outpatient management, treatment adherence, prescription, dental hygiene skills, habits, nutrition and so on. Not only in oral health.

It's all over. Like diet tracking, whatever, MyFitnessPal. There are so many apps. Studies have been done to evaluate the efficacy of these apps and also the information that we are sharing with our patients. The results that we have around this suggested some apps are fairly innovative tools for creating toothbrushing motivation. This is the result of a systematic review. The conclusion is mobile health can be effective in promoting biofilm and gingivitis control. This is a funny app teaching kids how to brush. Don't believe it. That's not my hair.

Sometimes, it is when I'm brushing. No. I'm just kidding. This kind of interaction we can have with the kids. Sometimes, with adults. It

can help us to provide improvements in a lot of topics in our health. We have data proving that, which means that it's not just a gadget. It's more than that. We are having some results. We'll see no magic but we have some good ones. However, even so, there is very little research and very little research has been published on the benefits and the effectiveness of these apps in terms of behavior change.

What we know right now besides they can be effective, they also know that they can be an emerging option for oral hygiene behavioral change. Because they can help us to promote certain growth, reinforce behaviors, self-monitor what patients are doing and provide feedback and also some help. There are issues. However, few have proven to be effective often due to the lack of engagement. 38% of the patients download the app. 38% they really erase it to delete it on the first day. 50% after one week.

In six months, 90% of everybody will delete the app from the phone. We have a close window of working if we really want to work with apps. One day, one week, we have to really work well. If there is no plan for engagement, it will be like a moment in time. How can we solve that? How can we solve that? It's the way we use the app is the most important thing. Not the technology perse that will make the difference. With or without technology, it's how we work, how we deliver the message that you'll make the difference. It's the provider.

It's you. It's the materials. It's the settings. It's the intensity. It's the tailoring. It's the style of you doing things. Not only on using apps. For example, if you think about how you are as a dental hygienist, a key active ingredient in behavioral changing intervention is how you deliver all your performance as a professional. Many services can be delivered by health technologies. There are no limits to what service can be delivered by these platforms. Some facilities in our area can be better suited than others with this kind of device.

Periodontology, implantology, pediatric dentistry and dental hygiene education, dental hygiene in the broad sense, they really could

have a good help from this kind of device. The point is, how can they work? The point is, everything we propose to the patient, to our patients must be felt or perceived by them as a benefit. If not, they will not use it for a long time. They will be deleted after a time. They never use it like the floss or the proximal brush. If not, the proposal here will not be learned and will not work.

The act must be capable of producing the desired effect or result. It must be practical and be feasible. It helps to give a meaning to the treatment. It should help the treatment. The challenge is to make the proposed idea a benefit for the patient. Certain time frames help to make it workable and increase the perception of the benefits to the patient. Let me show you some apps and software and devices. There are so many. Some of the apps I picked as an example, they have research behind it. Some research, I like it and they are fun.

Let me show some. Brush DJ. It's very well-studied. There are some articles about it. You can see the reference. You can read it in the end. We know that time of brushing is very important. The proposed here is if you can brush using your favorite music for two minutes. This is an app where you can change your favorite music in the two minutes version and then you will brush with your favorite music for two minutes.

This is an app where 25% of behavioral intervention categories by [inaudible 00:43:09], which is a very important behavioral scientist. 25 of behavioral intervention categories are used like goal setting, reinforcement, self-monitoring, and feedback. It helps with that. If it helps, it's just not a funny app. It's a tool. I can propose for the patient and say, "Okay. We are not reaching the goal that we want in brushing." Maybe I can suggest if you don't mind, why don't we use this app? We're going to use music.

You can brush during the time of your favorite music. Of course, you don't need the app to do that. That will help you to do that. Let me show you another application, which I really like. It's Chompers. Technically, Chompers is not an app. It's a podcast. You can find it on Spotify.

It's really cool. Because imagine this idea. I can write a story. We can write a story in the family or the grandfather, the grandmother, the mother, the father, whatever. The kids can write the story. We split the story in segments of two minutes.

Everyday, we have a new segment. They have to brush and listen to the story. This can go over and over. It's a good exercise. It's multi-level. You can write the story. You are talking. You are working on the skills, English skills, writing skills. You are working with the kids' family ties. You are working about reading stories. Of course, you are working on oral health skills, too. Chompers is a really nice tool in this world of mHealth technologies. Brush Up. It's also another cool app.

We don't need to use the app for a long time with the patient as we say. If I want to create a habit, I can propose to them to have just a funny moment. If I connect those funny moments with me as a dental hygienist and imagine a young kid who came to our clinic and we are trying to work on a creation of the habits. We have this Brush Up technology. There is a movie, maybe we can see it. It's a funny one. It's very interesting. That's crazy. Of course, if you think we can survive, listen to this for five months or whatever, we will not.

We'll be mad. Sometimes, young kids like to listen to things over and over. It helps them at least to make a connection to something fun. That's important when you are building memories. If the toothbrushing is a good memory, it becomes a good habit. Because sometimes, it's related to the memory. I remember one day my oldest kid told me, "I don't like to brush my teeth." Because it's the end of fun. You always say brush your teeth, pee pee and go to bed. I was like, "Wow. This is amazing." He was relating toothbrushing.

Maybe pee pee but that's a physiological thing so it doesn't count. He was relating the toothbrush with the bad moment of the day. Going to bed. End of fun. If we learn to connect and if we work with parents, if we can build that relation with the parents, that could be based for example in these technologies.

Imagine the next visit with this guy, how it was. You use it for a long time. It was fun. Did they make any movie? You can check. Also, you are creating a relationship with the patient and the family. Cariogram. It's a funny video.

It's a funny tool. I think it will start automatically. In fact, Cariogram is a risk assessment program. Now, you have an app for it. It really can be used for communicating with the patients. I don't know if you know this app. The Cariogram helps you to create self-awareness of what you are doing. They wrote in a systematic review about behavioral strategies or behavioral modification that self-awareness and self-monitoring but self-awareness is very important. Why is self-awareness important? I don't know. I thought we could see.

The video finishes and we start on the first screen. If you see here on the left side of the screen, there is a graphic. You can see a green area. The green sector, we are going to see again on the video, estimates the actual change to avoid new cavities. If you change these things here, if you change the factors there, if you give a different number, the factors will be different. It will change in size.

We have a visual thing talking with a patient saying, "Look. If you have added more fluorides, look how the actual change to avoid new cavities increase." Look now if you don't floss. Look now if you don't change anything. Look how decreased and you have more chances to have new cavities. In order to talk with the patient, we have a tool that gives color. That creates a different sensation with the patient. It's a different thing. It's a different world for everybody. Come on. These are just ideas that we can use.

If you want in the end, you can print a plan. You can write the things you wrote. It's cool. It's really interesting. There is some research on Cariogram. There is lots of research on Cariogram as a risk assessment tool. There is not so much research as a behavioral tool. The other thing I want to talk about is Smart Brushes. The Smart Brushes are our new reality. A new trend if you want to call it that

is a great tool to improve toothbrushing. Many of those smart brushes include apps which bring a huge range of tools for dental hygiene education.

Also, they are great tools for us as professionals. Because they can create a different way of evaluating the way our patients brush and giving feedback about the brushing app. It helps the patient. The Smart Brushes are science fiction for me. I'm from a generation of Star Treks. I'm from the generation of Star Wars in the beginning, the first one. Many of those things were impossible for us. Suddenly, they are a reality. It's amazing how science fiction is becoming so, so real nowadays.

Having a toothbrush that is able to detect the areas being brushed, it's something that I really never imagined when I start my program. It would be from the movies. We would dream of automatic brushes that go around. One day, we will reach that. Anyway, now that we already have these amazing tools that give us feedback, they are good for the patients. Also, they are good for our appointment.

I'm going to show you a video showing the project we are doing and to try to understand how we can use these devices as a tool for us to give feedback to the patient. Let's see if we can have the video. This is a Portuguese music. I like this singer. We use a lot of internal cameras. It was my PhD thesis. Why? Because we want to give feedback to the patient about the good things and the not so good things. Okay. Good with the brush. Not perfect but took pictures and then we showed the good things. We keep these pictures for remember. Let's plan.

Let's see what we should try to improve. Interproximal areas. This is a very less expensive touchscreen. It's just something I cover on my screen and then I can write. The camera is able to do this. We can see plaque with the camera. We discuss with the patient. We try to help them to create the plan. Where we should focus and how we can improve the areas that have inflammation. We always see inflammation most of the time more than dental hygiene. It's a different language for the patient. It's not the same language over and over.

More than the app, it's what is behind the app. Mobile technologies have revolutionized the face of communication. There is a great potential in their use in the health sectors. More than these things I was saying about how I can connect with the patients and I will get back to this in a moment. We can follow up over the patient's habits. We cannot question. We collect information. We can communicate from anywhere. We can schedule appointments.

Remind us with new technologies and this kind of technology when we look at this new gift with all this new world, that they can bring to the dental office. Again, it's not just with technology. It's the memories patients live it back. Take them home. It's like, "Oh, you can't imagine today my dental hygienist. They used a mobile phone to track how I was brushing." Show me this app. It's so cool. Do you want to see? You continue the conversation after. I don't forget the appointment.

If you do the same thing over and over, it's like a routine. It's the same over and over. Suddenly, you change something. You tend to say, "This is new." We innovate and innovate is fundamental for the future. We create empathy. It's fun most of the time. We need to use it. If it is not fun, don't use it. If the patient doesn't like technology, it doesn't make sense. Of course, don't use it. It can grab the attention. We know what grab the attention can make. There are a lot of other benefits. It can help us to interact with our patients.

It's a good way to practice because it's also for us, it's different. There are these emotional dimensions. Suddenly, you are doing something new. You are working with the patient. You are giving a suggestion. You are really trying to solve that problem. If they become curious, which are the things that's modern curiosity. Curiosity killed the cat. Cats are amazing. Because we are not cats, we are human, we know that resulting curiosity is an approach-oriented motivational state that instills people to explore, learn and get involved.

If I use a funny app to teach my young patients how to brush for example, with a funny snake on their head or with funny music. Again, I'm

just creating curiosity. I can say next time, we will see another video, another layer. They start saying, "I want to come again to the dental hygienist appointment." It happened so much. We know that most of our patients, the relation they have with the dental office is much better than for example, I had in my time when I was a kid. We should not forget. I'm almost finishing.

Thank you so much if you are still there. We should not forget that this kind of app or technology, they are not magic. We should use them to improve, not necessarily change our methods. If you think it makes sense to improve your method, it makes sense. I'm not saying we need to change everything. Maybe it could help us to improve. What is a good idea if it remains an idea? That could be good but we never tried. Come on, try. You should try. We should experiment. We should iterate. Yes, it could fail. Maybe it's nothing.

What would be the world today if we didn't fail a lot? Maybe we are where we are today in health, in technology, whatever because we failed and we never give up. We continued to try. If it still has the same result about periodontology disease, if it still has the same complaint about it, they don't do that. They don't know what they ask. Then don't complain. Come on. It's not about complaining. It's about doing things. It's about trying new things. Grace Hopper was a pioneering computer scientist.

She used to have on the wall of her desk a clock going counterclockwise just to remind us that because something was done one way in the past is no reason why it can't be done a better way in the future. She used to say the other thing in the world is to change the minds of people who keep saying yeah, but we have always had it done in this way. These are the results of change, my friends. If you don't change the days, we can be hurt. We can lose and the world can forget about us. It's like an invitation. Explore. Learn. Get involved.

Try to achieve results. Technology apps, it was just the way that I share with you my way of doing things. One way and it seems because we always, all of us be using different strategies. It was really a pleasure. This is my email. This is my area of research. I've been publishing some articles about not apps yet but we publish about text message and the use of internal camera. Now, we create a strategy using this multidimensional strategies with other work. I'll be more than happy to share with you about these topics. Sorry about my English.

Sometimes, I'm clumsy. I get excited. If I'm not concentrating, I move away. My grandma just died. I hope you understand. Thank you so much. If you have any questions, I will be here to answer. Thank you.