Jennifer Jacques: Good day, ladies and gentlemen. Thank you for standing by and welcome to today's web seminar. If you're experiencing technical difficulties joining the WebEx session today, please dial 866-229-3239. During the presentation, all participants will be in a listen-only mode. Feel free to submit written questions at any time by using the Q&A window located in the bottom right-hand corner of your screen. Simply type your question into the box at the bottom and click the Send button. Please be sure to address your questions to All Panelists.

And now, without further ado, I'd like to hand the call over to our first speaker for today's presentation, Dr. Lynn Mouden, Chief Dental Officer for Centers for Medicare and Medicaid Services. You have the floor.

Lynn Mouden: Thank you, Jennifer.

Thanks to everybody that's joining us today. This is the fifth CMS Learning Lab: Increasing Oral Health Through Access, and I have to tell you that we have the most registrants for this webinar as compared to any of them. So obviously we've created some interest out there on a topic that should be near and dear to all of us when we're talking about Dental Sealants: An Effective State Strategy to Prevent Dental Caries in Children.

We've often heard of things that we compare to a three-legged stool. One that comes to mind most readily is you can't have fire without heat, fuel and oxygen. Take away any of the three legs, and you don't have a fire. Well, we're kind of talking about a three-legged stool when we deal with CMS now because we talk about better health, better health care, and reduced cost per patient. So what we're doing is building that three-legged stool; and we know that providing all of those things which can be done at the same time -- which is obviously a new way of thinking -- but providing all those things, we truly can move forward as we increase access to care.

We know that there are disproportionate levels of disease and sealant utilization when we're talking about the Medicaid population. According to the GAO Report from the NHANES studies from 1988 to 2004, caries rates for patients age 2 to 18 – the caries rates for Medicaid patients have gone from 55% to 61%; in private insurance patients, it's gone from 50% to 45%, already showing a disproportionate level of disease. Specifically, when we're talking about caries rates for young children ages two to five, again, the changeover at that time period in Medicaid is from 32% to 39%; in private insurance, a much lower rate of only 19% to 21%. And unfortunately, we see similar rate differences when we're talking about the rate of untreated caries.

We have similar disproportionate levels when we're talking about sealant utilization; and again, this comes from the GAO Report on the NHANES studies. For those of you that might not be familiar, that's the National Health and Nutrition Examination Survey.

So when we're talking about sealant utilization, sealant rates for ages 6 to 18 – again, much lower in Medicaid, only rising to a high of 27%; private insurance, rising to 40%; and for those who are uninsured in either entity, we're talking about a level of 20%. So needless to say, it's showing a great disparity between those with private insurance, those with Medicaid, and especially those who are uninsured.

Now, when we look specifically at sealant rates ages 6 to 11, again, we're seeing the same kind of differences: Medicaid only rising as high as 22%, but private insured patients at a 36% rate of sealant utilization.

Now, one of the reasons we're having this conversation today deals with the Form 416 and the CMS Oral Health Initiative. So just to give you a little background for those of you who may not be familiar with it, the CMS Form 416 is required under the EPSDT Program, Early Periodic Screening and Diagnosis and Treatment Program; and it's the information that states give to CMS on a whole list of different indicators, of which some of those are dental indicators.

What we've done with the CMS Oral Health Initiative, which has now been in place for just a few years, is we've targeted a couple of those data sets to be part of the Oral Health initiative where we are asking

states to improve their rates in two categories. The first one is from line 12b of the Form 416, Preventive Services; and what we've asked the states to do is increase by ten percentage points the percentage of children ages 1 to 20 enrolled for 90 or more continuous days who've had a preventive service. Now obviously, that includes prophy cleanings, which I learned today was a bad word – but prophylaxis; fluoride treatments; and dental sealants. Now, in the Oral Health initiative, those goals are set for preventive services; and that does include all dental sealants whether it's primary or permanent teeth.

Now line 12d, which reflects the second goal of the Oral Health initiative, is talking about ten percentage point increase on sealants on a permanent molar for children ages six to nine – again, those enrolled for 90 or more continuous days.

And in the Oral Health initiative -- and I know I'm backing up a little bit here -- we've asked them to increase these by ten percentages points, which is not the same thing as 10%. I know you've all heard me say this a few times. But for example, if a state is at a 30% rate of preventive services, it doesn't mean going from 30% to 33%; that would be a 10% increase. Ten percentages points would mean going from 30 to 40.

Everyone, I think, understands now that caries in the primary dentition is a significant predictor of disease in the permanent dentition. Children are at higher risk if they have had caries; and not only caries in primary teeth but also as they go into adulthood and get permanent dentition. And everyone needs to remember that caries is a disease process. All too often we've talked about tooth decay and holes in teeth, the cavities that people refer to. But remember that the cavity, a hole in the tooth, is just the very end of a very long, complicated disease process – a process that can be stopped, a process that can be reversed. But please understand, that hole in the tooth is not the disease. The disease process is much more basic than that.

So we know that preventing caries in the primary dentition can prevent, reduce or delay the onset of disease in permanent dentition. So what we're hearing more and more about, although it's not necessarily a new concept, is chronic disease management. This has often been compared to a patient that had diabetes. A patient with diabetes, the physician doesn't wait until they're ready to have a foot amputated or when they go blind. The disease is treated as a chronic disease, not waiting for the end result of the disease. So obviously the comparison to the amputated foot would be the tooth that now has a hole in it and that the tooth has to be restored in a surgical process.

So again, chronic disease management has been around even in dental for some decades. But obviously what we have not had are the payment innovations and the innovations that can move this forward as far as payment systems go.

So there obviously are potential savings to Medicaid and CHIP when we're talking about dental sealants as an effective strategy. What we're going to talk about today are dental sealants in general, and we're going to feature a couple of states that cover dental sealants on primary as well as permanent molars. It's not our place at CMS to tell states what they should cover. So what we wanted to do today is to provide information that you will find useful when you are determining benefits for Medicaid and CHIP beneficiaries in your state.

If we go to the next slide, we have a couple of bar charts that come to us courtesy of Rob Compton at the DentaQuest Institute. And I certainly thank them for providing the information and for the analysis and the data that they have. This actually comes from a single state's program. As you look at the chart, and I know it's small enough that it may be difficult to read, but what's important is to look at the different colors and the different bars.

So what this shows us are the dollars in millions for treatment costs by age and by tooth type. So the bars to the farther left of the chart indicate primary teeth. And then as you start with ages five, six and above, as the bars change color, those are indicating permanent teeth. So as has often been said, the teeth that are indicated by the bright yellow are first permanent molars, which again, often said are the most expensive teeth in the mouth. They come in at about age five or six. We hope that they last for a lifetime;

but if they are not put into a prevention program, whatever that may mean for preventing disease, they may in fact start to decay, which often becomes a filling, which in later life becomes a larger filling and a larger filling. So what we obviously want to do is to prevent the decay process at its earliest stages.

If you go to the next slide, it's the same information but now we're given an example of the treatment costs by tooth type by age. And so what we're seeing now are the teeth shown across the bottom scale and the ages in the different colors. So again, by far the bar chart that's the tallest is showing the permanent first molar and the ages at which that tooth is treated.

So we have an opportunity with dental sealants on both permanent and primary teeth. It gives us an example of what could be done to prevent disease not only throughout the entire life stage, but most importantly, when we're talking about Medicaid and CHIP, it's saving those teeth, preventing the disease process in those children that are covered in our programs.

So what we've done today is put together a panel of speakers. I'm going to introduce all of them at one time here, and then I will let them do the turnover after each session.

Our first speaker is Dr. Barbara Gooch. Dr. Gooch is the Associate Director for Science in the Division of Oral Health at the Centers for Disease Control and Prevention, CDC, in Atlanta where she serves as a Senior Consultant on dental public health Issues, including the effectiveness of prevention strategies. She provides leadership to the CDC scientific team that reviewed evidence supporting the update of recommendations for school-based sealant programs in 2009. She also served on the expert panel assembled by the American Dental Association Council on Scientific Affairs to develop evidence-based clinical recommendations for sealant use in 2008. Dr. Gooch currently serves on the Department of Health and Human Services Federal Interagency Panel on Community Water Fluoridation.

After Dr. Gooch, we're going to feature a couple of state Medicaid programs. Our next speaker will be April Burton. April is a Registered Dental Hygienist. She graduated from Clayton State University in Atlanta, Georgia, in 1996, with a Bachelor of Science in Dental Hygiene. She's been a hygienist for seventeen years, and the last four have been in Medicaid management in Wyoming, where she serves as the Medicaid Dental Manager.

Our next speaker will be Jan Paulsen. Jan joined the Montana Medicaid Health Resources Division staff in 2007. After 12 years with the Public Assistance Bureau, where she managed employment and training programs under the TANF block-grant. Prior to that, she spent 16 years working for a community-based organization that provided vocational and residential services to developmentally disabled adults. Since coming to Medicaid Services, Jan has served as the Dental Program Officer where she supports private practice dental offices to be successful with services to Medicaid families. She's passionate about minimizing the administrative hassles of doing business with Medicaid, ensuring the reimbursement cycle is complete and that reimbursement is minimally adequate.

Jan graduated from Eastern Montana College in Billings, Montana, with a Bachelor of Science degree in Related Services. As a personal note, Jan is married and has three adult children and seven grandchildren. And I love this because she says in her spare time she plays golf and is a landlord, giving her lots of opportunity to play with power tools. I'm assuming the power tools are just as a landlord and not in playing golf.

We will finish up having Elizabeth Hill from CMS lead the Q&A in what we call our "office hour." So that means that we will be having Elizabeth moderate that session, which will be at the end of the three presentations.

So again, I thank everybody for joining us today and look forward to a very successful webinar. So with that, I will turn it over to Dr. Gooch.

Barbara Gooch: Well, thank you, Lynn.

I really appreciate this opportunity to talk about evidence-based recommendations for dental sealant use. Next slide.

We're going to review the recommendations and specifically six key questions that were reviewed by the expert panels that were put together in the last decade to implement and develop these evidence-based recommendations. Then we'll look at the findings that were based on the reviews of evidence, and we'll look at the current recommendations that were developed. Next slide.

Some of you may be asking, "Why evidence?" We currently have the data systems and the data available to help us when we're in an environment of constant or shrinking resources. And this affects not only publicly-funded health care delivery programs such as you have focused on, but also public health programs at the national or federal, the state and the local level. And basically, the evidence assists us in our current environments to focus on those practices that are most effective and efficient.

Evidence-based approaches primarily incorporate the best available scientific evidence about what works. So in the simplest form, we're really looking for evidence that informs us about what works and what works well. And we can incorporate that information into our decision making. Next slide.

Today you may have heard the term "systematic reviews." Systematic reviews of comparative studies are the currently preferred method for identifying the available knowledge. We cast a very broad net in order to bring in all of the available studies for consideration. The systematic review is the preferred method for determining what is the best information and then summarizing it in a useful manner for generating recommendations or other policy and program considerations.

The systematic review uses an explicit rule-based process; and why that's important is that process of how you undertake the review is not decided along the way but it's actually established before the review ever begins. And it reduces bias, particularly the bias of the investigator undertaking the review. And that bias can affect how you collect the information, what studies you include, and how you synthesize and report the findings. So in essence, we're trying through the systematic review to have an extremely rule-based and objective process. Next slide.

We do depend on a hierarchy of evidence. And generally systematic reviews and meta-analyses of randomized control trials are going to provide the highest level of evidence. Case reports and expert opinions are going to provide the lower level of evidence. I do want to just note that a meta-analysis is kind of an intimidating term, but it basically is a quantitative or statistical approach to combining the findings from different studies to more precisely estimate the effect of that intervention on the outcome of interest. And so in this case, in today's context, we're going to be talking about dental sealants as the intervention and tooth decay or dental caries as the outcome.Next slide.

I'm going to focus on two evidence-based guidelines that Lynn alluded to in his remarks. These focus on sealant use. The first one was published in 2008 in the *Journal of the American Dental Association*. It focuses on sealant use in clinical settings, and it was developed by an expert panel that was invited by the American Dental Association's Council on Scientific Affairs.

The second guideline focuses on school-based sealant programs. That was published in *JADA* in 2009. It was developed by a workgroup that was supported by CDC. Next slide.

We have six questions, and our first three questions are going to focus on sealant effectiveness. Do sealants work? And they're going to provide information on the circumstances under which sealants should be placed.

So Question 1 asks: What is the effectiveness of sealants in preventing the initiation of caries? And again, caries is tooth decay. And this tooth decay is primarily on the pit and fissure surfaces, and these would be surfaces judged by the clinician – the dentist or the dental hygienist – to be sound with no signs of the decay process. And the available systematic reviews confirm that sealants are effective in preventing the start of tooth decay on sound surfaces.Next slide.

The evidence for this is strong. The effects are of large magnitude. The most recent review that came out here in 2013 from the Cochrane collaboration indicated that the effectiveness of resin-based sealants at two years is greater than 80%. Estimates from other reviews indicate that the effectiveness is about a 60% reduction in tooth decay up to four to five years after placement.

And based on this evidence, the American Dental Association's expert group recommended that sealants be placed on the pit and fissures of permanent teeth when it is determined that the tooth or patient is at risk of developing caries or tooth decay. Next slide.

Our second question addresses: What is the effectiveness of sealants in preventing the progression of early tooth decay? In essence, managing decay in its earliest stages.

These surfaces would have the signs that you can see in the tooth in the lower right-hand corner of the slide. There would be white lines indicating loss of minerals such as calcium, phosphate and carbonate; yellow/brown discolorations around the pit and fissure, and also widening of the fissure area. It's important to note, however, from a clinical perspective that these early lesions have no cavitation or hole in the enamel surface.

And a systematic review in 2008 found that sealants are effective in reducing the percent of non-cavitated carious lesions that progress to cavitation. So they are effective in managing early decay and slowing or eliminating that disease process so that you do not progress to a state where you have, in essence, a hole in the enamel surface and the bacteria then having access to the softer tooth structures that are below the enamel. Next slide.

These findings were reported in the *Journal of Dental Research* in 2008, and the conclusion was that sealants reduce the percentage of non-cavitated carious lesions that progressed by about 70% up to five years after placement. Next slide.

In addition, we looked at the effectiveness of sealants in reducing bacteria levels in carious lesions. And a systematic review found that sealants also are effective in lowering bacteria levels. Next slide.

And this was published in the *Journal of the American Dental Association* in 2008 with the conclusion that sealants lowered bacteria levels by at least 100-fold. This result, coupled with the previous finding of sealants effectiveness in managing early, non-cavitated decay, supported an ADA recommend that pit and fissure sealants should be placed on early non-cavitated carious lesions to reduce the percentage of lesions that progress.

Also these two findings should reduce fears, particularly among clinicians, that tooth decay will progress and lead to poor outcomes if sealants are placed either knowingly or unknowingly over early decay. Next slide.

The ADA also issued a recommendation related to the placement of sealants on children's primary teeth. This was based in part on the findings of sealant effectiveness in the permanent teeth. But it was also based in part on the assumption and the acceptance that sealant retention is a proxy for caries prevention because a sealant fully retained on the tooth is deemed to be effective.

Based on those two key sources of information – one, the evidence based on permanent teeth and two, the fact that sealants have a high retention rate based on the studies that were available at the time this was developed in 2008 – the ADA made the recommendation that sealants should be placed in the pit and fissures of children's primary teeth when it is determined that the tooth or patient is at risk of developing caries.

The available studies on retention at that time indicated that more than 70% of sealants were retained on primary molars up to three years after placement. Next slide.

You will note that the clinical recommendations that I just described for sealing sound pit and fissures include an assessment of risk at the level of the tooth or child. This is called Caries Risk Assessment, and there is no universally accepted assessment tool; but I'm sure many of you are aware of the CAT, the Caries Assessment Tool, and then CAMBRA.

Commonly used indicators across these tools in highlighting or identifying teeth or children that may be at risk are active or untreated tooth decay or the signs of early decay that we have already reviewed; poor oral hygiene; low socioeconomic status; and limited use of dental services. And I'll also say not only limited but irregular use of dental services. And the Caries Risk Assessment assists with clinical decision making and also can improve the cost effectiveness of our programs. Next slide.

The evidence that we just reviewed also supported the recommendations for school-based sealant programs. These recommendations are to seal sound pit and fissure surfaces, and to seal non-cavitated pit and fissure surfaces. Next slide.

We had already reviewed that the American Dental Association recommendations were based on a Caries Risk Assessment at the individual level. For school-based sealant programs, the clinician may undertake an individualized risk assessment; but there is an initial risk assessment performed at the community level. And it's performed in order to reach vulnerable children who may be at higher risk for decay and lower likelihood of having sealants or access to dental care.

And that approach is by targeting high-risk schools. Generally high-risk schools are identified by the percentage of students that are on the free and reduced federal meal programs. We generally target programs. Of course, like Dr. Mouden indicated, at the federal level we do not tell the states what to do. But we provide some guidance, and we work closely with the states to understand how they are implementing what they consider to be an optimal approach within their local environment.

Many times we focus on schools that have greater than 40% of their students on the free and reduced-price meal program. And as I already stated we know that these children – many of them are from low-income families. They're going to be at higher risk for caries and untreated tooth decay. They're going to be less likely to receive sealants and other preventive services, such as clinical fluoride modalities. And they're also going to be less likely to receive timely dental care than children from higher income families. Next slide.

Our next two questions are about preparing the tooth surface for sealant placement. The first question asks if the addition of mechanical preparation of the enamel surface with a handpiece and bur prior to placement improves sealant retention. Now, the studies related to this are few; and they have limited and conflicting evidence. At the time that we reviewed this in 2008 and 2009, we could not determine the effect. Next slide.

The second question deals with cleaning the surface of the tooth, and we are interested in two surface cleaning methods. The first is by a toothbrush, a dry toothbrush in many cases, utilized by a child under supervision by the clinician. The other method is a small brush using the dental handpiece. And the question is: Do these result in similar retention rates?

Well, actually there were too few studies to determine the effect; but one clinical study suggested that there was no difference. Next slide.

In that context, we here at CDC also undertook some additional analyses looking at effectiveness studies. So these studies were not actually comparing surface preparation techniques, but we were able to use some approaches in order to have a better sense of how the surface preparation technique might have been associated with the outcomes. And in this case, we found that tooth brushing was associated with similar, if not higher, sealant retention than cleaning with the handpiece as I have described it. Next slide.

So the recommendations regarding sealant placement are that first of all, we always need to clean the tooth surface. But a dry toothbrush with supervision can be used. And of course the traditional dental

handpiece with a prophy brush also can be used. Additional preparation with a dental bur was not recommended. Next slide.

Our last question asks: Are teeth that lose sealants at higher risk of tooth decay than teeth that were never sealed? And a meta-analysis indicated that caries risk between these two states is similar. Remember this comparison is about teeth that lose sealants versus teeth that were never sealed. It did not look at teeth that lose sealants versus teeth that were sealed.

So why is this question important? Well, it was specifically important when we were developing recommendations for school-based programs because it relates to children who are likely to miss follow-up appointments to evaluate or check the integrity and the retention of the sealants. And again, children from low-income families are documented to move and change schools more frequently than children from higher income families.

So under this scenario, if a part or all of a sealant were lost and there was no opportunity to repair or replace the sealant, would we be placing the tooth, and thus the child, at increased risk for tooth decay compared to not placing the sealant at all?

In essence, if you could not assure that you could evaluate that sealant in a year's time or in a normal recall pattern, should you not place the sealant? Findings of this systematic review, however, indicated that the caries risk is the same between teeth that lose sealants either fully or partially and teeth that were never sealed. Next slide.

And these results were published in *JADA*, again in 2008 or 2009. Next slide.

The ADA clinical recommendation, based in part on those findings, was to monitor and reapply sealants as needed to maximize effectiveness. But we still recognize that effectiveness of sealants has been well documented among groups of children, even when those sealants were not re-evaluated over time and when there was only one-time placement of sealants. Next slide.

For school-based programs, we do seal the teeth of children even if follow up cannot be assured.Next slide.

So some of the key messages from this short talk have been that evidence supports the effectives of sealant use, both in clinical care settings and in school sealant programs. CDC and ADA recommendations are consistent on the topics addressed by both. And caries risk assessment is recommended at the individual level prior to placing sealants on sound surfaces in clinical settings. And the caries risk assessment may be at the individual level in school settings, but is at the community level in order to identify and to reach those students who are likely in need of sealant placement and oral evaluations.

So I thank you for your time. Next slide. And I'd like to turn to presentation over to April Burton of Wyoming Medicaid. Thank you.

Alice Burton: Thank you, Dr. Gooch.

I would like to first talk about the history of our program related to sealants. Prior to 2008, Wyoming Medicaid covered sealants on permanent posterior teeth only. This did include permanent molars and pre-molars. In 2008, Wyoming Medicaid added primary second molars – A, J, K, and T – to the list of teeth covered for sealants. And then in 2010, during a budget reduction request, it was determined that sealants on bicuspids would be cut from our program. The Medicaid Advisory Group supported this decision after lengthy discussions on the benefit versus the cost on sealing these teeth. We were proposing to see about a $200,000 savings by cutting the sealants on the bicuspid teeth.

We also monitor the amount being spent on one-surface fillings or bicuspids to see if this amount is increasing due to these teeth not being sealed. We have not had any increases since 2010, and in fact

have seen a decline from about $63,000 spent in 2010 on one-surface fillings to about $47,000 spent in 2013 on these fillings. Next slide.

The addition of primary second molars was based on a recommendation in the Guidelines by the American Academy of Pediatric Dentistry. They stated that any tooth, including primary teeth and permanent teeth other than molars, may benefit from sealant application due to the anatomy and the caries risk factor, and also that caries risk may increase at any time during a person's life. We also had encouragement from our Wyoming Dental Association and from the Dental Hygiene Association to increase our preventive services at that time. Next slide.

Now I'll talk about our policy. Currently the Wyoming Medicaid Sealant Policy is that we pay for the application of dental sealants for permanent molar teeth and primary second molars – A, J, K and T. Sealants are allowed once in an 18-month period for each covered tooth for clients ages 0 to 20, and each sealant is reimbursed at $28. This fee is based on Wyoming's methodology for pricing dental codes. We price our dental codes at 75% of the average billed charge for sealants by Wyoming dentists. This was established in 2008. Next slide.

This slide shows a cost to our Medicaid program over a five-year period of time. From 2008 to 2012, we have estimated that there were 10,018 sealants placed on A, J, K and T; and the cost to our program was $280,000. What we've tried to do is figure out the potential cost avoidance of one-surface fillings on these teeth. So we did an estimate, and say that there is a potential for 50% of these teeth that were not filled to potentially have a one-surface filing placed. At $78 per one-surface filling reimbursement, approximately half would be $390,000 to our program. If we have avoided the cost of fillings on at least half of these teeth, then we feel this benefits our program with cost avoidance and better oral health in our children. Next slide.

This slide is going to show us the percentage of kids that received a sealant versus the percentage of kids that received a filling. So what we hope is that as we increase the number of sealants that we're placing that we're going to see a decrease in the number of one-surface fillings. We are actually beginning to see a decline in the number of one-surface filings being done on these particular teeth – A, J, K and T. We will continue to monitor this trend and assess if we are truly reducing the number of fillings needed by paying for sealants on A, J, K and T. The decline in sealant placement from 2011 to 2012 is attributed to lower enrollments of new Medicaid clients. Next slide, please.

To understand the decline in sealant placement from 2011 to 2012, we have to look at the percentage of newly-eligible clients. So from 2008 to 2009, we had approximately 3,170 new clients that were eligible for sealants. As you can see in 2011 to 2012, we only had 313 clients. Therefore, there are less teeth to be sealed. Next slide.

Wyoming's Medicaid policy to reimburse providers for sealants placed on primary teeth we feel benefits our program in three different ways. By preventing costly restorative treatment – if our clients' teeth can be protected, we can realize a savings to our program and offer our clients better oral health. We're also protecting our children from potential dental emergencies. Unprotected teeth are susceptible to decay; and if this decay progresses untreated, there is a potential for a dental emergency. We also want to maintain the health of primary molars for space maintenance with potential prevention for orthodontic cases later. When primary molars are lost prematurely, there can be a shift in the dentition that otherwise would not have happened. This can increase the chance of a more severe malocclusion. Next slide, please.

With implementation of sealant coverage on primary second molars in 2008, Wyoming has seen about three years of decline in the number of one-surface occlusal fillings being done. We will continue to monitor this decline and the potential savings to our program.

Now I'll turn it over to Jan Paulsen with Montana Medicaid.

Jan Paulsen: Thank you, April. This is Jan Paulsen from Montana Medicaid. Next slide, please.

In Montana, our dental sealant policy is based on the ADA evidence-based clinical recommendations of the use of pit and fissure sealants published in 2008. Montana reimburses procedure code D1351 on first and second molars in the primary and permanent arch.

To the right of your screen is an illustration of both of those arches. We pay for tooth letters A, B, I, J, K, L, S, T. And in the permanent dentition in the permanent arch, we pay tooth numbers 2, 3, 14, 15, 18, 19, 30 and 31. And these tooth letters and numbers are paid through age 20. Next slide, please.

Other influencing factors that assisted us in making the change in our policy was the new practice standard brought to our attention from many local dentists within our state. We're strong partners with the Montana Dental Association, and we value their professional recommendations.

Also in discussion was the cost of sealants paired with the future savings that would be realized with implementing this comprehensive dental sealant policy made the right decision for Montana. Under the EPSDT program guidance, states have the authority to provide services that are determined medically necessary. We believe that early intervention means starting with primary teeth, and we believe prevention involves both primary and permanent teeth. Next slide, please.

We reviewed the eruption chart that is presented on the right side of your screen. Eruption means when the tooth comes in, and shed means when the tooth falls out. The chart on the right will give you the eruption schedule in months. I converted that to years, and we did a review of first and second molars when they came in and when they fell out. And you can see, there's a range in years there. Everyone has their own individual differences.

But when we looked at that schedule, we really took a look at how long the molar was actually in – meaning how long it was affected by bacteria. And we see that the primary first molars are in almost seven to ten years, second molars approximately the same. Then when they shed and the permanent teeth come in, approximately age seven -- second molars are a higher age, age 12 -- they're there for the rest of their life. But those primary molars are potentially in for eight to nine years. So that is a long time to potentially grow into some problems. Next slide, please.

This slide illustrates the age group breakdown as we see in our CMS 416 Report. As you know, we report numbers to CMS beginning with the age group of 6 through 9 and then again age 10 through 14. I took the previous chart of the eruption and shedding chart and applied it to these age groups. And you see with age one through two is when the primary first molar comes in. Age three to five, primary molar comes out. Age six to nine, the primary fall out and the permanent come in. Age 10 through 14, that permanent molar comes in.

In Montana, since we've been sealing teeth, the data here represents state fiscal year 2012, we sealed 411 kids in that early age, one to two group. That was 1,463 sealants. Age three to five, we sealed 1,259 kids with 3,976 sealants. Then when we get to the older ages, six through nine, we sealed 1,814 kids with 5,926 sealants. Age 10 to 14, we sealed 1,256 kids with 3,930 sealants.

What you can see is you hit a peak year at some point, of course depending upon when you start your program. And April Burton from Wyoming illustrated this as well. Once you get the molars sealed, they're likely to last for many years and you see the activity leveling off; and that's what this is beginning to demonstrate as well. Next slide, please.

So we hypothetically projected out what if we hadn't provided the sealants. So in state fiscal year 2012, we provided 15,885 sealants in total; and that's basically an average of three per person. If we hadn't had those three sealants per person and we had at least one filling per person or one stainless steel crown per person, we would have spent a lot of money. And this is very much an underestimation. We would have potentially spent $665,000 in fillings with one per person; $779,000 with one stainless steel crown per person. This is across our full EPSDT age range, with a total of 78,000 total eligibles. So you can see that the cost avoidance is fairly high compared to the $392,000 that we did spend. Next slide, please.

In conclusion, the cost per person to prevent decay ranged from $25 to $200 for the application of one to eight sealants. The cost to treat decay ranged from $65 to $200 per tooth, up to $520 to $1,600 for all eight molars. Sealants are clearly effective in reducing occlusal caries in children, adolescents and adults. The cost of preventing decay is dwarfed when looking at the cost of treating decay. Next slide, please.

So what's happening in Big Sky Country in the future is we're going to continue with our partnership with the Montana Dental Association. It's a very positive partnership and grows every year. We currently are working on a project with them called Who's My Dentist. It's a great campaign. They feature a website, www.whosmydentist.com, and it educates families of children to establish a dental home by age one; schedule regular appointments every six months; have a healthy, nutritious diet; teach children to brush their teeth twice a day; have a dentist place sealants; get a mouth guard for sports, etc. So that's a great project that we've teamed up with our Montana Dental Association.

We provide ongoing outreach to new dental providers to expand our network within the state. We provide training each spring and fall to strengthen our current providers. We send out annual letters to families informing them of services available. We support school-based dental sealant programs, which has a real strong start in Montana. We support the practice standard of getting kids to the dentist by age one with our access to baby and child dentistry program. We encourage families to have a dental home. And we provide transportation reimbursement if families need to travel out of town for services.

At this time, I would like to pass off to Elizabeth.

Elizabeth Hill: Great, thank you so much to all of our speakers. Now we'll answer a few questions that have come in. Everyone who's listening, please feel free to submit your questions through the Q&A box. I think our first question will be for Dr. Mouden.

Dr. Mouden, the CMS Oral Health initiative is a ten percentage point increase over what period of time?

Dr. Mouden: I'm sorry, I obviously forgot to mention that. Although originally designed to be over a five-year period, the baselines were just set this last year. But we are still asking the states to please work towards this goal by 2015.

Elizabeth Hill: Okay, and I think we had another question for CMS: Does CMS break out the number of prophys from fluoride varnish and sealants, and what evidence is used to support rubber cup prophy as a preventive service?

Dr. Mouden: First of all, we do not break it out at CMS, although a state may be able to provide that information on prophys as separate procedures from fluoride varnish because what we have reported to CMS on the Form 416 is preventive services as – I hate to say "bundled" – but as a separate way of doing it without breaking out the different treatment episodes.

The evidence for rubber cup prophys may not be very strong for preventive effects in young children; however, we do know that the provision of a range of preventive services does provide an opportunity for examination and assessment of a child's dental or skeletal development and the risk for dental caries.

Elizabeth Hill: Okay, thank you.

Barbara, I think this next question is for you: Is the Caries Risk Assessment recommended in the school-based setting?

Barbara Gooch: Well, I tried to address that; and let me just address it one more time in that we emphasize in school-based settings from the recommendations that were supported here at CDC that all children that have parental consent forms and have molars are our primary focus although we're not saying it can't extend to primary molars. But our permanent molars, we always want to make sure that that first permanent molar in the younger grades of the school-based program receives priority. If that tooth is erupted suitably to be sealed, then because we're targeting schools that have high numbers of

vulnerable children, we do not undertake generally an individualized risk assessment but would seal all of those teeth that are suitable for sealing. Now, of course the child would have had to return a parental consent form and parents may indeed discuss this with their own dentist, etc.

But the other reason we offer it to all children and also seal all of the teeth that are suitable or meet the parameters for sealing is that first, we don't want to separate children out on who's able to be sealed by the sealant program and who isn't. Secondly, we have this preventive opportunity. A child is there in the program, perhaps in the dental chair. Many times these are portable dental units with personnel. Everything is set to place the sealant, and so the overall recommendation is to go ahead and place that sealant in the child.

Now, even if we're in a school that has a high percentage of children who are on the free and reduced-price meal program, indicating that they're in the income group that appears to have higher risk of caries, it may be that in the local area the caries risk is quite low. In that case, the program can have its own policy and its own recommendation based on its local environment that, yes, a caries risk assessment can be undertaken.

But our overall recommendation from the federal level is if you have a child in the program with a parental consent and the child appears on the day that the program is sealed in the school, to go ahead and seal those molars because you might otherwise miss a preventive opportunity with that child.

So there are a number of caveats, but I hope that the final result was clear.

Elizabeth Hill: Okay, thank you. Another question for you is: Does the CDC or the ADA recommend one kind of sealant material over another?

Barbara Gooch: Well, CDC does not. We would rely on the Food and Drug Administration, another federal agency. If they've cleared a sealant material for marketing in the U.S., then we would defer to FDA and also we would advise the practitioner to follow the instructions for use for that sealant material.

The ADA, as you may or may not know in 2008 did, based on the available evidence, conclude that glass ionomer cement -- and they were limiting it to glass ionomer cement; and I do not think there were studies available with the resin-modified glass ionomer -- glass ionomer cement may be used as an interim preventive agent when there are indications for placement of a resin-based sealant. But concerns about moisture control may compromise such placement.

Now, I do want to highlight some recent evidence that has come out from the Cochrane review. The most recent Cochrane review certainly has a strong evidence base for resin-based sealants. The comparison of glass ionomer sealant to no sealant at all – there are very few studies of that; and one reason is that since the 1980s, the focus on not placing the sealant at all was considered to have some lack of ethics since we knew and have strong evidence that sealant placement is effective.

So the glass ionomer sealant compared to no sealant, there are very few studies. There are more studies that compare glass ionomer sealants to resin-based sealants. The fortunate part for the population is that caries risk in the study samples was very low. There were some very low incidents of caries and any other type of event related to tooth decay. So there really was insufficient evidence to make any conclusion because these studies were not focused on a population at higher caries risk.

So at this time, I want you all to realize that the studies that supported resin-based sealants were done primarily in the 1970s and some in the 1980s; and resin-based sealants have a very strong evidence base for effectiveness in a higher caries population.

When you're focusing on a low-risk population, you will not see that same level of effectiveness because the control group, the children who aren't receiving sealants, are not developing caries. So there is this interplay between caries risk and effectiveness.

Now, my last statement has to do with assessing caries risk. We do have models. CDC has certainly advocated caries risk assessment even in terms of the application of topical fluoride and the prescription of fluoride supplements. But the model that we have really has not been validated. A recent review by the U.S. Preventive Services Task Force could not find any evidence that related caries risk assessment to better outcomes in children in terms of oral health.

So we have to work with the tools we have. We have to understand that the studies to determine whether caries risk assessment makes a difference in outcomes are hard to initiate and to carry out over the long term. So we work with a theoretical rationale, and we do use caries risk assessment because we know that caries risk across the population has decreased. But sometimes that lower caries risk can somewhat inhibit or hamper our need to learn more about the effectiveness of materials; and that's also what's happened with glass ionomer sealants.

So while we have a very strong evidence base, I'll emphasize that again, for resin-based, not so strong for glass ionomer sealants. But they have been tested in more recent time periods where the caries incidence is lower.

That's a long answer. I hope that there were some take home messages from that.

Elizabeth Hill: Yes, thank you. I think this next question is for Jan and April: How are the provider network expansions progressing in Montana and Wyoming in light of the increasing numbers of Medicaid beneficiaries?

April Burton: Jan, do you want me to go first?

Jan Paulsen: Sure, go ahead.

April Burton: Okay, so in Wyoming this year they have not decided to expand Medicaid within Wyoming; however, we are diligently recruiting all the time and trying to expand our network. We currently have approximately 90% of our practicing dentists within the state participating in Medicaid. So we've only identified a very few amount of practicing dentists in our state that are not enrolled to be a Medicaid provider. We're always trying to recruit those people, and we're also trying to make sure that the providers that we do have enrolled are actively seeing our patients and trying to take on more in their areas.

Jan Paulsen: In Montana, our legislature also decided not to expand Medicaid. We've seen a small rise in our number of beneficiaries, not real huge. Our population of dental providers has grown slowly as well. And many of them have defined limits as to how many new Medicaid patients they can accept, whether it be between the CHIP program or Medicaid. We've seen over the recent years a direct correlation with the downturn in the economy with increased chair time available for our Medicaid beneficiaries.

So we're doing well, and we're doing what we can to reduce the administrative burden of doing business with Medicaid and providing the level of support that we can. Our network is very active – probably 450 providers I think in Montana. There may be as many as 600. So we have much of them and have a strong relationship with their offices.

Elizabeth Hill: Great, thanks. And, Jan, this next question is for you: How has the access to sealants been improved by using Montana's collaborative care for the registered dental hygienists? Are they reimbursed like dentists?

Jan Paulsen: They can. What we have in Montana is the ability of a hygienist to have a limited access permit to operate independently when associated with a public health clinic, an FQHC. And that is their backup dental office. From there, once they have the access permit, they can go to Head Start; they can go to schools; they can go to nursing homes and provide a short list of preventive services. We reimburse them the same rate as we reimburse dentists; but many of our hygienists, especially with our school-based programs, travel with a dentist in an employee/employer relationship.

Elizabeth Hill: Thank you, and we'll go back to Barbara. Barbara, could you describe the state of the evidence for placing sealants on primary molars?

Barbara Gooch: Well, I actually alluded to that. We searched the literature in preparation for this particular presentation; and really, there are very few studies that have focused on sealant use in the primary teeth. And the ADA undertook a review through 2008, and there were no studies of effectiveness of sealants on the primary teeth; but there were studies of retention of -- in this case I believe they were resin-based sealants on the primary teeth – and that retention rate was good.

And so based on that and based on the fact that sealants are certainly documented to be effective in the permanent teeth, the ADA did make the recommendation that sealants should be placed on primary teeth when it's indicated that either the tooth or the child is at risk. And if you're dealing with a Medicaid population, then certainly at the child and at the community level one could argue that the child is at risk compared to other groups of children.

The evidence is very limited for specifically examining sealant use on primary teeth.

Elizabeth Hill: Okay, thank you. And I think actually this next question is for you too: Is the Caries Risk Assessment recommended in the school-based setting?

Barbara Gooch: No, in the school-based setting, from the recommendations that CDC reported, the risk assessment is done at the community level. And it's done – again, I'll just focus on identifying and placing school sealant programs in those schools that have higher percentages of children on the free and reduced-price meal program -- by doing that, we reach children who are probably much less likely to have sealants and much less likely to have access to regular dental care.

There actually were two studies done in Ohio that showed that when you placed a sealant program in schools, differences within the school between children who were from wealthier families versus poorer families – and there are proxies for that, we obviously don't ask the children that – but in terms of how many are on the free and reduced-price meal program, how many are insured by Medicaid, how many are uninsured -- some of those differences between children in terms of receipt of sealants began to decline and in some cases disappeared.

So sealant programs are a great equalizer in terms of making sure that all children within one school or a group of schools has access and can use and benefit from dental sealants.

So, no, we do not recommend an individualized risk assessment. However, going back to my earlier comment that from the federal level, we don't tell our practitioners or our personnel at the state and local level what they should do. We make recommendations, and we provide the evidence; and then in the context of their professional judgment, their assessment of the child, etc., they make the determination of what is the appropriate course of action.

Elizabeth Hill: Okay, thank you. The next question is back to Jan and April: For both of your states, does Medicaid fund school-based sealant programs in your states?

Jan Paulsen: In Montana, the Medicaid Office does not specifically fund the school-based program as a whole. The staff, who I suppose manage the clinic, they need to file a claim on behalf of each individual student that they served.

April, did you want to answer the question?

April Burton: Yeah, Wyoming doesn't currently have a school-based sealant program.

Elizabeth Hill: Okay, so back to Jan: In school-based programs, who is eligible to bill Medicaid? Are dentists placing the sealants, or are they being used in a supervising capacity?

Jan Paulsen: Yes, the dentist who is over the clinic, it's usually a local dentist, can submit a claim. The place of service, whether it be the office, a mobile unit, or a school-based setting – we don't place limits on place of service; but the provider does need to be enrolled with Medicaid and of course the student needs to be Medicaid eligible. It's kind of a paperwork nightmare for the clinics because you've got to figure out who is and who isn't, and then they also are billing other insurers as well.

Elizabeth Hill: And does your state have a mid-level provider that can bill for procedures done in public health settings?

Jan Paulsen:The registered hygienists, who have a limited access permit, would be able to do that. That is part of their licensing certification with the Department of Labor.

April Burton: This is April in Wyoming. I just wanted to go back and elaborate a little bit on not having a school-based sealant program. What we do have is we have a public health program that will pay/reimburse dentists directly for sealant placement on children who either are Medicaid patients who need bicuspid sealants or are children who are uninsured that need sealants. So we do have that program in place; however, it is not a school-based program.

Elizabeth Hill: Okay, thank you. And then another question for Barbara: How long do sealants last, and is there an average time for sealant retention?

Barbara Gooch: Well, actually one of the best reviews of that came in the Surgeon General's Report, which was published in 2001. But that's been one of the most comprehensive reviews. It was reported that 92% to 96% retention in second-generation resin-based sealants after one year; and then 67% to 82% retention after five years. There was a longer-term study published in 1993, which is old now, again looking at second-generation resin-based sealants. And they are the long-term retention of 41% to 57% intact after ten years.

So retention of resin-based sealants, when they are placed with technical skill and adherence to the meticulous technique that is needed and certainly have a moisture-free operating field, the retention is quite high.

Elizabeth Hill: Thank you. And then again another question for Jan: "I understand that Montana pays for a dental visit every six months. Can visits occur more often for children at greater risk of childhood caries?"

Jan Paulsen: Yes, they can under the EPSDT Guidelines. If it's determined medically necessary through their medical chart at the dental office, through the result of a caries risk assessment, whatever method is used to document the extra need, it can be provided up to six times a year if need be.

Elizabeth Hill: Okay, thank you. And again, another question for Barbara: The study argues that handpiece bur does not improve retention after brushing. Can you comment on handpiece bur cleaning of fissures versus brushing the surface with regard to retention?

Barbara Gooch: Well, I just kind of wanted to clarify that. There are two separate questions there. One is about cleaning. And the question for us, and I'll give you the background, was that in cleaning the tooth surface, some school-based programs, actually most school-based programs, rely on dry tooth brushing of the surface by the child; and that's supervised, really as they're awaiting sealant placement. But remember, once they are seated in the dental chair, the high velocity water syringes are used to rinse off that tooth prior to acid etching, etc.

The other more standard modality in dental office where you're providing comprehensive services, etc., and you're not focused solely on the provision of preventive services such as sealants or fluoride varnish, etc., is to use a handpiece, the traditional handpiece prophylaxis, that in many cases the dental hygienist provides during your dental cleaning. Usually it would use a pumice, or it may use a dry brush slowly in the grooves. But they use the slow-speed handpiece.

That's difficult in school-based programs because our current recommendations at CDC for infection control are that if you use a handpiece, including the slow-speed angle, you're going to need to sterilize that between every child. So the other approach using the toothbrush was very important for these school-based recommendations that we really carefully looked at the evidence because there were concerns that we might be hindering or reducing sealant retention and effectiveness by not using the traditional cleaning with the handpiece and the prophy brush. But our findings did not reveal that.

And there have been just a couple of clinical studies, one in particular by Gilchrist. They did not find a difference between using the handpiece and using the brush. So that was important for us. That has to do with cleaning the surface prior to placing the sealant.

The bur and the dental handpiece is an additional step. I'm a dentist and Lynn's a dentist and others on the phone are. We're trained that when we see areas of the enamel that look like they may be affected by caries, say, or may appear not to be ideal for an acid etch – which the acid etch of course removes the mineral and then allows a physical bond with the sealant material – when that seems to be compromised, there has been some thought that you could do what's termed "an enamel-plasty," and that that might improve retention of the sealants and the marginal seal. But we really have no evidence that that is the case.

So again, for sealant programs, that's important because once more, having to introduce a high-speed handpiece into a school-based program for a technique that may be used in a fixed dental office with comprehensive care, it was not feasible; and it turned out that it was not needed within the school-based project management.

So there are two different stages here. One was the cleaning using the traditional handpiece and prophy brush versus the toothbrush. The second phase was the enamel-plasty. And so that's the evidence related to those two steps.

Elizabeth Hill: Okay, thank you.I think, actually, I'm going to turn the floor back over to Dr. Mouden.

Lynn Mouden: Thank you, Elizabeth. I do see that there is one last question before we close. Somebody has asked that we discuss the Medicaid Free Care Rule and what it means for school-based sealant programs. "Free Care Rule," we'll put that in quotes – actually, the quotes should be around "No Free Care Rule" -- because it's widely thought that you can't provide services for free unless everybody is getting them for free. So you can't provide them for free to one person but then bill Medicaid. This obviously is an issue in school-based dental sealant programs and in other settings, and there are considerable internal conversations going on at CMS to provide better guidance.

So I hope that answers it by frankly not providing much of an answer at this time, but stay tuned.

Needless to say, this has been a great afternoon. I certainly appreciate all the people that were with us throughout, those that are sticking with us. I certainly want to thank all of our speakers: Dr. Gooch, Jan Paulsen and April Burton for wonderful presentations. Thank you to Elizabeth for moderating the question and answer period, and also to our friends at the Medicaid CHIP State Dental Association who not only programmed these webinars but also the impetus of this particular webinar came from the folks at MSDA. So I certainly want to give them a big shout out, as they say.

Thank you to everybody for participating today, and we will be in touch about the next quarterly webinar as soon as possible. Thanks again.