

Boosting HPV Vaccination Rates Webinar Transcript

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A Minnesota Department of Health (MDH) and American Cancer Society (ACS) Quality Improvement Project.

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Matt Flory, ACS

Hello everyone. My name is Matt Flory. I'm with the American Cancer Society. We're so happy to cohost today's webinar with the Minnesota Department of Health about HPV vaccination and the IQIP program, and we're also fortunate to have two great speakers today. Dr. Robert Jacobson, the medical director from the Mayo Clinic, and Sudha Setty IQIP, coordinator from the Minnesota Department of Health, Dr. Robertson. I'm sorry. Dr. Jacobson, could you please move forward with your presentation?

Jacobson, Robert M., M.D.

Thank you very much. Let me just share the screen and my presentation today is entitled Boosting Human Papillomavirus, or HPV Vaccination Uptake Recent research. I'm a professor of Pediatrics at Mayo Clinic and the medical director of the primary care immunization program for Rochester, Kasson, and Southeast Mayo Clinic Health System. I'm going to speak to you, however, on behalf of the Department of Health, Minnesota Department of Health, American Cancer Society, on work that we did at Mayo Clinic in are sharing through publication and presentations like these.

By way of background, every year in the United States, 33,700 human papillomavirus or HPV vaccine preventable cancers occur each year. Uh, these HPV the HPV vaccine has been routinely recommended with permission to start at 9 to 10 years of age, which both Minnesota Department of Health and the American Cancer Society support and is routinely given or due at 11 to 12 years of age per the recommendations of the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, American Academy of Family Physicians, and others. With catch up through 26 years of age for everyone who didn't get it completed at the recommended age. Now, it's two doses, six months apart, if the first dose is given before 15 years of age and the patient is immunocompetent, it's 3 doses otherwise, at zero, one to two and six months apart. There's also recommendations for shared decision making for adults who have not completed this series, who are 27 to 45 years of age but find themselves at increased risk and are interested in getting the protection that they missed during their adolescence and adulthood.

Now, we are not doing a good job with HPV vaccination in the United States. This graph shows our up-to-date HPV vaccination uptake in US teens 13 to 17 years of age. The Y axis is the percent who are vaccinated, ranges from zero to 100% and then below in the X axis you see the dates starting in 2016, year by year going to the last year available 2022 and you see that among adolescents who should be have completed the vaccine by 13 years of age that we've only managed to move over the last seven years from about 40 to 43% to about 62%. We are not doing well. We are not accomplishing what we

really should be doing in our practices across this country, and it's different from other vaccines in the so-called adolescent platform. Over here in this table on the left, you see vaccines do it 11 to 12 years of age. That's that tetanus, diphtheria, acellular pertussis, or Tdap for the vaccine, the meningococcal conjugate vaccine against strains ACWY or MenACWY, and the HPV series. Well, in 2022, our uptake in US teens 13 to 17 years of age with 91.7% for Tdap and very close to that, the meningococcal ACWY with 88.6% being complete but only 62.6% for the HPV vaccine series. We know we can do better. We do better with other vaccines. We should be doing better with HPV. It's not just other states. It's Minnesota, too. In Minnesota, our uptake with Tdap for the 13 to 17 years of age is 94.2% and for meningococcal ACWY is 94.6%. But we don't see that with HPV series here in Minnesota. It's only 68.6%. A big gap, and some states do better than Minnesota at the top of the table, you see Minnesota, with its 68.6% uptake among 13 through 17 years of age, Iowa, just South of us, is 6% or more better with 74.9%, New Hampshire was 76.2%, Massachusetts, with 77.1% and Rhode Island with 85.2%.

Wish 100% HPV vaccine uptake should be our goal with no HPV vaccine preventable cancers, no HPV vaccine preventable cervical dysplasia, no HPV vaccine preventable premature birth, no HPV vaccine preventable infertility. No HPV vaccine preventable fetal loss.

There are evidence-based strategies to improve HPV vaccination. With school mandates, Rhode Island and District of Columbia have accomplished great things with their HPV vaccine rates, with the highest uptake in the United States. Minnesota does not. We have middling uptake without any sort of school mandate for the HPV vaccine, and we're not even among the best of those who don't have school mandates for HPV vaccine. Provider point-of-care prompts work, too. If we can use every visit for HPV vaccines when they're due, we can get people vaccinated, but you need to know the patients' due using your electronic medical record system to set up a point of care prompt and use every visit to vaccinate will dramatically improve the rates. Another strategy that works our nurse vaccine protocols to support provider-less visits, so you can make a nurse appointment to get your child up to date with vaccines without needing a provider there to order the vaccine. Practices across Minnesota that participate in our state immunization information system, or MIIC, the Minnesota Immunization Information Connection can and do improve their HPV vaccines. These are known as vaccine registries in other states. The Minnesota Immunization Information Connection, or MIIC, allows providers to vaccinate with confidence knowing from a variety of sources what vaccines their patients have received. Now, in addition to using these, participation in Minnesota's Vaccines for Children, or in Minnesota VFC can dramatically improve your rates because you get free vaccine from the state to vaccinate those who are eligible, including those children on state assistance, those who are Alaskan Native American Indian and those with no health insurance. Finally, evidence shows that initiating the HPV vaccine at 9 years of age rather than waiting till 11 to 12, you're much more likely to get your children in your practices up to date with HPV vaccine more quickly.

Uh this initiation at 9 or 10 years of age takes advantage of the beautiful immune response young children have to the HPV vaccine. It was always permitted by the ACP recommendations for HPV vaccine. It takes advantage of the better immunologic response at younger teens have to this vaccine. In fact, it's the basis for why you only need 2 doses. Unlike teens who start at 15 years of age, you need 3 doses and still don't accomplish the same antibody levels that a 9-year-old would, getting two doses and studies show parental acceptance of vaccinating at 9 or 10 years of age rather than waiting till 11 to 12. Studies show a higher rate of completion. Mayo Clinic did a study comparing those starting at 9 to 10 years of age, those with our patients who started 11 to 12 years of age and we found the families that

whose children started at 9 to 10 years of age, those children were 22.6 times more likely to be complete at 15 years of age. Now all of the Mayo Clinic enterprise routinely recommends HPV vaccine starting at 9 years of age, rather than waiting till 11 to 12. Our latest study, the one that I'm going to present to you today, sought to determine the role of two other interventions I haven't mentioned. Parental reminder recalls, these are communications to the parents and legal guardians of the children with information about vaccines due and in this case, we studied information about HPV vaccines due and we combine that with provider audit feedback with training. This is where we notified providers regularly in their practice as to how well they are doing with HPV vaccination, and we included in that feedback tips on how they can better improve their recommendations for vaccines and specifically use strong recommendation with presumptive language rather than discussing or conversationally bringing up the vaccines as though you're another parent in the room rather than the provider who's being asked health advice. We also gave teaching on using the case approach a motivational interviewing approach you can use in an office setting and a short visit dealing with vaccine hesitancy. And we also study the combination of the two, combining parent reminder recalls with provider audit feedback.

Now, what do I mean by strong recommendations with presumptive language. Parents actually are much more likely to vaccinate when the provider initiates the discussion and brings up the vaccines due and when the provider makes a strong recommendation for the vaccine using language such as your child is due for the HPV vaccine, your child needs an HPV vaccine. The nurse will return with the HPV vaccine due. Parents are much less likely to vaccinate when the provider fails to discuss the HPV vaccine due or when the provider offers the vaccine as an option. Uh, I've heard providers even say things like your child's due for the Tdap and meningococcal vaccine, what are your thoughts about the HPV vaccine? Or you could also get the HPV vaccine today, or even what are your plans for the HPV vaccine? Did you want to discuss the HPV vaccine? Ohh, these sound very patient friendly. But they're really sending the wrong signal that the HPV is only in option that they might consider, and you have no strong feelings about the vaccine.

The case approach to vaccine hesitancy has elements of motivational interview built in. You corroborate with the parent. You are understanding that the parents concern or expressed hesitancy. You are recognizing the parent as an ultimate decision maker and then you move to the A statement, moving from C to a within about me statement mentioning your role as the parents and patients' trusted health advisor and your commitment to the parent's goal of an informed decision about this vaccine. Then you summarize the science with your study of the concern and the sciences we know of it, and then you explain your advice by putting your strong recommendation in terms of the parents' concern.

Now our study sites included six Mayo Clinic affiliated practices in Rochester, and Kasson. These included both pediatric and family medicine, both physicians and nurse practitioners. All of the practices were using the following evidence-based strategies already in their practice before we intervened with our experiment. Of course, they're practicing in Minnesota, so there's no school mandate. But they did have provider point of care prompts with epic electronic health records. They did have nurse vaccine protocols for provider less visits. They did have two-way communication with MIIC, our immunization registry, so that we knew what our patients had and had not yet received, and all six practices participate in the Minnesota Vaccines for children and had vaccine available and freely available for their uninsured patients or patients that I met State medical assistance, their American Indian and Alaskan native patients. In all six practices already began with starting the vaccine series at 9 years of age with

routine HPV vaccine rather than waiting till 11 to 12. So, we are already working in this milieu when we randomize practices to receive our interventions.

Our study design randomized six practices and not individual practitioners or parents to these interventions over four years. We assign the interventions one year at a time with the first year everyone getting their usual care. The second year two practices started using parent reminder recalls, two of the practices started with the provider audit feedback. In the third year, two of the practices got reminder recalls, two got audit feedback and two got both. And in the fourth year, all six practices got both interventions. So, you can see all the practices got experience with both interventions eventually and we had pre-post and concurrent comparisons for a very powerful statistical model that really involved over 10,000 children during the four years of practice. So, I can say with confidence what results we got.

Now our study participants were children empaneled to one of the six primary care practices with parents and legal guardians of those children receiving the reminder recalls and license providers in those six primary care practices eventually all getting audit and feedback on a monthly basis about how they were doing what their HPV vaccines. Our study interventions included that parent reminder, recall and it occurred when the child in the next couple weeks was turning 11 or 12. The parents were sent a letter in envelope by USPS Mail to address to the parent or legal guardian and referenced the particular child by name and identified which vaccines were due, including the HPV, Tdap, meningococcal, flu vaccine if they're due and where to learn more about them. The providers got audit feedback. Each month, the providers received a confidential mailer, a report where the numerator was the number of patients, they saw in the last three months who were due for an HPV vaccine and got an HPV vaccine that day. In the denominator were the number seen in the last three months who are due for an HPV vaccine. The provider saw his or her rate as well as the practice best in average rates in other practices, and they that audit feedback report also gave them links for how to make a strong recommendation and how to use the case approach when dealing with vaccine hesitancy.

Now the final study cohort over the four-year, four step trial involved nearly 10,000 children, 9142 with 55.9% being 11 years of age, 41.1% being 12 years of age. 52.5% male 72.5% white, non-Hispanic patients with about 70.9% eligible to start the HPV vaccine series and about 29.1% eligible for completion.

Now, these were the results that we saw. This table shows all of the children, the males, the females, those who are just starting the series and those who are just finishing the series. And you saw those who got the practices where 3572 received usual care that the rates of uptake in the next year of a one dose of HPV or more was only 21.9% and was about the same whether you're male or female, whether you're starting a little bit higher rate, nearly double that for completing the series. But for parent reminder, recall, we saw a dramatic increase from 21.9% to nearly 35% with improvement both among males and females, both among those who are starting the vaccine and completing the vaccine. When we studied provider audit feedback alone, the rates were not as impressive, with only 30.4% receiving an HPV vaccine due in the next year, regardless of whether male or female and a little lower rate in those starting the vaccine, a little higher in those completing the vaccine, the combination of the two interventions studied across the six practices showed the highest rates with 39.7% of children due who are 11 to 12 years of age getting at least one dose of HPV vaccine in the year that that followed regardless of being male or female and seeing both improvements. Go back to usual care, look at that

17.6% all the way to 28.7 percent 36% all the way up to 59.3%. From the time the child became eligible to the time the step ended, we saw dramatic improvements in their HPV vaccine uptake.

Now we've of course applied statistics to look at the odds ratio and the confidence intervals and in bold are the statistically significant differences. Overall, the provider reminder, recall at an odds ratio of 1.56 over usual care. Now way to look at that is that's a 56% improvement in HPV vaccine uptake in the year that followed the parent getting that letter. Again, similar in males and females, similar in those initiated and completing. Didn't see much statistical significance for the provider audit feedback alone except in males with a 39% improvement among males. But when you combine the two, we more than doubled the rate of getting an HPV vaccine and the following year of the intervention. And we saw it both in males and females and we saw both with beginning and with completing and these were statistically significant. So, in summary, I wanna leave you with the results of our study. Parent reminder recalls increased HPV vaccine uptake by greater than 50% and the combination of a provider audit feedback with parent reminder recalls more than doubled the rate of HPV vaccine uptake. We can all, across the state adopt evidence-based interventions to improve our rates. Let's review them. We can use provider point of care prompts for vaccines due at every visit and use every visit to vaccinate. We can use every visit to vaccinate using presumptive language. Your child is due, your child needs and the case approach to corroborate with the parent their concerned, but then address it, to use nurse vaccine protocols for provider less visits and to provide two-way communication with our state registry so that we're all on the same page about each of our patients with what they've received and what they haven't received, participating in the Minnesota Vaccines for children, so that we can use our resources to better bring all our patients up to date with their vaccines rather than, uh then not dealing with the impact that socioeconomic determinants of health have on our children. We can start routine HPV vaccination 9 years of age and not wait till 11 or 12 or later. And we can use parent reminder recalls, which our evidence showed work alone or in combination with provider audit feedbacks to dramatically improve a practices ability to get its adolescents up to date with vaccines. And with that, I I'm going to pause and turn it over to Sudha Setty. To complete our presentation this this noon.

Setty, Sudha (MDH)

Good afternoon, everybody. While I get set up and share my screen, I think we have a couple of questions here. I don't know if we want to do that in this short interim.

Matt Flory, ACS

Sorry about that. Just having a little technical issue. One person asked other sorry if they missed this, but we're the reminder calls a robocall or a live person.

Jacobson, Robert M., M.D.

The parents told us in focus groups before we start this study, they don't want portal messages electronically. They don't want phone calls. They wanted a letter they could put under a magnet on the refrigerator that would remind them. And so, we sent these letters by U.S. mail.

Matt Flory

So Dr. Jacobson, another question in the chat. Do you recommend Epic prompts begin at age 9 or age 11?

Jacobson, Robert M., M.D.

We have them start at age 9, uh, we have made a decision as an institution that that's the best age to start the vaccination series. So, our epic prompts at 9 and not 11 and we look the parent in the eye, our staff in the eye and everyone else and say you're do at age 9. Now, that's our practices' choice. Uh, the advisory Committee on Immunization Practices has been permitting practices to make that choice since 2006, and Mayo has been doing it since 2006 in Rochester and Kasson, even with the earliest HPV recommendations, but has carried it ever since. We stand by it as the best practice. You know, on average in Minnesota, an adolescent makes about one visit to healthcare provider year and it's usually not a well child visit if you don't take advantage of every opportunity, you're going to end up with teenagers leaving, entering adulthood under vaccinated.

Matt Flory

Another question, are you aware of any efforts to require the HPV vaccine in Minnesota?

Jacobson, Robert M., M.D.

I am not. I do think school mandates work really well. For most parents, they're reminder of what they wanted to do anyway, and I think it's a mistake that we don't have a mandate for it. But I got to remind my colleagues in practice, we ought to be doing a better job with HPV vaccination in our offices. We're a hard pressed with rates as low as ours to tell the school nurses they've got to do cleanup with 60% of our 11 year olds when we're batting 80% at 11, I think we 11 years of age, we'd be in a better shape to tell the nurses to help us out with the remaining 20% the way they do a Tdap and meningococcal. But what a disaster to say. Oh, we give up in our practices. We're not even going to achieve what we should be able to do with Tdap and meningococcal with HPV and turn it over to the schools. It's. It would be too great of a hardship on already pressed resources. So, while I wanna go that direction, I would say for all of us right now, our job is in the practices with what we're doing with our patients. And when we do better, when we've got most patients on board, we can go back to the state and say let's think about that mandate again.

Matt Flory, ACS

OK. One last question, then we'll get on to Sudha. What are the most common parent concerns you hear about the HPV vaccine? It does it differ from other vaccines?

Jacobson, Robert M., M.D.

You know, the most common concerns I hear parents express are safety concerns that are often based on myth and the problem with us as practitioners is that we often fail to take seriously parent concerns. You know they're not withholding the HPV vaccine because there is they want to harm their child. They're doing this to help and protect their child. We need to corroborate the concern and share with them our understanding of that concern and the basis for it and help them dismiss it so they can feel confident about vaccinating. For HPV, it's primarily safety. We actually hear similar ones about, for example, the COVID vaccine. There are other concerns. One my child doesn't need her. My child's not at risk for HPV. Other ones that are frequently heard are my child too young for it, my child is uh, is more likely to have a reaction to the vaccine. All of these can be dealt with, but only if they're heard only if the parent is understood.

Matt Flory, ACS

Great. And then I'm gonna sneak in one more question and I think we'll have to come back to other questions because I wanna make sure we give Sudha a time. Have you received any pushback from providers to start at age 9 for HPV vaccination, and if yes, what is their rationale?

Jacobson, Robert M., M.D.

I'm sorry, could you repeat the question?

Matt Flory, ACS

Ohh, have you received pushback from providers to start at age 9 for HPV and what have they said about that?

Jacobson, Robert M., M.D.

No, we haven't. We were doing it as I said from 2006 in Rochester and Kasson and when we moved to doing it across the enterprise, actually both parents and providers welcome this and we've not had any struggle with it. You know, the vaccine is a very durable one with no evidence of a waning effect and the fact is some parents are gun shy, as are some teens of getting three vaccines, or four vaccines or five vaccines in one visit, and by getting the HPV out of the way at 9 years of age, you're making a little easier to have reduced number of injections in the years to come. Yeah, I we've just frankly from all around have seen people welcome it.

Matt Flory, ACS

Appreciate all the questions and in your thorough answers Dr. Jacobson. I wanna make sure we give Sudha a chance to present her slides and we'll come back to any questions that are still in the chat and encourage people to put other questions in the chat even as Sudha goes. Sudha, can you proceed with your presentation?

Setty, Sudha (MDH)

Yeah, for sure. And like Matt said, please feel free to populate that chat with these questions. We'll run through them at the end. Good afternoon, everybody, and Dr. Jacobson, thank you so much for setting me up for so much success here.

Let's talk a little bit about how do, how to move forward with a quality improvement plan? How do we take whatever we just learned from Dr. Jacobson and execute it in practice. Really quick before we move on, I just wanted to read this brief acknowledgement. State of Minnesota is home to federal 11 federally recognized Indian tribes with elected tribal government officials. The state of Minnesota acknowledges and supports the unique status of Minnesota tribal nations and their absolute right to existence, self-governance, and self-determination. The United States and the state of Minnesota have a unique relationship with federally recognized Indian tribes, formed by the Constitution of the United States, Treaties, statutes, case law and agreements. I always like to go over this before we talk about maps and Minnesota and counties. So just so we have that in our mind as we move forward that we're talking about counties, zip code, states, but we're also talking about tribal land.

Alright. So as a quick review, let's talk about QI AKA quality improvement. I'm going to use the words QI and a lot of acronyms because I can't help it. I'm a public servant and that is our bread and butter. QI

programs analyze processes and use a systematic approach to improve performance. Dr. Jacobson already took us.

Jacobson, Robert M., M.D.

Ohh Sudha we've lost.

Doan, Melody (MDH)

Sudha, you muted yourself.

Setty, Sudha (MDH)

Oh great, that's great. As a quick review, let's talk. Let's chat about QI AKA quality improvement. QI programs analyze processes and use a systematic approach to improve performance. I hope I'm not repeating myself, but here you go. You get a double bonus of quality improvement. Dr. Jacobson already took us through step one and a little bit of step three, so we've stated the problem and we've had our desired result. Right. HPV rates are not what they need them to be. They are not 100%. That means we are not preventing all of the cancers that we possibly can, given the presence of this vaccine. We I will talk about using data to understand the problem, but Dr. Jacobson has also taken us through a few of the strategies to for improvement. Like what can we do in order to get to our desired result, having stated the problem. And then the subsequent steps will be up to all of you, implementing strategies and refining as needed and evaluating those outcomes.

Alright, if low HPV coverage rates are the problem, where do we start? What is measured is what gets worked on, and I am quoting somebody who I heard during the planning of this process. It is Dr. Bob Jacobson who said this to me, and I cannot stop thinking about it because what is measured is truly what gets worked on. If we don't understand the magnitude of the problem, then we feel overwhelmed by like, how do we even get started? Where do we do? How do we even grasp how to get started if we don't understand where our coverage rates are? Well, we have lots of options to measure current rates. One is the MIIC assessment reports. We have a couple of different pieces of functionality that can help you there and they can be organization wide or specifically focused on a cohort of your patients. And we'll talk about that in a minute. You can also get a sense of what the state and the county is doing around you by using our public health data access use portal that has data that has statewide and countrywide rates and does have a few zip code level rates for the metro area. And then you can also use your own organization, your own clinic, systems, metrics, and systems.

So, let's talk first about MIIC's assessment reports. You can use these to check your organization's data quality in MIIC. Say you run a report and the number of people that it pulls like that MIIC pulls for your organization is like seven and you're expecting more like 700. That is definitely a big red flag saying that something is not happening like I thought we had this data exchange set up between our organization and MIIC, something's not happening. Let me get in touch with IT. Let me get in touch with MIIC and see what's going on. So that's kind of like a nice little way to be like this is something that we need to work on. You can also use MIIC's assessment reports to assess baseline immunization rates to get that starting place to understand the magnitude of the problem that you're trying to address. You can use it to identify areas for improvement. Umm spoiler alert, if you run an assessment report written for adolescent, you're going to see your mening and your Tdap rates up here, just like Dr. Jacobson mentioned. And you're probably gonna see your HPV rates down here. Given our state average that's generally what I see when I do my quality improvement visits and pull these reports. You can implement

practice changes based on those areas of improvement and plan some outreach activities and we'll talk more about that to start brainstorming some ideas for your practices. And you can also regularly run these reports to monitor rates to see whether practice changes or outreach activities are making an impact. Umm, it's always good to evaluate as you go along, so you can pivot if you need to.

So, this is our adolescent report in MIIC. We have a couple of options. Like I said, our standard one is like the cookie cutter, three click report. You log into MIIC, and you hit create assessment. I'll actually do a live demo here shortly, and you have a few options. The standard one is going to look at those kids between the ages of 13 and 17 years of age, and whether or not they are up to date as of right now. Little older than what Dr. Jacobson just mentioned for initiation, and I'll get to that in a minute. It also has the missed opportunities report as part of the summary, as part of the standard report, because that shows the number of kids who came in got at least one vaccine that they were due for that day but missed others. So that's when they'll show up on that report, is how many folks did you miss that day who came in from one vaccine and could have gotten others. The list and custom are a little more interesting because that's where you can adjust the age range of the folks, you're interested in downwards to 9, perhaps to 11 to 12, to 9 through 13. Whatever you want to measure, you can mess around with the age range using the list and the custom reports.

OK. Just in case we don't have enough time, I'm going to show you a very easy report to run in MIIC. So, here I am logging into our test environment. So, this data is all test stuff like that with no live patient data that I will be showing you today and I'm gonna go ahead and log in as a typical user. This is usually what most of our users see. That's the highest number of users of a category we have and right along here, along this left-hand navigation bar you'll see the assessment reports.

Doan, Melody (MDH)

Sorry Suda to interrupt you real quick. Do you my magnifying your screen just a little bit so we can see that better?

Setty, Sudha (MDH)

Yeah, I do not. Is that better?

Doan, Melody (MDH)

Thank you so much. Yes, it is.

Setty, Sudha (MDH)

Great. Yes, this is easier to look at when you can actually read it. Let's go ahead and hit create assessment under assessment reports. We have several different options here. What I'm gonna show you today is the adolescent vaccinations for this testing organization right here that I'm under. I'm going to hit the standard one, but and we're gonna go ahead and hit generate. Here you can see this is the standard range. It's 13 to 17 years of age as of today. Let's go ahead and hit generate. But while this runs in the background, I'm actually going to quickly show you what you could do with a custom population. Here is the age range that you can adjust. This is not just looking at the cookie cutter report that we have in here. This is a more customizable report that you can take a look at younger age ranges. So, here I'm gonna look at 11 to 12 years of age and hit generate. And while we were in the customs screen, the standard one ran. So, I'm going to go ahead and open that up and hit generate output. And you can take a look at what this looks like. This is all test data, so it's not exactly robust and I'm

gonna zoom in a bit, but here you can see we have the column for Tdap, for mening, for the booster, for first HPV and complete HPV. It's going to give you a nice visual up here, and it's also going to breakdown who is up to date out of the total number of patients that MIIC pulled on your as part of your organization. Fairly easy to read, very easy to snip and stick into presentations. Also, very easy to print out and interpret for all levels of clinic folks. You don't have to be a data wizard.

I'm gonna go back to manage assessment and quickly show you the adolescent customs. See, this only actually pulled three kids between the ages of 11 to 12, so I know it shifted and it looked at a different age range, then I hit view, and it's gonna it's gonna be the exact same report, just with, like wonky data cause it's test data. But I encourage all of you to go in, log into MIIC, contact the helpdesk if you have yet to. Yeah, see, there you go. It only pulls those three kids and none of them are up to date because they're all fake people. But I encourage you to log in to your to your organization's portal in MIIC. Like, just start through our normal UI and start clicking around and see if you can run this report. It's a very easy way to see it, and it's also what we see as far as your rates, because that's what we use to run it.

I'm going to head back to my presentation. Get out of MIIC and I will also make sure that we have the links to the user guidance and so on available for you. Actually, Melody if you don't mind throwing those into the chat so people can click around to take a look at the materials we have there.

All right. Moving on. Let's talk a little bit about the public health data access portal. This is for like the more macro level situation that you're looking at. You're looking at statewide, you're looking at Countrywide and some zip code level immunization rates. These data tell us the percentage of Minnesotans 13 to 19 years of age who are up to date on the recommended adolescent vaccines. And we have data available for the state and by county since 2018. This is updated annually and believe every summer.

We also have, like you also have the ability to use your own electronic medical record or electronic health record systems, whatever metric tools that you have available. So, the one that Dr. Jacobson mentioned was something that I think that Mayo had available to providers. If you know of stuff some that you haven't used, this is a great time to go and explore that a little bit more. Perhaps you don't have it, so you'll wanna use MIIC. Check with your IT, your QI, or any measurement staff to see what is available to you. I think the most important piece here is making sure you have the ability to measure, rather than sweat about which tool you are using. You can get there like further down in the QI process. QI is iterative. It's cyclical. You could always go back and refine. The first thing to do when you're just starting out is figuring out your tools. Use whatever is out there that's easiest for you. You can also reach out to your vendor to see if they have any training materials available to you. It's a good way to sort of plunge into the functionality that you may already have at your disposal.

So, let's talk a little bit about evidence-based strategies for improvement. Dr. Jacobson touched on reminder recall and for his project they sent physical letters, which is great. We have done that at the state for quite some time. Local public health have done that for years as well, and it's actually one of the most evidence-based methods to increase the vaccination rate of a population. Umm. Notifications for patients who are due or overdue for the HPV vaccine series is a keyway to make sure that we move that needle. The clinician audit piece reviewing records and getting a coverage rate for your whole patient population, it is possible with the MIC list-based assessment. I didn't show you that. I just showed you custom and standard, but if you weren't able to build a cohort of the adolescence you're interested in, or the nine and above folks that you're interested in, you can create a list in MIIC, feed it

into the UI that I just showed you, and then run a similar report with a bar graph and the table below that will show you how your patient population is doing. If you are not a clinician, you can still look at your whole clinic's adolescent patient population using the standard MIIC assessment report and that is still a good way to monitor rates over time. You also want to use that presumptive recommendation. That's strong recommendation. You can create a script for that strong recommendation and practice it with colleagues. I think that's a really key part there is the practicing when the pressure is not on you with the patient in front of you. That way you know practicing it with folks in your clinic is a good way for both of you to get some of the nuances of the conversation down without stumbling or feeling like you're at a loose end. I think practicing is definitely key there.

Let's talk a little bit more about reminder/recall. Clinics can use any systems that you have available to you to identify and notify families whose children are behind on immunizations, which is the recall piece or due soon, reminder. So, the Mychart pushes that some health systems have those. That's actually a good example of reminder/recall. Phone text and mail notices, also reminder/recall. We also have MDH tools available for you to facilitate reminder, recall. We have the client follow up function in MIIC which allows you to go into MIIC and pull lists of children who are due or overdue for immunizations based on criteria that you set. And we also have our texting program, which allows you to sort of set cohort of people to send text reminders to who are due for vaccine.

So, client follow up can help you improve immunization coverage rates by doing outreach to those who are recommended overdue for vaccination. I've listed the client follow up user guidance here. It's not as easy to like quickly demonstrate as assessment, but we have plenty of user guidance for it on our web page that I've linked here. And we also have feature it every twice a year in our biannual webinar series for training from MIIC. The MIIC texting service. We have the ability to send immunization reminders as a free service for organizations in Minnesota. The services opt-in in only, so you don't like, we don't send these messages on your behalf without talking to you, and it is open to all immunizing organizations. We use the MIIC immunization data to send text messages to clients who are overdue, due, or overdue for immunizations. Clients are sent three total text messages. Umm. And we send a text to newly eligible client every day on a rolling basis. Each text message also includes an option to receive the text message and other languages, and I'm gonna show you an example of the message here.

The example is on the right-hand side, and I just realized it's kind of small in my screen, so I'm hoping that you guys can see it ok, but regardless of which of the vaccines are included in your text message campaign, I'll text follow a similar format. There's no identifying information or specific data included in the message. The message tells the reader that someone in their household is overdue for a vaccine and includes the organizations contact information like phone number or online scheduler, link, whatever and then the client can use those in order to either book an appointment or to get more information. Clients can also reply to the message to get translations in Spanish, Hmong, or Somali.

Since implementation of our texting service began in May 2021, we have worked with over 70 different organizations. Over, for 500,000 clients have received text messages with an overall opt out rate of about 10%. I'm laughing because just like this is incredible. Like we have been able to reach so many more folks through the text system and I think that's really great. We have our texting resource here. If you want a little bit more of breakdown and information and what exactly the program entails, we like to call this our texting one pager and it's a great way to educate yourself about the testing program, but also pass out the information to other folks.

Let's talk a bit more about strong vaccine recommendations. This is data from a CDC national poll of parents in 2018. I don't know why they haven't published it because I love this data. I think it's really important to emphasize that the child's doctor or healthcare provider is still the most trusted source of information, and I think sometimes as folks who are in the clinic and you're seeing patients every day, you're getting that individual feedback from people who are just and the people who are really antivaccine are gonna stick in your mind. They're gonna ruin your day. They're gonna be what you think about it. It's hard to think about what I actually gave good advice to so many more people. It's like a perspective shift because really this is true. Like most people trust their doctor and they're going to go with what the doctor or the clinician says in order to be the right source of information when it comes to vaccines. Obviously, there are, you know there's search engines and internet social media, family that's in there too, but really the child's doctor or healthcare provider really is the main source trusted source.

Umm, this is also a great way to prevent some missed opportunities as well. Closing that gap when they're in the office means assessing what they are due for every single time they come in. So, I've actually included here a screenshot of a patient that I know might be my kid, whatever, and a screenshot of what she is due for at her next visit. We have since closed this gap. I will just have you know, but MIIC has been updated in order to recommend HPV starting at age 9, and I just wanted to emphasize that my daughter is 9. So that's why I thought it was handy to have her record up here. But you wanna make sure you pull this up by assessing that status every visit. It's a great way to ensure that you're giving the right vaccine at the right time. You can use MIIC for sure. That's definitely available to you, but sometimes it's not necessarily handy to folks who are in their EMR. So, either have it available to log into or use your own organizations forecaster or clinical decision-making support tool if it's available to you. MIIC is always available to you though, so.

Using effective communication approaches like the presumptive language, the sandwiching recommendations, especially within the context of that case approach that Dr. Jacobson mentioned is also super important when recommending vaccines. Considering writing a script, perhaps this is just for my learning style, but I need to write things down, read through them in order to feel like I am confident in what I'm talking about. I have helped people when doing my IQIP visits my quality improvement visits. I've helped folks like get the skeleton of a script down before I leave, just to make sure that they will be worth taking action on it or working on it. We have a bunch of videos for strong recommendations here at this link you there's no reason you can't copy those, like why not use those videos. Don't reinvent the wheel. Use what's already out there in order to form your script, and then as you practice it or as you use it over time, you're going to be able to customize it and make it feel more natural to yourself. I've also included the CDC and MDH's top strategies for increasing HPV vaccination. They include lots of resources from across the board, including ones from the HPV round table if you guys are familiar with that, those are also excellent and located here.

I wanna emphasize a few other pieces before I answer any questions, and I think Dr. Jacobson mentioned several of these as part of the case approach as well. But this is stuff that's worked for me when working for providers. Listening to parents doesn't mean that you're not giving us strong recommendation, and it doesn't mean that you're not gonna continue to endorse the vaccination piece. It just means giving them the space to it rather than cutting them off. You're saying you know Maya is due for Tdap, HPV and Mening today. Do you have any questions? Rather than do you want to consider doing the HPV vaccination. Open the door to listening to them, but give that strong recommendation. Assume vaccination right away. Reduce those disparities and promote vaccine equity by training

prescribers to recognize diversity within their community and to acknowledge the systemic, cultural, and historical reasons some patients may have low confidence in vaccine. It is, I think, you know, approaching patient care with cultural sensitivity and taking advantage of any trainings you have available for cultural competency approaches is the way to go there and make sure that everybody receives routine training to prepare for and to focus on vaccination discussion with parents on the current ACIP recommendations. Those are lengthy and they can be a lot, but if everybody looks at them from time to time, it's gonna stick. And so that way everybody will know what patients are due down from the front desk to people roaming the patients, to people giving the vaccines, to people calling to make sure that people are gonna get back in the office to make sure that everybody gets their vaccines.

Alright, so we talked about stating the problem and the desired result. I have shown you all the places you can get data to understand the problem. We've identified several strategies for improvement. Those whole smorgasbord of ideas and activities and plans that you can make in order to try to raise that HPV rate. Now what's up to you is to implement those strategies and refine as needed, and then to evaluate those outcomes.

So, the next steps we have available for you is to fill out the survey we'll send to you to elect to join this improvement project. We'll ask which of the activities we talked about that you plan to implement, and we'll also ask you what you wanna hear more about on the next webinar. It says webina but it's actually webinar because this is a typo. Take action on any of the emails that you receive from the health.iqip.mailbox@state.mn.us domain to fully participate in this project.

And if you feel like you need more hands-on customized QI planning than just the series of webinars that we'll have available, we can help our IQIP consultants can help. IQIP as a program is consists of an initial site visit. It's 60 to 90 minutes long where we talk through your immunization workflow, the priorities you have for vaccination for your organization and what resources and technical assistance the IQIP consultant can provide. That will be either me or one of my colleagues from MDH or it'll be one of our contracted local public health departments that do this work. And then we also check in throughout the year at two months and six months, we review progress to towards like implementing the strategies and the activities that you wanted to do. We talk about how whatever barriers that you encountered and how we can adjust or whether we need to recalibrate the activity entirely and then we do a 12 month follow up where we review the same progress in your activities, but also look at year over year coverage, what was your coverage rate like 12 months ago and what is it like now? What do you feel has worked well? What do you feel hasn't? And we can offer another visit after that because QI is cyclical. The more we go through that circle, the more we try to do small steps and assess as we go through them, the better it is.

I've included a bunch of resources here, so the HPV strategies are specifically here. I put them in the in the you know previously in the slides too. And then we also have the resources on MIIC client follow up, assessment reports and IQIP. Oh, and then the ACIP schedules. I actually use this link still to make sure that I'm saying the right thing for vaccination recommendations.

All right, I stopped sharing my screen. Do we have any questions?

Doan, Melody (MDH)

Thank you everybody so much for your time today. Before we start Q&A, please complete the evaluation link that I've sent in the chat and continuing education credit will be available for you once

you complete the webinar evaluation survey. I also want to throw into the chat the link to Dr. Jacobson's and Mayo Clinic very recently published research that was just published in January of 2024. So, that link is available to you as well and I wanted to take this moment to thank you, Dr. Jacobson, for always being a Minnesota's HPV vaccine champion and for the wonderful presentation you gave today and just you just added for all of your expertise and all of your work for quality improvement here as well. I will. We can go over about 2 minutes to take some last-minute questions. I did want to bring up one that was mentioned earlier about how CDC lists 11 to 12 as the recommended age for HPV vaccination but gives the caveat that it can be started at age 9. Do we see that verbiage changing anytime soon? And how do you navigate that gray area Dr. Jacobson?

Jacobson, Robert M., M.D.

Well, that gray area, that permissive language allowed Mayo Clinic in 2006 to adopt the 9 to 10 years of age recommendation. Data has really been accumulating, showing that in terms of improving delivery, taking advantage of this very durable vaccine, taking advantage of a child's wonderful immune response at 9 to 10 years of age and the great safety track record this vaccine has MDH, Minnesota Department of Health and the American Cancer Society, now both endorse 9 to 10 years of age. I know that ACIP made its original recommendations as a stretch from the licensure data that the FDA was submitted by the companies based on bridging data that showed the great antibody response 9 and 10 years of age children had in those trials and the lack of side effects and even that was an impressive use. I also know the ACIP, at least initially, loved the concept of an adolescent platform where we could at least count on all 11- to 12-year-olds to come in and get their vaccines. Now with seasonal COVID and seasonal flu recommendations, there's not so much of an adolescent platform as an all-out emergency for all of us to use every visit with an adolescent to bring them up to date on vaccines in need. I think it would help if ACIP changed its language, but I think that the language as is actually makes it very easy for practices to adopt. Remember, when you get your yearly schedule from the CDC that shows the vaccines, there are a lot of choices. Individual practices can make about the timing of different doses, or even the choice of different combinations. The ACIP is not telling you exactly what you need to do each time but is giving you some wiggle room to work with your practices, the brands that you can purchase of vaccines and put them to use. So, I see the 9 to 10 permissive language as in step with how the ACIP has been making other recommendations about vaccines. And yes, it'd be nice if they went to 9 to 10, but please no one here in Minnesota wait until that happens. Make the change today if you haven't already.

Doan, Melody (MDH)

Thank you so much for those closing remarks, Dr. Jacobson. We will be sending a recording of this webinar out to all attendees as well as next steps and how you can continue to participate in HPV vaccine quality improvement in your own clinic within partnership with the project through the Minnesota Department of Health. Thank you so much everybody and have a great afternoon.

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