When it comes to immunizations, teenagers are said to be an elusive population. A common view is that they simply stop seeing their doctor on a regular basis as they move from elementary to middle and high school. The evidence, however, shows that adolescents do make office visits and that opportunities to vaccinate are often missed. In a review spanning more than 9000 visits by more than 1600 adolescents to a pediatric clinic over a 5-year period, 82% of visits represented missed opportunities to provide the first dose of meningococcal conjugate vaccine (MCV4) to age-eligible patients.¹

With MCV4, the challenge today is not only in delivering the primary dose at 11-12 years of age (coverage rate: 79%) but also in capturing the recommended second dose at 16 years of age (coverage rate: <30%).² For a summary of recommendations from the Advisory Committee on Immunization Practices (ACIP), see next page.³

The 4 practices profiled in this report have developed a variety of strategies for achieving optimal levels of meningococcal immunization. They’ll tell you it’s not magic, simply a systematic approach, fueled by a passion for prevention. The key to success, they’ve found, is not only to avoid missed opportunities for vaccination but to proactively create them as well (see 10 BEST IMMUNIZATION PRACTICES, next page).

BEST PRACTICES IN MENINGOCOCCAL IMMUNIZATION:
HOW COLLEAGUES ARE GETTING IT DONE

¹MCV4=Meningococcal conjugate vaccine 4-valent or Meningococcal ACWY vaccine.

Photo credit: KidStock
10 BEST IMMUNIZATION PRACTICES

1. Encourage and promote a pro-vaccination, pro-prevention attitude throughout the office, from the front desk to the back office.

2. Develop a workflow with specific assigned responsibilities for staff members: checking immunization status, issuing reminders and recalls, updating records, and speaking to parents and patients about vaccines.

3. Consider every patient visit an opportunity to vaccinate—well checks, annual exams, sports or camp physicals, and visits for minor illnesses or ongoing care of chronic illness.

4. To help maximize those opportunities for vaccination:
   - Systematically check local, state, or territorial immunization registries to identify patients who are due or overdue for vaccinations.
   - Maintain up-to-date immunization records in your own patient database, electronic or otherwise. Check these rigorously to identify patients who need vaccinations.

5. Schedule annual exams for all adolescents, including a visit at 16 years of age to ensure that the second dose of MCV4 is administered on time while other pertinent health issues are addressed.

6. Send reminder and recall notices for exams and vaccinations by telephone, text messaging, e-mail, or regular mail.

7. Schedule vaccination-only visits to bring overdue patients into the office sooner rather than later.

8. Have on file a blanket consent or permission from parents to provide medical care, including vaccinations, to their minor children. In the practices described here, it’s not unusual for 16- and 17-year-olds to drive to medical appointments on their own.

9. Develop a set of straightforward talking points about meningococcal disease—its severity, ways in which it is transmitted, the rapidity with which it strikes, its potential lifelong consequences, and the availability of safe and effective vaccines.

10. Conclude your conversations with parents and patients by making a strong recommendation for vaccination.


ACIP RECOMMENDATIONS FOR MCV4³

Give first dose at 11–12 years of age AND second dose at 16 years of age

Recommendations if first dose is delayed:
- If first dose is delayed until 13–15 years of age, give second dose at 16–18 years of age.³
- If first dose is delayed until 16 years of age or older, second dose is not recommended.

³ The minimum interval between doses of MCV4 is 8 weeks. Thus, it is possible to give the first dose at 15 and the second dose at 16 years of age, as long as the minimum 8-week interval between doses is observed.

³ Routine MCV4 vaccination of healthy persons who are not at increased risk for exposure to Neisseria meningitidis is not recommended after 21 years of age.

References:
BEST PRACTICES

- Identify all adolescents who need vaccination, not just those coming through the door
- Designate a staff member to search an immunization registry website for unvaccinated or undervaccinated teens

Richard K. Ohnmacht, MD
Cranford, Rhode Island

A solo pediatrician for 20 years, Dr. Ohnmacht has a suburban practice affiliated with a teaching hospital. He was honored as an Immunization Champion by the Centers for Disease Control and Prevention in 2014 and is a member of the Rhode Island Vaccine Advisory Committee, offering guidance to the state department of health.

Our goal is to identify all of our adolescent patients who need vaccination, not just those who are coming through our doors. We also want to know about the patients we are not seeing. Our feeling is that we have to go find them. That's really the key to driving our immunization rates. We've vaccinated 100% of our adolescents with the first dose of MCV4 and more than 95% with the booster.

We have a central immunization registry in Rhode Island that helps us identify kids who are undervaccinated or unvaccinated. We have a designated staff member whose specific responsibility it is to go to the registry’s website and run these immunization reports.

Once patients in need of vaccination are identified, we get busy doing call-backs: “Your child is behind on this vaccine. Can we schedule an appointment?” I say call-back, but we’ll send e-mails or letters as well.

Getting adolescent patients into the office is a matter of persistence. We may say, “You want to play soccer? You’ll have to come in for a physical. And by the way, when you come in for the physical, we’re going to give you that second meningococcal vaccination that you need.”

EACH DAY’S VACCINE “AGENDA”

We also identify all patients coming in for a scheduled appointment who need to be vaccinated. Based on what our scheduler has gleaned from the state registry—and our own rigorously updated electronic medical record—we do our morning huddle, look at the schedule for the day, and have a mutual understanding of that day’s vaccination “agenda.”

As part of an Accountable Care Organization, our staff attends meetings regularly, and they bring back to the office what they learn. We have had National Commission on Quality Assurance Level 3 status for the past 6 years. I’m fortunate to have had my staff (2 full-time, 1 part-time) with me for a long time. They train me.

There was a time when we vaccinated to help prevent diseases that people knew about. Today people don’t know about disease, they only know about vaccines, and so they worry about vaccines. If they knew more about the disease, they might worry a little less about the vaccine.

With that in mind, we need to let patients and parents know that there is a real disease that this vaccine helps prevent. We don’t want to be gruesome in talking about meningitis and meningococcemia, but it’s a gruesome disease. If you make it any less gruesome, you’re not really doing justice to your patients. We need to let them know how serious this can be.

AN UNFORGETTABLE DISEASE

When I was a resident, I saw a baby with meningococcal disease. It’s unforgettable. Years later, that same child came into my practice. I asked him and his family if I could use his story to emphasize how important it is to get vaccinated, and they said, without hesitation, “Absolutely. We’ll do anything we can do to see that people are vaccinated.”

The most important thing is that I haven’t seen any meningococcal disease in my patient population, and that’s what helps me sleep better at night. When you have a patient who wakes up with a 104˚ fever, you can think about it a little differently now than you did 15 years ago.
I practice in the area where I grew up, so I’ve known many of our patients and their families for a long time. My mother taught at the high school. Many of the teachers and coaches I had are still there.

People know us. We want them to trust us. Parents ask me, “What would you do with your 2 boys? Would you give them this vaccine?” I say of course I would. If parents have been happy with the care we’ve provided to their kids for 5 or 10 years or more, we want them to say, “If you think it’s the right thing to do, we’re going to do it.”

SEIZING THE MOMENT
We capture opportunities for immunization at the annual physical or sports or camp physical. I do a lot of sports medicine and so that’s a good time to make sure our patients are caught up on their vaccinations. It’s our standard practice to check a patient’s immunization status against the North Carolina Immunization Registry and our own electronic medical record.

When we see kids at any times—for an ankle injury, a rash, cough, ADHD—it’s one click on the electronic medical record to pull up their immunization history. It literally takes 2 seconds.

This has been very helpful in identifying patients who are not coming in for their annual exams. That’s how we find the 17-year-old who hasn’t had a checkup since he was 14 years old. Based on the latest check of our records, we’re reaching 95%-97% of patients with the first dose and nearly 80% of our 16-year-olds with the second dose.

We work hard to create a culture of prevention. It’s ingrained in us that meningococcal disease is a terrible disease with serious morbidity and mortality. We tell patients and parents that the vaccine is the best way we know how to maximize protection.

DOSE 1 AT 11, DOSE 2 AT 16 YEARS OF AGE
Our conscious plan is to give the first dose of MCV4 at 11 years of age and the second at 16 years of age. We schedule annual checkups for all our teenage patients and target the 16-year-old visit for the second dose, among other things. We think it’s important to have parents participate actively in their teenager’s care, especially in that time of transition toward life after high school. Our visits are much more rich when a parent is involved.

Our staff is well-trained to recognize deficiencies in vaccine records. Our nurse managers who oversee vaccines will often run searches of our records for certain age groups to see who has had 2 doses of meningococcal vaccine and who has had 1 dose. We can flag them to be vaccinated at the next scheduled visit, or send a postcard telling them they are overdue and asking them to come in right away.

In talking about meningococcal disease, we don’t show photos but share the data, which are scary enough. I have personal experience with this disease, and I share that as well. When I was 15 years old, I played basketball against a boy who, it turned out, had meningitis. I just remember playing against him on a Friday and he died on Saturday. It became a huge social, emotional, and health issue in our little community, and a powerful and motivating memory for me.

On a more mundane level, we remind 16-year-olds that they’ve had a meningitis shot before. We want them to view the second dose in the adolescent years as an essential, natural part of their ongoing care.
We’ve worked closely as a team to see how we can fully implement a standard vaccine workflow in the office.

The workflow we’re now using—and always fine-tuning—arose from our monthly team meetings, designed to share good ideas from all perspectives. We wanted to brainstorm how not to let patients slip through the cracks when it comes to vaccinations. The key, we found, is to improve communication from the receptionist to the MA to the provider. Without a set standard, everyone would be doing it their own way.

**ADVANCE PLANNING SAVES PRECIOUS TIME**

The day before each prescheduled visit, our receptionist—who also serves as our scheduler—pulls up the website of the Washington State Immunization Registry, prints out information on the patient’s immunization status, and attaches it to the chart. It is part of her scope of work to prepare these charts every day, for the next day’s schedule.

The next morning, the MA can look at the printout and advise parents that their child is due for 1 or more vaccinations. She’ll also pick up on any clues as to whether the parents have questions and concerns or hesitancy about vaccines, and she’ll give the provider a heads up in that regard—a warm hand-off.

**Doings work ahead of time to check each patient’s immunization status gets us prepared and mindful of the vaccinations that our patients might be missing. It also saves a tremendous amount of time during the visit itself—we estimate up to 10 minutes per visit.**

We have external as well as internal incentives: Every 6 months the state department of health pays an on-site visit and pulls charts at random, looking, for example, at vaccines given within specific age groups.

**VACCINE REFUSERS ARE “CHOOSING A RISK”**

If a teen has an issue with a vaccine—and decides to protest—we call a truce, tell them that “no one is going to poke you today” and suggest they calm down and return in a couple of weeks. We tell parents, “The harder you push your child, the harder he’ll push back.” At the same time, we’ll tell the patient, “If you want to choose not to receive this vaccine, you need to know that you are actively choosing an increased risk of disease.”

We have an MA whose sister had meningitis and lost her hearing. Her ability to be open and talk to patients about what happened to her sister has really helped a lot of these kids.

**We review our own records quarterly to figure out where we might be struggling and how we can do better. Our workflow has been successful to the point where it has now been adopted by East Wenatchee, another pediatric location in the Confluence Health system.**

**We know that kids and parents will always find something negative about vaccines on the Internet. That’s why the culture and environment of our pediatric department are key. We want to make sure our adolescent patients know that we really care about their lives, their future.**

Our people love what they do and believe strongly in preventive care. We support one another, encourage good work, and are always looking to improve.

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**BEST PRACTICES**

- Establish a routine vaccination workflow with specifically assigned staff responsibilities
- Check every patient’s immunization status in advance of each visit

**Wenatchee Pediatrics**

Wenatchee, Washington

Wenatchee Pediatrics is one of 3 pediatric departments at Confluence Health, a system that includes 2 hospitals and 11 clinics in central Washington. The department has received statewide recognition for its immunization performance. The team includes 3 pediatricians, 3 physician assistants, 2 RNs, 6 medical assistants, and 4 receptionists. The perspectives shared here come from John Donaghy, Practice Manager; Alexaus Hardy, physician assistant; and Mayra Rodriguez, medical assistant.

Philip Milnes, MD, and Grant
We've been strongly advocating the primary MCV4 vaccination and booster dose ever since the ACIP came out with its recommendations. I really insist that patients receive the vaccine, and I don’t think I’ve had any parent refuse. A strong recommendation from me, combined with the impact of state mandates and college requirements, has helped us cover more than 90% of our adolescent population.

I’m pretty up front and blunt with parents and patients in describing what meningococcemia is. It’s a pretty quick 2 or 3 minutes explaining how what seems to be a typical cold or viral infection with fever can quickly put a young person in an emergency room with a potentially life-threatening condition. That verbal description is pretty vivid. They get the picture.

INSISTING ON ANNUAL EXAMS FOR TEENS
How do we get adolescents to come into the office to be vaccinated? We insist that they see us on a yearly basis. We send out reminders that it’s time for the annual exam with the understanding that vaccines will be part of the visit. Outside of the annual exam, whenever a parent calls the office for any reason, our nurses are very good about looking up the patient’s immunization record while they’re on the phone.

If we find that a teenager is overdue for a shot or two, we may schedule a nurse-only visit to receive the vaccines, often late in the afternoon or on Saturdays to accommodate the parent’s schedule.

Throughout the childhood years, we try to set expectations about vaccines. When a child receives the first dose of meningococcal vaccine, we explicitly tell them they’ll need a booster dose when they’re in high school, and we flag the chart right then and there. We educate at every opportunity so there are no surprises. Many of our kids will come in now and ask when their next shots are due.

If a 16- or 17-year-old is in the office alone and we don’t have a permission note in the file, we’ll call the parent, get permission over the phone, and ask them to fax us the confirmation. We then scan it into the child’s chart. That way we don’t miss a chance to give a vaccine in that moment, before the patient—and the opportunity—is gone.

A COMPELLING CHAMPION OF VACCINATION
One of my former patients—a girl I cared for until she was 5 or 6—was stricken by meningococcal disease when she went away to college. She lost her legs and fingers. Her name is Jamie Schanbaum, and the Texas legislation requiring meningococcal immunization of college students is named after her and another young person. I’m still in touch with the family. She has a website (www.thejamiegroup.org) and is a compelling champion of vaccination as well as a paralympic cyclist. When I can share a personal anecdote about a disease that is so horrible, it really hits home, with both the parents and the kids.

BEST PRACTICES
- Insist that patients be seen annually throughout their teenage years
- Be “up front and blunt” with parents and patients about the severity of meningococcal disease