How will this module help me improve adult vaccination rates in my practice?

1. Outlines six STEPS to creating a successful team-based adult immunization program
2. Answers commonly asked questions about team-based adult immunization programs
3. Provides downloadable tools and training materials to guide you through the process
Introduction

Vaccines are one of the greatest achievements in the history of medicine and public health. High levels of vaccination in the 20th century led to unprecedented increases in life expectancy and decreases in morbidity and mortality from vaccine-preventable diseases. As a health care professional, you likely understand the importance of adult vaccination; however, the administrative burden, time spent on immunization counseling and financial risks of implementing an adult immunization program may seem daunting. This module will address each of these concerns and provide a comprehensive guide to implementing an adult immunization program in your practice.

Q&A

How big of a problem are vaccine-preventable diseases in adults?

Each year, more than 50,000 adults in the United States die from vaccine-preventable diseases—largely from influenza and its complications. Vaccine-preventable diseases are significantly more common in adults than in children.

What factors lead to lower vaccination rates in adults compared to children?

Several unique factors contribute to lower adult vaccination rates compared with those of children, including limited gaps in awareness about adult vaccinations, lack of vaccine requirements for adults (e.g., no school requirements), a greater focus on acute rather than preventative care for adults and, importantly, a lack of established immunization programs to routinely assess vaccination needs and deliver vaccinations during health care visits.

Which vaccines are routinely recommended for adults?

Routine adult vaccinations include vaccines against influenza, pneumococcus (PCV13 and PPSV23), tetanus/diphtheria/pertussis (Tdap), hepatitis A, hepatitis B, herpes zoster (shingles), meningococcus, and human papilloma virus (HPV).

What is an immunization program?

An immunization program is a system for engaging your health care team, ensuring your patients receive strong recommendations for the vaccines they need, promoting vaccinations, efficiently vaccinating patients, and getting paid for these efforts. Immunization programs can improve quality of care, save time and lead to better health outcomes for both patients and staff.
Six STEPS for implementing a team-based immunization program

1. Get your team on board

As a champion for adult vaccinations, you set the tone. Your recommendation is the single most important factor in influencing a person’s decision to get vaccinated. Therefore, it is vital that you as a physician convey strong support for vaccination not only to your patients but also to your team members. Getting your entire team on the same page is essential for a successful immunization program.

Vaccine declination form
(MS WORD, 46 KB)

Q&A

How can I engage my team members?

First, ask your team members what they think about vaccinations. Many of them may share the same concerns about vaccines as your patients. Obtaining feedback allows for a more tailored and frank conversation. This can be done either informally via a conversation or formally via an online survey or an anonymous question/comment box. Asking your staff what concerns they have heard from family members or patients allows them to raise questions without fear of appearing less knowledgeable or unenthusiastic about vaccinations. Based on the responses, a formal training plan can be established (see Step 2).

How do I encourage team members to get vaccinated?

Complete vaccination of the health care team should be a priority. This not only sets a good example for patients but also reduces the risk of team members catching and transmitting vaccine-preventable diseases. You can also provide staff with buttons or stickers stating “I got my flu shot.” In those cases when a team member does not get vaccinated due to a recognized medical or religious reason, adjust your practice activities as needed to make sure that those who are not immunized are not putting vulnerable patients at risk (i.e., ask them to wear masks during direct patient care).
Are mandatory staff vaccination policies effective?

Mandatory staff vaccination policies requiring all team members be vaccinated, unless they have a medical or religious reason to be exempt from vaccination, are very effective. Consider establishing vaccination as a condition of employment for new workers, in accordance with your state law, and work to change the culture of your organization to one that values prevention. Public support by administrators is also very helpful.

For team members with contraindications, a medical exemption form should be filled out and signed by a physician. Team members can also refuse a vaccine for personal reasons, in which case they can fill out a vaccination declination form. If your practice does not allow a mandatory staff vaccination policy, consider having a mandatory signed vaccination declination form instead, which states that staff who decline vaccination are aware of the risks of not being vaccinated. This is a great opportunity for staff to receive education on the benefits of vaccines.

As a non-primary care physician, what is my role in promoting vaccinations?

Sub-specialists, urgent care staff and other care providers play a vital role in encouraging vaccinations. While it may not be feasible for all practices to implement their own immunization program, all clinicians should be aware of adult vaccination schedules and feel comfortable vaccinating patients. If your practice does not carry certain vaccines, make a strong recommendation to the patient to get vaccinated and then refer them to their primary care physician, a pharmacy, or the health department for vaccinations when appropriate.

Train your team

Use the Adult Immunizations: Team Training Program to provide immunization training for your practice or organization. This program contains five training sessions, each approximately 30-60 minutes in length, with speaker notes. You can use this program as is or modify it for your team’s needs. It includes links to several engaging videos that encourage staff participation and conversation.

The topics of the five training sessions are:
1. Vaccine fundamentals
2. Communicating benefits and risks of vaccines
3. Preparation, administration and adverse event reporting
4. Storage and handling
5. Billing, coding and documentation (includes standing orders)
Q&A

How much time will training require?

Training does require special time to be set aside for uninterrupted learning. The Adult Immunizations: Team Training Program can be taught as either a single half-day session or as five separate shorter sessions depending on your team's needs.

What other tools are available to engage the team with different educational backgrounds and levels of licensure?

Training will vary by state and immunization role rather than staff member title and should be tailored to their needs.

Stories, videos and personal patient anecdotes can be very compelling and are great resources for team members. These tend to be more memorable and powerful than statistics and are more likely to be shared by team members with patients. For example, a video of a child with whooping cough gasping for breath helps staff to understand why vaccination against pertussis is so important.

Another simple and effective way to disseminate information is to post a “Question of the Week” in the staff common area. This delivers a small amount of information at a time and also keeps training information up to date. A collection of sample questions and answers are provided as a downloadable tool to get you started. The Adult Immunizations: Team Training Program also includes questions that highlight the key teaching points of each session and can be used to reinforce staff knowledge and build staff confidence about vaccinations. It may also be useful to provide some of this information in your practice's policies and procedures handbook.

In addition to the Adult Immunizations: Team Training Program provided here, numerous training resources are available online. Some examples are:

- Centers for Disease Control (CDC) webcasts and self-study courses on immunizations
- CDC FAQs regarding vaccinations
- CDC Vaccine Storage and Handling Toolkit
- Immunization Action Coalition information

Adult Immunizations: Team Training Program
(PPT, 10 MB)

Questions of the week
(MS WORD, 59 KB)

Prepare your team to address common patient questions

Many patients have inaccurate knowledge about vaccinations as a result of misinformation from news outlets (e.g., television, print, social media) as well as from their own families and social circles. However, in most cases, your recommendation will still carry more weight than what patients hear elsewhere, especially in cases where you and your patients have a trusting, long-term relationship.

It is essential that your team be prepared to address common patient questions and concerns about vaccinations. All team members, from medical assistants to nurses, should feel comfortable telling patients that vaccines are safe, necessary and effective, remembering that anecdotes resonate stronger than data. Provide
short stories of patients who have had a vaccine-preventable illness and emphasize that the most common side effect of vaccination is a sore arm. Most patients want to make healthy decisions and will respond to guidance from you and your team.

Q&A

Why are so many patients declining vaccines in recent years?

It is very easy to scare people; it takes much more time and patience to “un-scare” them. Because of the media attention given to celebrities and other non science-based sources who have incorrectly associated bad health outcomes in children with vaccines, many people have become suspicious of vaccinations. Even though the original paper suggesting a link between the MMR vaccine and autism was retracted and disproven long ago, and the author of the paper was discredited and had his license revoked, fear about vaccinations persists among the general public. This video shows real patients sharing their viewpoints may be worth watching, as understanding patient perspectives allows you and your team members to better understand how to communicate with patients.

What can I say to patients who say they can fight infections naturally?

You might consider saying that when it comes to health, prevention is just as important as treatment. Furthermore, vaccinations build up the immune system so that it is stronger and more prepared if and when an infection does occur, similar to having roadside assistance for your car or a fire extinguisher in your home.

What can I say to patients who say they don’t need vaccines because they “don’t get sick”?

Our immune system and risk for illness changes with time and no one can predict when severe illness will strike. Remind patients who feel they don’t need vaccines of the concept of community or herd immunity —getting vaccinated helps protect others who are more at risk for severe illness than they are, such as the elderly and babies too young to be vaccinated. Ask patients if they visit their elderly grandparents or young nieces and nephews and emphasize that their being vaccinated will help protect their family members. Many patients are more willing to be vaccinated to protect the health of others than to protect their own health.

What can I say to patients who say they would rather “take their chances” and seek treatment after they become ill?

Many patients are very surprised to hear that for many vaccine-preventable diseases, there is no treatment once you have the disease, other than “supportive care.” This is true for measles, mumps and rubella.

What can I say to patients who say the flu shot gave them the flu?

First validate this concern by saying that many patients tell you this, then emphasize that it is impossible to get the flu from a flu shot. Adults on average get a common cold three or four times a year, often during flu season, and attribute this coincidence in timing to the flu shot. In other words, often what patients (and sometimes physicians) call “the flu” is actually just a common cold, which the flu shot cannot prevent.

What can I say to patients who say the flu vaccine didn’t work and they got the flu anyway?

Team members should remind patients when administering the flu vaccine that it does not prevent the common cold. Educate team members to refrain from calling a severe cold or gastroenteritis “the flu.” Make sure that staff and patients are aware of the difference between a cold and influenza.
It is also important to note that the flu shot is not 100 percent effective at preventing the flu and it does take about two weeks to take full effect, so it is possible to contract the flu after receiving the flu shot. These flu cases are a result of coincidental timing and/or a less accurate prediction of flu strains in making the vaccine, not a result of the flu shot itself. Remind patients that even if the flu shot does not end up preventing the flu, it does decrease the severity of the illness in most cases.

If a patient declines one vaccine, do they usually decline all vaccines?

Surprisingly, no. Many patients have strong feeling about one vaccine but not others. Often patients decline the flu vaccine but are willing to receive the Tdap vaccine.

As a physician seeing both adults and children in my practice, how can I address parental skepticism or objections towards vaccinations?

Many parents have heard or read inaccurate information about vaccine safety, but that doesn't mean they won't ultimately agree to vaccinate their children. Listen to their concerns and answer their questions deliberately and honestly, remembering that the conversation can always continue during future visits. The American Academy of Pediatrics has helpful resources to guide you when addressing parents’ concerns.

What if a patient still declines a recommended vaccine?

It is always important to end the conversation with respect for a patient's decision. Ask your patients who decline a vaccine to think about it some more and remind them that they can change their minds at any time and receive the vaccine at a future visit. Keep the door open!

What online resources can I direct my patients to when they have questions about vaccines?

Many patients hear medical advice from family, friends, the media and even celebrities. Encourage your patients to do their own research on reputable websites such as Centers for Disease Control: Vaccines & Immunizations or Immunization Action Coalition. These websites also provide patient-tailored information in Spanish and other languages. Encourage patients to read more about vaccines on their own, but be aware that sites without science-based information often have benign or authoritative names. It is very important to direct patients only to reputable sites that contain accurate information.

JAMA Patient Page: Pneumococcal Vaccination
(PDF, 192 KB)

JAMA Patient Page: Influenza Vaccine
(PDF, 172 KB)

Implement a standardized process

Implementing standardized processes for vaccinations—from pre-visit planning to assessing, recommending, vaccinating or referring and documenting—will maximize vaccination rates. Empower front desk staff, medical assistants and nurses to get involved in the process. Using standing orders and established protocols can also help save time, improve care and enhance your practice's bottom line. Using standardized processes also signals to the team that they are all valued members and allows every team member to work to the top of their licensure.

Consider using the standardized processes below. Not all examples may be applicable to your practice, so it will be important to take into account your own practice's workflow.
Identify which patients are due for which vaccines for the next day's clinic. Many electronic medical record (EMR) systems have age- and disease-specific reminders for immunizations that are due and using these can save a lot of time. Talk with your EMR vendor about activating these reminders. Have medical assistants perform pre-visit immunization planning for patients using EMR-based alerts and immunization schedules. Once the need is identified for a specific vaccine, the appropriate Vaccine Information Statement (VIS) for that vaccine can be given to the patient upon check-in by the front desk staff (see next bullet point). If your EMR does not provide these reminders, staff can use CDC vaccination schedules or a printable standing orders checklist to determine which vaccines are recommended for each patient. Paper-based or other vaccination needs assessment tools like the CDC online adult vaccine quiz are helpful tools as well. Once patients who are due for a vaccine are identified, they can be recorded on a log sheet for easy reference. An example log sheet is included as a downloadable tool in this module.

Have front desk staff prepare and hand patients a preprinted VIS when they check in. After the clinical staff identifies which patient is due for which vaccine the next day, they write the patient’s name on the appropriate VIS for the front desk staff to hand to the patient upon check-in. This allows patients to have time to read about the vaccine and alerts staff that a vaccine is due. Reassure the front desk staff that they are not responsible for answering any vaccine-related questions from patients and should encourage patients to ask you or a nurse if they have any questions. If a series of vaccinations is required, the front desk staff can also schedule the next vaccination appointment for a patient upon check-out.

Use standing order sets for vaccine administration before the physician component of the appointment and for documentation. These can standardize and streamline practice and may be particularly useful when dealing with vaccines with complicated schedules (e.g., the pneumococcal vaccines Pneumovax [PPSV23] and Prevnar [PCV13]). Your EMR may already have a standing order set for pneumococcal vaccination, but if not, examples of preprinted standing order sets are included in this module.

If your patient declines a vaccination, ask why and then provide further counseling and encouragement. Repetition and a consistent strong recommendation for vaccination by all team members is key.

Use standard protocols for managing and reporting adverse events from vaccinations. Adverse events are uncommon and most often mild, but we all want and need to be prepared for the rare, more serious event if it occurs. Distribute established protocols for managing adverse vaccine-related events in adults and children to your team members. Adverse events should also be reported to the Vaccine Adverse Event Reporting System.

**Q&A**

**Can medical assistants administer vaccines?**

In many, but not all states, medical assistants are permitted to administer vaccines. Check your state’s laws regarding the role of medical assistants and vaccine administration. Furthermore, some organizations may restrict the roles of medical assistants, so it is important to check your own organization’s policies in addition to those of your state.

**Where can I find educational materials on vaccinations for my office?**

The Center for Diseases Control (CDC) and many state health departments have materials that can help you promote vaccinations, as well as buttons and badges for public use. You can also display information from the CDC on your own practice’s website. The CDC provides code for displaying the current recommended immunization schedules on your website, as well as a quiz to help patients understand which vaccines are recommended for them. By linking to this schedule, whenever the CDC makes a change, your website will automatically display the update as well.

**Does my state have a registry for all immunizations?**

Most states have an Immunization Information System (IIS) (i.e., vaccine registry), for recording and consolidating patients’ vaccination records. These are state-based immunization registries, with information on childhood vaccines reported to the IIS, as well as some adult immunizations. Check with your health department about the IIS in your state and how to obtain permission to look up patient vaccinations and how to report vaccinations. Empower your staff to check the IIS as part of pre-visit
planning. While immunizations may be manually keyed into the vaccine registries, most IIS have the capacity to accept immunization data from certified EMRs. Submitting and receiving immunization data to public health agencies through a certified EMR can also help you achieve points and qualify for an incentive payment under Medicare. You can find information about the IIS in your state from the CDC.

**What should I do when a patient is due for a vaccine that our practice doesn’t carry?**

Your practice may not stock some vaccines, in which case it is important to refer patients to alternate clinics such as a travel clinic, urgent care, pharmacy, hospital or the local health department when those vaccines are due. Write a prescription for the recommended vaccine or include it in the patient’s after-visit summary and hand the patient a VIS about the vaccine. Consider having a list of local immunizers available that you can send your patients to or direct your patient to the Vaccine Finder website. Establish a method of communicating back to your office when vaccinations are completed and encourage other local immunizers in your community to also report to the IIS.

**How can my practice use social networking to improve vaccination rates?**

Include reminders for vaccinations at appropriate times of the year, such as the start of flu season, the start of the school year or asthma awareness month, on your website, Facebook page or blog. You can also advertise “immunization only” clinic hours at peak times.

Team members can also encourage patients to join Facebook or community groups that promote health and wellness. Do advise patients to be cautious about websites without science-based information that are prevalent on social media and encourage them to discuss what they have read with you.

**How can I help my patients keep track of their own vaccinations?**

Tell patients that it is important for them to keep track of their own vaccinations. This can be done with a printout of their vaccination record from the EMR, by carrying a wallet card with updated vaccinations and/or through a variety of apps or websites. Some states also provide access for patients to their individual vaccination records on the IIS. Refer patients to their state immunization program for information on this.

Document vaccines given and minimize financial risk

Minimizing the risk for financial losses starts with reducing wasted vaccines. A few key resources and strategies can help make sure that your revenue matches vaccine costs.

**Q&A**

**How can I reduce the number of wasted vaccines?**

Educate your staff on safe vaccine storage and handling. Avoid common mistakes such as improper vaccine refrigerator temperatures and storing food in your vaccine refrigerator.

It may be useful to empower a nurse or medical assistant in your practice to take the lead on immunizations by designating them the Chief Vaccination Officer, whose duties would include:

- Tracking the number of vaccines given each day
- Pulling vaccines from their central storage location in a small, set number of vaccine doses per day
- Returning unused doses to the central location at the end of the day
- Reconciling the administration record with the number checked out from storage
Overseeing billing at the end of each day

How do I ensure accurate documentation and billing in the absence of an EMR system?

Keeping a vaccine log is key to accurate documentation and charging. Required elements to document include: vaccine name and number of doses received, vaccine manufacturer and lot number, date administered, VIS edition date and the date it was given to the patient or guardian, and the name, office address, and title of the vaccinator. Make sure you are coding appropriately, including accurate use of administration codes along with specific vaccine codes and, when appropriate, modifier codes. Examples of a day-based vaccine log for documentation and billing purposes is included in this module.

What are some purchasing tips to be more cost effective?

Estimate needs based on the previous year's vaccination numbers. Know your vaccine cost per dose and reimbursement for each vaccine by different payers. Consider purchasing directly from vaccine manufacturers or from group purchasing organizations and purchasing in small volumes more frequently. Partner with vendors to negotiate lower shipping rates to allow for more frequent purchasing in smaller amounts.

How can I minimize the administrative burden of vaccine documentation and billing?

Roster billing, which allows for submission of one claim for all Medicare patients receiving a pneumonia or flu shot in a given day, can consolidate and simplify billing. Examples of vaccine rosters for the pneumonia and flu vaccines are available from the Centers for Medicare & Medicaid Services.

Recognize and reward the participation of your team

Developing, implementing and measuring new projects requires hard work and motivation, especially during the planning and launch phases. It is crucial to have the entire team on board with your immunization program throughout the process. When starting your immunization program, debrief with your team regularly to identify unexpected challenges and troubleshoot how to overcome them. At the end of the day, don’t forget to reward and recognize your team for their hard work.

Q&A

How do I reward my team for their hard work?

During team meetings, consider having individual team members share anecdotes of successful patient vaccinations after initial skepticism, high rates of vaccines administered or other stories about grateful patients. Highlight your team’s hard work by submitting a brief description of the project to the clinic newsletter, local paper or local board of health. Sending your own letter of commendation and appreciation, copied to the hospital or practice administrators, can be of great value. And of course, free catered lunches can also help to build camaraderie and morale. A list of additional ways to celebrate your team’s efforts, many of which require just a few minutes of planning but are greatly appreciated by staff, is included as a downloadable tool in this module.

How often should I revisit our new immunization program with my team?

At the beginning of a project, check in with your team weekly. Ask how things are going, what is working and what could be improved, and then adjust your approach. As time goes by and wrinkles are ironed out, these meetings can be held less frequently.
Ways to celebrate
(MS WORD, 53 KB)

AMA Pearls

Make a strong recommendation about vaccinations to your team members and your patients.
Spend time training your team on how to respond to patients’ questions and hesitations about vaccinations.
Use standardized processes to optimize efficiency and vaccination rates.

“Make a strong recommendation about vaccinations to your team and patients #STEPSforward”

Conclusion

Implementing an adult immunization program in your practice can save both lives and time while increasing revenue. Proactive and proper training ensures that the work can be safely and effectively carried out by non-physician team members. This team-based approach also improves overall practice morale. Remember that few interventions in history have improved the health of the world population as much as immunizations!

STEPS in practice

1

Implementing Team-Based Immunizations in Oak Park, IL: A Case Study

No matter how many times a provider strongly recommends an overdue vaccination to a patient, some patients simply choose not to follow this advice.1 “It’s so important to tailor your message and take advantage of opportunities to reinforce why the vaccine is needed,” says Marie Brown, MD, an internal medicine specialist at Rush University. “I’ve found in my practice that pointing out that a vaccination can protect others can be a powerful motivator. If it’s a young healthy man sitting in front of you, ask him to get his flu shot to protect his
elderly grandmother. If it’s a new grandmother, explain to her how important a Tdap vaccine is for protecting her baby granddaughter from whooping cough. You may be surprised to find that many patients will receive a vaccine to protect others but wouldn’t do so just for themselves.”

Recently, Dr. Brown was faced with one of those opportunities that shouldn’t be missed. A patient she was seeing had a reminder pop-up in her chart that she was overdue for a Tdap vaccine. The patient had been declining this vaccination for decades, always saying “she felt fine and didn’t need it, so maybe another time.” But at this most recent visit, she shared that she was in a rush to finish her appointment because her daughter-in-law was in labor about to deliver her first grandchild. Dr. Brown quickly emphasized how important Tdap was so that she didn’t expose her new grandchild to whooping cough. The woman agreed to be vaccinated. At a return appointment, the patient explained that she not only shared with her daughter-in-law how she had been vaccinated to protect the baby, but became the gatekeeper for other visitors to make sure that they were vaccinated before meeting the newborn. The woman beamed as she relayed how much the new mother appreciated this action. This story was celebrated in the clinic with a shout out during a weekly team meeting.

Dr. Brown’s practice has standing orders and specific processes in place to streamline immunization as soon as the patient provides consent. This starts before a patient even walks through the clinic door. During pre-visit planning, the medical assistants (MAs) check the patient’s chart to see if any immunizations are due. If there are any, the MA prints the Vaccine Information Statement (VIS) for that vaccine and has it ready to go for the next day. Then, the VIS is given to the patient, sometimes before the patient is roomed. If it’s influenza season, typically January through March, the VIS is handed to the patient at check in so they can peruse it as they wait. During other seasons or for different vaccinations, the VIS is provided during rooming. Standing orders allow MAs to administer some vaccines, such as pneumonia vaccines, before Dr. Brown enters the exam room.

In addition to finding opportunities to encourage patients to be immunized and making administration of the vaccine easy for patients and staff, it’s important to celebrate the small wins that contribute to a successful adult immunization program. In Dr. Brown’s clinic, this means giving shout outs in team meetings as well as designating a Chief Vaccination Officer (CVO). The CVO is a very enthusiastic MA who is nominated by her colleagues to serve in this role. This designation is supported by the American College of Physicians as a way to improve vaccination rates around the country. The MA receives a $150 check to provide lunch for his or her team and takes part in supplemental training to be a vaccine champion and resource for the team. In Oak Park, the CVO spreads this knowledge through ongoing training at the practice. The MA is also a champion for staff and providers to stay current with their own vaccinations.

Since implementing these changes, Dr. Brown’s practice has seen vaccination rates double over the last eight years, from 40 percent to 80 percent. She is also proud to report that she sees very few influenza cases during flu season due to high flu vaccination rates, which makes a big difference for general patient care as many other practices are seeing numerous emergency cases in winter and spring.

References


Introduction:
Increasing administrative responsibilities—due to regulatory pressures and evolving payment and care delivery models—reduce the amount of time physicians spend delivering direct patient care. Each year, more than 50,000 adults in the United States die from vaccine-preventable diseases—largely from influenza and its complications. Vaccine-preventable diseases are significantly more common in adults than in children. This module provides a comprehensive guide to implementing an adult immunization program in the practice which includes a system for engaging your health care team,
ensuring your patients receive strong recommendations for the vaccines they need, promoting vaccinations, efficiently vaccinating patients and getting paid for these efforts.

**Learning Objectives:**
At the end of this activity, you will be able to:
1. Describe the role an individual physician plays in setting a supportive tone about vaccinations for both team members and patients
2. Explain the importance of training your team to properly store, administer and track adult immunizations
3. Discuss the importance of preparing your team to address common patient questions and concerns regarding immunizations
4. List the benefits to implementing standardized processes for vaccinations

**Article Information**

**About the Professional Satisfaction, Practice Sustainability Group:** The AMA Professional Satisfaction and Practice Sustainability group has been tasked with developing and promoting innovative strategies that create sustainable practices. Leveraging findings from the 2013 AMA/RAND Health study, “Factors affecting physician professional satisfaction and their implications for patient care, health systems and health policy,” and other research sources, the group developed a series of practice transformation strategies. Each has the potential to reduce or eliminate inefficiency in broader office-based physician practices and improve health outcomes, increase operational productivity and reduce health care costs.

**Disclosure Statement:**
The project described was supported by Funding Opportunity Number CMS-1L1-15-002 from the U.S. Department of Health & Human Services, Centers for Medicare & Medicaid Services. The contents provided are solely the responsibility of the authors and do not necessarily represent the official views of HHS or any of its agencies.

**References**