

Evidence-Based Medicine for Pharmacists in the Patient-Centered Medical Home

Monday, December 13, 2010

Transcript

OPERATOR: Good day, ladies and gentlemen, and welcome to today's conference entitled *Evidence-Based Medicine for Pharmacists in the Patient-Centered Medical Home*. If you get disconnected at any time from the Web conference, you may dial 888-632-5065 or 201-604-0318. And, when prompted, please enter 57764940 followed by the pound sign. Again, that code is 57764940 followed by the pound sign.

At this time, it is my pleasure to turn the floor over to Sarah Shoemaker. Ma'am, the floor is yours.

SARAH SHOEMAKER: Thank you. Good morning, ladies and gentlemen, on behalf of the Agency for Healthcare Research and Quality, also known as AHRQ, welcome to today's Web conference titled *Evidence-Based Medicine for Pharmacists in the Patient-Centered Medical Home*, held by AHRQ's Effective Health Care Program.

My name is Sarah Shoemaker. I am a Health Services and Policy Researcher with Abt Associates in Cambridge, Massachusetts. I am also a pharmacist. I have been working with AHRQ's Office of Communications and Knowledge Transfer to conduct outreach to pharmacists and make them aware of AHRQ's evidence-based resources and engage them in AHRQ's Effective Health Care Program, and I will be moderating today's event.

Before we get started, I want to review some information about today's Web conference technology. If you are experiencing technical difficulties, there are a number of options for assistance. You can click on the *Click Here for Web conference Help* Link to be directed to a troubleshooting Web site to do a systems check, or you can open the Web conference FAQ document under the *Downloadable Files* button on the bottom of your screen. You can also contact technical support by submitting your issue in the Ask Question box.

Under the *Downloadable Files* button, you will also find the slides for this event, which may be helpful for reviewing slide details, and a document with speaker biosketches.

Today's Web conference includes closed captioning, the captioning that appears in a box below the slides through the Windows Media Player or Real Player buttons on the main page. Finally, this presentation is being recorded and will be made available on the AHRQ Web site shortly.

This Web conference was developed by AHRQ's Effective Health Care Program, with assistance from the American Pharmacists Association. This Web conference is approved for one and a half hours of CPE [Continuing Professional Education] credit; to obtain credit, participants must

participate in the entire conference and complete the online evaluation by December 27. A voucher code and further instructions will be provided at the end of the Web conference.

In terms of learning objectives, at the end of today's Web conference, we anticipate that each of you will be able to define the tenets of the medical home and AHRQ's role; describe the various patient-centered medical home models; discuss successful implementation strategies and potential barriers to the medical home model; and recognize the Effective Health Care Program as an evidence-based resource.

Now, let me introduce our speakers. We will first be hearing from Janice Genevro from AHRQ's Center for Primary Care Prevention in Clinical Partnerships. She will present AHRQ's perspective and role in the patient-centered medical home and share with us a medical home resource available from AHRQ.

Then we will hear from Stephanie Hammonds and Karen Williams from the Health Resources and Services Administration, or HRSA, about their experiences with integrated models of care in their Patient Safety and Clinical Pharmacy Services Collaborative.

Next, we will hear from Vince Willey from the Philadelphia College of Pharmacy about his experience in a medical home practice, including the challenges. And, last, we will hear from Scott Smith from AHRQ's Center for Outcomes and Evidence about evidence-based resources that may help pharmacists in the medical home and other settings.

Finally, we have set aside time at the end of the call to take questions from the audience, which can be entered by the *Ask Question* button, which is located at the bottom of your screen. When you click on the button, a box will appear requesting that you enter your question. Once completed, press the *Submit* button. Feel free to pose questions throughout the presentations, and we will try to answer as many questions as we can at the end during the moderated Q&A session.

The following are the disclosures the speakers have to claim. So, without further ado, I'll turn it over to Janice Genevro from AHRQ. Jan?

JANICE GENEVRO: Good morning, everyone. As Sarah mentioned, I work at the Agency for Healthcare Research and Quality. I'm a Senior Scientist and Lead of the Primary Care Implementation Team in the Center for Primary Care Prevention and Clinical Partnerships. I'll be providing information—some information about the Agency for Healthcare Research and Quality in terms of the work that we do and our mission and also introduce you to AHRQ's work in the patient-centered medical home and some online resources that we've developed that we will hope will be of great value to you.

AHRQ's mission is to improve the quality, safety, efficiency, and effectiveness of health care for all Americans, and, to do this, we work in three general areas. First, we generate new knowledge, and this includes providing research support through grants and contracts. We synthesize evidence, and we support implementation, and we are doing work in all three areas related to the patient-centered medical home.

In terms of our position on primary care, the Agency for Healthcare Research and Quality recognizes that revitalizing the nation's primary care system is foundational to achieving high-quality, accessible, efficient health care for all Americans, so we understand that high-quality primary care is essential to supporting our mission and supporting good health care and good health care outcomes for all Americans.

Specifically in relation to the medical home, AHRQ believes that the primary care medical home, which is also referred to as the patient-centered medical home or PCMH, advanced primary care, and the health care home, is a promising model for transforming the organization and delivery of primary care.

AHRQ has developed our own definition of the medical home, and first of all, we wanted to point out that a medical home is not simply a place, but it's a model of primary care that delivers high-quality care that's patient-centered, comprehensive, coordinated, accessible, and continuously improved through a system-based approach to quality and safety. And I'd like to talk a little bit more about each of these components and provide some specific information about our perspective on these.

So those are the key components of the medical home; our definition of the medical home, the first is that the medical home is patient-centered. And this means that the primary care that's delivered is relationship-based with an orientation toward the whole person. It also involves partnering with patients and their families, which requires understanding and respecting each patient's unique needs, cultures, culture values, and preferences. The medical home practice actively supports patients in learning to manage and organize their own care at the level that the patient chooses. Recognizing that patients and families are core members of the care team, medical home practices ensure that they are truly informed partners in establishing care plans.

Comprehensive care is also an essential and important aspect of the medical home. The primary care medical home is accountable for meeting the large majority of each patient's physical and mental health care needs, including prevention, wellness, acute care, and chronic care.

We'd like to highlight that providing comprehensive care requires a team of health care providers, including pharmacists. But the care team also will include physicians, advanced practice nurses, physician assistants, nutritionists, social workers, educators, and care coordinators.

Although some medical practices may bring together large and diverse teams of care providers to meet the needs of their patients, many others, including smaller practices, will build virtual teams that link themselves and their patients to providers and services in their community.

Actually, I misspoke there, that was comprehensive care.

Moving on to coordinated care. The primary care medical home is responsible, at least in our perspective, for coordinating care across all elements of the broader health care system. This would include specialty care, hospitals, home health care, and community services and support.

This coordination is particularly critical during transition between sites of care, such as when patients are being discharged from the hospital, or moving from primary care to nursing home settings, or from nursing home settings back to primary care. It's also essential that medical home practices excel at building clear and open communication among patients and families in medical homes and members of the broader care team.

Next, the medical home needs to provide superb access to care. The primary care medical home delivers successful services with shorter waiting times for urgent needs, enhanced in-person hours, around-the-clock telephone or electronic access to a member of the care team, and alternative methods of communication, such as e-mail and telephone care. In—it's especially important to note that the medical home and practice is designed to be responsive to patients' preferences regarding access.

And, finally, in terms of a systems-based approach to quality and safety, the primary care medical home demonstrates a commitment to quality and—quality improvement by ongoing engagement in activities such as using evidence-based medicine and clinical decision support tools to guide shared decisionmaking with patients and families.

We also recognize that there are other aspects of the supporting environment that are needed to help make medical homes a success. These include health information technology, workforce development, and payment reform, which we believe are critical to achieving the potential of the medical home.

The full version of AHRQ's definition of the medical home is available at the link that's there on your slide, www.pcmh.ahrq.gov, and I'll be talking a little bit more about that resource toward the end of my presentation.

We did want to highlight that the principles—the joint—the joint principles that were—that have been publicized by the American Academy of Family Physicians, the American Academy of Pediatrics, and the American Osteopathic Association and our principles are closely aligned. You'll see the crosswalk here between the elements of AHRQ's definition of the patient-centered medical home and the joint principles. Two things we wanted to highlight are that we have focused on team-based care as being a core element of comprehensive care, and, as I mentioned, we see pharmacists as being a critical element of team care. And we have not focused on the notion that the primary care medical home needs to be directed by a physician or that there needs to be a personal physician as part of the medical home; rather the patient and family can relate directly to the team in the primary care medical home.

I'd like to talk a little bit about some of the research that AHRQ's doing, and some other projects that we have under way to support the patient-centered medical home. First, we have retrospective evaluations that are under way at two sites; these are being conducted at Health Partners in Minnesota and WellMed in Texas, which are two sites that have been leaders in the patient—the transformation movement to the patient-centered medical home.

We also have several mixed-method evaluations that are designed to understand how primary care practices have transformed to the medical home. We've made 14 two-year awards, and

those awards were made in the summer of 2010, they're for two years, and so we'll be able to get results and hopefully communicate those to the larger medical community in 2012.

We've also supported the development of a research agenda related to the primary care medical home; this was work that was co-funded with the Commonwealth Fund and the ADIM Foundation, it was a collaboration of professional societies. A meeting was held in late October 2009, and the results of this agenda were published in June 2010 in the *Journal of General Internal Medicine* and are available, I believe, to the general public for download.

And I don't really know what that noise was or if everyone heard it, but we will move ahead.

AHRQ also has made a commitment to supporting the development of information for decisionmakers related to the primary care medical home as part of a larger project that we've undertaken. We are publishing foundational white papers, and these are available to the general public on the Web site that I mentioned early—earlier. The three papers that we started with were designed to address what we thought were core issues in the primary care medical home that there were information gaps. The first is a paper regarding the HITECH Act's potential to build medical homes, and this is called necessary but not sufficient.

The second paper addresses issues related to engaging patients and families in the medical home, including patient and family involvement in their own care and quality improvement and safety initiatives at the level of the individual primary care medical home and also engaging patients and families in larger policy and strategy issues related to the development and evaluation of the medical home.

Finally, the third initial white paper related to issues regarding integrating mental health services into the medical home. These are specifically designed to address policy and research issues, and there are associated decisionmaker briefs that are three to four pages that highlight the central issues, and those will be available, we hope, in the beginning of 2011.

We also have another set of white papers and briefs that will be coming out. We are looking at PCMH outcomes, there's a lot of conversation about how successful the patient-centered medical home has been in delivering the kind of outcomes that the research and policy community and the general health care community are interested in, including improvement of care, improvement of health outcomes, and reduction of costs. So we're planning a paper that will provide information about outcomes of specific kinds of forerunner primary care mental home models.

We'll also be looking at the patient-centered medical home within the larger health care system, looking at the medical neighborhood, and we have a particular brief coming out that looks at care coordination within the context of the patient-centered medical home and the accountable care organization.

We do have an upcoming series of briefs on the status of primary care in the United States. I've just learned, however, that the analysis of the primary care workforce paper has been delayed, but we will post that as soon as it's available on the Web site that I mentioned.

In addition, the patient-centered medical home resource, online resource, has a database of published literature on the medical home that includes over 500 citations. It's searchable by domain, by policy, relevance and outcomes, and it includes a section on foundational documents and articles that, we hope, will be of value to you.

Finally, I'd like to talk about some implementation projects. AHRQ has developed a toolkit on integrating the chronic care model and safety net settings. This—the chronic care model was developed by Ed Wagner and colleagues, and there's tremendous overlap between the elements of the chronic care model and the primary care medical home. These toolkits are designed to help individual practices and health care systems make the transformation to providing the services that the medical home ideally offers.

We've also initiated a project to bring together a national expert working group on using practice facilitators and practice coaching to facilitate transformation to the patient-centered medical home. This will be launched in winter 2010, and the primary product from this will be a toolkit on how-to guide to help practices make the transformation.

Then, very briefly, we also have some health IT products and projects related to the patient-centered medical home. One of these specifically is designed to help describe the information flows and interactions between and among patients and consumers and other primary care medical home stakeholders, and it will be based on the development of some new functional use cases. This began in the summer of 2010, and results from this will also be available within the next 18 months or so.

Finally, here is the online PCMH resource center that I mentioned. Again, you can find it at pcmh.ahrq.gov; it has the foundational white papers, it will have policy briefs, it has the searchable citations database and will also be the repository for additional information that we develop over time as AHRQ increases its investment related to the patient-centered medical home.

This online resource is targeted toward meeting the needs of policymakers and researchers, it has information about our definition of a medical home, and I mentioned the database and the white papers. It will continue to grow and expand, and we hope to be augmenting the information that will be available regarding implementation and information that will be of value to people who are actually providing patient-centered medical home-oriented care in the field.

And I think that's it for me.

SHOEMAKER: Thank you, Jan, for sharing us with—sharing with us AHRQ's principles for the patient-centered medical home and making us aware of AHRQ resources. I know we have a diverse audience of pharmacists from several settings, all of whom I'm sure could find valuable resources on AHRQ's PCMH online resource.

Besides AHRQ's principles and the joint principles developed by several physician organizations, we wanted to recognize that, in 2009, several pharmacy organizations developed

principles for inclusion of pharmacists' clinical services in the patient-centered medical home. These principles include access to pharmacist services, patient-focused collaborative care, flexibility in the design of the medical home, development of outcome measures, access to relevant patient information, effective health information technology, and aligned payment policies.

In the pharmacy principles document, the organizations acknowledge several private and public sector success stories of pharmacist clinical services enhancing the safety and effectiveness of medication use. One of the success stories is HRSA's Patient Safety and Clinical Pharmacy Services Collaborative, which turns us to Stephanie Hammonds's presentation.

STEPHANIE HAMMONDS: Thank you, good morning. My name is Stephanie Hammonds, and I work in the Quality Improvement Branch of the Office of Pharmacy Affairs at HRSA, the Health Resources and Services Administration. My colleague and the Quality Improvement Branch Chief, Commander Karen Williams, regrets that she's unable to be here today, a real trouper, she's undergoing treatment for breast cancer, and today is her infusion day.

I'd also like to thank Dr. Mark Laufman at Northwestern University for his assistance with this presentation.

Our mission in the Office of Pharmacy Affairs is to provide clinical and cost-effective pharmacy services to enable participating entities to stretch scarce federal resources in order to serve more patients, expand their services, or offer additional services.

As part of this two-fold mission in conjunction with administering the 340B Discount Drug Program, HRSA launched the PSPC, the Patient Safety and Clinical Pharmacy Services Collaborative. Using the Institute for Healthcare Improvement's breakthrough series methodology, the Patient Safety and Clinical Pharmacy Services Collaborative achieves optimal patient health outcomes, eliminates adverse drug events, and provides sustainable access to clinical pharmacy services for ambulatory patients served by safety net providers.

Patients selected for interventions take an average of eight prescriptions, have five chronic health conditions or more, and are medically out of control. Operating on a 12-month cycle, 54 percent of the selected patients improved to be medically under control, adverse drug events were reduced by 49 percent, and potential adverse drug events were reduced by 60 percent. And I'll provide more detail on how we do that over the next several slides.

This slide represents a systems prediction of the rate of error; currently, primary care providers operate in relative autonomy without any real system of care. As a result, in chaotic fashion, there's no way to predict an error rate.

In the middle, by using a systems-based approach, we were able to get a baseline measure on our rate of error. And, on the right, by implementing clinical pharmacy services into these systems, this is where we can go. With a highly reliable organization, error rates are extremely low.

In 2001, the landmark IOM [Institute of Medicine] report “To Err is Human” was published. Then there was a call to reduce health disparities. We’ve had a decade of calls to action, we’ve had a decade of hospital-focused work in patient safety, but outcomes remain largely unchanged. The recent OIG report shows that we kill about 15,000 Medicare beneficiaries each month, as much as half from medication errors. That’s 20 jumbo jets full of Medicare beneficiaries crashing, killing all passengers on board each month.

And still, we tolerate the status quo of the lone physician treating patients without team-based collaboration, we tolerate non-adherence and poor outcomes, and then we blame the patient. Because of this, the needle is not moving, we’re not seeing a change despite a decade of asking for it.

So, instead of killing 7,000 Medicare beneficiaries, our goal is first to keep them all alive. The PSPC aim is to save and enhance thousands of lives each year by achieving optimal health care outcomes, eliminating adverse drug events, and integrating clinical pharmacy services into primary care.

This is a visual of the aim that you saw on the previous slide, or we want to improve the overall delivery system. So, with a focus on comprehensive primary care, including transitions of care, the PSPC aims to integrate clinical pharmacy services into the patient-centered health home.

Over on the left, you see the traditional model, which is not powerful enough to significantly improve outcomes, particularly for high-risk complex patients. Everybody in an ideal world has a primary care doc, they leave the light on for you, they have their prescription pad, it’s basic episodic care with the same old outcomes.

So, looking to an advanced model, we want to minimize the old standard of care with the lone doc in his or her office. And I know it doesn’t look like it on the left side, but it doesn’t look like an injection needle, but think of clinical pharmacy services as a shot in the arm to help us do what we need to do to get better outcomes. These three levels of care turn the old system of care on its head and close the outcomes gap between expected and actual outcomes.

I think many of you have probably seen this diagram before of the three Ts to transform health care, so I won’t spend much time on it here. But there’s another way to think of it; let’s use an ACE inhibitor as an example. So, in T1, we have all the basic biomedical research, someone discovers the chemical compound that can inhibit angiotensin-converting enzyme. But, without the next step, it’s useless to impact public health.

In T2 in the middle, what looks like a funnel, we have the clinical research trials, and somebody ultimately markets the product. The patient takes their medication, but perhaps not the right way or perhaps without a good system in place. We failed them and never spent the time with them to make sure they understood how to take it the right way. Then they get a cough, and they get all this inappropriate treatment for bronchitis or asthma, or perhaps nobody monitors their potassium, and they die of sudden cardiac death.

So what T3 shows is, despite the clinical research to market the drug that could save their life, we've got a huge backlog in a systems-based performance improvement. The funnel has only been a bottleneck, and now patients are falling through the cracks, and these cracks are like the cracks in the wheels of a steam engine coming down the track, and it's like watching a train wreck getting ready to happen.

So, a train wreck getting ready to happen. Pretend you're watching a movie, and you were watching a train wreck, and what's the soundtrack? You hear scary music. Well, these are real data, this is the average patient in the PSPC population of focus takes at least eight prescription drugs, they've got at least five chronic conditions, and they see multiple providers. We focus on the high-risk, high-cost medically complex patients, and what do we call them? We call them our train wrecks. Sadly, this could be the story of their life, and the scary music is their soundtrack.

So, although teams start with a population of focus, a small sample of patients to target for their quality improvements, our data have shown that as much as 30 percent of the patients in the safety net can be classified as high-risk.

So, teams start with a population of focus and track the metrics for one of their out-of-control health conditions. However, the goal is to spread the improvement model to all core measures for all the patients. Like to spend a minute here, and I'd like to point out that, even though the teams are tracking and reporting the measures for one condition, they are still taking care of the whole patient. This one measure is a place to start their systems-based quality improvement effort.

Also note that over half of our teams focus on diabetes, perhaps as a low-hanging fruit. But, as we know with diabetes, 96 percent of these patients have more—have other comorbidities. And at the risk of sounding like a broken record, while teams might only track and report the HbA1c measures to HRSA, they are nevertheless providing comprehensive care for all the comorbidities to that patient.

So, we're going to look to the future and think of Mr. Big Voice in the movies. Imagine a time, but the future is now, PSPC is already doing all of the things that you see here. We have the potential to redesign and enhance medication reconciliation processes such that the patient is the driver at every encounter regardless of who provides care or where. Imagine a time where patients review their medication lists with their providers at each office or ER visit, hospital discharge, consultant office pharmacy, or other to be sure that we're all on the same page, and the patients actively challenge and manage changes.

So, imagine a present future where patients know what each med is intended to do, know that if—know if the goal is being met, they're aware that they have a formulary, they have adopted a healthy skepticism, and can—and can challenge any change to their med list to ensure it is indeed an improvement, and actively seek advice and counsel regarding medication management from their clinical team.

So, instead of a clear and present danger, by putting names and faces on our aim, the PSPC is like a controlled building demolition, and we believe it's going to blow the doors off the status quo.

So, the PSPC uses a change package, and you might ask, What is that? During the first year of the PSPC, high-performing teams were studied for leading or best practices. These best practices were then vetted by national experts and compiled for re-dissemination to other teams as one of the ways that we foster an all-teach, all-learn environment. This document is a living, breathing document, and it's updated as teams find new ways to break through challenges and spread clinical pharmacy services to more patients.

Think of the collaborative really as a single, all-encompassing strategy, one process that operates with three core components and two overriding principles.

And here are some of our data from year two. So, what you're looking at, each bar on this graph represents the patient in one team's population of focus. If you'll recall the pie graph that I showed you earlier with the 54 percent of teams focusing on diabetes in addition to those other disease states, teams selected patients whose health status was out of control. So, by definition, at the beginning of the year, 100 percent of the patients are out of control.

So, here is the same graph, the same teams, the same patients across all the same disease states after 12 months in the PSPC. But you can see that the patients receiving care from these teams have demonstrated dramatic improvements.

Well, we aggregated all that data and found that, in 12 months across all teams, the health status of 54 percent of the patients in the teams' populations of focus were brought from out of control to under control.

The PSPC teams also made substantial strides in improving patient safety, potential adverse drug events, or near misses dropped by 60 percent, and harmful and, in many cases preventable, adverse drug events dropped by almost 50 percent. We saved lives, we extrapolated these data to the approximately 3,000 PSPC patients, and we estimate that we prevented 202 potentially fatal adverse drug events.

We expect the number of patients receiving care in community health centers will double in the near future to nearly 40 million. If 30 percent of them are high-risk, that means that 12 million of them will need clinical pharmacy services. Extrapolating PSPC data, we estimate that, after this expansion of clinical pharmacy services is integrated into the systems of care, we can prevent 5.4 million near misses and 720,000 adverse drug events.

So, improving patient care and safety, it is the right thing to do, but we recognize that there has to be a business case for these services to be sustainable. The literature showed that, on average, PSPC generates a four-to-one return on the investment, but a targeted approach can generate up to a 12-to-one return on the investment despite increases in drug spending as a result of improved adherence.

We also know that each preventable adverse drug event across the health system is approximately \$8,700, and this may be an underestimate as these data are primarily generated from hospitals.

Implementing clinical pharmacy services into primary care delivery in the patient-centered home can avoid hospital admissions and readmissions by decreasing acute events in the treatment of chronic disease. And we estimate that integrated clinical pharmacy services into community health centers alone could save up to \$6.26 billion each year.

So, currently in its third year, the PSPC team leveraged community-based partnerships, including health care providers, community health centers, Ryan White HIV/AIDS providers, poison control centers, critical access hospitals, rural health clinics, just to name a few. As you can see here, we started in our first year with 68 teams in 37 states, and now we have 127 teams in 43 states, including Washington, DC, and Puerto Rico. And these teams have leveraged partnerships across 320 organizations, and it has been those partnerships, the community-based partnerships, that have really allowed the PSPC to flourish.

And with that, I will turn it over.

SHOEMAKER: Thank you, Stephanie, for sharing the success story of an impressive and certainly growing collaborative of pharmacies across the country.

Many of you via the Web conference site have responded to several questions we've posed to you, including indicating your current role in a patient-centered medical home. It seems about 10 percent of the audience reported currently working in a medical home, which I think we'd all be pleased to hear. Another quarter report trying to develop or become involved in an existing medical home, and then nearly half of the audience is not currently involved in a medical home. For those not currently involved in a medical home, I think you'll find the next presentation of particular value. Additionally, Vince Willey will share some of the challenges he has encountered, several of which you all identified as a major challenge to pharmacists' role in the medical home.

Now we will hear from Vince Willey from the Philadelphia College of Pharmacy about his real-world experience as a pharmacist in a medical home—Vince?

VINCE WILLEY : Thank you so much, and I'm always excited to talk about this topic because I have such a passion for getting—we as pharmacists to get so involved in direct patient care, and, you know, ambulatory care settings, outpatient settings, whatever you want to call them. And what I've always seen with the medical home was that it was really a vehicle or a structure for us to do those patient care services. And if any of you, especially the 50 percent who are kind of new to the experience, I—if you're like me, the first time I heard of the medical home, I said, well, are people going to people's homes to give care? Or what does it all mean? So, hopefully, you've gotten some background on that from the first couple of presentations.

And what I want to do is kind of give you some insight into what we've done at our practice, and what I would say is nothing that we've done, I believe, is any magic or has to be the way to do it.

But I think it's nice if you're trying to start something to have some kind of template, some kind of framework to say, well, this is what somebody's done, good or bad, we can—we can debate that later. But at least hopefully to give you some of our experiences.

As well as I want to give you the physician perspective because if you're going out there to try to start a medical home-type practice and approaching some physicians, I want to give you a little bit of insight into maybe how they're thinking about these services. And, then, finally, implementation challenges, so some of the things that we've done that OK, well, we've—we thought it was a good idea, but maybe it didn't work out so well, and we're still in the evolution of this as you'll see in a minute. But hopefully give you some of those tidbits that you can learn from some of our mistakes and maybe how we overcame them.

Just to give you a background, the particular practice I'm at has three full-time physicians, has nine staff members, only has medical assistants, doesn't have nurse practitioners, physician assistants, or nurses. And I picked this type of practice, I've done some of these things in other larger practices, and one of the things that I felt was important was I wanted to get into a physician practice where a lot—a community-based one where a lot of care is given in this country, not all care is given in these large centers, or VAs, or such, so—or academic centers.

This is—this is a regular, you know, if you will, mom-and-pop physician shop, and I wanted to say OK, could these services be implemented well in this type of setting? Practice has been around for a little over 10 years; they have had electronic medical records, which is a big part of the medical home; and they do have phlebotomy on site, so we can—we can get lab draws there right at the site.

So, there—the medical home that we're working in, it was a collaboration with the Philadelphia College of Pharmacy where I'm an associate professor. We currently have two full days per week, so we've kind of split that to one full day and two half days. And I bring that up because if you're going to start these types of things, every situation's going to be a little bit different, and having flexibility working with the physicians' schedules, and how their office flows, then working into your type of flow, there's going to be a lot of give and take here, so I don't think there's any right or wrong answer, but I think flexibility is the key.

Also, just that we started in 2009, I was the one pharmacist one day per week, and then we've added a second pharmacist two half days per week starting at the—at the beginning of this year.

One of the things that we did was we had the opportunity, and one of the things you'll run into is space is always an issue in practices. So trying to figure out where you're going to do this. And we had a couple of different options, and one of the things that we decided to do was to take an area of—kind of their break room area and make it into a patient education area. We didn't want it to be an exam room, we wanted patients to know as soon as they walked in the door, this was something a little bit different than their experience, OK, than they would typically have with their physician.

One of the things we wanted to do was we kind of have that roundtable, so it was more a discussion of peers, if you will. The other thing that we—that we felt was it would be relaxed

atmosphere, and I would say at least in a quarter of my visits, for the first time the significant other comes. So, say we're talking to a diabetic, and lifestyle modifications and diet are part of that. You know, if the wife or the husband does the cooking, having them there at that meeting is real important, not only from just a support mechanism, but from actually implementing some of those lifestyle modifications.

And it also allowed us to do group visits that we really haven't done—we've done a few group visits, but mostly when we've had multiple people there, it's been significant others for folks.

So, how are patients scheduled with me? Well it's right within the—in the physician patient scheduling system, so if you pull up Tuesday tomorrow, our—where I'll be there, I have a schedule that runs along aside in the EMR [electronic medical record], right next to the—to the physicians. The receptionists make the appointments, the majority of our patients are specifically referred by the physicians. Though we do have some fliers up in the offices, so they—we do have some self-referrals, but, for the most part, our patients are referred by the physicians, you know, within the—within the group.

Just to give you some kind of framework for our visits, one hour for our new patients, and you'll see when I go through, what we go through, sometimes an hour doesn't seem like enough. But I think you start to saturate the patient if you go too much longer than that.

And then we have about half-hour for followups, though sometimes they're a little longer, sometimes they're a little bit shorter. But, again, just trying to give you some framework as if you were going to approach a physician about these things. You know they're going to ask, well, what's—what does a visit look like? And how long? So you can maybe start to think of these things and use what we do as a base and maybe, you know, tailor to the services that you're going to provide.

So what patients are currently referred? Well, my area of interest has always been around metabolic syndrome patients, so I've—most of my patient interactions in the beginning have been for diabetes, hypertension, dyslipidemia, as was mentioned in the previous presentation by Stephanie, most of these patients have multiple or all three conditions. So, we do a lot of work with patients with, again, multiple of these conditions.

We also do some screenings as far as ADHD, depression, anxiety, and bipolar disorder and how to manage the pharmacotherapy around those, which I think is a novel thing within primary care. I don't know if—where you are all located on the phone here, but I know in the—in the Philadelphia, Delaware type area where the college is and where the practice is, respectively, you know, a lot of primary care docs do end up a lot—doing a lot with these mental health conditions just because it's hard to get into a psychiatrist and psychologist and such. So, having some more objective data for the primary care physicians and giving them some evidence-based recommendations, we felt this was a—an underserved population, and a real need for our patients, and the physicians really gravitated toward this, and the other pharmacist who's with me—with Jim Reinhold really has grown this part of the program.

In addition to those patient populations, we're also expanding to asthma, smoking cessation, anticoagulation, pain management. And just kind of a catch-all, complex medication regimens, I'll have the doc say, hey, this person's on 12 meds, they're really having trouble for-affording them. Is there anything you can help us do to pare them down? Or how can we best, you know, make use of the limited dollars they have to spend on these?

So, again, I think there's a lot of other areas that you can go into, but hopefully this gives you some ideas, again, because I'll have physicians and pharmacists come in and say, well, what do you do? What patients? And if you can start to give them some tangible things, an asthmatic patient, a diabetic patient, oh, OK, then they can see this rather than, well, this pharmacist is going to come in and do something with my patients.

So, now I'm going to transition into what do we do as far as interview with the patients. And let me hold one moment, I was—just wanted to make sure—OK, so let me—apologize for that. So one of the things we wanted to do was have an—and I always do an introduction, who I am and what I do. And I think one of the key things that I've noticed here is that sometimes patients say a pharmacist, and they're going to think, oh, all we're going to talk about is medications. And I don't know about you on the phone, but what I've noticed in almost 20 years of practice is, especially I think with the availability of the Internet out there, is that more and more patients are very, very scared. They focus on the risks of medications and maybe not the benefits and are very, very resistant to starting medications.

So one of the things I talk to them about right away is, hey, I'm a pharmacist, but I'm not just going to talk to you about medications, and I'll talk to you about the other things I do, but there's a lot that we can do as pharmacists other than medications. But, again, our medication knowledge really being our cornerstone.

The other thing I always ask is, What do they want to get out of the session? OK. I always joke that I'm a professor, I can ramble on for the next hour, and hopefully you'll get something good out of it. But what do you—what motivated you to come here? OK. Again, disease-state management and education, reviewing labs, I always go over the labs with them, so my diabetic patients, so they know what their hemoglobin A1C is and know what the goal is. I have the availability of having the computer screen right in front so we can use the EMR to show some cool graphs. And, more importantly, why they should care about those numbers, because sometimes we get caught up in all these numbers, but you want to bring it to life. So, for instance, it's not just about hemoglobin A1C, it's about, you know, making sure that your kidneys are OK and your heart is OK or you don't have that tingling or feeling in your—in your hands and your feet, so bringing it to life for the patients.

Next thing, a lot of my metabolic syndrome patients will do dietary review. So, again, it's therapy, but it's not medication therapy. One of the things I think that is—we need to have as pharmacists to be able to feel comfortable with is basic dietary education. I know I wasn't when I first started, and I'm not looking to be a dietician. But what we can do is some very, very simple things, teaching people how to read a food label, showing some basic things about fat, cholesterol, and sodium. I use the ADA [American Diabetes Association] reducing calories and fat slide deck, but there's great other examples out there that you can use.

I set calorie goals for my patients, have them do a diet diary. And there's a—I gave you a couple of resources there where they can look and really look at non-food label foods, so you had a banana, for instance, yes, those calories count, it's a great food, but those calories count. So give them some tools to look things up for themselves. And I try to give them a couple specific things to work on coming out of that visit.

Next, you know, do some vital signs--weight and blood pressure--sometimes I'll do them, sometimes the medical assistant will do them for me. What we always do at the end of each visit is we review the recommendations with the physician. I'll give them recommendations about medications, lab testing, any screen that has to be done; we'll sometimes do the foot exams. If I have a pharmacy student with me, I'll have them do the foot exams with me.

And, in our model, the physician completes each visit, you know, part of what they're doing is enacting the recommendations, the other thing is reinforcing key points with the patients. So it's a—really a team approach, and they're reviewing the things that I had already spoken to them about.

So that—after that initial visit, typically about four to six weeks after that, we'll have a follow-up visit, and we'll do a bunch of different things there, as you can see on the slide, dietary changes, medication changes, reviewing all those types of things, seeing if we had any labs that were measured. And really reinforcing things because, remember, a lot of these things are about lifestyle modification that you can't just say once to somebody and say, yes, OK, good-bye.

The next thing is certainly individualizing a follow-up schedule, so some of our patients, you know, they only get two—they only need two visits, and they seem to do well after that. Others I've had some patients in my year and a half there where we see, you know, on an every-couple-of-month basis to keep them on track.

As far as documentation goes, we—I—myself and Dr. Reinhold we've put notes right into the—into the physicians' charts, so electronic medical records, to the EMR, the electronic medical records, they created—we've created a specific pharmacist note template because pharmacist notes are a little bit different. We update the medication lists, and then we forward those notes to the physician for review and sign-off of the recommendations, though, in our practice, what we've really done is already done those, we've already talked about what those recommendations are going to be, and the physician's really bought off on those.

Now, one thing I wanted to spend a minute or two about was the physician perspective. So, if you're going to go to a physician's office or a physician office practice approaches you, which I've heard both happening in the last year, and I've had—worked with pharmacists to do these types of things, you want to know about what they're thinking and how you can sell you—sell, if you will, your services to them.

One of the things, certainly, finance comes into the—into place here. We're not going to really talk a lot about finance today on the—in the—in this Webinar, but understanding what that physician, is it a fee for service, or capitation? So are they getting paid for each visit, or are they

getting paid a certain amount of dollars per month for that patient whether or not the patient comes in? Because that's going to impact how reimbursement might end up flowing to you.

And then payer bonuses, that's one thing you can help by helping their payer bonuses situation, and maybe that's a way that you can generate revenue for the practice as well.

So, some of the hot buttons, some of the things that you're going to want to think about before you walk into that physician's office, and I developed these along with my wife, who's a primary care physician. So it's not just me thinking about these in isolation, though certainly I've encountered a lot of this in practice over the years. But control, physicians are type A personalities, most of them. Most of them are very dedicated to their—to their patients, certainly they have liability issues as well, and they're a little concerned, hey, is this whole pharmacist medical home thing going to create more work?

Certainly, the—one of the other things they're really worried about, especially primary care docs, is breaks in communication. So, they refer patients to a specialist, you know, unfortunately whether or not they get a consult note back is sometimes very random. So that's really something that created a followup. So, if you can address that proactively when you go to see the physician, tell them, hey, look, we're going to really aggressively follow up with you, and, you know, and they're actually going to be the ones who are approving the recommendations, so they're always—they're always in the loop, if you will.

A little—again, I—not a focus for the talk today, but the finances are, you know, referring to the pharmacist can't be an—a negative financially. So you need to figure out creative ways to work with the physician, whether they—you've become salaried with them or you take a percentage of what the billing—what the billing rate is, and is the billing done under them, or under someone—or under you? So there's a couple of different ways to do that, and each situation is probably going to be different.

The reimbursement for medical home services, that's really evolving as we speak. And there's optimal practice size, you know, what's the optimal practice size? I'm only with three physicians, I'm not sure we can have a full-time pharmacist there that could be supported. But I think, you know, about a half-time pharmacist, we probably could. And then, depending on the physician, sometimes schedules are different; Mondays and Fridays are usually the worst, but it really depends on that individual physician.

Why a pharmacist? So, again, trying to sell yourself to that. It's a—we have a complementary skill set, physicians diagnose, that's what they're best trained to do, that's what they are experts in. We're medication experts, it's a beautiful combination. The one thing I want to say is we don't want to just hang our hat, that's our cornerstone, absolutely that medication, but we can also do other things. We can perform lifestyle modification like the diet and exercise, we can talk about disease-state management, and talk about education, about their diabetes. So we can do more than just talk about the medication.

The negatives, well, a lot of times a physician doesn't see a pharmacist in this particular role. Costs, looking at other physician extenders, such as nurse practitioners, or MAs—excuse me,

medical assistants. Pharmacists are expensive, so we had to figure out what's the—what's the billing for that, and it might be—it might be different types of billing rates.

And, then, finally, we're not really recognized yet as nurse practitioners or physician's assistants are as far as the billing goes. So we're trying to break those barriers down, so there's definitely—there's definitely some work to be done here. But there are also some neat revenue sharings that are—that are going on out there.

Couple of bumps in the road that we've hit, these—at least my patients tend to be non-compliant with their lifestyle and medications, and, hey, they don't show up for the visit, so we have about a 20 percent no-show, which is bad for the patient, but it's also bad for the business model, if you're getting paid for a patient to come there, and you're not on—not salaried, for instance, you—if the patient doesn't show up, you're not getting paid.

Integration of the services with an existing practice and staff. We had to do a lot of staff education because they were trying to figure out, well, who the heck am I, and why is this pharmacist here? And how do I schedule them? So you can't just talk to the physicians once you get in the door, you have to talk about—to the whole staff as well.

We are talking with local commercial insurers to work on those things such as payment to pharmacist as the provider and getting adequate reimbursement rates. Timing of the office visit to close out the visit with the physician, we need—we basically—part of what we do by having the physician see the patient is certainly that reinforcement, but it's also for billing as well. So, if we can get—be the pharmacist be recognized as a provider, then there's things then potentially you could be more selective in using the physician's time there.

So, I guess my key takeaways are—medical practice models are changing, and I believe that the patient-centered medical home can be a way that we as pharmacists can get involved with direct patient care.

And this last part is a lot of times we as pharmacists don't like to be out there in the forefront and selling and saying how great we are. And we really need to do an aggressive, but appropriately aggressive job in this in stating our value. We have to make sure people can understand what we can do, you have to understand what the physician's perspective is before you go to sell that to them, and then we've got to articulate our value proposition.

So with that, I will—I'll turn it over.

SHOEMAKER: Thank you, Vince, for your valuable insights and sharing your experience. Just as a reminder to the audience, you can submit questions electronically by entering them by the Ask Question button at the bottom of your screen. So I encourage you to enter them as they come to you, and we will try to address them at the end during the Q&A session.

Several audience members in the polling question have thought that lack of comparative effectiveness research to support pharmacist clinical decision making was one of the challenges

that pharmacists face in terms of being part of the medical home. So I'm hoping the—those audience members as well as others find the next and final presentation of particular relevance.

So, finally, we will hear from Scott Smith about the evidence-based resources for pharmacists available from AHRQ's Effective Health Care Program—Scott?

SCOTT SMITH: Good morning, thank you very much, Sarah. I'm Scott Smith. I'm director of the Pharmaceutical Outcomes Research Program here at this—the Agency for Healthcare Research and Quality. And, to build on today's discussion about the patient-centered medical home, I'm going to briefly discuss the large investment that the federal government has made to improve patient outcomes by providing more scientific evidence to practitioners and their patients about the effectiveness and comparative effectiveness of drugs and other interventions as they're used in real-world settings.

And so I'll talk about the organizational home for that at AHRQ, which is called the Effective Health Care Program, and let you know about some tools and resources that are available to you right now as soon as you get off the call on our Web site, and I think will help those who are interested in building the patient-centered medical home in a way that's evidence-based.

So, AHRQ's Effective Health Care Program began in 2005 as part of the Medicare Modernization Act. AHRQ was instructed as part of MMA to conduct research and dissemination on the outcomes, comparative clinical effectiveness, and appropriateness of health care items and services, including prescription drugs.

The goal of that initiative as part of MMA was really to provide patients, clinicians, and policymakers with reliable evidence-based health care information, which, I see, is important to be in the cornerstone of a patient-centered medical home.

So, comparative effectiveness research, as it was called in MMA, really focuses on patient-centered outcomes. The concept is to provide unbiased, objective, practical evidence-based information and, ideally, comparative information about drugs, devices, tests, surgery, and approaches to health care, to give clinicians and their patients really the information about the range of both benefits and harms, not focusing on just benefits or just harms, but really the balance of benefits and harms, to talk about the level of evidence, what is known, and also what is not known. The whole goal of comparative effectiveness research is really to be descriptive and not prescriptive—prescriptive; it does not tell you how to practice pharmacy, it is not meant to be a mandate or test, but it's meant to be a—to give you tools, not rules, so that you and your patients can make the best possible decisions about what's right for them.

And just quickly deconstructing two key points about comparative effectiveness, it's really designed to give you comparative information about all the available options, oftentimes when we read the literature, it's—the comparative information is lacking, it's also—it's often comparing an intervention to placebo, and we know in real-life settings that we're not in a situation where we're deciding between giving a person a placebo versus an active ingredient or an active drug; we're really thinking about the range of therapies that may be available.

And also literature is mostly focused on efficacy information, and not about effectiveness or really what is the true balance of benefits and harms in real-world settings outside of clinical trials.

The CER, or comparative effectiveness research, is also a central element to the health care reform legislation, the Patient Protection Affordable Care Act, and I point this out because a new institute has been established through the Affordable Care Act called the Patient-Centered Outcomes Research Institute, or PCORI. The law establishes PCORI as an independent, non-profit institute that will have public and private sector funding. PCORI will work with AHRQ and NIH to disseminate research findings and really continue the work that was established under MMA.

So, as PCORI gets set up over the next couple of years, you'll be hearing more and more about patient-centered outcomes research and CER, and new resources will be available through this institute.

I wanted to also point out this somewhat simplified framework that was published in an editorial in the *New England Journal of Medicine*, and, if you have time, this is a two-page article that was published in *New England Journal* that I think really helps our understanding about thinking about how health care decisions are made. The authors of this editorial pointed to the top panel, or panel A, which sort of is how we're trained in pharmacy to think about interventions. They argue that interventions are made in which we think about one threshold and one size fits all, but there's a threshold by which the net benefits outweigh the risk, and, if we see that threshold, whether it's a lab test or some kind of other clinical diagnostic measure, we automatically recommend care. And below that—below that threshold, care is often discouraged.

And they really agree thinking about a new model, and that's the second model labeled B here and which is really this large gray area, a large gray area of small benefit or uncertain net benefit, which they label as discretionary care. And, in this area, it really challenges clinicians to defer to patients about their preferences about care, about whether that benefit is important to them whether they—and really trying to quantify the uncertainty around whether patients will receive the full benefits of therapy. And, as we look at what comparative effectiveness research or patients in our outcomes research do—it really helps clinicians give—provide them with the tools to understand how much uncertainty there is around different care for individual patients.

The other point I wanted to recognize is that different decisions have different evidentiary needs, so most of our literature is focused on population-level decisions. For instance, decisions about drug coverage or clinical practice guidelines. And patients often have different levels of evidence or different outcomes by which they are looking to make their decisions. Often it's not the clinical outcomes that patients are focused on, but outcomes that we often like to call humanistic or quality-of-life outcomes.

So, keeping the patient in the center is important. We recognize that each patient is different, and what's different about them includes their life circumstances, their medical history, and clearly their values. And, when we look at the literature, oftentimes the literature doesn't recognize these differences. And, as I point out the resources that we're creating as part of the

Effective Health Care Program, this helps quantify really where—what we know and what we don't know about different therapies.

So, what is the Effective Health Care Program? There are three major components. There's an evidence synthesis component, which is under the program we call the Evidence-based Practice Center program. This is a program which systematically searches the literature, reviews the—reviews the quality of evidence and synthesizes it so that the reader knows the current state of art around a particular clinical question.

The second component is evidence generation. Oftentimes, when we do an evidence synthesis, we find that the evidence is often weak in certain areas. And so what AHRQ and NIH are doing is looking at where the evidence base is weak and trying to build new research studies to address those questions and to strengthen the evidence and reduce the uncertainty around different health care interventions.

And, lastly, the program consists of an evidence translation or dissemination center that we call the Eisenberg Center, which takes the products of the first two, the evidence synthesis program and the evidence generation programs, and puts them in different formats that are designed for clinicians, patients, and policymakers. And I'll focus on some of those today, too. I think those will be most useful to this audience.

This slide gives you—just an illustration of all the outputs of the program on the left hand and research reviews, which are the evidence synthesis. These are all available on AHRQ's Web site. The evidence reports are also available on the—on the Web site. These are usually co-published in medical journals; most commonly *The Annals of Internal Medicine* will co-publish these. We also have a product called the technical brief, which is a product that is designed to focus on new and emerging evidence in areas where we know there are relatively few studies, but there're often lots of questions about the new technology. And I'll give you examples of each of these in the following slide.

So, this slide gives you some really concrete examples of reports that we currently have done in the systematic review program. These are all available on AHRQ's Web site. We have a report on the comparative effectiveness of anti-psychotics in adults, we have a report on epileptic medications from patients with epilepsy, we're looking—have another report on pharmacotherapies for Crohn's disease, and so on down the list. So, this gives busy clinicians who want to know what is the current level of evidence around each of these clinical areas a resource that they can quickly turn to and have at their disposal when they're counseling patients or making consults with other health care professionals.

The technical briefs, which, again, are—help explain what is known and what is not known about new or emerging technologies, these could be new and emerging tests; they also tend to focus on devices, and often things that the evidence may never be really created very well. So, if you look at we'll—the one that we're doing on wheelchair mobility, there's not a lot of evidence, although there's multiple different wheelchairs out there, and for pharmacists who are—have durable medical equipment in their pharmacy or are consulting on that, you now are—know that there's not a lot of evidence on sort of different adaptations of wheelchairs and yet a lot of interest and understanding how you best fit the wheelchair with the person who's using it.

So, I'll point these out to you as examples. And, lastly, on this slide, I show you examples of new research. These are studies that are ongoing within the agency where systematic reviews have shown us that the evidence base is relatively weak. In open angle glaucoma, the study is looking at what happens after first-line therapy fails; we're looking at therapies for end-stage renal disease. We look not only at drug comparisons but also at devices and other kinds of technologies, so we have a study on drug-eluting and bare-metal stents, we're looking at PET scanning, ADHD, and risk of sudden cardiac death, and so on.

And what's in the pipeline? We have more than a hundred topics ongoing in evidence synthesis on future research and a large investment, as I said when I started my discussion, was made as a result of the Recovery Act to really provide all of these in a new research infrastructure that really provides all of these both in the short run as well in the—as well in the long run with the new PCORI Institute, which will receive funding to continue this initiative for the future.

The Effective Health Care Program recognizes that oftentimes the reports that we create are very technical and they have a lot of details. Some are really designed for research audiences, and, in order to really make them most useful to practitioners, we need to create what we like to call just derivative products to simplify the language in that for people who are not interested in reading, for instance, a hundred-page systematic review but really want the clinical bottom line, have tools that are available to them and that support them.

So, this slide gives you an example of the different derivative products that are created from a systematic review from faculty slide—faculty slide sets that are available for downloading for those who are teaching either pharmacy students or other clinicians; we have case studies, we have continuing education models that are available on the Web site. And, then, most importantly, which I'm going to talk really briefly about, are the consumer guides. I'm going to focus on the consumer guides because I think they're most relevant to people who are interested in using these in the patient-centered medical home or developing a patient medical home today.

These guides take the key messages from the EHC [Effective Health Care] reports so you know that those reports have scanned the literature, they've evaluated the literature, they've given you the current level of evidence, they're written in plain language in approximately eighth-grade level for our consumers. We do try to get it down below the eighth-grade level, but it's often challenging to do that. But we do our best. We have audio files, we pilot test them, and we really try to give you actionable information that's written to help inform the decisions that patients are trying to make with an emphasis on harms and benefits. All the products—the printed products are available in Spanish language for those who are serving Spanish-speaking populations, and we provide a little bit of cost information as well.

There is a companion for all the consumer guides, there's a clinician guide that's really written for our clinical audience. These guides follow very closely the systematic review and the consumer guide—the patient guide as well. These guides are available in print and online and audio versions as well. So, it's a nice set of tools that are clearly available to everyone now. We would love to have more and more pharmacists use these in their practice, and we'd love to get feedback on how they are used.

There's also a rule not only at the output stage, but at the input stage. We welcome nominations from practitioners on new research topics, on input on the questions that we are asking as part of the program, if we are making sure that we are covering the populations and the—that you—that you are serving as well as the clinical controversies or where there's clinical equipoise that we are addressing those key important questions.

We also invite comment on the reports before we finalize them to make sure that we got it right; so there's a public comment period of four weeks that we welcome public comment, and every comment is taken seriously and has to be responded to before we publish the final reports. And then we also involve clinicians—pharmacists and other clinicians—in making sure that, when we do the derivative products, that they've been focus group—tested and that they are clearly useful to you all.

Interest of time, I'm going to skip this slide and talk about this slide and what can comparative effectiveness research do for you. Our goal is really to help make sure that decisions are consistent, that they're transparent and rational. It's—the value of this information is really to clarify the nature of the disputes over practice and policy and help patients really make what's the best decision for them—that's important to them. So, two patients may come up with two different answers about what's best for them based on their knowledge of the harm and benefits of a therapy and what's important to them. But, most importantly, it really can help you and your patients work together as a team and make the decisions that are right for ultimately achieving the outcome that the patients hope to see in their care.

This is the link to where all the information is available. It's at www.effectivehealthcare.AHRQ.gov. All the reports, the audio files, the faculty slide sets, and the CE [continuing education] activities are available here. You can also get printed copies of these if you—if you'd like to have them in your pharmacies. You can get multiple copies available for free from the AHRQ clearinghouse either through sending a request to this 800 line, or there's also an e-mail request.

If you'd like to keep up to date on new reports that are coming up, you can sign up for the list serve, and this gives you where to sign up for those e-mail notifications. If you're working in a particular clinical area like diabetes or heart disease, you can sign up for those specific clinical areas, or you can sign up for all of the reports that are coming out. We don't ping people too much. We recognize people get a lot of e-mails. So, I think it's a couple e-mails a month actually, and it's a nice way to keep informed of what's happening and, if you nominated a topic, to see that topic go through the system.

So, with that, I'll turn it back to Dr. Shoemaker and open it up.

SHOEMAKER: Great, Scott. Thank you. Now we'd like to start with the Q&A session. We have received several questions, so we've tried to cull the ones that are similar. And I think several questions have been raised to try to offer—to allow the audience to get a better understanding of Vince's experience in a patient-centered medical home practice. So, Vince, if

you don't mind, if you could share a little bit more about kind of the—how your practice model operates.

I know you went into it a little bit at the initial visit and the flow. I'm talking about kind of the estimated length of your appointments—how much time you spend with patients, working with lab results, whether the physician or clinician sees the patient in advance of you or after you. And then, also, how your role or that practice connects to the pharmacist in the retail setting or in—that is, providing the dispensing of the medication.

WILLEY: All right. And if I—if I miss some of those sub-bullets, just yell at me and I'll try to clarify them.

So, as far as my visits go, so when the patients are scheduled with me, they're coming in specifically to see me at least for the beginning part of the visit. My visit—the initial visit is an hour in length. The follow-up visits average about a half-hour, although there is some variability around them. As far as the physician, the physician sees the patient at the end of the visit, so that's after I've gone through things with the—with the patient. After I've discussed my recommendations with the physician, they come in to finish off the visit.

And the question would be, Well, how long does the physician spend with the—with the patient? It really depends on what's going on with that patient. Sometimes it's as little as a couple minutes. Sometimes it's maybe up to 10 minutes. It's usually less than the time they would spend with their—if it was just a visit one-on-one with them. So, it is a lot less of their time, which is probably something good to talk to the physician because they think they're going to be seeing the patient over the same amount of time and they're going to have to block out their schedule.

The other thing I always do with the patients that unfortunately in the abbreviated timeframe we had didn't—wasn't able to get to was that the—I always talk with the physicians prior to seeing the patients. Either they send me what we call a flag—it's basically an e-mail within the electronic medical records system—to let me know why the patient was referred and what they want—you know, what they see the goals of going through the education with them. And also I'll try to grab them in the hallway if I can before that just to have a, you know, 20-second conversation. “Hey, Mrs. Jones is coming in. What do you want to make sure that we go ahead and hit?” So, that's kind of the time commitments for the visit.

As far as labs and how do we—how do we disseminate that information to the patient? Very, very variable, and I'm sure those of you on the phone who have experiences like this know it will vary. So, sometimes I'll be the one going over. So, if I recommend labs and they come in the next—you know come in whatever—four to six weeks afterwards, I'll review the labs with them then. Sometimes, depending on the urgency of it, you know, that'll be communicated out by the physician's staff or the physicians themselves. Sometimes it will be me, though usually not via phone. Usually I do my communications via the in-office visit. So, on occasion, I will have, you know, phone call visits with folks.

We're also implementing some secure e-mail type things as well that they're just piloting now at the practice. So, some of those transfers of lab results and such could be done that way as well, and I think you're starting to see practices do that.

I think there was a question about how do we interface with the community pharmacists. So, I have probably talked and done things with most of the community pharmacists who serve our patients. There're probably four or five pharmacies that we use a lot, so certainly I will, under the direction of physician, call in prescriptions at times, as well as one of the things that we're interested here in the college is could we do some kind of additional type training at the community pharmacy level, realizing that the patients are probably going there more than they're even seeing us at the—inside the medical home. So, that is something to be extended in the future, but I think is a—has a huge potential to be able to reinforce some of the concepts that we're—that we're talking about, you know, in the—in the office.

And, then, I think there was a question, Sarah, about working with other clinicians that. . .

SHOEMAKER: Yes, and thinking about the dispensing pharmacists or retail pharmacists that might actually dispense the medication.

WILLEY: . . .OK, yes. I think I—we had talked about that. You know, again, I don't—I have some discussions with them, but, you know, for the most part I think that's something that's got to—that's got to evolve at least where we are. You know, certainly, we'll have some discussions with them, "Hey, you know, we discuss with them how to do insulin injection technique. You know, if you feel comfortable could you, you know, review that with them?"

And then we also do, I know, other models will work with physician assistants and with nurse practitioners, so there's definitely some integration of care that can happen with other, you know, non-physician health care providers as well. What I'll say is we want to make sure as pharmacists we're involved in some of those discussions because a lot of times it goes, you know, just to the nurse practitioners or just to the physician assistants, and people don't necessarily think of us as pharmacists in these roles, so that's kind of where my ending slide was to say, "Hey, let's make sure that we're advocating for ourselves in those roles, as well."

SHOEMAKER: Great, thank you, Vince. Several questions raised by the audience may be appropriate for Vince or even Stephanie to answer and possibly Jan. We're asking about either recommendations of thinking about how to do this or knowledge of existing models of pharmacists either in retail settings or not in a clinic setting being linked to or part of a medical home or starting—kind of developing a medical home model.

WILLEY: I'd certainly be happy to take the first crack at that.

SHOEMAKER: Go ahead, Vince.

WILLEY: There's a—there's a lot of—there's a lot of different models that folks are doing out there. I know I've been working with several folks around the country who have either been approached by physician groups or are approaching physician groups proactively to work in this

collaborative-type care. And, again, a lot of these type services have been done over the years in a variety of settings like VAs and academic settings. I used to—you know, 15 years ago was in a large HMO setting where we—where we did a lot of these things.

So, I think what the medical home offers is a defined structure to do these in a way to help quantify what's going on and maybe some of those payment issues as well. So, I think—I think there's some—there're some opportunities. I know a couple of the people I'm talking with are working inside a physician's office a day or two a week. I know some of the ones that have been also successful have been referring to the pharmacies, though those models, at least the folks I've worked with, it's been a little more challenging because of how the patients flow and how is reimbursement handled for those services.

So, I can talk to my experience and some of the folks I'm working—you know, collaborating with around the country. It's been, you know, within physician offices. And one of the things, too, is hasn't been—again, in necessarily these huge group practices, but in smaller-type physician practices as well. So, it may be where folks have to have some flexibility in their schedules where they're—a couple of days a week at a—at a physician's office and a couple days a week in a community pharmacy. So, I think—I think some flexibility there will make this model go forward.

HAMMONDS: This is Stephanie. I just wanted to add on to that. As part of the Patient Safety and Clinical Pharmacy Services Collaborative, we have currently a requirement that at least one member of our team be a HRSA-supported organization. Now, that could be a Ryan White Program, it could be a 340B pharmacy at a community health center—what have you. But, in relation to that, specifically the 340B, we do have a lot of community pharmacies that participate as contract pharmacies. So, while we don't have as many community pharmacies in the collaborative as we would like to yet, that's a definite area for spread. But it's really in this area of the contract pharmacy for the 340B services that you see the community sector really becoming engaged.

And I lost my train of thought. I'm sorry. But, yes, it's mostly the 340B contract pharmacies, but we do wish to expand in other areas.

SHOEMAKER: Go ahead, Jan.

GENEVRO: Yes, one other resource for information about this would be the non-profit organization that's been started called the Primary Care Patient—or the Patient Center Primary Care Collaborative—sorry—PCPCC. And they're available at PCPCC.net, and they've had pharmacists present at a couple of their recent conferences.

And there was a pharmacist from New York and one from North Carolina who had affiliated themselves with small practices, and I think that the information that they presented at previous conferences would be available on the Web site and would be valuable just to hear about their experiences and some of the barriers of facilitators that are similar to what has been presented today. Thanks, Sarah.

SHOEMAKER: Great, thank you. Thinking about the future of the pharmacist in the medical home, there have been several pharmacy faculty that have raised questions about either recommendations of what they can be doing to think about preparing future pharmacists for a role in the patient-centered medical home, but also thinking about the experiential education side and where are these sites or how can one find out about sites and getting connected to sites hopefully with a pharmacist; if not, but also just a medical home. So, I'm opening it to the panel for ideas, thinking about how do we prepare future pharmacists for the patient-centered medical home.

HAMMONDS: This is Stephanie. I can take a stab at that. One of our most valuable partnerships that we've had in the Patient Safety and Clinical Pharmacy Services Collaborative is that with schools of pharmacy. I believe there are 110 schools of pharmacy in the United States, and we're currently partnered with 73 of them. And that's a really valuable partnership in that it creates win/wins. We have students that go to the various sites, and they help provide the latest and greatest up-to-date clinical information to many of the teams while they're on rotations, but—and we also provide them with sites to do so. So, the teams get the benefit of having that latest clinical information and the updates, and then, the teams—or, I'm sorry, the schools get rotation sites. So, it really is a win/win all around.

GENEVRO: This is Jan. I—in terms of finding out where patient-centered medical homes exist now from the perspective of demonstration projects and things like that, I encourage people to go to the pcmh.ahrq.gov Web site and go through the citations database to see which programs are active now. But, in terms of preparing pharmacists to practice in patient-centered medical homes, I think there are a couple of experiential types of learning that would be particularly valuable.

One is transdisciplinary or interdisciplinary team practice in which students actually have the opportunity to do internships or placements with students in other health professions. I know that this is of huge interest to people in the nursing and medical professions to try to get students to work together from the—from early in their training so that they understand what the nature of teams is and how to communicate well with each other.

And, then, I think a focus on some of the lifestyle changes and other types of health behavior change that Vince talked about building a relationship-centered practice is a really important aspect of the patient-centered medical home, but that's not something that's been highlighted in most health professions training, so I would really encourage a focus on communication skills and putting the patient at—patient and family at the center of care, which I think is something that Scott also mentioned and highlighted.

WILLEY: Yes, this is Vince. I couldn't echo more the sentiments that were—that were just spoken. One of the things I think is vitally important is someone who's in the practice of educating future pharmacists; we're real good at doing multiple-choice questions and evidence-based medicine. And I had a patient, you know, a couple weeks ago who—it was—on any multiple-choice question, it would be very clear that they would need to be on a statin, based on their cardiovascular risk. However, it took me a year to get that patient on a statin because of

some misconceptions they had about—and overvaluing the risk versus undervaluing the benefits in their particular situation.

So, I think some of that psychology, if you will, in working with patients is something that we need to do a better job of role modeling and formally training our students on. You know, they have to have that solid database. You know, they have to know, Hey, that patient is appropriate for a statin, but that next step is actually getting that patient to take that medication, which it's not just dollars and cents anymore. Most of the patients in my practice have health insurance and at least, you know, have—you know have some amount of payment that comes with that stuff, so it's not—it's about them going on the Internet and really looking at the risks and undervaluing the benefits.

So, I think that's something we need to do a better job in teaching our students.

SHOEMAKER: Great. Thank you, Vince. I think we'll just end with one final short question before we sign off. Several audience members posed a question about what's—and I think—I imagine Stephanie and/or Vince might be in the best position to answer this question, but several people are raising the question, What's the difference between what a pharmacist is doing in the medical home from what pharmacists have been doing in several practices, including medication therapy management?

HAMMONDS: This is Stephanie. We focus on integrating clinical pharmacy services into the patient-centered medical home and into primary care. And medication therapy management is an important part of clinical pharmacy services, but it is only one of many other components of what we call clinical pharmacy services. And I can provide it later. There is a link that is available to see the change package, which is our list of best practices. And it does give a detailed list of what are clinical pharmacy services. And it—and it, MTM, is really only one of 10 things on that list. What we're talking about is really disease-state management. So, I'll just leave it there.

WILLEY: Stephanie, I couldn't agree more. Though I will say to the folks who pose those questions, like I said, I know a lot of us have been doing these things for a lot of years and maybe we're just calling it a little bit different thing. Again, I used to work at an HMO—an integrated model with doing these services. And HMO kind of got a dirty name to it for a lot of reasons, but, you know, a lot of these services folks have been doing it. Maybe it's just repackaging it and calling it a different name. But, again, it's definitely more than just MTM and focusing on medications.

SHOEMAKER: Great.

HAMMONDS: Hi, this is—this is Stephanie. I just wanted to interject before we close, we at the PSPC, we are having an all-team call tomorrow, so if folks wanted to get a feel for what the types of things that we talk about with our teams on a monthly basis, please don't hesitate to reach out and contact me and we'll get you that information. It's going to be a pretty power-packed session tomorrow.

SHOEMAKER: Great, thank you, Stephanie. Well, unfortunately our time is up. If we did not have—if we did not get to your question today, we will try to respond by e-mail to all the questions, but you can also e-mail us at *EHC_pharmacists@ahrq.hhs.gov*.

And to access all the resources that Scott mentioned today and print them out, please visit the Effective Health Care Web site, or you can order them en masse for free through the AHRQ or AHRQ Publications Clearinghouse. Additionally, please visit AHRQ's Patient-Centered Medical Home Web site for more resources on medical homes. And I would like to thank all of our speakers today, and I would also like to thank our many participants for joining us today, and we hope the information presented here was informative.

As we conclude the Web conference, let me remind you that this event will be archived and available shortly on the Effective Health Care Web site. And, finally, as you leave the event, please answer the two feedback questions that are posed to you. Your feedback is very important to us as we develop more resources and plan similar events for the future.

Additionally, most importantly, to gain CPE [continuing professional education] credit for participating today, please visit www.pharmacists.com/education with the following voucher code—"E" as in echo, "M" as in Mary, "B" as in boy, 123. That is "EMB123." And follow the instructions on the site. And thank you again to our speakers and participants. Have a wonderful day.

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