Incorporating Collaborative Care Strategies to Enhance Linkage to Care and Treatment Initiation for Viral Hepatitis

CMEO Podcast Transcript

Faye Jackson:

Welcome to the second Snack program in our series on viral hepatitis. This activity is supported by an independent educational grant from Gilead Sciences Inc. After completing this activity, learners should be better able to incorporate collaborative strategies into practice to improve linkage to care and patient engagement for patients with HBV, HCV, and HDV.

Please note, this program was recorded prior to the November 2025 Liver Meeting held in Washington D.C. Key takeaways relevant to our continuing medical education program today are shown on your screen for reference.

Our international faculty includes experts in viral hepatitis prevention and management from Asia, France, Germany, Spain, and the United States.

Su Wang, MD, MPH, FACP:

My name is Dr. Su Wang and I'm the Medical Director for viral hepatitis programs and the Center for Asian Health at Cooperman Barnabas Medical Center, which is in New Jersey, USA.

George Lau, MD:

I'm George. I'm George Lau. I graduated from the University of Hong Kong in 1987. I have been working as a hepatologist for more than 30 … 30 years. And I also work in China, I'm a Chair Professor in Beijing and also Shanghai and I operate my private clinical trial center now in Hong Kong and working on advancements of drug discoveries and so on in liver diseases. And in addition, in the past few years we set up the Asian Pacific Association for the Study of the Liver (APASL) Viral Elimination Task Force and I was elected as the Chairman. And right now, I'm working on the guidelines for APASL around hepatitis B with lots of friends in Asia Pacific regions, more than 48 members from 26 countries or special administrative regions.

Heiner Wedemeyer, MD:

My name is Heiner Wedemeyer. I have the privilege to Chair the Department of Gastroenterology, Hepatology, Infectious Diseases, and Endocrinology here at Hannover Medical School in Germany. And at this center, we had a long interest in liver diseases but in particular in viral hepatitis.

Jean-Michel Pawlotsky, MD, PhD:

My name is Jean-Michel Pawlotsky. I'm a hepatologist by training, I became a virologist by profession and doing both jobs together as well as I could. Currently, I'm the Head of the Department of Virology and Pathology in the Henri Mondor University Hospital which is one of the major university hospitals in the Paris area. And I'm also Head of a research unit related to Inserm, our National Institute for Health, and the title of our research unit is Viruses, Hepatology, Cancers so we're right in the right topic.

Maria Buti, MD, PhD:

I am Maria Buti. I am a hepatologist based in Barcelona in Spain in Hospital Universitario Valle de Hebron. And I have been working in the field of viral hepatitis for many, many years, particularly in screening, diagnosis, linkage to care and treatment for hepatitis B, C and Delta.

Debika Bhattacharya, MD, MSc:

My name is Debika Bhattacharya. I'm a physician scientist who does infectious diseases and I'm based here at University of California Los Angeles (UCLA) in the great state of California in the United States. And my work is largely around directing a viral hepatitis program in a large integrated healthcare system, and then my research is focused on HIV and viral hepatitis co-infection, primarily HIV and hep B co-infection with a focus on pregnancy and outcomes within pregnancy. However, we do do a lot of hepatitis C screening, linkage to care, and treatment in our setting and I'm really excited to be able to talk to you all about it today

Faye Jackson :

Here now are Dr. Su Wang and Dr. George Lau.

Su Wang, MD, MPH, FACP:

You have … in Hong Kong or in the region, are there some collaborative care models or are you seeing this integrated into primary care? Or especially like in rural areas, how do we think we're going to be able to get hep B care to areas that don't have big academic centers? What kind of collaboration can we do with primary care or nurses or the barefoot doctors that we hear about in China?

George Lau, MD:

It does not exist anymore. That was a long time ago, that's before the Cultural Revolution. Now...

Su Wang, MD, MPH, FACP:

Or community healthcare workers, there are people who go out to the communities really warriors.

George Lau, MD:

We have programs from different places. Say for instance recently in the southern part of China, that's the Guangdong, that includes the bay areas with a population of about 150 million. And the government … the local government support universal screening and we aim at 70% of the populations with hepatitis B and hepatitis C and it is ongoing. Because screening itself is so cheap...

Su Wang, MD, MPH, FACP:

They're screening both hep B and hep C together?

George Lau, MD:

That's right. That's right. They are screening...

Su Wang, MD, MPH, FACP:

Okay. Great.

George Lau, MD:

It is ongoing and let's see how it goes. But as far as the guideline is concerned, we recommend universal screening. It's not too difficult even if a quick cut …

Su Wang, MD, MPH, FACP:

Are you guys doing rapid? Is there rapid testing or rapid diagnostic tests (RDTs)?

George Lau, MD:

We do. Rapid tests, me, I'm involved in the community healthcare, I have free groups called Hepatitis Free Generation which has been operating for 20 years. And we have donors and we run community screening, at home screening from time to time, it's a quick test. And I have to say that the quick test itself, the cost has come down so drastically. Go a quick test because at that time I had to purchase from a company from Australia, it costs about 15 U.S. dollars per test, quick test, one drop of blood. And now, we are talking about less than 5% of the original cost. It's very, very low. And you can also test for others too, it's not just HBV, it's a panel.

Su Wang, MD, MPH, FACP:

Yeah, I think that's why we're moving to this multiplex testing where it'd be nice to do HIV, hep B, hep C all together, right?

George Lau, MD:

HIV, SAR antigen, core antibody, anti-hepatitis B surface antibody (HBS), and also hepatitis C antibody so that's good. It's one drop of blood and then you can move on with the information. It's not 100% accurate but I think it's good enough, more than 95% accurate.

Su Wang, MD, MPH, FACP:

Right. Then you can have more community-based testing, we could even talk about potentially self-testing.

George Lau, MD:

We also go with the measuring of the blood pressure and so on.

Su Wang, MD, MPH, FACP:

That's nice. I think that's a way to do it, integrate it with other health things. Don't silo it as just hepatitis tests.

George Lau, MD:

Yeah, you're weight, you know? Your height and, that's your body mass index and maybe you should …

Su Wang, MD, MPH, FACP:

Yeah, do your body mass index (BMI) …

George Lau, MD:

And do the sugar too, random sugar...

Su Wang, MD, MPH, FACP:

Exactly, the blood sugar. There's also cholesterol fasting... I mean finger sticks too. That's the way to do it. Yeah, it's a whole person approach as opposed to...

George Lau, MD:

The liver, the fatty liver.

Su Wang, MD, MPH, FACP:

We're liver testing too, right?

George Lau, MD:

The blood pressure, you see is the whole package. I think this is the way to move and we want to really bring down the liver problems in Asia Pacific regions. I think this is the way to go, especially in China and in India, they have obesity and so on.

Su Wang, MD, MPH, FACP:

There's a lot of metabolic issues in Asia. Diabetes, hypertension, hyperlipidemia, it all affects the livers.

George Lau, MD:

Right. Exactly.

Faye Jackson:

And now let's join Dr. Wedemeyer and Dr. Bhattacharya to learn more about screening and linkage to care.

Heiner Wedemeyer, MD:

I think that's very interesting. As you mentioned, these general practitioners (GPs), they have to follow so many guidelines, so many recommendations on 20, 30, 40, 50 diseases. We have to educate them but also have to make things simple, not let's say to make things too complicated and then we miss people. And in this respect, you just mentioned that they need reminders, they need electronic support but also on our side. What strategies do you think may be effective in your settings in let's say shortening the time after screening, after the diagnosis of an infection has been made, and then treatment initiation? And again, in my setting, in our setting when I look here at my referring physicians, we lose individuals and time matters. The longer it takes, the highest the risk that in the end we lose an individual. Same for you?

Debika Bhattacharya, MD, MSc:

Yeah, 100%. And in the U.S., unfortunately, we also have a very fragmented healthcare system. You can receive care... Care depends when you're an adult on your insurance. And you can get care in community-based clinics, you can get care at large academic healthcare settings, you can get care in a county or a state setting, you can get care in the VA, the veterans affairs setting, you can get care in a tribal setting. It's really quite fragmented. And I think the largest barrier I will just say is insurance and lack of insurance in order to get care.

But I think anything that you can do to co-locate services where people are getting their screening for other comorbidities is going to increase or decrease time to initiation. For example, co-locating HCV screening and treatment in opioid use disorder clinic has been shown to be successful in increasing sustained virologic response (SVR) rates for sure when compared to standard of care. There was a cluster randomized study that was done in New York in opioid use disorder clinics where they actually also not just co-located care but they co-located telemedicine, telehealth care for HCV screening and linkage to care. And their SVR rates in the centers that were randomized to telemedicine was over 80%, whereas those who did standard of care was under 50%. And I think that is attributable to the attention to care that comes with telemedicine. But I would say co-locating care is probably one model.

The other model is that we really need to expand and be innovative about how we link people to care. One of the things that we do in our practice is... Well, two things. We have pharmacists who by and large handle most of our hepatitis C care, they're mid-level providers, advanced practice providers, they receive the same consults that we do. And in one pathway, not all of our treatment pathways, but in one of our treatment pathways in uncomplicated patients, those who do not have cirrhosis, those who do not have HIV, they can go to what we call an e-consult direct-to-treatment program which means that a pharmacist will review their record that obviously is discussed or signed off on by a physician. And then that person will then get hepatitis C medications, in this day and age, post-pandemic, mailed to them and then they start treatment. And we have found that certainly decreases time to initiation.

There, we're exploring two concepts there, one is expansion of providers using pharmacists and we're also using a way that we bypass the physical visit only where it's appropriate. Obviously, that's not appropriate for everyone, there are people that absolutely need to be seen. But for uncomplicated individuals, very low Fibrosis-4s (FIB-4s), treatment-naive, that has been an approach that we've used.

Heiner Wedemeyer, MD:

That's extremely interesting. And this shows to me that there is, in the end, no let's say one strategy fits all scenarios. We really have to adapt this on the background of the patient, on the... As you mentioned, on the insurance system, on other settings. But the next question from my side would be do you experience also cultural barriers? There may be a different if a patient is... You mentioned the persons who inject drugs, they have to be treated in a different way as if there may be a migrational backgrounds. I can assume that in California you have, in particular of hepatitis B, you have Asian-born patients but you may also have completely different let's say types of backgrounds, which at least in my setting when I see here in Germany, I have migrants who were born in either Eastern Mediterranean area or in Russia or in Africa. And let's say education, willingness to become tested, willingness to receive treatment is really different. And we need different types of information, we need different types of let's say talking to patients.

Debika Bhattacharya, MD, MSc:

Yeah, that's really interesting. One point that I really love that you've brought this up, Heiner, because I think this really highlights... I'm just going to put a plug in for research of course, but I think this really highlights the need to really do behavioral sciences research where we understand what the patient's perspective is. Because if we can't get folks to take medicine, then what is the use of developing all of these great products that we have? I just wanted to put a plug in for that.

Yeah, I think that's really interesting. For us, I think that in California... Hepatitis C and hepatitis B. In hepatitis B, it is true that those who are foreign-born have a higher prevalence of hepatitis B in the state of California. Largely I would say in my practice, a large academic healthcare setting, most individuals are actually highly educated, they are coming as post-docs, working in the technology sector and they're quite cognizant of the need to be screened. I think what becomes an interesting conversation is around treatment and the need for treatment in hepatitis B in particular.

I think in the HIV community... Obviously, HIV is a different disease, outcomes happened more quickly, you must treat. But I think we have not seen the same amount of awareness like we did for HIV or hepatitis B for example. And so, this acknowledgement that this is a chronic disease, it's a disease that at some point is likely going to need to be treated if they're not able to clear surface antigen by themselves, I think that is a new concept that really bears discussing. And treatment paradigms are evolving and so not everybody has heard about expanded treatment for hepatitis B, and there is some reluctance I will say for people to get treated for hepatitis B. And I don't know if that's cultural, I don't have that knowledge to say that it's cultural or not but I have noticed that. I was surprised actually as I started talking more and more about expanded treatment for hepatitis B, that I was meeting more resistance to chronic therapy than I thought. That's the hepatitis B sphere.

The hepatitis C sphere I would say culturally in terms of different countries, different regions, it's a lot more homogeneous for us for hepatitis C. But we do have persons who are homeless, we do have persons who are injecting drugs, we do have in the HIV community men who have sex with men. There are different ways to talk to... I do find that you have to use different techniques to discuss hepatitis C treatment there because everybody has different concerns. For somebody who's experiencing homelessness, their biggest concern is where am I going to put the pill bottle? And so, then thinking about what strategies you can use to alleviate that. For somebody who is injecting drugs, it's trying to understand is this the person who is injecting drugs but who is otherwise compliant with everything else and we can actually put on therapy versus somebody else who has a lot of other competing comorbidities? And so, I think those are the questions really that we are dealing with in terms of cultural differences.

Heiner Wedemeyer, MD:

It's very, very interesting, Debika. You mentioned the fear of becoming infected or being infected, maybe different from B versus C, but let's say also stigma of being infected. Do people or infected individuals talk about their infection? Do they feel a stigma? And we've been talking about hepatitis B that we may treat not in distinct settings but we may not necessarily treat let's say the gray zone patients. But I just said this morning, hepatitis B patient, intermediate viral load, not really a high FibroScan. And I said, "Okay, according to the new European guidelines, you are in the gray zone. We may not treat you immediately." But he was really fighting.

He said, "Okay, I feel it's being stigmatized with this infection. I have problems sexual life. In family, the risk of maybe there are slightly remaining risks of transmitting the virus. I want you to treat me now." Even though the

guidelines may say it's no immediate need to initiate treatment. Do you experience the same types of individuals? Is stigma an issue or we are making up stigma as one important thing which in the end for the individual patient is not that important?

Debika Bhattacharya, MD, MSc:

Well, again, I think it's patient-centered. So, it is what each individual patient I think is going to have a different answer to that. I do think stigma in hepatitis B is significant in part because in some parts of the world it is a test that may restrict their employment opportunities, particularly in healthcare, and so I think that becomes important. And then around childbearing age for a couple, I think that's where I've seen stigma be most apparent.

You know what I find interesting though is that when I start talking about the hepatitis B treatment question, I do get asked, "Well, you tell me that the viral load is going to go down but what about the other marker, the hepatitis B surface antigen? You're telling me that's going to remain positive probably still forever with current therapies or 1% a year loss." And that actually has an impact on them that I find surprising.

And I think that if we had treatments where we can actually get to functional cures, and I know you're doing a lot of the research that there are many drugs in development right now that are aiming for hepatitis B functional cure where you can hopefully lose... Well, the goal is to lose hepatitis B surface antigen. I think that we are underestimating how important that might be to patients because of the stigma of having hepatitis B surface antigenemia. But I do think it varies from person to person and I think it varies based on the context of their lives.

Faye Jackson:

Next, Dr. Wang and Dr. Buti explore access to screening and treatment in Spain.

Maria Buti, MD, PhD:

We have a national elimination plan for hepatitis C. These national elimination plans allow screening for everybody that likes to be or wants to be screening and also access to treatment, free access to treatment diagnosis and treatment. And I think this is very, very good because we have treated and we have cured a large number of patients with chronic hepatitis C. It's not the same for hepatitis B, it's a pity because this national plan, it's only focused on hepatitis C. It will be nice to cover both, hepatitis C and B. But we have a good vaccination program, all new births are vaccinated and also adolescents. And I can tell you that our population, Spanish population or people who were born in Spain are all vaccinated against hepatitis B at ages below 40.

Su Wang, MD, MPH, FACP:

Before 40? So, you do it for adults, you have adult vaccination policy along with the pediatric one, there's both?

Maria Buti, MD, PhD:

Yes, we have but for people with risk factors, with …

Su Wang, MD, MPH, FACP:

Ah, okay.

Maria Buti, MD, PhD:

But we have this general vaccination pediatric program for more than 40 years, that means that an important part of our population have been vaccinated against hepatitis B. We have the issue of migrants, migrants particularly for high and middle endemic countries for hepatitis B are not vaccinated or some of them are not vaccinated. But our local population, it's vaccinated because the acceptance of vaccination is very, very high.

Su Wang, MD, MPH, FACP:

Great to hear. No, it's really interesting to hear the differences in countries with acceptability of vaccines. And obviously you have a big migrant population too, that probably plays into some of where the burden is of hep B, right?

Maria Buti, MD, PhD:

Yeah. We have an important migrant population, particularly from South America because we speak the same language so this type of migration. But South America, it's not a region with a high endemicity for hepatitis B. But we have an important migration from Sub-Saharan Africa. And in Sub-Saharan Africa, the endemicity of hepatitis B and in some parts also of hepatitis Delta is very high, this is an issue now. Some of these illegal migrants with different languages with barriers to access to our healthcare system and the majority of migrants from these African countries are not vaccinated.

Su Wang, MD, MPH, FACP:

Yeah. Yeah. No, you guys have done great work in that population I know.

Faye Jackson:

And now, here again is Dr. Wedemeyer for a frank and candid discussion with Dr. Pawlotsky on linkage to care in France and Germany.

Heiner Wedemeyer, MD:

When we talk about simplifying regimens, everything starts with screening. We can only cure a disease, we can treat an infection only if the infection has been identified. And there has been a lot of discussions, population-based universal screening, cost-effectiveness of screening approaches differently for B, for C, and even for Delta with reflex testing. What are your thoughts on potential approaches, how to screen the populations? For example, for France, would there be a difference for high risk populations versus general populations? What are your thoughts?

Faye Jackson:

Before we continue, let's get our audience involved with an audience response question. Which of the following strategies is most effective in improving viral hepatitis case finding and linkage to care in France? Is it A,

implementing universal population-wide HBV and HCV screening as the primary national approach? B, relying on general practitioners to lead most viral hepatitis and treatment efforts? C, integrating combined HBV/HCV//HDV testing and reflex testing into existing high-risk service settings? Or D, focusing exclusively on point-of-care testing and dried blood spots without additional system level changes? Or select E if you're not sure.

And the correct answer is C, integrating combined HBV/HCV/HDV and reflex testing into existing high-risk service settings.

Let's return now to Dr. Wedemeyer and Dr. Pawlotsky.

Jean-Michel Pawlotsky, MD, PhD:

I can tell you what worked in France in terms of diagnosis and linkage to care. Universal screening did not really work and I think after recommending it that the French government is stepping back. What clearly worked is combined testing, testing HBV, HCV, HIV at the same time is in one offer for people who come for either virus or for another reason is something which worked very well. Reflex testing you alluded to is very important. When you have an HBsAg positive sample, you reflex test for HBV DNA, you reflex tests for HIV RNA when you're anti-HIV positive, and you reflex test for HDV antibodies when you're HBsAg positive. Point of care test and dry blood spots have been very helpful in certain settings. And most importantly, integration of screening and diagnosis into existing services which are used by high-risk groups is something that is very helpful. Opioid substitution clinics, needle syringe programs, sexual health clinics, migrant centers, HIV clinics, prisons, detention centers obviously.

I think one point is community outreach and culturally adapted campaigns also because there are marginalized groups with different cultures, different languages. Decentralizing testing is important, involving non-specialists from the primary care physicians, nurses, etc. All this I think has been working in France and we have screened and detected many, many patients. Patients are remaining undiagnosed, especially in these high-risk or vulnerable or excluded populations. And I think by continuing integrating all these different approaches, we can really make progress.

It is possible but we have not achieved it. I think the main barriers currently that limit expansion is the incomplete reflex testing issues in prison implementation, the issue also of HDV which is not well-known by people and often forgotten, and also some data gaps and social structural barriers. And we have a lot of new patients who are migrants coming from various parts of the world, the language but also the culture. It's easy to resolve the problem with the language, just an interpreter. But the culture of the people may be important in the way they take diagnosis, treatment, etc. And we have to take care of this, it's a major barrier I believe.

Heiner Wedemeyer, MD:

And then in France you mentioned all the different groups, cultural barriers, but also the guys taking care about certain change problems, programs. In all settings, these people involved in taking care about human beings, individuals are really aware of the importance of viral hepatitis. My impression is that let's say 5, 10 years ago there was more noise in this field that some of these people being involved in these systems are less aware about the issue of viral hepatitis than it had been 5 to 10 years ago.

Jean-Michel Pawlotsky, MD, PhD:

I completely agree. I completely agree. It's probably partly our fault because when you say we've solved hepatitis C, we've solved hepatitis C, we've solved hepatitis C repeatedly and we're happy that we had options, we had simplified treatment, we had very high cure rates, nobody is interested anymore, including our young colleagues who are not interested in treating patients with hepatitis C because they think it's no longer a problem, it's been solved, etc. There's also I think some misunderstanding around HBV drug development, HBV cure which was announced, which is not possible and we're evolving in different directions with different potential drugs. And Delta is really ignored very globally. And I remember when I was a medical student, we knew that Delta was with HBV, we knew that we had to reflex test for Delta virus. And at some point and for any reason, I think it's been forgotten by doctors and there's a lot of work to do to bring it back into their thoughts.

Yes, I completely agree. I think hepatitis is no longer popular, although we have a vaccine for HBV and HDV, although we have good treatments for these three viruses now, we have to probably revive it.

Heiner Wedemeyer, MD:

And then therefore, I think also programs like this are important. We have to keep going. Just one remark regarding my country, Germany, I was really surprised. Obviously, we were all focused on risk-based screening procedures, targeting all the group you just described. You know that in Germany there has been some kind of population-based, not screening but offer of testing being introduced in fall 2021 that every German individual above the age of 35 could attend a general health checkup, undergo screening for viral hepatitis once. And initially I was really skeptical because who is attending this general health checkup, it's not the risk groups, it's not the guys with the language barriers, etc. And I was skeptical whether this would really work.

But it worked. We had a dramatic increase in newly identified cases both for hepatitis B as well as for hepatitis C. The newly diagnosed rates for HBV in this group were five times as high in 2022 as compared to pre-pandemic areas in 2019, which showed to me that there's really many patients undiagnosed out there. And it's almost an ethical responsibility to identify individuals as risks who may suffer from a disease but who also may transmit an infection. Population-based efforts I think now should be implemented throughout Europe in my view.

Jean-Michel Pawlotsky, MD, PhD:

Yeah, I agree with that, with one point which is that Europe anyway is heterogeneous in terms of infected populations. Obviously, we have high-risk populations in common, people inject drugs, prisoners, these ones we have everywhere. But I think a point that plays a role is that different forms of immigration we have in different countries, we do not have the same people coming from the same countries with same risk factors and this has to be taken into consideration. I completely agree with you that there are some parts of the global population that are accessible by screening campaigns like the one you mentioned and we had the same recommendation in France. I'm not sure we were as successful as you were but we were somewhat successful. But then in every country we have to understand where are the pockets of HCV, HBV, HDV-infected patients that remain and that we should specifically target, and this is part of public health actually.

Heiner Wedemeyer, MD:

Who is treating viral hepatitis in France? Is it the GPs? Is it the infectious disease specialists? Is it the hepatologist? Who's taking care about these patients and the usual topic, linkage to care, linkage to treatment? And so, where are the patients lost in France?

Jean-Michel Pawlotsky, MD, PhD:

In theory, everybody can prescribe viral hepatitis drugs including general practitioners. This is in theory. But in practice, and that was mostly the case for hepatitis C because hepatitis B I think they partly manage, but we thought that they would be really interested in treating hepatitis C and they're not. The vast majority of patients in France may be different in Germany, you'll tell me, and in other countries. But in France, the vast majority of patients are still taken care of and treated in a specialist pathway which can be either hepatologist or infectious disease physicians. There are a few general practitioners who prescribe but they have become specialists in fact. They are liver general practitioners, they have patients. And so, my opinion has been a little bit disappointing.

That said, it's not been a problem in our elimination program. We keep the target and we are really on track so it's not been something blocking for the elimination targets, but it's been a surprise for all of us because we have been advertising GPs taking care of these patients and they have not been interested in. To their credit, they have a lot, a lot, a lot of diseases taken care of and hepatitis is one among many, many. And obviously they are probably more interested in hypertension, diabetes, and very frequent diseases than in viral hepatitis.

Heiner Wedemeyer, MD:

Yeah. In my country, I completely agree with your last point. The GPs have to take care about so many issues, so many diseases, they have to know 100 guidelines and viral hepatitis not their main problem. And that leads me to the main point because a patient with viral hepatitis needs time, they need to explain the disease. And obviously if you have to teach students or young fellows these days, the important point is patient engagement and shared decision-making, you have to involve your patient. And I think for the GPs, if you really want to involve your patient, you need knowledge and expertise also in the details. And that's probably our jobs, the experts to explain the importance of a viral hepatitis or an infection and with all the consequences behind that. I don't know. At least for me in Germany, this is really an issue. And patients who are infected with the hepatitis virus, they have questions.

Faye Jackson:

Here are our SMART goals for today. One, implement combined testing within routine workflows, adopting at least one integrated screening approach. Two, reduce time from diagnosis to treatment by adopting models such as co-located services, telemedicine, or pharmacist-led pathways. And three, increase collaboration with primary care, pharmacists, and community health workers.

Thank you and have a nice day.

