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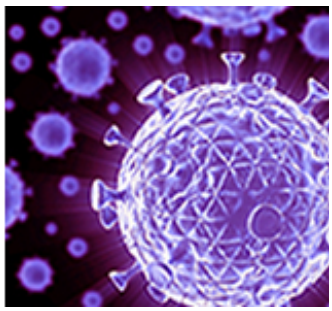

VOLUME 1 — ISSUE 2: TRANSCRIPT

Featured Cases: Screening and Management of Older Patients with HIV Infection

Our guest author is Kelly Gebo, MD, MPH, Associate Professor of Medicine and Epidemiology at the Johns Hopkins University School of Medicine.

After completing this activity, the participant will demonstrate the ability to:

- Discuss the screening of older patients for HIV risk factors,
- Explain the issues of polypharmacy in older HIV-infected patients, and
- Describe the impact of disclosure on the older HIV-infected patient.

This discussion, offered as a downloadable audio file and companion transcript, covers the important issues related to *Screening and Management of Older Patients with HIV Infection* in the format of case-study scenarios for the clinical practice. This program is a follow up to the Volume 1, Issue 1 *e*HIV Review newsletter—Screening and Management of Older Patients with HIV Infection.

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The presentation today will not include discussion of any off label or unapproved uses of drugs or products.

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Faculty Disclosure
Kelly Gebo, MD has disclosed that she has no relevant financial relationships with any commercial entities specific to her presentation.

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Next Issue: Linkage and Retention in HIV Medical Care

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MR. BOB BUSKER: Welcome to this first *e*HIV Review Podcast.

*e*HIV Review is presented by The Johns Hopkins University School of Medicine. This program is supported by educational grants from Abbott Laboratories, Boehringer Ingelheim Pharmaceuticals, Inc., and Bristol-Myers Squibb.

Today's program is a companion piece to our eHIV Review newsletter: *Screening and Management of Older Patients with HIV Infection*.

Our guest is that issue's author, Dr. Kelly Gebo from The Johns Hopkins University School of Medicine.

This activity has been developed for infectious disease specialists, primary care physicians, nurse practitioners, and other health care practitioners whose practice involves treating HIV patients.

There are no fees or prerequisites for this activity.

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Learning objectives for this program are, that after participating this activity, the participant will demonstrate the ability to:

- Discuss the screening of older patients for HIV risk factors;
- Explain the issues of polypharmacy in older HIV-infected patients; and
- Describe the impact of disclosure on the older patient infected with HIV.

I'm **BOB BUSKER**, managing editor of eHIV review. Our guest today is Dr. Kelly Gebo, associate professor of medicine and epidemiology at The Johns Hopkins School of Medicine in Baltimore, Maryland.

Dr. Gebo has disclosed that she has no relevant financial relationships with any commercial entities specific to her presentation.

Her presentation today will not include discussion of any off-label or unapproved uses of drugs or products.

Dr. Gebo — welcome to this eHIV Review Podcast.

DR. GEBO: Thank you for inviting me to be here.

MR. BUSKER: In your newsletter issue, you reviewed important new data about the epidemiology of HIV among older patients, their response to ART, and key issues involved in the management of polypharmacy. Today I'd like to focus on how that new information can be applied in clinical practice. So please start us out with a patient.

DR. GEBO: The first patient is a 72 year old female who presented to her primary care physician with a diagnosis of failure to thrive and fatigue. The patient had been at her usual state of good health until three months before presentation, when she notice a 10-pound unintentional weight loss. The patient had also been incredibly active in her community and was noticing difficulty in maintaining her activities of daily living, including volunteering in her great grandson's classroom.

Her primary care physician ordered extensive laboratory tests which revealed a mild anemia and a protein gap. He also conducted an evaluation for malignancy, which included chest, abdomen, and pelvic CT and a colonoscopy, all of which were negative.

Her medical history was significant only for mild hypertension and cataract surgery. Her only medication was low dose hydrochlorothiazide. The patient lived with her daughter, did not use drugs and was not sexually active. She did not use alcohol or tobacco. She was very active in her great grandson's classroom and was an active member of her church community. The patient's husband had died a decade earlier of pneumonia.

After extensive testing, HIV was diagnosed in this patient . Her CD4 count was 57 and her viral load was over 100,000. Much to the patient's and her family's surprise, her RPR also returned positive at a titer of 1 to 8.

MR. BUSKER: What do you consider the most pertinent factors about this case?

DR. GEBO: This is an interesting case. This patient had classic signs of HIV, including failure to thrive and fatigue, that would have immediately initiated an HIV testing if she had been 40 years younger. Interestingly, at the advanced age of 72, the CDC guidelines don't recommend screening for HIV; however, the patient's history of her husband dying earlier of pneumonia triggered the primary care doctor to send off the HIV test.

The patient did not have classic HIV risk factors as she was not sexually active, nor had she used injection drugs in the past. Of note, most older patients do remain sexually active. In fact, a study from the *New England Journal* revealed that many men reveal sexually active at older ages. A recent study revealed that 84 percent of men between the ages of 57 and 64 were sexually active, and almost 40 percent of men between the ages of 75 and 85 were sexually active, defined as having sexual intercourse within the past 12 months.

With the use of erectile dysfunction drugs, men are remaining sexually active at much older ages than they were previously. Women are often thought not to be at risk of pregnancy so they are not using condoms to protect themselves. Given this increased sexual activity, providers need to be comfortable asking their older patients about their sexual history as well as their sexual risk factors so they can provide appropriate HIV testing and advice on protecting themselves from additional sexually transmitted infections.

MR. BUSKER: Just a note to our listeners — that a link to the New England Journal study Dr. Gebo just mentioned can be found in the transcript version of this podcast.

So Dr. Gebo — Tell us about the potential implications this patient's advanced age might have on her HIV outcomes.

DR. GEBO: For this particular patient, there are some significant ramifications of her advanced stage of disease. Older patients are more likely to achieve immunosuppression at diagnosis because the HIV is often diagnosed at advanced stages. Providers do not screen for HIV in older patients as well as we do in younger patients, and often this means that HIV is diagnosed in older patients when their CD4 count is well below 200.

Older patients also do not respond well to antiretroviral therapy once initiated. Although they are more likely to achieve virologic suppression than younger patients, they have a smaller increase in their CD4 count after starting antiretroviral therapy. In fact, an article by Keri Althoff, et al, showed that older patients have smaller improvements in their CD4 counts up to two years after starting antiretroviral therapy when compared to younger patients. This suggests that even starting antiretroviral therapy may not improve the patient's long-term outcomes as well as it would in a younger patient.

Therefore, the recent CDC guidelines have recommended starting older patients on antiretroviral therapy as soon as they present to care. This is an important change in our recent management of the older patient infected with HIV.

MR. BUSKER: For the patient you presented to us: when should ART be started, and what type of therapy would you recommend starting with?

DR. GEBO: That's an interesting question. Given the decreased response with CD4 cells in older patients, the recent DHHS guidelines have suggested starting older patients as soon as they present for HIV care. This means we no longer wait for the CD4 count to fall below 500 and if they present with a higher CD4 count, they should still be started on antiretroviral therapy as soon as possible.

When selecting an antiretroviral therapy for older patients, it is important to think about their comorbid conditions. Patients who have renal insufficiency or other risk factors that place them at risk of renal insufficiency, such as hypertension, diabetes, or cocaine use, may not be the appropriate candidates for tenofovir-based therapies.

In addition, we know that many antiretroviral therapies increase the risk of hyperlipidemia and diabetes. Therefore, when managing the older patient with HIV, it's important to think about their comorbid conditions when selecting their first regimen. In addition, it's important to think about side effects and toxicities of antiretrovirals once they're started, and patients should have aggressive screening to make

sure they don't develop these toxicities, and if they do, discontinue their antiretrovirals or change their regimen to avoid long-term toxicity.

MR. BUSKER: What other important points does this case illustrate?

DR. GEBO: Appropriately, at the time of HIV diagnosis, the patient was screened for syphilis. Her RPR returned positive at 1 to 8. One of the diagnoses in HIV that must be screened for is neurosyphilis. Given the patient's unknown history of syphilis, it would be appropriate to do a neurologic examination and if she had any neurologic signs she should receive a lumbar puncture to rule out neurosyphilis. If her LP is positive she should have treatment with IV penicillin. If the LP is negative, the patient can receive intramuscular penicillin for treatment of late latent syphilis.

MR. BUSKER: How was this patient treated, and what were the outcomes?

DR. GEBO: After an extensive discussion with our clinical staff, we had a long conversation about whether or not this patient should be treated . She was elderly but she was actually doing remarkably well in terms of comorbid conditions and she was complaining significantly of fatigue and failure to thrive, which we thought were symptomatic of her HIV.

Therefore, we decided to begin antiretroviral therapy with a four-drug combination. The patient was subsequently started on AZT, 3TC, abacavir and ritonavir boosted lopinavir. Unfortunately, she soon developed hallucinations and daughter found her standing in the kitchen trying to stab at a ghost with a knife.

We immediately stopped her efavirenz and replaced it with Kaletra. Unfortunately, the patient developed life threatening hepatitis and we then had to stop her antiretrovirals again.

We had another extensive conversation with the family and we felt that stopping antiretrovirals was probably in the patients best interest, given that she had two significant side effects with significant associated morbidity.

The patient was adamant in her desire to be treated because she wanted to achieve her activities of daily living and therefore asked for us to consider initiating antiretroviral therapy one more time. Again, we brought this case to our conference and we discussed the pros and cons of starting antiretroviral therapy and decided to give her one more try.

We decided to start her on abacavir, 3TC and atazanavir. Remarkably, the patient became undetectable within three months, her viral load remained undetectable, and her CD4 count rose to over 400. The patient did very well for three years going back to volunteering and becoming increasingly active in her church community. She died in her sleep recently at the age of 98 or unknown causes.

MR. BUSKER: Thank you, Dr. Gebo. Let's move onto another patient now, please.

DR. GEBO: The second patient for today is a 63 year old African-American female who has been infected with HIV for approximately 10 years. She has done remarkably well on her antiretroviral therapy, with a CD4 count that has been over 500 and a viral load that has been undetectable at less than 50 copies. In fact, her most recent CD4 count was 511 and her HIV1 RNA was less than 20 copies.

Her medical history is significant for hyperlipidemia, hypertension, chronic hepatitis B, osteoarthritis, a recent diagnosis of lung cancer that required both lung removal surgery and chemotherapy and radiation from which she's recovered.

The patients medications are tenofovir, FTC, ritonavir, atazanavir, entecavir, hydrochlorothiazide, pioglitazone, lisinopril, aspirin and atorvastatin. Unfortunately, this is over ten pills a day for this patient, and she has significant difficulty maintaining this every day.

Of note, her BMI is 30, her most recent systolic blood pressure is over 140, and her hemoglobin A1C is 9.5.

MR. BUSKER: This sounds like a relatively complicated case. To your mind, what are the most important points?

DR. GEBO: This patient is actually doing remarkably well from an HIV perspective. She's been virologically suppressed with a high CD4 count for over ten years and has done well despite being on radiation therapy and chemotherapy. Unfortunately, she is not doing well with management of her comorbid conditions.

She has poor diabetic control, an elevated BMI, and high blood pressure. All of these are symptoms of her not being able to take her complicated medication regimen appropriately.

MR. BUSKER: This patient has so many comorbid conditions. Do we have any understanding of why?

DR. GEBO: A number of studies have suggested that older patients with HIV acquire comorbid conditions at an earlier age than sero negative age matched controls. In fact, a recent study from the Swiss cohort showed that approximately 50 percent of patients infected with HIV under the age of 50 have no comorbid conditions, but approximately 75 percent of patients who are age 65 and over have at least one comorbid condition, and approximately 10 percent have three or more comorbid conditions in addition to their HIV management.

It's unclear if this is the result of premature aging, advanced age, or toxicity from antiretroviral treatment. A number of studies are currently ongoing to figure out why older patients with HIV develop comorbid conditions so commonly.

There are many things that we could do to help this patient optimally manage her HIV and her other comorbid conditions, and we need to think about that when we manage her HIV.

A number of nonpharmacologic interventions could help her, including diet, weight loss programs, and improving her exercise, potentially water aerobics programs, given her osteoarthritis.

In addition, the patient is a current smoker and given her recent history of lung cancer and predilection for cardiovascular disease, tobacco cessation should be a high priority when managing her other non-HIV related conditions.

In addition, there could be potential interventions to help reduce toxicities, including switching her ART medications if she is likely to develop diabetes from her antiretrovirals.

MR. BUSKER: Something that struck me from the presentation was this patient's pill burden. What can be done to help her with that?

DR. GEBO: This patient is on a significant number of medications, ten pills per day. She had difficulty taking all of her medications at one time and when we sat down and looked at her regimen we were able to take some of her pills to be taken in the morning and some of her pills to be taken in the afternoon, which certainly helped with her adherence.

In addition, we got her family involved with helping her because we have found that family support is always helpful when trying to help patients with improving their adherence.

In addition, it is important to address in nonthreatening ways why she may have been having difficulties taking her medications. For some patients, cost is a significant issue, and as patients age and are enrolling in Medicare, this is something we need to keep in mind.

In addition, there could potentially be drug/drug interactions or side effects or toxicities she's experiencing which may affect her adherence to these medications.

In addition, many patients are on multiple times daily dosing regimens which can complicate their adherence to these antiretrovirals, as well as their other medications used to treat comorbid conditions. Therefore, we must be cognizant when prescribing antiretrovirals and other medications about the frequency, as well as the drug/drug interactions of these medications.

Finally, it is important to try to keep the medication regimen as simple as possible. Reducing the number of pills and reducing the number of times per day that patients have to take their medications can significantly improve adherence. As providers, if we can do this we can significantly improve long-term clinical outcomes.

MR. BUSKER: Let's look at her pill burden from a different perspective. Does she need to take all these medications? And if not, how would you determine which ones can be stopped?

DR. GEBO: This is a very important question. Particularly when this patient was undergoing chemotherapy we did a strict evaluation to see which medications were essential for her and which ones could potentially be stopped, given the significant nausea she had with her chemotherapy. We kept her HIV and her hepatitis B drugs going; however, we did give her a break in managing her hyperlipidemia and

with her aspirin therapy. This reduced the overall number of pills the patient was taking per day and significantly improved her adherence to the other one. After her chemotherapy was stopped and she had improvement in her nausea, we were able to restart all the medications without any difficulty.

I think as providers we need to evaluate at each visit how many medicines the patient is taking, are they all essential and are there any medications that could potentially be stopped without significant harm to the patient.

MR. BUSKER: We'll return with Dr. Kelly Gebo from Johns Hopkins in just a moment.

DR. RICHARD MOORE: Hello. I'm Richard Moore, Professor of Medicine in the Divisions of Infectious Diseases and Clinical Pharmacology, and Director of the Moore Clinic for HIV Care at Johns Hopkins University. I'm one of the Program Directors of HIV Review.

*e*HIV Review is a combination newsletter and podcast program delivered via e-mail to subscribers. Newsletters are published every other month. Each issue reviews the current literature in areas of importance to infectious disease specialists, primary care physicians, nurse practitioners, and other health care practitioners whose work/practice includes treating HIV patients

Bi-monthly podcasts are also available as downloadable transcripts, providing case-based scenarios to help bring that new clinical information into practice in the exam room and at the bedside.

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MR. BUSKER: Welcome back to this eHIV Review podcast. I'm Bob Busker, Managing Editor of the program. Our guest is Dr. Kelly Gebo, Associate Professor of Medicine and Epidemiology at the Johns Hopkins. And our topic is Screening and Management of Older Patients with HIV.

We've been discussing how the information Dr. Gebo presented in her newsletter issue can be translated into clinical practice. So to continue along those lines, Dr. Gebo — please bring us another patient.

DR. GEBO: Our next patient is a 77 year old female who has had HIV for approximately five years. Her most recent CD4 count is 500 and her viral load has been undetectable most of the time; however, we did notice that she had several blips per year, often occurring around the holidays.

The patient's medical history is significant for mild hypertension and an arrhythmia with AICD placement and depression. The patient's medications are tenofovir, FTC, efavirenz, carvedilol, hydrochlorothiazide, paroxetine, and pravastatin. She's the caretaker for her three grandchildren. Her husband died in 2008. She uses no tobacco, alcohol or drugs and is currently working two jobs so that she can have enough money for food for her three growing teenage grandchildren.

Her family is unaware of her HIV diagnosis and this significantly affects her adherence to antiretroviral therapy. The patient is fearful that her family will find out her diagnosis, and she has been unwilling to discuss it with her family. When she travels to her daughter's house for the holidays, the patient takes one pill bottle with all of her pills in it and labels it "blood pressure pills."

MR. BUSKER: Interesting patient dynamics, Doctor. What was your approach to this case?

DR. GEBO: This patient is very interesting in that her CD4 count is elevated; however, she is not being optimally managed. She's had multiple virologic blips, most often after visiting family from out of town. On further questioning, the patient admits she puts all of her pills in a container labeled "blood pressure" and takes them randomly while out of town so that her family does not know her condition.

The patient reports that she is very afraid of her family finding out about her diagnosis and removing her grandchildren from her care. After multiple discussions with the patient, she agrees to have a joint family meeting where we disclose her HIV status.

The patient and her daughter came into the exam room and we had a long conversation. I asked the daughter why she thought her mother was presenting

for care, and she said this is where she has her blood pressure and her high cholesterol treated. I agreed and then asked her if she knew any other medical conditions her mother had. The daughter said no.

Ultimately, I disclosed that the patient had HIV in addition to her hypertension. The daughter seemed non-fazed by this entire experience. The mother turned to her and said you knew I had HIV, and the daughter said, of course we knew you had HIV, dad died of HIV about ten years ago, we all assumed that you did, why did you hide it from us?

At this point the mother and daughter began to cry and it became entirely clear to the mother that both the daughter and her family knew about her diagnosis. After this point, the patient was far more adherent to her antiretroviral therapy, the family became engaged in helping the patient to develop both advanced directives, and an end of life care plan for when she ultimately died.

I addition, it allowed for discussion about what's to happen with the grandchildren at her death. This was significantly relieving to the patient and her family because for the first time they were able to have open conversations that led to both the development of end-of-life treatment care plans, which were important for me to know, as well as improved discussion with the family, and ultimately improved clinical outcomes because the patient was able to discuss and disclose her HIV status with her entire family.

As you can imagine, we were all feeling very relieved by the time we exited the room. Disclosure is an important issue with older patients infected with HIV. They are often reluctant to disclose their HIV status because they are afraid of being discriminated against by their local communities or by their families. They're afraid of losing contact with their children and their grandchildren, and we have found that families are far more supportive of the diagnosis once it's made than the patients are thinking it will be. In fact, we've developed patient support groups for our patients who are over the age of 50 to help them disclose their HIV status to their families and have found this to be a very helpful group of people to help our patients with this important conversation.

Ultimately, we have found that disclosure is significantly improved and helps with both their current management as well as their end of life care. I would encourage providers to have these conversations when patients are well and to try to help patients develop conversations with their family so that disclosure can be made about hospitalization or end-of-life care to be determined when families may not know their ultimate HIV status.

MR. BUSKER: An excellent illustration. What was the final outcome with this patient?

DR. GEBO: Remarkably the patient has been virologically suppressed 100 percent of the time since this disclosure. The family has been very engaged in helping the patient with her HIV status and with managing the grandchildren which was difficult financially for her before.

Ultimately, I think this conversation has improved both the patient's clinical wellbeing, as well as her psychosocial well-being and has been very helpful for me as a physician, because now I have not only the patient, but her family to rely on for providing additional information for this patient. It also helped with dealing with medical power of attorney and advanced directives before a catastrophic illness occurred, and I think ultimately this will help the patient with her long-term mental well-being because she knows that her end of life wishes will be met when needed.

MR. BUSKER: Thank you, Doctor. Please bring us one last case.

DR. GEBO: The last case today is a 77-year-old Caucasian gentlemen who has had HIV for over 20 years. He's done remarkably well with his antiretroviral therapy. He has a CD4 count of over 750 and has been virologically suppressed for over 15 years, with his most recent viral load being less than 20 copies.

His medical history is significant only for mild depression and hepatitis C infection. His current medications are abacavir, lamivudine, ritonavir, and atazanavir.

The patient lives alone, he's divorced. He has sex with other men. He has two children and four grandchildren whom he visits regularly. He uses no tobacco, occasional alcohol, and has rare crack use.

He had done remarkably well until January, 2011, when there was an ice storm in Baltimore and he went out to walk his dog. Unfortunately, he slid on his stairs, fell down and broke a number of bones requiring a prolonged hospitalization.

MR. BUSKER: And the most important points of this case, Doctor?

DR. GEBO: Well, this patient has been optimally managed from an HIV perspective with long-term virologic suppression and immune reconstitution on a well-tolerated regimen. He's had optimal lipid management, his blood pressure is well controlled, and he is not using any tobacco.

Unfortunately, he is susceptible to other comorbid conditions because of his increased age and potentially because of his HIV infection. In addition, he is continuing to use crack cocaine which is putting him at high risk of nonadherence to his antiretrovirals, as well as other significant comorbid conditions.

MR. BUSKER: This patient does have some high risk behaviors. What can you advise clinicians about how to best screen patients for those?

DR. GEBO: That's a very important question. I encourage providers to ask all of their patients between the ages of 12 and 112 about any sexual activity. Are they engaging in oral, anal or vaginal sex with men, women, or both, and are they using any type of protection when having these activities. I also encourage providers to ask about alcohol use, tobacco use, and any drug use.

This patient is 77 years old and would not be one that you would automatically think of as using crack cocaine; however, when I asked he readily admitted it. I think as providers we often are uncomfortable asking people who look like our parents or grandparents about sexual activity or injection drug use, and until we become comfortable with it, patients will never be comfortable.

Once we are comfortable, ourselves, asking in a very, nonthreatening, nonjudgmental way, patients often provide answers which are very helpful and can help improve the delivery of the care that we provide to these patients.

This patient appeared to be low-risk. He was doing well from a laboratory perspective; however, on further questioning, his social history revealed both unprotected anal intercourse and crack use. Approximately 40 percent of men over 75 report being sexually active, and this number is likely to increase with the use of erectile dysfunction drugs. Therefore, it's very important for all of our providers to be comfortable when screening patients on their sexual and drug history, and it is also imperative to intervene and have services to offer our patients who are engaging in these high risk behaviors.

MR. BUSKER: This patient had some serious injuries from his fall. Do you think his HIV status or his comorbid conditions might have contributed to the severity of those injuries?

DR. GEBO: It's interesting. Older patients infected with HIV have been shown to be at risk for both osteoporosis and fractures, and a number of studies suggest that both age and HIV infection may predispose patients to being at increased risk of fractures.

Older patients should be screened for osteoporosis, in fact, current recommendations are for DEXA screening for all postmenopausal women, as well as men infected with HIV, who are age 50 and over. In addition, patients with HIV should have other age appropriate interventions There should be cancer screening that should remain consistent with the American Cancer Society's screening guidelines.

In addition, sexually active older adults should be screened for sexually transmitted infections, preferably twice annually if they are engaging in high risk behaviors. In addition, they should avoid comorbid diseases. Patients should be vaccinated with influenza and S. pneumoniae vaccines to prevent both flu and pneumonia when appropriate.

For patients who are smoke, tobacco cessation is an important intervention to help reduce long-term clinical adverse outcomes. In addition, all patients should be encouraged to engage in exercise and to follow an appropriate diet.

Providers should be vigilant to screen for hyperlipidemia and to treat lipids when appropriate, as well as to screen for hypertension and to treat it appropriately. In addition, when comorbid diseases

are present, we need to better treat them, particularly osteoporosis and hepatitis C infection.

In fact, this patient had undergone previous treatment for his hepatitis C with interferon and ribavirin. Unfortunately, he developed virologic rebound after stopping his therapy and is now considering other options now that the new hepatitis C drugs are available.

Finally, it's important to address psychosocial issues and advanced directives in clinic when things are calm, rather than waiting for a catastrophic event to occur. Thankfully, this patient had addressed these ahead of time, and although we did not need his advanced directives, I did have information on how to contact his family, which was very helpful when the patient was brought in by ambulance. Both the patient and his children were grateful that we were able to contact with them and they were able to meet with him in the emergency room as soon as the event had occurred.

MR. BUSKER: Thank you for those cases, Dr. Gebo. I'd like to shift gears now and ask you for your overall thoughts on the whole topic of HIV infection in the elderly, and what we can expect to find happening in the future?

DR. GEBO: That's a very interesting question. HIV in the elderly wasn't a topic that was of high priority approximately a decade ago; however, given the graying of the epidemic and the new infections we're seeing in older patients, it's achieved increased publicity, both in the lay press, and in the scientific community.

In fact, the White House recently had a National HIV and Aging Awareness Day which was co-sponsored by the National Institutes of Health where they invited a number of physicians community activists to come and talk about the issues of HIV in the older population.

In addition, the NIH Office of AIDS Research recently issued a request for proposals on the topic of HIV and aging because it's become an increasingly important topic in the HIV community. In addition, there is now an International Workshop on HIV and Aging; the third International Workshop will be in Baltimore in November 2012.

Also, in the lay press, there's been increased publicity with one of the recent characters on the show "Brothers and Sisters," an older man who recently had a diagnosis of HIV and coming to terms with his diagnosis, and how to disclose this to his family. So I think this topic of HIV and aging is finally gaining the recognition it really needs.

Unfortunately, there are some things we still don't know. In fact, there are several areas for future research such as how do we prioritize comorbid disease treatment in HIV infected older patients? In addition, should we screen for and treat comorbid conditions more aggressively in older patients with HIV than we do among those without HIV infection? These are some of the questions that we are looking to answer.

In fact, a recent document published by the American Academy of HIV Medicine and the American Geriatric Society, called the HIV and Aging Guidance Project, tried to delineate some of the important principles of HIV management in the older patient. While this document is kept online, it's also being updated on monthly, so as new studies come out, providers can use this to obtain the most recent information on management of the older patient.

In addition, as we discussed, the DHHS guidelines issued in March of 2012, now suggest treatment changes for the management of older patients, including initiating ART for all patients over the age of 50 regardless of their CD4 count. They also recommend that ART associated adverse events occur more frequently in older patients, and therefore, screening for bone, kidney, metabolic, cardiovascular and liver related health of older patients with HIV should be monitored closely.

They also note that drug/drug interactions should be assessed regularly, particularly when new drugs are added to the patient's regimen. And HIV experts and primary care providers should work together to optimize the medical care of older patients with HIV with complex comorbidities.

Finally, the DHHS guidelines recommended counseling to prevent secondary transmission of HIV, as this is an important aspect of long-term care for this older population with HIV.

I think we have made a lot of progress in managing HIV in the older patient, but we still have a lot of ground to cover. I think that we will have a lot more information in the next five years, including what are potentially the optimal regimens to treat older patients with, as well as more information about potential drug/drug interactions that we should be careful of in our older, population with HIV.

MR. BUSKER: A link to that HIV and Aging Guidance Project website Dr. Gebo mentioned can be can be found in the transcript version of this podcast.

Now I'd like to review the key points of our discussion today. Let's start with explaining the need for screening older patients for HIV risk factors.

DR. GEBO: The current CDC guidelines recommend screening for HIV in patients between the ages of 13 and 64. As we know, older patients continue to engage in high risk behaviors, including sexual activity and drug use. I think it's important to keep in mind that we need to ask patients about these behaviors and continue to screen patients who are engaging in these high risk behaviors, even if they are above the age of 64.

MR. BUSKER: Describe the issues of polypharmacy in older patients with HIV.

DR. GEBO: We know that our older patients have many comorbid conditions and are often taking multiple medications for these conditions. Patients who are taking multiple medications are more likely to suffer from nonadherence because of difficulties taking their medications together, as well as potentially drug/drug interactions.

I think as providers we need to be aware of this and try to identify medications that patients may no longer need, as well as potentially significant drug/drug interactions that need to be avoided when prescribing medications to these older patients.

MR. BUSKER: Finally, please summarize the impact of disclosure of HIV status for the older patients infected with HIV.

DR. GEBO: Older patients with HIV are often reluctant to disclose their HIV status to their families and friends because of fear of isolation. They don't want to be cut off because of their HIV diagnosis.

Fortunately, what we have found clinically is that after patients disclose their HIV status, most families and churches are actually welcoming. This has been very helpful in helping improve their long-term clinical outcomes because they can help patients take their medications more appropriately, as well as help them get to clinic for their visits.

In addition, once patients have disclosed their HIV status, it makes the planning with advanced directives and end-of-life care far easier, as patients are not afraid of their families finding out about their HIV diagnosis after their death. I think this can improve the patient's mental wellbeing, as well as improve discussions with the family and help them plan for appropriate end-of-life care.

MR. BUSKER: Dr. Kelly Gebo from the Johns Hopkins University School of Medicine, thank you for participating in this eHIV Review Podcast.

DR. GEBO: Thank you for having me and giving me the ability to discuss this very important topic of HIV in the older population.

MR. BUSKER: This podcast is presented in conjunction with the *e*HIV Review Newsletter, a peer-reviewed, CME certified literature review e-mailed monthly to clinicians treating patients with HIV.

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Thank you for listening.