



HTS Webinar: New WHO Guidelines for HIV Testing Services

September 9, 2015

JENNIFER PEARSON, JSI, AIDSFree: Greetings and welcome to today's webinar on the new World Health Organization guidelines on HIV testing services. My name is Jennifer Pearson and I'm a technical advisor with the AIDSFree Project.

Before we begin today's presentation, I'd like to quickly review the Adobe Connect environment and set a few norms for today's webinar. Today's webinar has one presentation followed by a discussion period in which our speaker will address your questions. Within the webinar environment, please make use of the Q&A box on the bottom right side of your screen to share your thoughts, note your questions, or ask for help with sound during the presentation. Questions you ask are only visible to you, our presenter, and technical support. If you're experiencing difficulties, our technical support will respond to your question privately. We will collect your questions for our speaker, and will save them for our discussion period. We will do our best to share responses to unanswered questions via email following the presentation. Please know that this webinar is being recorded, and a link to the recording and slides will be made available following today's presentation. It is great that we are able to connect so many people from so many places today, but your experience may vary based on your internet connection and computer equipment.

I will briefly go over a few troubleshooting steps if you have technology challenges today. A few troubleshooting tips: If you lose connectivity or cannot hear, you can always close the webinar and reenter the meeting room in a browser other than Google Chrome by clicking on the webinar link provided. You can also run the audio setup wizard under the meeting menu. You can always troubleshoot in the chat box by starting a private chat with AIDSFree tech. And if these troubleshooting steps are not successful, please rest assured again the webinar is being recorded and you will receive an email with a link to the recording following today's event. Any questions that don't get answered during the Q&A session will be compiled after the webinar, shared with the presenter, and responses will be shared with participants.

To get us started, and to introduce our featured speaker, I will now turn it over to our moderator, Vincent Wong of USAID.



VINCENT WONG, USAID: Hey, everybody. Thanks, Jennifer, this is again Vincent Wong, I'm with the Office of HIV and AIDS at USAID in Washington. Senior Technical Advisor for HIV Testing and Counseling and was also a member of the guidelines development committee. So thanks and again welcome. Good afternoon, good morning, good evening to everyone and anyone calling in from Asia. We're really happy to have you join us for this webinar looking at WHO's new consolidated guidelines on HIV testing services. And we'll start off with just a brief introduction by somebody many of you are already familiar with, Dr. Rachel Baggaley, Coordinator of the HIV Prevention and Health Center division at the HIV Department at WHO headquarters based out of Geneva. Dr. Baggaley has twenty-five years of experience working on HIV programs and policies in multiple regions and a range of both clinical and community experience. She leads the HIV testing work at WHO and a small team of hers really did stellar work in putting together this consolidated guidance which is much needed to inform both policy and programs in the field. So without further delay, I'm just going to stop speaking, we'll get right into Dr. Baggaley's presentation, and then we'll keep you all on for questions submitted after the presentation. So take it away, Rachel.

DR. RACHEL BAGGALEY, WHO: Thank you very much, and welcome everybody. I'm going to be slightly rushing through some of these slides, so please don't worry they will all be available. But most importantly, the consolidated guidelines are available on the web and we have three fact sheets which are really short snapshots for you to want to have something much, much briefer.

So in this talk, I'm going to really talk about these new guidelines, why we call them the HIV testing services guidelines, what does this new name mean, a little bit of background on what progress we've made on testing to date, the rationale on these new guidelines. And I'm going to talk about some of the key issues we have in these guidelines: making strategic choices about approaches to testing, new approaches to be considered, better linkage, and improving quality and misdiagnosis.

So many of us are aware throughout the past twenty-five, thirty years, HIV testing has had lots of different names: voluntary counseling and testing, testing and counseling, and we really thought it was time to really embrace what testing means and to give it a fuller, more inclusive title, so we call it HIV Testing Services. We want to emphasize and reiterate the three C's. Consent, everyone as we know, must continue to consent under testing. WHO never recommends mandatory testing or coerced testing. Testing results must always be confidential and shared only with the person who's being tested's permission, but we don't want to promote secrecy. We also haven't removed counseling from the testing process, but we really want to emphasize that counseling should be tailored, so pretest information is often appropriate and always needed but high quality

posttest counseling should be available particularly for people who test positive. We've become increasingly concerned over the years with the quality of testing is of paramount importance, so providing correcting test results is a big emphasis of testing services. And testing without linkage is really not acceptable. Linkage is prevention, linkage is treatment, linkage is care services. So we feel this new name really kind of reenergizes testing and dialogue, and we hope that this will enable testing to be done in a much more positive way with great impact. So we're all familiar with the cascade, and use the cascade to balance if we're lucky with testing but we really usually just concentrate on the treatment cascade, but we also really feel, and I want to thank Fritz van Griensven in Thailand for having this idea of putting testing at the center and supporting the fact that testing should also link to prevention and retain people who have ongoing HIV risks into prevention and services.

So, where we are, and again, I'm racing through these slides somewhat. We've done an awful lot of testing, and this basis I'm inventing isn't inclusive to the whole world, it's really what we have reported to WHO and UNAIDS and UNICEF for our reporting system so low and middle-income countries and the denominator for these slides will vary according to what data was submitted to us. So huge amounts of testing and most of this, a large portion of this was in the Africa region, and that is rightly so because that's where the burden of the epidemic is.

Again these are the countries that reported, 129 reporting their number for testing across countries and about one-hundred fifty million children and adults received testing and again most of this was in Africa. When we look down at countries who report by, and most countries do report by male and female desegregation, but it's pretty uniform that everywhere women are tested at a much, much greater rate than men, and this is understandable because over the past twenty, particularly over the past ten years, so much testing has been concentrated in antenatal clinics and other services where women attend and this is not only the case in Africa but you can see from the other small circles that this is also the case in the Americas and in Asia and Europe and the Mediterranean. So everywhere women are receiving more tests than men. When we look at, and again it's a much smaller number, it's HIV1 countries who report on desegregation of male and female positive and negative we can see that the positivity rate again reflects the burden of disease across the region and a high positivity rate is achieved in Africa and much lower in other regions. But when we look at the positivity rate for men and women, we see that although it's higher, there are more women who are diagnosed with HIV globally this is really because of the testing that's going on in Africa. And if we look at the other regions, although many men are being tested, the positivity rate and sheer

number is not much higher so we really haven't, we're really picking up many more men for much less testing in other regions.

What we are concerned with is we really need to support the testing of and getting people in for testing who have HIV and are yet to be diagnosed so in this rather kind of busy graph here we are looking at the proportion of people in the darker bar who the prevalence rate in the country—the prevalence rate in the darker bar is the prevalence rate amongst those who are tested—the positivity rate of the tested and the lighter bar is the actual prevalence rate in the country. So you can see countries like the Congo are really able to hone in and test those who are more at risk so they're really getting a higher positivity rate. Where other countries are continuing to test but their prevalence – the positivity rate amongst those who are tested is significantly lower than the prevalence in the country and that's for many reasons. Outside Africa and I've just chosen a few kind of countries here to illustrate the point, but again as reflected in the general data from the region, when we are testing the positivity rate amongst men is significantly higher than amongst females and in most settings the positivity rate for both males and females is higher than the background rate though this again varies country to country.

So I'm just going to again pick a few countries. Thailand which is probably well known as one of the most successful countries. And if you look at the top graph, the top bar graph there, they've really done fantastically well and reaching people with HIV and diagnosed. That gap is really very small. But if you look at the numbers, and I've circled there the men and the women, many less men are getting tested. But proportionally there are many more who are positive, so Thailand really has to reach out and test more men because those are the ones who are currently having the highest positivity rate, the highest yield, but are not currently being reached are being tested in much lower numbers.

This slide is Bolivia and it could be many, many countries really emphasize with a similar thing. They've done less well in overall coverage but where they are testing, the men were really much higher proportion of positive than women, really showing they need to adjust their testing strategy.

And Tanzania is a high burden country really testing a lot of men and not as many women. Again the positivity rate again for the men is significantly higher than it is for women. When you get the countries like Botswana the situation is very different. And that's not necessarily because Botswana is doing anything wrong, it's probably because they've actually done something right. They've really achieved an awful lot of testing and although they're continuing to test the positivity rates amongst those who are attending for testing is much, much lower than the HIV prevalence in the country and that's really

because they've already diagnosed and linked for treatment and care to many of the people who have HIV. And this is the dilemma for countries like Botswana, another high burden country because they've actually done a really good job, to get to that last percentage of people be that thirty, twenty, ten percent is going to be much more difficult so it's not a simple equation of considering the positivity rate the achievement for a country.

So how far have we come? And I really want to thank Vincent for encouraging me to put this stage right there because we're often really in the HIV world we don't celebrate our successes in testing. And if we looked at 2005—you know not that long ago—we've really done very poorly in household surveys in high burden countries in Africa reported less than ten percent of people reporting testing and now we're about at the fifty percent mark. However, we do have to get that other fifty percent and we have these ambitious goals of 90-90-90 in 2020 and 90-90-95 in 2025 and I worry that we have the relatively easy fifty percent. We have the women attending antenatal clinics but we don't have men and we aren't concentrating on adolescents in the high burden countries and key populations everywhere. We still have the challenges of linking people from testing to treatment and to prevention services so we must also think about focusing and taxing on these groups who are underserved at the moment and they'll be very different approaches between generalized epidemics and low and concentrated epidemics but also a degree of overlap in the approaches needed.

So I'm just going to highlight a few of the critical issues in the new testing guide and I must urge you to have a look at them. Don't be daunted that they seem rather long, there are summaries at the beginning of each chapter and I'm going to talk about our new approaches to lay testing, I'm going to talk about better linkages—how we can improve better linkages. I'm going to discuss misdiagnosis and why that's a problem and how we need to follow up and fix quality assurance and reemphasize retesting of everybody who tested positive before ART initiation. And then I'm going to talk about some of the strategic choices. We've done a lot of testing, we're not going to have new demands or increase in money for testing so we've got to really be more focused and to achieve the best results with this kind of similar amount of funding.

So the testing guidelines are arranged into chapters and I urge you to pick and choose so you don't have to start at the beginning and go back to the end but you can look at your areas of interest and others you can quickly look at the summaries. Now for those who really want to delve into it, we also have a whole series of annexes which give you all the information to dispatch it with you, the values and preferences, the costing on modeling, that we've put into the development of the guideline.

The first highlight I need to talk about is lay provided testing, and I think for some of us who have been working in this area for many years, this is something we feel is extraordinarily obvious. It seems crazy that here we are in 2015 and there are many countries where testing is not allowed to be done outside of clinical settings and not allowed to be done by people other than health care providers. And internationally only 30 -40 percent of policies we looked at allow testing by lay providers, much higher in Africa. We feel this is really a missed opportunity for getting testing out into the community.

And this is just a little map here that we have which highlights in yellow and darker blue the countries that don't allow or we have no indication that they allow testing by lay providers. And we look at the evidence in our guidelines group and see there is compelling evidence that testing by lay providers increased uptake and the accuracy and quality provided by lay providers is equivalent, people are quite supportive of testing provided by lay providers, and the cost cannot be lower. So all in all, the guidelines group really wanted to reemphasize and make a strong recommendation –a strong WHO recommendation—to train lay providers to safely and effectively perform HIV testing using tests and we hope this will now change governments and what governments are lacking behind to allow lay testers to be used in community testing and in clinical settings. We have some guidance on this, we obviously need to really emphasize that lay providers should be chosen wisely and often may come from the groups or communities where potential people wanting testing come from and this is particularly helpful for key populations. As for anybody who's coming out for testing, it's not something that is to be done as a one-day training and then send them out into the world. They need support. They need to have continued mentoring and there has to be quality assurance just in case to make sure the quality is maintained and that would be applied to any kind of testing. There has to be adequate remuneration. The WHO doesn't agree with supporting people who do this on a voluntary basis, they should be compensated. And there has to be clear national policies that endorse this role and so it is legitimate and legal. And I just wanted to put up a little tweet there. We have had a huge response on tweets and our social media campaign and this is one I was really touched by, it came in from somebody in Nepal. It says "at last WHO now formally recommends lay providers, I hope this will rapidly result in policy change."

We also recognize the inconvenience of testing. It is often very difficult to get a definitive diagnosis by using WHO testing strategies. These are the testing strategies below in high-precedent settings that are clearly outlined in our guidelines and they require two or three different record tests. And these may mention the procedure in the community may add complications where people mix up tests or have to be trained in different tests.

So we suggest that for simplicity, we promote what we call the “Test for Triage.” It is not a definitive diagnosis, it is a test that allows a lay provider to give a negative result and suggest retesting if that person has ongoing risk or has had a recent exposure, and then anyone who tests positive should be linked immediately or as soon as possible to a clinical site so they can have definitive testing and then be linked to treatment and care.

The second highlight is linkages and this slide here is a review that we did previously and it really shows a wide variety of linkages. It can be good but it can be poor, and certainly we are aware that testing, particularly in campaigns and in community settings, without a strong emphasis on linkage may lead to people not being linked and linked to care. The same applies to clinical settings as well. And earlier diagnosis and earlier linkage is essential particularly now that many countries are recommending they get ART initiation.

It can be achieved and the orange bars show that across India once people are diagnosed, the linkage to care can be pretty good. It’s not the major fall-off from the cascade. The major fall-off from the cascade, from my understanding, is getting people tested in the first place. This is not—I’m showing you a good example, there are many, many poor examples. And when we’re talking about linkage, we’re talking about retesting and before ART, we’re talking about linking to test partners and family members. We’re linking to other clinical support services. We’re linking to prevention and sexual reproductive health.

A lot of testing goes on in the community, and people who test negative are really often very blissful. And this is another missed opportunity. And I want to thank my PEPFAR colleagues who provided this example here from Mozambique where through community-based testing we were able to identify many males who were negative and link them to male circumcision services. And I think this can be very successful and offer something very important for them, a lifelong support and prevention for those who are negative.

What we really don’t know and I think this is difficult that we can’t definitely say, “What are the best things to support linkage?” Many of these will be context specific. When we discussed the issue with PEPFAR colleagues we came up with a whole number of things that did support linkages that will be appropriate in some settings and not in others. So I think the message from this is that programs do need to ask in the community what would support linkage. I think one thing that we should and we really failed to do is support partner testing and partner notification. We know from the available linkage information that when a partner or a family member knows someone who has HIV and they consent to being tested, this is a great support for either linking together or linkage to treatment and care. And also to services and also support the other partner. And again this is something that has been done over the past twenty years.

I think all of us on the call and many of us who work in this field are becoming increasingly worried about the quality of testing. We are worried that many people who are receiving incorrect results. And we don't have enough data but we know from some studies that this could range from two and up to ten percent of incorrect diagnoses and particularly worrying with immediate treatment. Someone comes in and they get some treatment immediately. An HIV diagnosis is one of the most important events in your life and it is extremely important this is a correct diagnosis. And the public health, the personal, and the cost implications of lifelong treatment for someone who doesn't have HIV are enormous. We need to minimize misdiagnoses. One of the reasons we've identified for incorrect test results is that many countries don't use WHO strategies or algorithms. We are working with countries and I'm not going to name and shame countries but we work with countries and try and support them to use testing strategies that will likely yield much better results. We've done a review looking at all the errors that occur, clerical errors, user errors, and many others, and all of these contributes. And with a whole chapter which looks at quality assurance in the guidelines and that area cannot be emphasized enough.

We—as I said—we are very concerned about starting treatment on humans who could not have HIV, and therefore in December of last year we reissued our retesting recommendations before people started on treatment. And some you know we've had some people worry this is far too much work, we can't possibly do that, it's going to slow things down. But as I said, I think until we can really show our service isn't really having any significant level of false positivity, I think countries should continue doing that. And certainly it has been very interesting results from Malawi where they've shown that this has happened where there remains quite a significant false positivity rate although this has decreased significantly since they've increased their quality improvement measures. What we do want to avoid is continually testing people who are negative and certainly within antenatal settings we certainly do not encourage retesting in low prevalence settings. There is a rationale for supporting retesting of antenatal women in settings of high incidence and we recommend a retesting in the third trimester, or around delivery, or in the early postpartum period because of the significant incidence that appears in some settings, particularly in sub-Saharan Africa. But we really don't want to continue so much of the retesting and there are some countries with very low prevalence that retest up to four or five times during pregnancy and this is really a waste of resources. As I said this is our quality assurance essential to the whole on this but it's really worth understanding that.

My fourth highlight is really to look at focusing testing. We've been very successful in clinical settings, particularly in antenatal. We've been less successful outside of antenatal.

TB has seen another great success, but in high-burden, generalized epidemics HIV testing should be a routine process of all clinical contact. In low concentrated epidemics it should be really selective either to services that are associated with HIV like TB, STI, and for key populations, and also for indicator conditions. A real missed opportunity is couples and partner testing. Again, it seems totally crazy that thirty years into the epidemic we still don't routinely offer testing for partners of people with HIV. This will have the highest yield of any kind of testing, at least 50 percent of partners will have HIV. This is an opportunity and this will often be for men to get into treatment but also identify discordant couples and will really support and get that couple remaining a discordant couple. And we recommend these two kinds of tiers to be augmented with community-based approaches tailored to the populations most at risk in those communities. In the guidelines we give all sorts of suggestions on how this could best be achieved.

So expanding community-based testing is highly acceptable. Gone are the days when people are very reluctant to test, people really want to test but they want to make it easy. They want the opportunity, they want to be tested when they're not going to need to take time off work and wait in a queue, so mobile, and outreach, and workplace testing are good ways, particularly for key populations and men. They'll often lead to earlier diagnosis, as I said before, counts again because testing people before they come into clinical settings and they're unwell. And it will help us with these missing populations, the men, the key populations, and young women in high burden settings before they become pregnant, which is the way that right now most women would become aware of their HIV status. We have to be better about linkage to care. Positivity rate can be really much higher in clinical settings if you are looking at key populations index in partner testing but it may be low if it's really not well forecast and mass campaigns and home-based testing in low burden settings may not be cost effective. And the unit cost may be more for some of the community-based approaches. However it has to be balanced against the positivity rate. If it's going to cost more to provide outreach to key populations and the positivity rate is much higher, the unit cost, the cost per HIV test, will be potentially much lower. So again these are the kinds of analyses that have to be made in country.

In our guidelines we talk about HIV self-testing. I'm not really going to talk about this today in detail because when we were putting this together I was told there was way too much and I had to cut some things out, and it may be something that we can have a future session on itself because this is a rapidly growing area with many more countries showing interest and lots of pilot projects are currently being developed. And we discuss it in some detail in the HIV Testing Services Guidelines and we previously prepared a

technical update on this. Currently self-testing has been predominantly sourced back to oral fluid testing but in the UK and France are now going to be offering self-testing that is blood based. Self-testing for both of these will become more widely available in the very near future.

So just to conclude, our guidelines are really there to say our testing services are not enough to get to that first 90, and I think the first 90 is really the most problematic. And we really, and I'm so pleased with this, there's so much interest in testing, it's been a bit of a Cinderella subject but I think we are all waking up that it's not just some things that will happen and we can carry on as usual. Although community-based testing has been implemented widely, it has not often been done in the best way. Having big campaigns in communities with low prevalence may not, is unlikely to be helpful, and has to be much more focused. We must continue facility based testing but there are many missed opportunities particularly in STI clinics, general medical, and for pediatrics. Couples and partners testing should really be prioritized and normalized. Some countries have been highly successful, but there are caveats. They always have to be voluntary, if women do not want to be involved partners because they fear bad repercussions that should be respected. But for many couples this has been successful, and certainly countries like Rwanda have implemented to an extremely high degree with great outcomes. Self-testing isn't new, it's been going on informally and certainly for the past ten years many health care workers throughout Africa and beyond and I'm sure many of us in the field have self-tested informally. But I think now we're realizing there's a big potential, there's a huge demand. If you look at the values and preferences of many of the populations, they're very keen to have the empowerment and autonomy to self-test. And WHO will be producing guidelines on this over the next twelve months and we currently are encouraging countries to start implementing using different self-testing models to different populations. The public health response is currently really lagging behind public demand and I think we've been cautious and rightly so because we see some bad outcomes for people following testing, but I think many of these have been superseded now that effective treatment is so widely available, so we need to put some of this behind us and we need to be much more bold. We need to improve quality. We need to stimulate technical advances to have really easier tests that can detect people as early as possible following exposure and support innovation and implementation.

My final slide is the most important, of course; I want to thank all my colleagues here at WHO, who have been really helping me with the testing work over the past years and looking at the data. The guidelines were a collective effort. We were very kind of novel in our approach to developing them we did most of our work remotely over the internet and that worked extremely well. We had great, great contribution from our guideline

development group. We also had huge support from more than 120 peer reviewers from all regions, from communities, from implementers, from ministries, and so I feel this has been a huge collaborative support. And we really want to thank PEPFAR for supporting us not only financially but technically. And Charlene Brown and Vincent Wong I want to thank you for arranging this seminar, and colleagues at CDC as well for continuing to support this work and hopefully we can really start to roll with that in country. I think what's always the problem, and I always quote Elizabeth Moran who's my long-time mentor in this area, she always says WHO guidelines stay on the shelf or stay in boxes, and I really think we're going to try this time to that they get to countries and change policy and have better services. So thank you very much for giving me this time to share with you.

VINCENT WONG, USAID: And thank you, Rachel, for taking the time out of your extremely busy schedule, I know with all that's on your plate out and beyond HTS to take the time to share this information with so many people from the field. Again, my name's Vincent Wong with USAID Washington and we've got about eighteen minutes left so I'm going to jump directly in the questions. If you want to submit a question up before you can submit them online and we'll try to get through as many as we can and for those that we don't get to maybe we'll find a virtual platform where we can exchange further information.

So we'll start with Scott, he asks "What proportion of testing is that which occurs in AMC, I'm under the impression that that makes up the majority of testing, is that correct?"

DR. RACHEL BAGGALEY, WHO: Well, certainly that's what it appears. Across all regions, as I said, the majority of people who are testing are women and the places they are getting tested are largely antenatal. It may be family planning and other reproductive health services. That has been the kind of—the easiest way because there has been such an emphasis on mother-to-child transmission. And we need to change that. We need to change that particularly outside Africa because we're missing the men. And inside Africa we're also missing the men and we have to think about partner testing particularly. Outside Africa, it's really key populations who are missing out and they are really across the board not getting the services they need.

MELISSA SHARER, JSI: Ok, great. Thank you again, Rachel, for that excellent presentation. This is Melissa Sharer from the AIDSFree Project. And I just want to note that we do have a virtual platform, a community of practice, many of you have already signed up for it and there will be a link to it at the end of the presentation. So that's another place that we can hit any questions that emerge from you, either that we're not getting to today or again might emerge after you guys think more about the presentation and what Rachel has to say. The second question we have is from Colin, and

it relates to strategic choices and targeting, "Should the low positivity rates discourage us from testing?"

DR. RACHEL BAGGALEY, WHO: This is a very, very good question and I think there are several answers to it. Certainly what I was trying to show with the data from Botswana. Botswana has done really, really well. They've had really great testing initiatives over the years. It's a really, really small country. It's a really well-resourced country. They've had a big emphasis on HIV, so they've really, really done well. And that means to get to the next—to get the last number of people who need testing is going to be more difficult and you're going to get a much lower positivity rate than in the general population prevalence and that's a fact. If you want to get to 90-90-90 then that's a case. However, I would say if you're in a country like Bolivia where you're testing tens of thousands of women in antenatal clinics and you're getting a very, very low positivity rate and you're not testing key populations and their prevalence is much higher, I'm not necessarily saying stop doing the antenatal. It may be you need to make sure you're only doing one test—you're not repeating tests going forth but you would really need to focus on the populations that have the highest positivity rate so that they can be diagnosed and linked to care. I think that you need to look as well—that countries should look at all their different methods. If they've got a budget for testing and some methods, some approaches are much better than others. They should prioritize those. But I think also it's not that there aren't equity issues as well and I think sometimes one has to be a little careful. What I haven't presented in this presentation, another thing I took out, is really looking at antenatal testing because that's quite complicated even in low yield, low positivity rates it still can be cost effective because of the prevention of pediatric HIV. So it's a complicated question, and I probably haven't answered it very well, but I'll be happy to follow off-line about that.

VINCENT WONG, USAID: Thanks, Rachel. Yeah it's a really very ever-present question and a difficult one. One big factor that just popped into my mind is the retesting rates among negatives. If you ask the negatives to retest that certainly dilutes the yield. So the next question relates somewhat, but looking at the first nineteen, the question is from Colleen, "How do we have people who do not know their HIV status? Can you explain that among people with HIV?" So I think she's asking why would coverage be so low? I guess I can rephrase that.

DR. RACHEL BAGGALEY, WHO: Yes, so I think she's asking—there are two ways of looking at that. How do we know that? So we know that from population based surveys where blood draws are taken, and we know that from modeling and estimates. And that is something that UNAIDS really gives us every year so that's how we know that that's the case and many countries have that estimation. And Europe and the states have a very

good understanding of the populations that are not accessing testing and remain unburdened. Why we have it? And I think that's more complicated I think why we have it is we're not offering the services that people want and need and that's not because we have so much focused on providing services for antenatal. We haven't offered it for men, we haven't focused on key populations, and key populations really outside Africa do represent a significant number of new infections and even within Africa when we're developing our key population guidelines we really want to emphasize within Africa when we were developing our key population guidelines we really want to emphasize within Africa key populations, sex workers, men have sex with men, and to some extent in small pockets people inject drugs and certain people imprisoned. Numbers of new infections represent these people actually a large proportion which is not provided the testing services that we then need.

MELISSA SHARER, JSI: Ok, great. Thank you. Another one from Loretto Redebe, "Are the triage tools paper-based?" I think that's referring to the ones you mentioned around slide twenty-five.

DR. RACHEL BAGGALEY, WHO: So we have proposed this approach, as I said it's a first test in the community. It's really outlined in the guidelines, you can find it all there. It's really pretty straightforward, if it's not enough, if you require additional information, additional tools to support this is something we could think about doing for you.

VINCENT WONG, USAID: Ok, thanks, Rachel. So there are so many questions pouring in and I'm realizing we only have ten more minutes. We'll try to take a few key ones out and move the rest off-line. Jabon Angole asks, "What about poor quality test kits used in the testing algorithm giving false results?"

DR. RACHEL BAGGALEY, WHO: Yep, absolutely, I think that's a major concern and certainly speaking from a WHO perspective, the WHO recommends a large number of different test kits that are what we call prequalified and those are the ones countries should use in there to populate their testing strategies and to make their testing algorithms. I think that unfortunately—and this is becoming very apparent with self-testing—that a lot of really kind of poky and untested test kits out there that remain and that's why we want to rationalize self-testing, legitimize it so that we can assure that the test kits are of good quality. Also we are concerned that storage and expiry dates are problems with test kits but I think countries probably quite often use prequalified tests in their testing algorithms but you know in the private sector, in some community centers that don't procure them through national—using nationally regulated processes this could be a major problem.

MELISSA SHARER, JSI: Ok, the next question is about data and gender desegregation from Jason Reed. "I know that data on the percent ART and the percent virally suppressed are limited"—I just lost the question bear with me—"but are the disaggregated estimates of percent tested and percent positive that are diagnosed first 90 from ESA countries?"

DR. RACHEL BAGGALEY, WHO: So we have quite a lot of that data and—so when we look at countries all reported—well not all—but have different ways of reporting for disaggregated data so I was just looking at last year's data and we have data from seventy-six reporting countries that disaggregate by men and women, and I see the majority of those are from Africa. Yeah, but I'm just looking down there and we have twenty-seven countries who disaggregate by male and female and sort of ten or so from the other regions, there are other regions who do that.

VINCENT WONG, USAID: Thanks, Rachel. So here's a question on retesting again from Jabon Angole, a good one, "Would it not be easier and appropriate to use a tiebreaker test in inconclusive test results instead of waiting for fourteen days?" For countries—

DR. RACHEL BAGGALEY, WHO: Yep, so thank you very much, very good question and thanks for letting me give you the WHO perspective on this. We really look at a tiebreaker and actually there is an increasing body of published that says tiebreaking is a disaster. So what you're doing, you have a first test that's positive, a second test that's negative, and the third test is positive. So what you're often doing, the first test the country will use is often one that is as sensitive as possible, and a sensitive test is, you know, going to pick up as many positive, ninety-nine point whatever percent of people who have HIV, but what you then need—we would also have a significant number of false positives. The second test is more discriminatory, so it should be more specific so it should rule out—help you rule out false positives. Now the third test in a tiebreaker is often a sensitive test so what you're really doing is confounding the false positivity you get with the first test. And what has been shown in the published literature is this is a major cause of misdiagnosis. Much better to wait fourteen days for those inconclusive results and then retest. And people who are converting that will become much clearer. And I think we want to make things easy so we are able to link people to treatment as quickly as possible, but we mustn't shortcut things because as I said earlier this is the most important thing, the most important diagnosis of people's lives and we want to make absolutely sure it's correct. And I think health care workers and communities have to realize that as with any medical test, nothing ever gives you a 100% accurate result and that's the case whether you have a cholesterol test or you have a blood glucose or you have a blood pressure monitoring. You know people don't make a clinical diagnosis

on one test so we have to be absolutely certain. And there is certainly a huge amount of evidence showing a tiebreaker is really a cause of false positives rather than a help.

MELISSA SHARER, JSI: Okay, great, everyone, we have about another three or four minutes but Rachel has kindly agreed to stay on an extra five minutes to get through some of these questions. So the next question is from Katya Isaacson and it's about youth and adolescents, "Is there any data on the prevalence of youth and adolescents testing rates and do they follow the same pattern for boys and girls as you had talked about for men and women?"

DR. RACHEL BAGGALEY, WHO: So as always with youth and adolescents, there's pretty poor data. And it's not—we've just emphasized in our HIV information guidelines we need to be much more encouraging of having countries disaggregate by age so we can have much better data. And across the board, the data we have does reflect adolescents are much less likely to get tested and obviously in Africa, particularly, in Southern Africa, young women are the group we want to get into testing but at the moment the best, really the easiest opportunity are antenatal but that's going to be too late. So we really want to support earlier testing and testing for young women before they become pregnant. Outside Africa, young people are really the populations we want to support testing because there's a lot of evidence that shows young key populations are the most vulnerable meaning we need to be sure they have the they have confidence and determination to test and this is when they need the biggest support, and yet many programs for legal and social reasons are not really friendly to adolescents or key populations and so it's a kind of two-pronged approach. And so data is poor, need is huge, approaches are different across countries and regions and areas.

VINCENT WONG, USAID: So, Rachel, we thank you for staying on and spending a few extra minutes with us to get through some of these questions. I'll go to the next one by John Feno who asks, "I'm not familiar on the literature on costs of HTS, has there been a convergence of costs on HTS within and among countries?" And I'll preface it by saying we did cut a few slides on the costing elements of HTS and we may do a webinar on that as well. This is the first in a series so we can get into more detail on that as well but maybe a brief answer would be helpful.

DR. RACHEL BAGGALEY, WHO: It depends, there are those that have strong costs, and it's very heterogeneous as you can imagine, and you know just a simple testing service and a facility based testing is likely to be much cheaper. And it will largely depend on the cost of the test kit which you know that they can vary country to country and the costs can be quite low and the additional staff time can be quite small. Where as community testing again ranges hugely depending on all sorts of different factors and models but we have quite a lot of detail in the guidelines which you could look at. I think it's very

difficult to make comparisons and if you look at South Africa compared with neighboring Zimbabwe, they vary. And staff cost are so much more in South Africa, if you compare with the U.S. obviously hugely more costly because of commodities and personnel but I once again want to emphasize what we really want to look at is the positivity rate, so even if community-based testing is more expensive, if you're reaching people earlier, if you're reaching the unreached, the positivity rate is higher, it might be essentially more cost effective.

MELISSA SHARER, JSI: Ok, great. It's probably going to be the last question that I'll speak and then Vincent will have about one more. From Matteo Cassilato, "One of the things we should be considering is how to help the millions of people who currently do not want to test. We know that men test less than women, we know that it was not a lacking of the knowledge of where the HTS services can be accessed, so Rachel if you can talk about the role of trust plays in convincing peers, and especially men, to test please?"

DR. RACHEL BAGGALEY, WHO: So I think we're in a bit of a changing environment. I think that that question would have been more true five years ago, I do think that men are much more willing to test, making it much easier to fit into their lives, so workplace testing, often partner testing, where these are offered and where home testing is offered, weekends evenings, uptake can be extremely high for men. So I don't think it's this huge reluctance to test, it's really opportunity. And certainly we need to make sure with services that confidentiality is ensured and trust is ensured, and again it's going to be very situation having good community-based organizations that condone and support men who have sex with men within criminalized settings where they feel trusted may be a way to support men and some settings. Rwanda has done fantastically well I think 85 percent of partners of pregnant women now are quite—you know have access to testing. There are many examples of home-based testing. If men are there, they're really, really happy and really want to be tested. I'm sure many of us have been on home-based visits and have really seen "Yeah, great thank you for coming. I really don't want to spend a day off work and it's great you come and offer this to me here in my home."

VINCENT WONG, USAID: Thanks, Rachel. So we'll go to the last question, it's kind of a general one, but Mbuoy asks, 'Would it be possible to disseminate these HIV guidelines in the Africa region just as they did with the ART guidelines?'

DR. RACHEL BAGGALEY, WHO: Certainly, I mean they're now available on the web. We will do everything in our limited powers to make sure to disseminate them. And we hope we can have them widely available. We feel anyone on the call who feels able to promote them and use them and certainly I'm hoping that USAID and CDC will be able to work in countries. WHO is a relatively small organization compared with many other organizations. We're not particularly effective unfortunately at disseminating, but we are

really, really trying but we welcome partnerships with anybody who would like to support this.

VINCENT WONG, USAID: Thanks, thanks so much. So again, Rachel, thank you, thanks Cheryl, and the whole WHO team for taking the time out to present on the new guidelines. I also want to thank Charlene Brown and Melissa for really helping to develop this webinar, and the whole JSI team. A couple of brief announcements, we do have the HIV Testing Services Community up and running. I think there's about two-hundred and fifty participants from many, many countries right now. We can take some of these questions off-line in the coming days and try to dig in a little bit deeper and provide some references as needed, so please join over there. And this is hopefully the first in a series of webinars. This was providing a brief overview of very extensive guidelines on HIV Testing Services, so stay tuned. If you've got thoughts on webinars you want to see, let us know. We're certainly thinking about HIV self-testing, we're certainly thinking about testing quality, and costing. There's sort of a range of issues to dive in deeper about. And if you've sent a request through the webinar, we'll send you a link to the community of practice because it'll allow you to join if you haven't already. So with that I'm going to stop and turn it over to Jennifer for some final logistical thoughts, and thanks everybody for taking some time out and joining.

JENNIFER PEARSON, JSI, AIDSFree: Thank you, Vincent. Again, before we wrap up we just want to thank all the participants again and to Dr. Baggaley for giving her time and expertise today. As a reminder, as we've said several times, any questions that did not get answered today during the Q&A session will be compiled and shared, and responses will be shared with all participants. And before we close the room I again just want to remind everyone that the link to join the AIDSFree HIV Testing Services Community is on your screen right now so the community will be a space for us to continue this discussion as well as other discussions related to HIV testing. Just go ahead and click on the link and it'll take you to the registration page. You will receive an email with the link to today's recording as well as a link to a short event feedback form. We would really appreciate it if you'd take a moment to complete the feedback and help us to improve our future webinars. Thank you all once again, and have a good day.