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Rising Tuberculosis Rates Among Healthcare Professionals

Announcer:
You're listening to *Tackling TB* on ReachMD, sponsored by Qiagen. Here's your host, Dr. Jennifer Caudle.

Dr. Caudle:
According to data from the Centers for Disease Control and Prevention, annual tuberculosis rates in the general population have steadily declined over the past 3 decades, but the same can't be said for healthcare professionals. In fact, clinicians are contracting TB at a higher rate than the general public, suggesting that it may be time for us to reconsider the ways we test ourselves and our peers.

This is *Tackling TB*, and I'm your host, Dr. Jennifer Caudle, and joining me to review updated guidelines and share key strategies for TB testing among healthcare professionals are Dr. Regina McDade and Dr. Marie-Claire Rowlinson. Dr. McDade is a clinical care coordinator at the Department of Infection Prevention and Control in Miami, Florida. Dr. McDade, thanks for being here today.

Dr. McDade:
Thank you for inviting me to participate in this panel discussion.

Dr. Caudle:
And Dr. Rowlinson is assistant laboratory director and CLIA laboratory director at the Florida Department of Health in Jacksonville, Florida. Dr. Rowlinson, it's great to have you with us.

Dr. Rowlinson:
Thank you. It's great to be here.

Dr. Caudle:
Absolutely. So, Dr. McDade, we're going to start with you for some clinical background. Why are healthcare personnel at a higher risk for TB these days than the general population? Does this speak to something wrong going on in our health facilities or something going right in the wider world?

Dr. McDade:
I don't think it's anything going wrong in our healthcare facility as something is going right in the wider world. We have programs and policies in practice in places where we are screening patients. Once cases are identified, they are placed on directly observed therapy, and contact tracing is done again to prevent transmission. And again, what we remind the general public and healthcare workers is TB is still a concern, and healthcare workers may be at risk for occupation exposure.

Dr. Caudle:
And as I understand it, Dr. McDade, the CDC and the National Tuberculosis Controllers Association recently updated their guidelines on de novo and latent TB testing of healthcare personnel. Can you speak to some of the updates and what led both of these organizations to revisit their guidelines recently?

Dr. McDade:
Because we were doing a lot of testing among healthcare professionals and we were not finding a lot of TB patients, there was a low tuberculin skin test conversion rate among healthcare workers, which led us to believe that there was minimal or no occupation exposure occurring, and of course it was not cost-effective to do all of this testing and not finding cases. So the first thing that these facilities need to do is baseline test and preemployment screening and testing of all healthcare workers without a documented history of prior LTBI or prior history of TB, and as part of that screening, they may do the individual risk assessments, which is new—of course the

symptom screen—and depending on what the facility chooses, either the tuberculin skin test or the IGRA.

One of the new changes is regarding the serial screening and testing. So, routinely it's not recommended in certain areas, again based on the risk assessment of your facility.

In addition, TB education is for all throughout the healthcare system, which is new, and it's not routinely recommended for systems with low risk, so what we do at our facility as part of the employee mandatory education, we have a module for TB education for the healthcare workers in our system, and that's evaluation and treatment.

Dr. Caudle:
Dr. Rowlinson, turning to you, were there any notable elements from these guideline updates that got on your radar from a laboratory science perspective?

Dr. Rowlinson:
Specifically from a laboratory perspective, I think the most notable change for us laboratorians is that laboratory personnel were not specifically identified as an individual set within healthcare personnel, and we kind of know that laboratory personnel, specifically those handling samples that may contain TB or manipulating cultures of TB, are at a much greater risk for laboratory-acquired infection and should be screened on a regular basis. And we know that the lab are in this high-risk group, but the guidelines really aren't specifically clear in relation to laboratory personnel about how often this regular screening should take place, and there's also no mandatory reporting that the screening has taken place or that a lab-acquired infection has occurred, so I think those are some of the challenges for laboratory personnel.

Now, I will mention, that in response to this updated guideline from CDC and NTCA, a companion document has been developed and was recently published just in July of 2020, and this companion document is really to help people interpret the guidelines. It's like an enhancement, and it does include specifically wording about laboratory personnel.

Dr. Caudle:
Excellent. For those of you who are just tuning in, you're listening to *Tackling TB* on ReachMD. I'm your host, Dr. Jennifer Caudle, and today I'm speaking with doctors Marie-Claire Rowlinson and Regina McDade about the updated recommendations from the CDC and the National Tuberculosis Controllers Association on TB screening among healthcare personnel.

So, Dr. McDade, let's come back to the age-old question in the clinics, which is to test or not to test, in this case talking about annual TB testing for clinicians in healthcare settings. Where do the guidelines fall on this? And do you think it's the right move?

Dr. McDade:
Yes, I do think it is the right move. Again, the decision should be individualized to each facility and based on their annual risk assessment and consultation with the local and state health departments. Of course, it's cost-effective. If there are no known exposure or ongoing transmission and you have your baseline, so there's no need for routine testing, so I do agree with the changes in the guidelines.

Dr. Caudle:
And, Dr. Rowlinson, on the subject of which test to use and when, how do the updated guidelines compare tuberculin skin testing, or TST, with interferon-gamma release assays, or IGRAs?

Dr. Rowlinson:
Well, the use of TST versus IGRA is up to the individual institution. The guideline specifically states that it does not include recommendations for using an IGRA versus a TST. And to summarize very briefly, I think there are some advantages of performing IGRA in that it's a single patient visit for the test, it's a laboratory-based test, so it uses controls, has objective results and defined interpretive criteria, which all support quality assurance, and IGRA is unaffected by BCG vaccination, and there is no cross-reaction with a majority of nontuberculous mycobacteria.

There are other guidelines from CDC that do also talk about when to use TST versus IGRA, and some of those guidelines do say that IGRA is preferred in certain settings, and they may be anyone with low or intermediate risk of disease progression and those for whom it's been decided that testing for latent TB infection is warranted, and IGRAs are strongly recommended for those who are BCG vaccinated or are unlikely to return to have their TST read. Another recent guideline is for the US Civil Surgeons for immigration purposes. They are no longer accepting TST and must use an IGRA in that setting. So I think it really does depend, but these guidelines specifically for healthcare workers do not say whether to use TST or IGRA.

Dr. Caudle:
So, doctors, let's position these recommendations around the COVID-19 pandemic. How does the emergence and persistence of this

pandemic affect attitudes towards TB testing in health facilities? Dr. McDade, I'll start with you.

Dr. McDade:
We've had instances where the patient was admitted with the rule out COVID diagnosis as well as rule out TB. We try to encourage the providers to remember TB is still a threat, and they need to remain aware since both of them are respiratory-spread diseases. So we continue to test patients. We have a lot of negative air rooms. We had them before COVID, and thanks to COVID we have additional negative air rooms.

Our attitude here has not changed toward TB testing. The patients in the high-risk clinics on the outside, depending on which immune-compromised population, they are getting their annual screening with the IGRA.

Dr. Caudle:
Okay. And, Dr. Rowlinson, what are your thoughts?

Dr. Rowlinson:
Yes, I would echo what Dr. McDade said in that it really hasn't changed our attitudes or recommendations in terms of how we test people during the pandemic. What I will say from a laboratory perspective is that we have seen a lot lower volume of submission for laboratory testing, and I think this really is reflective of the fact that fewer people are accessing care, at least in person. To go back to something that Dr. McDade said in implementing IGRA, in this situation it may be useful because it requires a single patient visit for the IGRA to be completed versus the TST that requires a person to return for the TST to be read.

And one thing that I actually didn't mention earlier but I'd like to mention now related to IGRA is that one of the things about this guideline not recommending serial screening of people who are at low risk is that specifically when we look at something like IGRA and testing for healthcare personnel who are at low risk, if they are serially tested, there is a greater chance for a false-positive, and we don't want to have false-positives. We want to make sure we're screening the right people, so that's just something to keep in mind.

Dr. Caudle:
And, Dr. McDade, let's come back to the practitioner's angle for the final word. Looking ahead, where do you see clinical practices and guideline recommendations needing to evolve before we can eliminate TB from the US?

Dr. McDade:
As far as clinical practice and guidelines, we continue to identify cases or suspects or contacts of cases. If we start them on preventative treatment, we need to ensure that they complete treatment, whether it's with the short-course or directly observed preventative therapy, and those that have progressed on to cases, again treatment, contact investigation, and then for those cases, directly observed therapy —and again, shorten the course of treatment to encourage compliance with these patients. So I think we're doing the right thing because we see that the numbers are going down, but there are other factors. And because of COVID and everything, the socioeconomic conditions are putting the patients in high-risk groups now, so we just have to continue to support and fund our health departments and continue with partnerships to address this to control TB with the ultimate goal of eliminating TB from the US.

Dr. Caudle:
Excellent. Well, that's a great call to action for us to think on. So, on that note, I'd like to thank my guests for sharing their clinical and scientific insights on the updated guidelines for TB screening among healthcare professionals. Dr. Rowlinson and Dr. McDade, it was great having you both on the program.

Dr. McDade:
Thank you for having us.

Dr. Rowlinson:
Thank you. It was a pleasure to be here today.

Announcer:
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