

### Transcript Details

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### Stories in TB Care: Memorable Experiences & Lessons Learned in Practice

Announcer:

This is ReachMD, and you're listening to Tackling TB, sponsored by Qiagen.

Here's your host, Dr. Jennifer Caudle.

Dr. Caudle:

As tuberculosis continues to be a leading cause of infectious disease mortality worldwide, clinicians are at the forefront of efforts to eliminate this global epidemic. That's why today we'll be taking a look at what those efforts actually look like in practice from the memorable experiences of a TB expert.

This is *Tackling TB* on ReachMD, and I'm your host, Dr. Jennifer Caudle. Joining me to share stories and reflections on caring for patients with tuberculosis is Dr. Masae Kawamura, practicing internist in San Francisco and Senior Director of Scientific and Medical Affairs for Qiagen.

Dr. Kawamura, welcome to the program.

Dr. Kawamura:

Thank you very much, Jennifer. I'm really happy to be here.

Dr. Caudle:

Well, we're excited that you're here as well. And to start us off, Dr. Kawamura, can you tell us about how you came into this field of practice and what's motivated you to stay in the fight against TB throughout your career?

Dr. Kawamura:

Well, my journey was really not the typical journey into public health. I really wanted to be an internist in Hawaii, where I grew up, but during my residency I did a outpatient infectious disease rotation at UC-San Francisco, and part of that rotation was rotating through the TB clinic. And when I actually was exposed to that kind of medicine, which I really didn't have a name for, I said, "I've got to do this kind of medicine," which was actually public health practice, and it was the going out with the outreach worker to provide directly observed therapy to a homeless patient that fascinated me. The compassion that was required to get a patient through treatment and the community aspects, the protection, it was much more than just a patient and you as a doctor. It was big. And as I fell into this love of working at the tuberculosis clinic, you know, of course I realized this was a global disease; this was a problem that was much, much bigger. As you mentioned, it is the most deadly infectious disease worldwide even today, and so, you know, TB elimination at that time, even early on, became my goal in life.

Dr. Caudle:

It's very inspiring, first of all, but it also sort of—your story really points at how our early experiences can be so defining and formative, you know, in our career, so it's nice to hear what really piqued your interest. What are some of the most important TB prevention pearls you've picked up over the years, particularly for those who are at high risk?

Dr. Kawamura:

For patients, you know, the most important thing is to really level with that patient and explain what TB is. You know, TB is a deadly disease. If it's not treated, 50% of people will actually die, but it's completely preventable. It's also a contagious disease, so if you get it, it's not just about you; it's about your family; it's about your friends; it's about the community. And so, when you explain that, you know, "by taking this medicine you will prevent TB in yourself and protect the community and you're doing your job for your family and your

community,” they are more than willing to take medicine even if they’re not feeling sick. And so I think the first pearl is really explaining what tuberculosis is, because most people don’t understand that it’s an airborne infectious disease. And right now with COVID-19 I think people can really, really relate to this. And the fact that people are not aware of how deadly and how contagious tuberculosis is—you know, one-fourth of the globe is considered infected with latent TB—they won’t feel alone, and I think they will do their part because you actually can... You can test for it, and you can take the medicine and actually prevent a lifetime without tuberculosis.

Dr. Caudle:

Excellent. And how about on the diagnostic and treatment sides? You know, have there been any updates or experiences that have changed your approach in those areas?

Dr. Kawamura:

Absolutely. I thought I would not see any changes, but there have been so many. It took months to actually get drug susceptibility on a patient, and now it can take days. We can diagnose TB definitively in 2 days with a PCR test. And on the prevention side in detecting latent TB, you know, we’re stuck with 100-year-old skin tests where the patient had to come back; it was very inconvenient. And as a TB controller, you know, our higher-risk populations were homeless patients who really could not prioritize their health, and busy immigrants, and so I never thought I’d see the day, but it came, and we now have a blood test for TB that is much more specific, that’s not impacted by BCG vaccination that caused a lot of false-positives from the skin tests, especially among immigrants. And so now we have the blood test called the interferon-gamma release assays available.

And not only that, on the treatment side we have new drugs for drug-resistant tuberculosis, for active disease, but on the prevention side, treatment used to be 9 months, and for some individuals 12 months, and now standard treatment has gone as short as 3 months and a dose once a week, once a week or 12 doses in 3 months, and it looks like the new data that was just recently published in *JAMA* is going even shorter. It looks like with this longer-acting rifamycin we can get the treatment down, a daily treatment down to a month, so doctors will no longer have an excuse to not test, not believe the result, No. 2, and not treat the patient to prevent TB.

Dr. Caudle:

Wow, that is amazing I have to say. For those of you who are just tuning in, this is *Tackling TB* on ReachMD. I’m your host, Dr. Jennifer Caudle, and today I’m speaking with Dr. Masae Kawamura, who is sharing some experiences and practice pearls towards managing TB.

So, Dr. Kawamura, I want to get a better sense of the patient care experiences that have influenced or even fundamentally changed your outlook on TB. Can you share a memorable story or case that inspired you?

Dr. Kawamura:

Well, one of the cases that I like to talk about with other doctors really illustrates why I’m so passionate about this disease and also why they should also join the bandwagon in preventing tuberculosis. You know, this is a story of a young immigrant from Latin America. She had a scar in her lung and a positive TB test, so we got sputum from her even though she was asymptomatic just to make sure she didn’t have active disease, and indeed she didn’t, and so we offered her preventive treatment because people with scars that look like from TB actually have 10 times the risk of developing disease compared to someone with a normal chest x-ray. So she had very high-risk latent TB infection. Unfortunately, she agreed. We gave her 1 month’s worth of medicine, and then she didn’t show up. However, 2 years later, early in the year, she said she started coughing around Christmastime and losing weight, so 2 years later... At least the good news is that she came back to us. She knew who to come to. And then, so we repeated the x-ray, and alas, she had actually destroyed her lung, and that upper lobe completely collapsed.

She was there with her 2-year-old child, and he was a healthy kid, looked exactly like his dad—a little mini-me, if you will—and because he was there, we did a chest x-ray, as we would any young child because they are extremely vulnerable to developing TB if they are infected, and he also had tuberculosis. And children are often asymptomatic beginning, but they can develop disseminated tuberculosis that can go to brain or bone.

And so this is a story of really making sure that your patients are educated well, making sure they get through the treatment because it can really prevent the devastation of lung destruction, which it has lifelong consequences, and the spread to others, to a precious child. And fortunately, everyone did well. We caught everyone in time, but we can never bring that woman’s lung back. And you know, she was a young woman in her 20s. So that’s a really important illustration of why prevention is so important.

And you know, it’s hard to treat someone who’s healthy. They say, “Doc, I don’t want to take a medicine because I’m healthy.” But like I said, I think with COVID-19, the opportunity... Because we can test for it, we can know a patient’s status and we can give them a medication to prevent a disease for their lifetime, I think patients will be much more likely and receptive to that and telling stories like this one.

Dr. Caudle:

Right. No, absolutely. These stories and, you're right, the advances are and do make an impact, definitely. On the flipside, were there any particular problems or setbacks that you faced within your practice that demanded a different way of going about things for your patients? And if so, what lessons did you learn from that experience?

Dr. Kawamura:

Well, the challenge with this kind of work that I've done is always about adherence, you know, and patients not wanting to take medicines. They have a thousand reasons why not. Something else is more important; they're not sick. And so I think what I really learned from it, this is a very humbling job, and really, as a doctor, you really have to listen and be empathic to the needs of your patients. And if they feel heard and if they also know that you are serious and you really do care about them and that this treatment that you're giving is about caring, not just for them but for the community and the greater world, you can reach them. You know, I've become very successful at that because of that. So, you can turn a challenge... Especially if they are angry, you can find out why they are confused or misunderstanding the problem and be empathic about where they are emotionally, but you can also address, after they feel heard, that misunderstanding or that confusion.

Dr. Caudle:

That's also very inspiring, and I think that those sort of clinical pearls are going to be so helpful for the rest of us, you know, practicing for whatever conditions we're treating, right, whether it's chronic disease or TB or others, so it's very helpful to hear how you've navigated that and worked with your patients.

You know, finally, Dr. Kawamura, you know, based on your experience, what's one thing that clinicians on the front lines of TB can do to help bring about the end of this disease?

Dr. Kawamura:

Well, I think the biggest gap is the ignorance around tuberculosis and how common it is. You know, there are 13 million people in the United States with TB infection. You don't have to screen every single person, but you should be knowledgeable about who has the risk of exposure and who is at risk for developing disease. You know, it's not screening the, you know, the world, but so it's thinking TB risk and thinking TB prevention. Really, the public health cannot do this for everyone, and it's really the people at the front lines—the primary docs, anyone caring for a patient at risk. And who am I really talking about? I'm talking about non-US-born individuals. We're talking about most of the world, you know, except for Western Europe, Japan, Australia and New Zealand that have lower incidence, right? So the whole world. So, if you see a non-US-born person in your practice, you know, think TB. Think TB risk. Screen them. They have a right to know their status. Think about how important it is to know your COVID status right now. You know, we don't even know how to do that at this point yet. You know, we don't have enough tests even. But with tuberculosis you can. You can know. You have accurate tests, blood tests, to give you a status. It should be in their medical record, even if they refuse treatment, because of some kind of drug-drug interaction. You can actually monitor them. You can have them watch their own symptoms. And if something changes, you already know their status, and it can be in your differential diagnosis. So my pearl is think TB, think TB risk and think prevention.

Dr. Caudle:

Excellent. Well, with that call to action in mind, I'd really like to thank you, Dr. Kawamura, for joining me to share some memorable experiences in your TB practice. It was wonderful having you on the program.

Dr. Kawamura:

Thank you very much. I enjoyed it.

Announcer:

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