

Building a Medical Laboratory Technician (MLT) Program from the Ground Up MP4 Video Transcript

Presenter: Angela Tarrant, faculty, Medical Laboratory Technician Program, Otero Junior College (CO)
Event: CHEO Discipline Panel Faculty Professional Development Workshop
– By Design: Taking ALL Allied Health Students Across the Finish Line
Date: May 15, 2015

OK, just to start out with a little bit of humor. Sorry, sir, we don't have the facilities for a CAT scan, but we can certainly get you a lab report. And what we have done in our facility is get you a lab report.

And I titled this "Building a Laboratory Technician Program from the Ground Up", because we literally have-- so just to show that progression. Why me? My name is Angela Tarrant. As she said, I worked in clinical laboratory for over 25 years, and have a specialty in microbiology.

And then this opportunity came up. And I thought, this job has my name written all over it, because I've worked in 25-bed hospitals to 1,000-bed hospitals in rural areas and metropolitan. And I know what students need. And I'm really anxious to get in on this.

And again, this program, and why Otero-- just some statistics about why we need medical technicians, technologists. In 1970, there were 791 MT programs, but by 2003, 70% of these had closed. I experienced this while I was in school, also. There were six in the state of Oklahoma when I applied. And four of them closed the year I got accepted.

30% of individual laboratorians expect to leave the workforce in the next four years. And 25% of them are 55 or older. You go in any lab, and it's an aging population.

So why Otero-- for those of you who don't know-- we are in La Junta, Colorado. And we serve this area, because it's a predominantly rural area. So we serve a huge part of southeastern Colorado.

Three rural, very economically depressed counties-- just over 33% of the residents are of Hispanic descent. We are a Hispanic-serving institution. 38% of them live below the poverty level, and with unemployment rate of 8.67 in the area compared to 6.1 state overall.

And a lot of that's due-- we've had a severe drought. Industry has left. And that's one of the reasons for the grant, and why we started this program at Otero.

78% of the service area residents have obtained a high school diploma, 89% in the state. So we're below the state average out there, also. This is a picture of Otero. And the reason I bring it up, when I say "Building from the ground up," we did.

This is the main building built in 1941. This is our life science area. The black are our new additions. This is the new addition, which a third of it houses our MLT lab. So we got a new facility to put all of this in.

This is our old lab. And we were crunched in there into the organic chemistry lab, which we had to share with the chemistry department. And they were very gracious. In spite of this-- of course, this is all students.

And this whole back counter took up equipment that we were using for a semester, and then moving in and out of my office as needed. Because we had no space for it. And as you can see, in the back are incubators, instruments, storage for all these microscopes, et cetera.

This is our new classroom. And like I said, one third of that new building is our MLT lab. We have it divided into clean and biohazard level areas.

So this is all clean area. The students can come in, bring their coats, their backpacks, everything else. We have a mental line right here. All biohazard on the other side, which we keep dirty and clean. And the students-- we're teaching them the safety of the infection control process in this.

We have the lab divided. It's set up exactly like a clinical lab in a hospital. We have our chemistry area with our chemistry analyzers, hematology with coag and slide stainers, blood banking with our cell washers, and microbiology.

We got a new laminar hood, CO2 incubator, and a regular room-air incubator. And then I was donated two more, which I'm going to turn one into a fungus

incubator this summer-- turn meaning adjust the temperature-- nothing big. It sounds like I was going to do something really technical there. I'm just going to turn down the temperature. And then we also have two drawing stations for our phlebotomy program.

Behind a great program are great people. And I tend to be the one who people see, because I'm full-time faculty. But Audrey is our Director of Resource and Grant Management. She came on in January, and is helping us manage this grant.

And then Elizabeth Huff, we don't have a picture, because Beth is here with us today. Beth is a key component of our program, because we need NAACLS accreditation. And NAACLS is very, very specific about the people who hold that position. And Beth has an incredibly specific skill set, which manages to fulfill that. And we're very glad to have her on board.

Then Cathy Bollacker actually was on the ground level of the program. She bought the equipment, investigated the clinical sites. Basically, when you talk about the MLT program at Otero, you see my face. And this is a person that does the work. We couldn't have this program without Caty.

Then Lavona Tyska-- we have a Career Coach through the grant. And she does so much for us with our students. She counsels them. She gets workforce funds for them. She arranges daycare. She's tutoring-- all of those things that improve our retention with the program.

Our program is divided into two areas. We have a phlebotomy certificate. And in the medical laboratory technician program, the certificate is optional. But we highly encourage the students to get it. And I can't think-- we don't have any that haven't so far. They get that certificate.

The phlebotomy program was NAACLS approved, which is a national accrediting agency for clinical laboratory science, in 2014. We started the process in 2012. And so the phlebotomy portion of it got it in 2014.

The phlebotomy certificate is two semesters. This is a great area for people who-- I don't know if I'm going to like this. We've got two semesters. The first one is our intro to our MLT program, and the second semester is an internship.

And so basically, they're sent out. They learn to draw blood. They get 100 sticks, 100 clinical hours in a facility.

And you go, well, OK, that's cool. And this is a great job, because for two semesters in a certificate program, we're seeing wages-- \$14.29 is the average that is touted by the Department of Labor. We're actually seeing around \$12, which is really good wages for somebody with a high school diploma and a certificate. So we really encourage this.

Medical laboratory technician program is five semesters, with 451 clinical hours of internships. So this is our big thing, and getting this with our affiliates, our advisors, to get people to take these students.

All of our theory classes are hybrid. We put the majority of the lectures online. When students come to campus, we are in the lab.

We are working with laboratory skills in the lab. We staff these on two days to accommodate our working adults and our mothers with children. We have a lot of those, and commuters. I have very small classes, but everyone in my class last semester was a commuter.

Yesterday, as we were sitting here, Beth got our email that we passed another step in our accreditation procedure-- in our process. From 2012 to finally get that yesterday-- as soon as we send in our self study, our students can sit for their board exams. That is huge, because without that board exam, they can't work.

And so this has been something we've really been waiting for. Labs will not hire them as medical technicians, even if they have a degree, unless they pass that board exam. They cannot pass the board exam unless we have accreditation. They can't take it. And so that's a big, big deal.

MLT wages-- about \$17.90 an hour-- and again, this is a great wage. And this is what we're actually seeing with students. People signing on-- we did have a student who is employed even though he hasn't taken his board exam because they know he's getting board ready. And he hired on around \$17 with a sign-on bonus. So this is really good for everybody.

This is just our brochure. And the main thing is to show the class schedule. Because you talk about the gateway classes-- English, biology. Our students have

to have through A and P 2 to be in the program-- and so a lot of chemistry, math, science.

And this is kind of where we lose them sometimes. We have to watch that retention. When they sit in my office, and they say, science-- don't do very well with science-- I'm, like, you might have to think about something else, or we're going to have to work on that. Because we've got to get you through all these classes.

Labor market and workforce-- as part of this, many of the local hospitals realize the shortage is coming. I just told you 25% of our workforce is going to leave. They're watching this in their own labs, and so they are highly supportive of the program.

They take our students for clinicals. They donate us thousands of dollars worth of consumable supplies. And they sit on our advisory board, so that we know what they need.

They come and say, hey, you sent me a student. They were weak in this skill. Can you work on that?

Yes. We incorporate that in the next. So we're building the program through a lot of their feedback. And then they want to hire these students, because they know they need people.

Our clinical sites-- without reading the list, we have a whole bunch. But this is part of our problem, too. We're in La Junta and it's predominately rural. We send our students as far west as Salida, as far north as Burlington, and kind of right in here. So we've got a lot of travel expenses with their clinical sites.

I do this because I worked in clinical lab for over 25 years. And you ask my parents, what do you do? And they go, she draws blood. I don't know, she works in a lab. That's kind of the thing.

And the reason is, no one sees the face of medical laboratory technicians and technologists, because we're in the lab. So when you go to the hospital, yeah, you get your blood drawn and pee in a cup, usually. And then what happens?

We teach our students to draw blood on fake arms. And then they practice on each other. And then we send them to clinicals for another 100 hours.

We have chemistry. You think you got a heart attack. You come in, and we do glucose for diabetics-- all of those chemistry analyses we teach.

This is our chemistry analyzer that we purchased. And this little guy will do everything the big guys in the big clinical labs will do. It's just slower.

And Cathy teaches clinical chemistry. And she just loves this instrument, because not only is it slow, it's difficult. And you go, well, that's not a good thing.

But it is when you're teaching students to troubleshoot. And so this thing has all kinds of issues. She work them through it.

By the time they can run this thing, they can run these things. This is one of our students out in a clinical with the big analyzers. And they're going, man, this is a piece of cake after that Selectra. And so when we we're sending them out, they're definitely workforce ready.

Hematology-- we're reviewing all kinds of blood cells, coagulation. We have a little pochHi instrument for a complete CBC that does a partial differential, and a coag instrument, which has blood clotting. And it's nice, because a lot of the instruments for safety won't let you open them up. But we can override this and teach students while it's running, as long as we're watching their hands that they don't get inside.

And then we have this piece of equipment that ties to our microscope, so that we can project onto the screen what we need the students to see. And because you're looking at a microscope, teaching that skill, and then students go, well, I don't know. I don't know what it is.

I've looked in. And they're on the wrong power. Or they're not in focus. And this way, we can tell them exactly what they're supposed to be seeing. It's a great teaching tool. More microscopes.

We also teach blood banking across matching units. And we use a tube method on this. This is where our clinical affiliates come in, because blood banking reagents are in the thousands of dollars.

They outdate them every 30 days, so they give me their old ones. So I'm always 30 days behind, with pretty fresh reagents for one bottle of this, which I need-- check cells is an example-- I need one per student per semester, and that's one of 10. \$250 for that little bottle of check cell. So I get all these expired from the facilities.

Cell washers-- running these tests on urine -- we have a couple little Clinitechs. And then our microbiology Department, we have the CO2 incubators and our laminar hood. A lot of what I teach is infection control, and to keep the student safe.

And so we are working in a real lab. They're gowned up. They're gloved up. But they have all their PPE on the entire time we're working, so that this is not a new concept when they go into the clinicals. They know how to keep themselves safe.

And why would anybody choose this as a career? The reason is, even though you never see laboratory people-- they draw your blood and they go away, and you go wow, what did they do? 80% of physicians' decisions are made from lab and x-ray.

So not only is this a very good career in terms of wages, this is a great career in our contribution to society. And another reason I do this-- for those of you who teach the other sciences-- sometimes the students are going, what am I going to do with this? And they think nursing-- health care is nursing. This is a different option to nursing that can really affect health care.

The MLT program at OJC is committed with all of the facility, the administrators, people on board, plus our clinical affiliates and advisors. We are rising to meet the shortcomings. I have people calling me all the time-- fairly often.

Hey, we need people. When are you getting students out? We need people. Now that we can get them to take their board exams, I can give them good, real answers with that.

And I have a few minutes. I realize this is small, and you're never supposed to do this with PowerPoints. But this is why I teach. This is why we developed this program.

This is one of our students. And I'll kind of skip through it without just reading. Her junior year of high school, she dropped out of school pregnant with her second child.

And so she quit school. We're in a poverty stricken area. She has two children, realizes I'm going to have to learn to make a living, and enrolled in this program-- originally in the nursing, but it just wasn't a good fit.

And so she loves this. Because with two small children, two days a week on campus is what we do. The rest is online.

And she says, I'm soon to become a college graduate. We were doing blood banking together the other day. And she goes, hey, my brother is graduating from high school. And I'm, like, hey, that's really cool.

And she goes, yeah, he's the first person in my family ever. I'm, like, OK, that's kind of eye opening. And so this is going to be our first college graduate in this family, which is in December.

So this is our success story. And I work so closely with these students in the lab, and get to know them. And then to hear their personal stories like that, it's why we do what we do.

And I really love doing what I do. Sometimes I get a little bit discouraged, like everybody else. There's no perfect job.

But then you see this. And you go, this is why we do this-- to get these students out of poverty into viable careers where they can support their families.