**LabMed Podcast Ep 6 - Jyoti Shetye - FINAL**

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**VO - Welcome to *Life in the Lab*, brought to you by the Association for Laboratory Medicine. I'm Kamiljit Chatha, and I'm a Consultant Clinical Scientist at University Hospitals Coventry and Warwickshire NHS Trust. In this series, we bring you inspiring stories of clinical scientists and medics working in laboratories in the UK and around the world.**

**Jyoti Shetye is the Director of Laboratory Operations at Mediclinic Middle East, a private healthcare group with hospitals and clinics across the United Arab Emirates.**

**One key thing Jyoti’s really embraced throughout her career - something that piqued her interest from a young age - is sustainability.**

Basically,  I grew up in Mumbai, India, and the lifestyle over there was inherently sustainable. I loved playing outdoor games. I enjoyed going for hikes and I enjoyed natural landscapes. So, definitely, you know, preserving the environment, the seed was embedded within me.

**While Jyoti was definitely passionate about sustainability, she was also really into science. After earning a Master’s in Chemistry, she joined the Bhabha Atomic Research Center, where she got to deepen her expertise even further.**

Bhabha Atomic Research Center is one of the most prestigious institutes in India. Here, I completed my PhD, and the scientist within me was born and nurtured. I developed a large number of skills over there, and sustainability is one of them. And this became my core principle in my working career.

**Jyoti then moved to Dubai, where she landed her first role as Lab Manager for Mediclinic. Just like that, she was part of the management team overseeing a network of 29 clinics and 7 hospitals.**

**And it didn’t take long for her to realize that, when it comes to laboratory environments, 'sustainable' is probably one of the last words you’d think of.**

Clinical laboratories are 24/7 operations. We have high energy consuming instruments, we have the centrifuge, fume hoods, refrigerators, you have freezers, you have analyzers. Then comes the water. You require a large amount of water. There is waste production also. Medical waste, even plastic waste, in terms of tips, pippets, as well as many of the other consumables.

**But in this high-waste environment, Jyoti saw a chance to make a change.**

As I moved up onto my career, my motivation from daily operations moved to strategic initiatives. I started mentoring and leading teams, but I made sustainability as my focus area because that was my prime objective. And then, I decided that if we can actually minimize energy resources, water utilization, and minimize waste production, it can give a very high impact.

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 We had 29 clinics and each clinic had a functional laboratory. These clinics were just a few kilometers apart. And then we thought to ourselves: do we really require laboratories in all these clinics?

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**That’s when the idea to centralize and consolidate the labs came to life. In 2016, her team set out on a mission to cut down the total number of labs across the entire network.**

We came with a proposal to our corporate management, which was approved. Then we went and met each and every medical director in the clinic. And we told them about our plan.

 When there is any change, there is always resistance initially. But you know, our top management as well as the clinic medical directors were very supportive. They trusted us and they believed in us.

 We created two central laboratories. One in Dubai and the other one in the Abu Dhabi region. Then we had seven hospital based laboratories. Three of them were located in Dubai and four were located in Abu Dhabi and Al Ain regions. And these secondary laboratories cater to their individual hospitals as well as the cluster clinics associated with it. The cluster clinics are primary collection centers. They collect the samples, they perform point of care testing, and the remaining tests are then sent to the secondary laboratories. They perform the tests, which are actually within their scope, and then send the remaining test to the central laboratory, which are the regional laboratories - one in Dubai and the other in Abu Dhabi. By using this centralization and consolidation program, we consolidated twenty-nine laboratories to nine laboratories.

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You can say in 2016, we started this and nearly within a year or so we had done it.

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**You would think all that lab closing and consolidating would lead to a big staff layoff, right? Well, actually, no - not at all!**

We  did not retrench a single staff. We created new departments, we created new specializations, we trained our staff, got them transferred over there. And by doing so, it increased their satisfaction because they got more skills. They got exposed to more areas. And that's how actually the entire program became a hit.

**With the success of the centralization, they kept pushing forward, thinking outside the box, and looking for other changes they could make.**

**One idea was to extend shifts beyond the usual 9 hours, so staff wouldn’t have to commute as often and could get longer blocks of time off.**

 We thought: Why don't we change the shifts to a 12 hour shift for the staff? It was done for certain departments. When we have a 12 hour shift, the person or the technical staff transiting from their residence to the hospital, to and fro, is going to minimize. And this will have an indirect impact on the carbon footprint.

We thought that this is going to help our staff to have a work-life balance. The staff, to be honest, are very happy because they have a lot of off days in between and they are looking forward to those weekly offs, which they get.

**Then there was the question of reducing the laboratories’ stock days - that’s the number of days' worth of stock sitting in inventory. The more days you have, the higher the risk of your inventory expiring or ending up with too much of something you don’t actually need.**

The target or the benchmark by MediClinic was 25 days but our laboratories had stock days of 48. However, we tried to reduce it, we found it was not working. It was so bad.

So, what I did is I called all the supervisors of the various departments and I told them: from today onwards we are going to play a league game. So, I told them that every department is going to be monitored on a weekly and monthly basis. On a monthly basis, we are going to check for the stock inventory, we are going to check for the stock value, the stock days, as well as the variance. And weekly and monthly reports were published and you will not believe; each one could see what the other department was doing and each one wanted to actually be at the number one position.

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 Within a few weeks, our stock days came down from 48 days To 23 days.

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We played the game for a period of two years. Now, we don't play the game but it's been incorporated into all the laboratory units as well as the laboratory departments. So, I can tell you a simple league game changed and gave us wonders. And I felt that this is something which was like thinking outside the box for us.

**Another way Jyoti encourages that 'thinking outside the box' is by not only working closely with her team but also seeking input from other areas.**

**She really values getting different perspectives and ideas from all kinds of people across the lab network.**

During one of our team discussions, we were just discussing what are the new ideas which we can have to incorporate within the laboratory framework related to sustainability. Is there any way we can reduce our wastage? And then, the Phlebotomist came out with one idea.

**A Phlebotomist is the person who draws blood from patients - whether it's for tests, transfusions, research, or donations.**

Our original way of working was when Phlebotomy collected patient tubes, these samples were kept in plastic kidney trays. And there was one kidney tray per patient. So, you can imagine the amount of plastic we were buying, using, and discarding.

So, the Phlebotomist said: how about we change it to racks. Instead of putting the tubes in a plastic tray, let's use the racks and these racks can be reused. And then I said: wow, this is fantastic. Now we're talking about a circular economy. And we immediately implemented it. And you won't believe… 100 percent of the plastic tray wastage was eliminated.

We just changed our practice. Now, listening to the Phlebotomist, a sample sorter said: Oh! Our initial practice of transporting samples from one lab to another lab was that we used vacutainer tubes, and these tubes with the blood samples were put in individual biohazard bags. And these biohazard bags were then put into cool boxes and transported.

Instead of using biohazard bags, we can put these tubes in the rack and the entire rack consisting of 60 or 100 tubes can be placed in one single big biohazard bag and this bag can be kept into the cool boxes. Now, you won't believe… by changing this practice, we eliminated 60 percent of our biohazard bag consumption, which weighed up to a combined weight of an Asian elephant and a calf. So, just by actually team building or team discussions, fantastic ideas can just flow out.

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I keep on asking my staff: *Why are we doing this in a particular way?* Because, you know, some of the processes have been started decades ago and we are still following the same process where things have changed and we have to go for the change.

It's like self challenging, you know: *Why are we doing this? Or is there something which we can change over here?*

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This reminds me of one story, basically, which helped me in developing my mantra in my working career. So, the story is related to two frogs. So, basically, back in India, the farmers used to milk the cows and the milk is then kept or collected in cans. One day, there were two frogs who actually jumped into two cans. Let us call it can A and can B.

Now, when both these cans were sent to the dairy, when they opened can A, they found a dead frog. When they opened can B, there was a frog which was alive, which leaped out, and it escaped.

But how did the two frogs from can A and can B think differently? The can A frog, when he jumped inside the can, he was so terrified. And he said: I'm a frog. I can swim. But I can swim only in water. This is milk. What am I supposed to do? He got so panicked and he died.

The can B frog thought differently. He said: Oh, I'm a frog. I can swim. But this is milk. I can swim in water. But the important thing is I can swim. And he went on swimming, moving round and round. The milk churned, and butter was formed. The frog leaped onto the butter and got saved. Now, what this story tells us, that our environment changes from time to time.

But if we use our learned principles, or principles from our education, and apply it to any environment, we can succeed. And this is my working mantra, which I use in Mediclinic laboratories.

**Thanks to all their hard work, Jyoti and the Mediclinic Middle East Labs Management Team didn’t just cut down on waste - they also slashed water usage by 57 percent and energy use by 53 percent .**

**Their efforts earned them a sustainability award from the Royal College of Pathologists in 2024.**

Oh, wow. It feels great. It's something which we long to achieve and we achieved it.

**But the thing is that Jyoti… Well, she’s just getting started!**

The recognition which we received by the Royal College is something which actually motivates us. Everybody is very hungry. So, now we want to achieve more and we want to reduce more.

We have very strong support from our management. Without the support, you can't do anything to be very honest. So, you have a supporting management team, you have motivated staff and sky's the limit then.

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Our waste reduction, which was 40 percent, we want to have it even more, and we want to actually even reduce our energy consumption. So, what we are doing is we are now going in, replacing some of the analyzers or equipment with the new technology, which have got energy saving devices like some of refrigerators and centrifuges, so our energy consumption definitely we're expecting it to drop down.

We are planning to go digital, go paperless. When you talk about the number of trees which you are responsible for getting chopped, that's the time when the staff feels: Oh my God, is it so? With digitalization, we want to actually reduce our paper consumption a lot.

 I would love to have complete, you can say sustainable laboratories. So, I would like to have a full circular economy wherein you actually recycle or repurpose the materials in the laboratory.

And we're also looking into creating new lab spaces wherein we can have some green areas within the lab. And then having point of care testing, a reliable, accurate, sensitive, and cost efficient point of care testing. So, it can reduce the sample transportation time.

So, these are some things, our future plans, which we are looking into, and we are progressing in that direction. So, maybe for the next RC Path Award, we will be there again.

**Today, Jyoti is passionate about sharing her journey of making the lab network more sustainable and helping others who want to do the same.**

Any institution anywhere across the world can do this and can work onto the model which we have created. And we are open to sharing this with anybody and everybody.

The lab is an ocean of data.  If you're data driven and you have your data maintained, you can look into your geographical location, look into the needs of each and every hospitals or clinics, look into super specializations which are associated with those clinics - what are the stat tests which will be required to cater to those super specializations? Then look into centralization having fantastic logistical support.

For me, what I feel is that nothing is impossible. And the mantra which we work on and which I believe is that it's better to try and fail rather than not to try. You can do it.

**For a transcript of this episode or for more about Jyoti Shetye and her work, visit our website at** [**www.labmed.org.uk**](http://www.labmed.org.uk)**/podcasts**

**This podcast is brought to you by the Association for Laboratory Medicine. Produced and edited by Caroline Bacle, sound mixed by Daniel Fletcher. Special thanks to Avi Surskas and everyone in the LabMed team.**

**And we’ll be back next time for more stories of *Life in the Lab*.**

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