



LEAN SUCCESS STORY:

THE LEAN EXPERIENCE OF THE MICROBIOLOGY LABORATORY OF THE OTTAWA HOSPITAL

One of the ongoing issues in any laboratory is change. The Microbiology Laboratory of The Ottawa Hospital (TOH) is no exception. Throughout major changes of staffing, policies, procedures, and budgetary constraints, it is difficult to focus on the day-to-day procedural issues of processing specimens in the most efficient manner and addressing staff concerns.

In 2006, the Microbiology Laboratories for the three campuses at TOH were amalgamated into a newly constructed laboratory located at the General Campus.

In the existing labs, there had been ongoing changes in standardization of procedures, specimen receiving, transportation, work distribution and specimen flow. Many attempts had been made at improving the work areas; some were successful and some continued to be a concern. It remained evident that, although we now had a spacious new lab, we still had a number of issues that we were unable to.

While attending the 2008 AMMI-CACMID convention in Vancouver, I had my formal introduction to LEAN. I was travelling with one of the Microbiology Lab's charge technologists and we were both very interested in what we heard at lectures and viewed on posters. We learned how LEAN had been successfully used in the laboratory environment to increase efficiency and save time and money in the process. A stop at Calgary Laboratory Services on our return home also showed us first-hand what a success LEAN could be in a microbiology

laboratory.

It had now become quite evident to me that a LEAN process could be the answer to many of the issues in the TOH Microbiology Laboratory. Our most pressing concern was the Specimen Receiving Area (SRA). Specimens are received from all three campuses of TOH and from two area hospitals. Our existing system, coupled with the severe staff shortages, was creating excessive stress on the staff and resulting in increased sick leave and a significant number of errors. However, with all the cost cutting and budgetary concerns of the hospital, I felt it would be very difficult to obtain buy-in from those holding the purse strings.

Fortunately, our new EORLA (Eastern Ontario Regional Laboratory Association) manager was familiar with a successful LEAN process that had been carried out in Toronto. She was on board. Our administrative director was very open-minded, and the VP was quite agreeable to looking at anything that would improve the extreme concerns arising in the Micro Lab and potentially save the hospital money. The lab microbiologists were a little skeptical, but not restrictive in any way, as we moved forward in implementing the LEAN process.

With the assistance of the new EORLA Manager and our VP on board, LEAN Advisors Inc. was hired to come into the Microbiology Lab and assist us with our concerns.

A LEAN team was carefully chosen from the staff, consisting of a Charge Technologist, a Senior Technologist, a fairly recent MLT graduate and a Laboratory Technician. The Charge Technologist, although not working on the routine benches or in specimen receiving, is thoroughly knowledgeable on all aspects of the lab. The Senior Technologists are resource technologists for the rest of the staff and are required to answer questions and troubleshoot issues; they work both on and off the benches. The bench technologist has been trained on

all the routine benches in the lab, including the SRA, and is very open minded to new ideas. The Laboratory Technician works solely in the SRA and is extremely knowledgeable in this area. I, as Laboratory Manager, was also on the team.

LEAN Advisors gave a one-day overview session on LEAN to the Micro staff, Microbiologists, Laboratory Directors and anyone else who might have an interest in, or be affected by, our LEAN initiative.

Our contract with LEAN Advisors Inc. provided the team with thorough training in the principles of LEAN and access to Change Management processes if required. Training, process review and implementation were all intertwined. Each session was a full day and days were scheduled in groups of two or three for maximum effectiveness. Our trainer was present at all sessions and was adept at drawing out new ideas from the team members and making them feel very comfortable in doing so. This interaction with team and trainer allowed for thorough review of the process in our SRA, sound recommendations and prompt implementation of changes.

The results were beyond our expectations. The four main work areas in our SRA were cleaned up, excess equipment moved, schedules reorganized, staffing and processing changed. All this ended with much improved TAT, a considerable increase in the number of specimens processed per shift, and a huge amount of stress being taken off the shoulders of the staff. These LEAN initiative results are documented in another article on this web page.

In most hospitals across the country, the time is right for implementation of a LEAN process in laboratories. We have been working far too long with old procedures and methods. A new look at processes that save time, energy and money, improve TAT, decrease stress levels on

staff, and introduce usable and effective processes can only be of value in any institution.

The biggest hurdle for anyone thinking of getting started with LEAN may well be acquiring unanimous agreement from the powers that be and from the staff who will be resistant to the change. Our lab was in a staffing crisis due to multiple resignations and illness and therefore the staff was willing to try anything that might improve workflow and efficiency for them. I must commend them on their ideas, input and implementation. In the end, it is the staff that learns the process, implements many of their own ideas and is responsible for keeping the processes moving forward.

Undoubtedly there are always a few diehard holdouts that are reluctant to change, no matter what. A change management process can be put to good use in these situations.

Communication to the staff and to the department heads was essential. Everyone had to be continually kept aware of how things were progressing, why changes were being made, and how it was improving the process. Communicate, communicate, communicate. To be honest, this was one area where we fell a little short. In trying to keep the staff informed and updated, we were lacking in information flowing to the Microbiologists and General Manager. We had to address the challenge of communication and realize how important it was.

“LEANing” the SRA naturally impacted other areas and showed us where LEAN could be used throughout the Microbiology Laboratory. LEAN has now been implemented in the Level 3 Lab, the Mycology Lab, and the routine benches. It also led to reorganization of our fridges, freezers, and inventory control. Our LEAN team must continually improve the process, keep LEAN on track and address concerns from the staff as they arise. It will take a strong leader and a diligent team to fight this uphill battle, however, once LEAN has begun, it is quite

evident that there are improvements in turnaround time, processing, efficiency and, certainly in our case, staff morale. This ultimately leads to our goal of providing the best possible patient care.

It is my sincere hope that the LEAN process will move into the remaining laboratories in the Department of Pathology and Laboratory Medicine and throughout the entire hospital. With LEAN, patients will receive the quality of care and service that they expect and deserve, and the work environment will be improved by decreasing the stress and allowing the trained professionals and support staff to provide more value to their clients.