Using Lean 5S to Optimize MLS Laboratory Work Space

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ABSTRACT

The Medical Laboratory Science preparation (prep) room, over time, collected obsolete equipment and outdated reagents that were no longer used. There were 2 extra refrigerators and an extra freezer, in addition to the large refrigerator and freezer already storing laboratory specimens. Objects were abandoned by former instructors when the courses they taught were completed. With multiple refrigerators and freezers running, excessive heat was generated. The heat made working in the prep room uncomfortable, not to mention the large amount of wasted energy.

To create a more pleasant and efficient work space, a Lean 5S was performed. The purpose of using Lean methodology was to identify waste and non-value-added activities. The 5S, which included sorting (removing items no longer valuable), setting in order (arranging items so they are easy to access), shining (cleaning), standardizing (how the work is done), and sustaining (to prevent the work area from deteriorating back to its previous condition), was performed at the request of the Dean of the College of Health Sciences.

The 5S required establishing a cross-functional team, which comprised the champion of the project (the Dean), the key stakeholders (the faculty members and Director of Laboratory Resources), and 2 additional team members (graduate students with "fresh eyes"). The team worked together to identify types of waste, including the waste of motion caused by people having to search for laboratory materials, the waste of energy because of running the extra refrigerators and freezers, and the waste of defective equipment and expired reagents.

The outcome of the 5S project resulted in a more efficient and productive laboratory prep room with an added benefit of creating 35% more work space.

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