

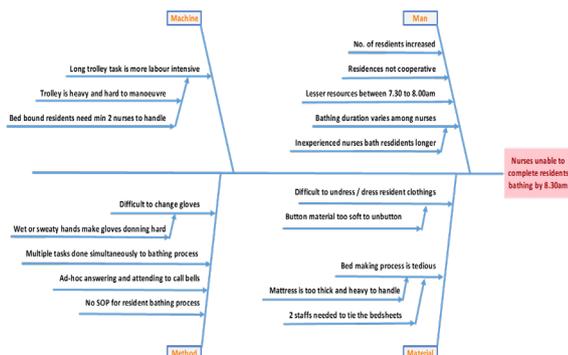


Implementing Lean thinking in nursing homes (Part 2)

This case study showcases a nursing home that has implemented Lean thinking in a workflow optimisation project. The project team involved had undergone a series of structured learning workshops and onsite project implementation. The team was also guided by a coach from the Lean Transformation Innovation Centre (LTIC) to potentially resolve the manpower constraints of inpatient long-term care service.

Act 3: Root cause analysis (RCA)

The team brainstormed via the Fishbone Diagram to ascertain why they had been unable to complete showering the residents on time. The 5 Whys technique was then used to deep dive and address some of the major causes identified.



The Fishbone Diagram

Act 4: Developing counter measures

The team brainstormed on various counter measures that could help them meet the showering cut off time at 9am with the current manpower and number of residents.

Some nurses shared their feedback on the showering process:

“If we redesign and streamline the morning bathing procedures, can we reduce the workload of the morning shift and therefore reduce the manpower required by one?”

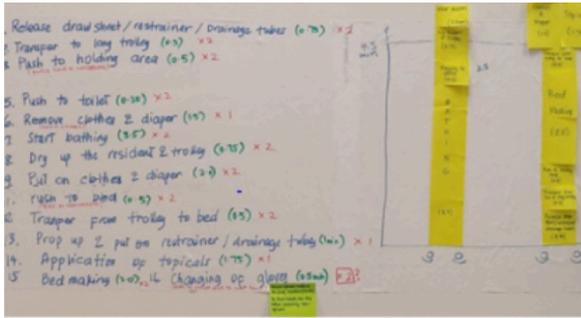
“If we shift some of the work from the morning shift to the afternoon or night shift, will we need the same number of nurses in the morning?”

“If we reschedule the bathing of Category 4 residents to the afternoon, do we still need more nurses in the morning?”

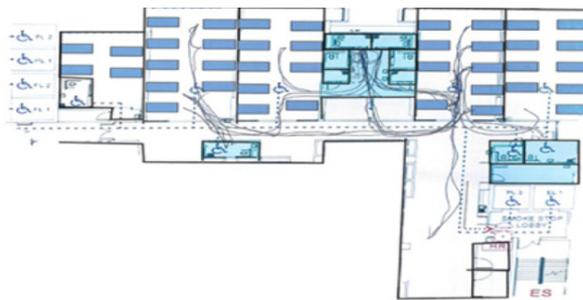
During the morning shift, the nurses, personal care assistants and healthcare assistants are responsible for nine main tasks. These include bathing residents, bed-making, taking vital signs, wound dressing, serving breakfast, morning exercise, doctors’ review of residents, carrying out doctors’ instructions and the application of topical solution for residents.

Using the Fishbone Diagram as a guide, the team also scrutinised every detail of the process.

1. Studied the bathing process to identify areas where time could be saved.
2. Standardised the bathing process to make it more efficient and effective.



Standardised work chart¹ for the bathing process



Spaghetti diagram of the ward showing the movements of the nursing staff in the morning hour

3. Studied routines such as the bedmaking process to reduce time during the morning crunch.

The team was divided into groups to record the movements of the nurses and time taken for bathing both bedridden and wheelchair-bound residents.

A Spaghetti Chart was drawn after a Gemba walk² to identify wasteful activities, which would lay the foundation for workplace organisation in the future.

4. Other work included looking into reducing the bottleneck by leveraging the night shift. This could be done through a quick changeover and redistributing some of the work to the night shift.

Based on the survey data gathered in September, 20% of the residents preferred to be bathed between 5 to 7am. Another 30% of the residents chose to be bathed between 7 and 8.30am. Based on the data, the team was assured to proceed with countermeasures of having night shift nurses bathe 14 commode residents by 7am. Their confidence was further boosted by a Takt Time³ study which confirmed that adequate time was allocated for nurses to complete the bathing process.

This case study illustrates how the nursing home achieved a planned outcome of bathing 90% of the residents by 9am. The project delivered a scientific approach by allocating resources and rebalancing the workload between shifts to support an expansion drive. 📌

Glossary:

- ¹ Standardised Work: The precise work sequence in which an operator performs tasks within takt time.
- ² Gemba Walk: This means to “go and see” for yourself what is happening on the ground.
- ³ Takt time: This is the rate at which a job needs to be completed at in order to meet customer demand.



Mark Tan | Assistant Director, Lean Transformation and Innovation Center | Singapore Institute of Technology

Mark is in charge of delivering Lean training and projects to various industries, including SMEs. The center aims to promote and develop lean practices among local enterprises, and drive adoption of Lean thinking, culture and mindset through the partnership with the Lean Enterprise Institute. Since its inauguration in Aug 2016, the center has supported more than 30 companies on their Lean journey. Prior to joining LTIC, Mark was a Lean Six Sigma Black Belt practitioner with the private sector for more than 15 years.



David Leong | Senior Manager, Lean Transformation Innovation Centre | Singapore Institute of Technology

David is a certified Lean Six Sigma Black Belt practitioner and a certified QMS Lead Auditor for ISO9001. He has more than 15 years of experience practicing and applying Lean methodologies. He is also well-versed in applying other quality improvement tools such as Agile and Scrum, across different industries. David also conducts public workshops and masterclasses.