

# Optimised and colour coded Mölnlycke® procedure trays boost efficiency

Volume of surgical procedures increased by 17% thanks to lean thinking



'At first, I thought Mölnlycke was just a marketing-driven company only interested in selling goods. But it quickly became clear they really sought to offer added value, even bringing in a consultant who further improved our business.'

Tarmo Martikainen, CEO



'We were satisfied with previous Mölnlycke procedure trays. Still Mölnlycke picked up on our O.R. development project and spontaneously proposed to review the trays and add a colour coding system.'

Tanja Heikkilä, O.R. Nurse



'The numerous variations of instruments and materials in our field of specialisation require meticulous organisation. Mölnlycke acts as a true partner in this process.'

Eeva Nieminen, Head Nurse



Coxa Hospital, a private institution specialised in orthopaedic hip and knee replacement surgery, was founded in 2002 as a joint project of several public hospitals and organisations. The hospital strives to be an example when it comes to quality and productivity. Performing about 3,000 joint replacement operations per year, it constantly works to improve its approach and procedures. “We consider ourselves a lean hospital,” says Tarmo Martikainen, the hospital’s CEO.

#### Key actions and achievements

- Colour coding of material and inventory
- Partnership with Lean consultant
- Review and optimise trays with the right components
- 2 Mölnlycke procedure trays were split into 4
- From 29 to 37 components in the primary hip tray
- From 31 to 45 components in the primary knee tray
- Number of surgical procedures has been increased by 17%

As a private organisation, Coxa Hospital runs on productivity, continuously reinventing itself to increase output without compromising patient satisfaction. In 2012, it launched an improvement project initially focused on sterilisation processes and quickly evolved into an analysis of its storage and inventory methods. In this process, when the hospital scrutinised its material flow, Mölnlycke® noticed this effort. They recommended revising the Mölnlycke procedure trays already in use and even brought an external consultant, KM&T, into the picture to maximise the benefits of this modification, according to principles of Lean Management Methodology.

#### Optimising the Mölnlycke procedure trays improves performance

Coxa Hospital implemented two different Mölnlycke procedure trays for hip and knee replacement procedures as early as 2004. Eeva Nieminen, Head Nurse in charge of the disinfection and sterilisation board, was involved in the process to adapt and divide these two trays into four. The result was a major increase in procedural efficiency and staff productivity by adding procedure-specific components in each tray: “We saw it as a huge opportunity to customise our trays even further. Experience taught us which components would be undeniable assets.”

Her colleague Tanja Heikkilä, O.R. Nurse, adds: “We opted to split our trays into specific versions for primary operations and revision procedures. Revision surgery always requires more items that we had to add ourselves. Checking each item individually for expiration dates and sterility took time and carried more risk. Next to



saving time, having everything delivered in a single sterile package also reduces stress, eliminates mistakes and improves patient safety. It was great to work with Mölnlycke® representatives since we got tips about components that would be helpful to include in these customised procedure trays. To help the staff decide which items to add to each tray, Mölnlycke organised a hands-on event to present the look and feel, and pros and cons of different options. For example, these tips included surgical sutures, skin stapler, diathermy pencil, wound dressings as well as safety equipment such as safety needles, needle counters and scalpel holders."

### Mölnlycke's support goes beyond just selling goods

CEO Tarmo Martikainen explains: "When Mölnlycke approached us, I was sceptical, thinking they just wanted to sell their goods. But it quickly became clear that they really sought to provide added value. They connected us with one of their partners, KM&T – a healthcare consultant specialised in Lean Methodology. Thanks to their suggestions, we were able to further finetune our reorganisation project."

An analysis of working processes showed several opportunities to amplify the value of the Mölnlycke procedure trays and colour coding option. Thomas Gnesotto, KM&T's European Managing Director, describes: "We visualise problems and identify gaps. We are not about brutal deployment, but proceeded step by step, winning the hearts of the Coxa Hospital staff by offering help and real improvements. Mölnlycke has a colour coding system including the ability to mark each Mölnlycke procedure tray with a distinctive colour. Together with the nurses, we implemented this colour coding system based on pre-existing colour demarcations used within the O.R., and we proposed expanding this to the whole material flow, including reusables."

### Easier stock management thanks to colour coding

"The colour coding system hugely simplified stock management," says Tanja Heikkilä. "One operation equals one tray, and thanks to the colour coding, you immediately notice which ones are running out. You can be sure that everything you need will be there while avoiding overstock and expiration." Tanja and her colleague, Eeva Nieminen, agree that it saves time and permits the O.R. crew to take their minds off of checklists and administrative tasks. Nurses can focus on the patient, and disinfection and sterilisation staff previously in charge of inventory and storage of single-use components, are now able to concentrate on their main tasks. Not to forget that it reduces the risk of picking the wrong tray. All this results in heightened staff and patient satisfaction.

### Staying lean is an ongoing process

"We are not at the end of opportunities when it comes to Mölnlycke procedure trays," says Tanja Heikkilä. "The extra O.R. can be rented to surgeons of the adjacent university hospital to perform smaller orthopaedic procedures, assisted by our staff. Trays for these procedures would require yet another composition." Tarmo Martikainen agrees that optimising hospital processes is an ongoing process: "You cannot rush things when people's health is at stake, but stagnation is totally out of the question. There will be further improvements to be made, and wherever applicable, Mölnlycke and KM&T will be the partners of choice to reach our objectives."



#### Key benefits

- The disinfection and sterilisation board can concentrate on its main tasks and perform instrument set preparation as an extra responsibility
- Nurses' stress is lowered
- Patient safety and satisfaction has increased
- Freed-up working space leads to time savings
- The hospital enjoys a heightened reputation as a best practice model and effectual concept





'In a hospital highly dependent on its O.R.s, everything is related to time: duration of the operation, planning procedures, time needed for changeover. We also observed that logistics and material handling play a crucial role in efficient time management.'

Tarmo Martikainen, CEO



'By implementing industrial-style material management, we reduced the time hospital staff needs to spend on inefficient actions, freeing up time for doctors and nurses to focus on patients.'

Thomas Gnesotto, Managing Director  
KM&T Europe



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