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NH MEP GIVES SMITHS MEDICAL A SHOT AT A NEW LAYOUT
*Positive Results from Lean Training Include Reduction in Floor Space, Increase in
Product Output by 82 Percent*

KEENE – Smiths Medical products are used in a variety of critical and intensive care environments. At their Keene, New Hampshire location, individual components such as tubing, needles, syringes, and medications needed for certain procedures are packed as one sterile, sealed kit. They recently needed to introduce a new hypodermic product line into the facility and knew in order to obtain the best plant layout possible, they would need to work with the New Hampshire Manufacturing Extension Partnership (NH MEP).

“We had a 4700 square foot Pain Management area that contained two large conveyor belts which employees would use to place items in the kits, but a Fixed Needle Hypodermic Machine was to replace Pain Management in this space,” said Rick DiMeco, a production manager at Smiths Medical. “The goal was not only to relocate Pain Management, but to do this while greatly reducing the department footprint. As an additional challenge, we had to meet increased demands for kits produced per day and we had to increase the number of lot changes as we moved to smaller batch sizes. We were hoping the folks from NH MEP could help us in this situation.”

“A team from the NH MEP assisted with the plant layout for Smiths Medical. We determined they would benefit more by beginning with some Lean work,” said Linda Ellis, project manager for NH MEP. “A team of employees from first and second shifts of the Pain Management department received some basic Time Wise® Lean 101 training, and then learned how to use Value Stream Mapping (VSM) to diagram their current state and determine what improvements were needed in order to reach their goals.”

Working with the NH MEP and Rick DiMeco, the team determined that replacing the large conveyor system with a cellular layout would allow them to meet their takt times in a substantially smaller space. Their process flow stayed the same, and using tables and

benches, the team created a temporary cell so employees could get used to working in the new configuration before the actual move.

“When they relocated, they quickly were building to one-piece flow, using the u-shaped work cells,” said Ellis.

“We’ve seen a number of positive results working with the NH MEP. Besides relocating Pain Management, a staging area has been constructed where we can pull orders and materials for the kits onto wheeled racks, which are then moved to the cells when visual kanbans indicate the need. Kanbans are signals that indicate the need for replenishment of materials to a user,” said DiMeco. “Everyone is working as a team. With six people per cell and four cells, they are able to put out four finished kits every 18 seconds!”

Other results include reducing floor space by 62 percent, increasing output 57% from 6800 trays per day to more than 10,000 per day while increasing changeovers per day from 15 to 40 on average. Also, 20 manufacturing associates and support staff at Smiths Medical have been working on a Lean certificate program sponsored by New Hampshire Technical College, and are doing their school projects in-house in the Tracheostomy Department, applying cell layout, point-of-use storage and set-up reduction. They will have most of the Lean work completed in that department by the time the class concludes.

“Along with the great results, I have noticed subtleties such as smiling people who like coming to work and like their environment. If they have any work-related concerns, they are empowered to change them,” added DiMeco. “They “own” the business and embrace it. If they have a better way of doing something, they bring it to the surface and know that it will be put into place. They do not fear change and are prepared for change at any time if it will improve something. Thanks go out to all of the folks from the MEP team who assisted us and made us realize the potential of applying lean principles.”

The NH MEP is an affiliate of the National Institute of Standards and Technology (NIST) under the U.S. Department of Commerce. The national MEP system is a network of manufacturing extension centers that provide business and technical assistance to smaller

manufacturers in all 50 states, the District of Columbia and Puerto Rico. Through MEP, manufacturers have access to more than 2,000 manufacturing and business “coaches” whose job is to help firms make changes that lead to greater productivity, increased profits and enhanced global competitiveness. For more information, please visit www.nhmep.org, or phone 1-800-MEP-4MFG.

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