



Blount Memorial Hospital Improves Emergency Room and Operation Room Efficiency Using MVT[®]

Medical Facility Reduces Patient Wait Time by 24%, Surgeon Wait Time by 42.7% While Increasing Patient Satisfaction by 26.5%

Hospital To Be Used as Test Case for Medical Facilities Across the Country

Knoxville, TN – September 11, 2006 – QualPro Inc., a process improvement company that has helped Fortune 500 companies like DuPont, Cingular, and Circuit City enhance efficiency using its mathematically proven MVT[®] (Multivariable Testing) methods, announced today the results of another MVT[®] project in a hospital. In the four months that QualPro worked with Blount Memorial Hospital in Maryville, TN, consultants were able to pinpoint a variety of factors that influenced efficiency and satisfaction in two critical areas of the hospital: The Emergency Room, where MVT[®] looked to reduce the amount of time it takes for a patient to go from door-to-doctor as well as patient satisfaction; and the Operating Room, where ideas for how to reduce turnover time between surgeries as well improving surgeon satisfaction were tested. By using the MVT[®] method to narrow down the positive ideas and eliminate the hurtful ideas, Blount Memorial was able to reduce patient wait time by 24%, improved patient rating of pain management by 26.5%, increase patient likelihood to recommend Blount Memorial's ER by 15.9%, and reduce OR non-productive time by 42.7%.

Blount Memorial Hospital is a 304-bed, acute-care hospital operating 13 facilities that service a five-county area. The MVT[®] Testing Program at Blount Memorial Hospital began with brainstorming sessions conducted with a variety of hospital personnel, including physicians, nurses, staff, and transporters. During the brainstorming, 121 ideas were presented to improve ER efficiency and patient satisfaction. Of these, 16 were singled out as being practical, fast, and cost free and, therefore, selected for MVT[®] testing. Likewise, 227 ideas that were identified for the OR that could potentially improve OR efficiency and surgeon satisfaction; 22 of them were tested.

The MVT[®] Process showed that implementing the helpful ideas and avoiding the hurtful ideas can reduce Blount Memorial's ER door-to-doctor time (or the time a patient waits to see a doctor) by 24% and total turnover time by 11.4%. Blount Memorial's patient satisfaction in the area of pain management prior to MVT[®] testing averaged in the 76th percentile and likelihood to recommend averaged in the 83rd percentile. After MVT[®] testing, both Blount Memorial's pain management and likelihood to recommend percentile score increased to the 99th percentile in the region and 97th in the nation making Blount Memorial's ER one of the best ranked ER's in

their region. The MVT[®] testing to improve OR efficiency and surgeon satisfaction shrank Blount's non-productive Operation Room time by 42.7%, OR turnover by 23.9%, and overall surgeon dissatisfaction by 43.9%.

Patient Satisfaction and Efficiency Results in the ER

Typically, about one in every four improvement ideas help improve a business. Of the 16 ideas tested to improve efficiency in the ER, the following three ideas helped in the ER and had no negative impact on patient satisfaction:

- **Move Patient to “Admit Holding” Area** – MVT[®] determined that having a special area to send admitted patients to, instead of leaving them in the ER, was helpful.
- **ER MD Pre-Discharge Visit** – Asking the ER doctors to do a pre-discharge visit was helpful. Previously, some doctors were following this procedure and some were not.
- **Use Bed Ahead Process** – Asking bed management to keep a clean bed ready for ER patients was helpful.

In most cases, during MVT[®] testing, one in four ideas which are thought to be helpful, actually *hurts* the overall goal. The following five ideas were found to hurt either efficiency or satisfaction in the ER:

- **MD Intro: Smile-Shake Hand-Sit** – Asking the ER doctors to smile, shake hands, and sit when greeting patients was hurtful.
- **Pain Meds Before X-Ray** – Blount Memorial's ER staff thought it would help patient satisfaction and perception of pain management if they consistently gave patients pain medication before going to X-Ray. However, this slowed the patient care process and hurt both patient satisfaction and perception of pain management.
- **Housekeeping Calls ER when Bed is Ready** – Having housekeeping notify the ER as well as bed management did not help move patients out of the ER into floor beds any faster.
- **Triage Nurse Expresses Protocol** – Transferring some of the questions for the patient from the triage nurse to the ER nurse did not help the patient's perception of pain management.
- **Review ED2 Guidelines** – Like many trauma centers, Blount Memorial has an ED area for critical patients and one for people with non-critical issues. When they stress the guidelines for who should go to ED2 (non-critical area) with the ED desk staff, it hurt efficiency and caused patients to spend an average of 14 extra minutes in the ED.

The remaining ideas made no difference.

Efficiency and Surgeon Satisfaction Results in the OR

Of the 22 ideas tested to improve surgeon satisfaction, five ideas were found to help in the OR:

- **OR Board** – Having a large white board at the OR control desk to list the cases so everyone can easily see the status of all cases was helpful. Blount Memorial is purchasing a new OR computer system and now knows the importance of making sure the system they select has a good tracking component.
- **Give Callback Times** – Having the OR control desk call the surgeon with updates for “Add-ons” to their schedule was helpful.
- **Verify Procedure** — This helpful idea was a change to Blount Scheduling process. Faxing the surgeon’s office a list of the surgeon’s cases the day before surgery so the surgeon could review the list and catch potential errors was helpful.
- **Holding Call Sooner, 60 Minutes** -- Bringing patients into the OR holding area 60 minutes ahead of time instead of 30 minutes was helpful.
- **Why Not Picked Sheet** – Second and third shift picks supplies and instruments for the following days cases and place them on carts for each case. Having a sheet listing the missing items from the cart was helpful.

The following five ideas hurt efficiency and/or surgeon satisfaction in the OR:

- **Give Time Needed to Floor** – OR holding staff telling the nurses on the OR floor the exact time they needed the patient (i.e. “We need John Doe ready by 2 pm”) caused more patient delays. It was better to just say ASAP.
- **Notify RN of Issues** – Notifying circulating nurses in OR suites about any pending issue that may cancel a case hurt efficiency.
- **Help Transport** – Asking OR staff to help the transport patients during down times hurt efficiency.
- **Highlight Hold** – On surgeon preference cards, which list the supplies, instruments, and equipment needed for the surgery, the word “HOLD” is printed next to supplies that should not be opened until OR staff verifies with the surgeon that the supply will be used for that particular patient. Highlighting the word “HOLD”, with a yellow highlighter to see if it would reduce waste, only hurt efficiency.
- **Get Help to Flip** – In an operation room, supplies have to be opened so that the sterile supply inside the packaging does not come in contact with the packaging or other non-sterile object (e.g. the floor). Making sure the staff had an additional person helping them open these hard-to-open items so that they remain sterile, did not reduce waste and hurt efficiency.

The remaining 12 ideas made no difference.

“These improvement ideas are critical to reinforcing our image in the community and bringing patients into the hospital,” said Joe Dawson, CEO of Blount Memorial Hospital. “We are extremely excited about the MVT[®] results. In fact, we are looking at other applications for MVT[®] in our health system.”

“QualPro has a tremendous tool to help a facility determine what works in their community for their patients and culture.” said Richard Hall, Chief Nursing Officer for Blount Memorial Hospital

“I am very pleased with the outcome of our MVT[®] project. The doctors were fascinated with a scientific statistical process to apply to operations. It brought all the group together for ideas and involved everyone in the testing. We are all amazed at the changes we have been able to institute with outstanding outcomes in such a short amount of time.” said Dr. Dick Evans, Medical Director for Blount Memorial Hospital.

“Our work with Blount Memorial is extremely important because it reinforces that MVT[®], widely known for its results in business, is also needed and can produce rapid results in the healthcare sector,” said Dr. Charles Holland, CEO of QualPro Inc. “Having tested over 150,000 different improvement ideas since 1982, QualPro has found 25% of ideas help, 22% hurt, and 53% make no difference. That statistic held true for Blount Memorial. And knowing which ideas are helpful in their unique environment, will allow Blount Memorial to focus their efforts on those beneficial activities.”

About QualPro

QualPro Inc. is in its third decade of helping businesses improve their results through its unique process improvement technology. After working with more than a thousand organizations around the world, QualPro has helped clients in every industry to better satisfy their customers, improve their bottom lines, and strengthen their competitive positions.

QualPro's success can be attributed to its MVT[®] methodology and unique implementation approach, which identifies actions that a company can take to dramatically increase sales, reduce cost, and improve quality in only a few weeks or months. For more information please visit www.healthcaremvt.com or call 1-800-500-1722.

About Blount Memorial Hospital

Since 1947, Blount Memorial has been providing health care to the people of East Tennessee. Blount Memorial is committed to providing the best possible health care with top-flight physicians, comprehensive services, and advanced technologies that are close to home.

Blount Memorial is rapidly changing to meet the health care needs of its growing community. For more information about services and specialties, please visit www.blountmemorial.org.

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