

Anne Arundel Medical Center

Annapolis, Maryland USA



Anne Arundel Installation Highlights:

- Tracking assets in and among 3 separate pavilions
- Over ½ million sq. ft.
- 300+ bed facility
- Asset tracking oriented toward nursing efficiency
- Tracking 1,750 items
- Pushing to 4,500 by 2011

Find equipment in just minutes!



"[Before Versus] It could take a whole day to find a single piece of equipment that lots of people are using."

Deirdre Robinson, RN

In the Beginning

Like many hospitals, Anne Arundel Medical Center (AAMC) invested in a world-class Wi-Fi network. No problems there. It's perfect for their wireless communication needs. But promises were made to AAMC that they'd be able to use their Wi-Fi network to locate assets—considered essential to making operations more efficient.

AAMC's Wi-Fi Asset Tracking program began in 2006. Richard Constantineau, Manager of Biomedical Engineering, helped direct the Wi-Fi tracking implementation. "We were excited about the possibilities. We wanted it to work. Asset tracking would save us so much time. Anne Arundel would save millions." They tested the system following set-up and tried very hard to make it work. But the Wi-Fi network simply was not sufficient for asset tracking.

They were told they needed more granularity, so AAMC invested in more access points. AAMC and their various asset tracking vendors poured hundreds of man-hours into managing the system, recalibrating and still equipment wasn't where the system said it would be. Ease of use was an issue, as were difficulties with what the Wi-Fi vendors described as "zonal sensitivity." Reporting was out the question.

In the end, they tried 2 different Wi-Fi asset tracking systems (one for over 1½ years!), spent countless hours testing and revising the system and thousands of dollars beyond their initial investment, and still they could not find their equipment.

However, Asset Tracking was an important initiative. The 300+ bed medical center was spread out across 3 facilities, with nearly 12 acres of nooks and crannies—a sanctuary for assets that don't want to be found. However, nurses need to quickly locate patient care equipment quickly and Biomedical Engineers must first find equipment in order to service it. Furthermore, it was clearly understood that if AAMC could easily locate assets and increase equipment sharing among its three buildings, it could:

- Reduce time spent searching,
- Get needed equipment to patients more quickly,
- Create more quality time with patients, and
- Reduce rental and purchasing related costs.

AAMC recalled that, years prior, an automated nurse call system had been installed to help locate nurses and automate call cancellation due to the distance between the ED and OR. The system featured Versus IR locators and was sold as an add-on to the nurse call system. One of the reasons the Versus system had been chosen back in 2001 was that it could scale to patient tracking, asset tracking and other areas of the hospital.

Why not make dual-use of the Versus system, and stop focusing on a stand-alone equipment tracking system purposed just for biomed?

Bringing Versus Onboard

"One thing I learned through our Wi-Fi tracking attempts," says Constantineau, "was that in order for an asset tracking system to be useful, your staff have to be able to trust that

Tremendous Time Savings

"Our immediate goal is to increase efficiencies for nursing staff, and to help them find the items they need quickly. Before Versus, it could take up to an hour or two per day, per nurse or escort to find equipment. Now, it takes 5 minutes."

Richard Constantineau, Manager
Biomedical Engineering

Anne Arundel Medical Center

Annapolis, Maryland USA

they are looking at real-time results of where that asset is located at the moment.” This requires accuracy, the cornerstone of the Versus solution.

Versus was very willing to assist AAMC and keen to demonstrate that asset tracking was an attainable goal. Versus was also willing to prove the system using AAMC's existing sensory and wireless networks. In fact, Versus added only radio frequency (RF) sensors to increase communication and reporting capabilities and asset tags for the equipment.

The pilot was highly successful in that it:

1. Demonstrated that the existing Versus sensory and nurse call networks could be leveraged for additional functionality.
2. Proved accurate and easy to use.
3. Provided the data and time savings AAMC had been desiring to capture all along.
4. Underscored the importance of matching the technology to the desired outcome. *Wi-Fi is for communicating data—even Versus uses it for that. **Locating and process improvement require accuracy, which is obtained through the Infrared component.***
5. Was backed by the technical expertise and outstanding professional services of Versus' experienced team.

Works Like a Charm!

“We tried several location systems on our wireless network, but we couldn't get them to work correctly. We'd seen several systems fail, so I was very leery going into our asset tracking pilot with Versus, but the system worked like a charm. We tried to get the system to fail, but could not.”

Richard Constantineau, Manager
Biomedical Engineering

A decision was made to take the Versus Asset Management solution system-wide. “I was really impressed with Versus,” Constantineau says. “With most vendors, you expect that when you say ‘Go’ they're going to want to start installing immediately and move on to the next sale. Versus wasn't like that. Understanding our desired outcomes and immediate and long-term goals was very important to Versus' implementation process.” The system was installed and activated in October 2008. AAMC is currently tracking 1,750 assets in and between the AAMC Acute Care, Clatanoff and Edwards pavilions.

Versus also proved to be flexible and able to adapt to AAMC's revised goals. Constantineau explains, “The tracking initiative began with mobile medical equipment such as hospital beds, but we discovered within a week of the asset tracking software going live that nurses and escorts really need to find specialty items that biomed would never consider, such as recliners, walkers, and bariatric commodes.”

Intended for Nurses—But Everyone Loves It!

“Asset tracking with Versus is unique at AAMC in that, first and foremost, we're using this as a solution for our nursing staff, rather than the typical maintenance tool,” says Constantineau. “Our immediate goal is to increase efficiencies for nursing staff, and to help them find the items they need quickly. Before Versus, it could take up to an hour or two per day, per nurse or escort to find equipment shifted across the expansive medical center. Now, it takes 5 minutes.”

Additional positive outcomes include:

- **Increased equipment visibility and sharing between 3 separate pavilions.**
- **No longer charged for lost equipment (e.g. \$10K for wound vac).**
- **Nurses are happier: more time with patients and fewer frustrations.**
- **Patient satisfaction improved with quicker equipment request turnarounds.**

Constantineau explains that AAMC has never had an issue with Versus, and that everyone, especially the nursing staff, love it. Nurse Deirdre Robinson agrees, noting “It could take a whole day to find a single piece of equipment that lots of people are using. Things like mobile lab printers—they're critical, but they're expensive and we don't have that many, so we have to share them.” Even third-party service technicians, like those who arrive from Kinetic Concepts, Inc. (KCI) to service and pick up equipment love the Versus solution with one tech commenting, “I wish everyone we work with would get one of these systems!”

Making a Difference: ROI

With the asset tracking system fully supporting nursing needs, AAMC decided to extend tracking to complement specific Biomedical Engineering goals. This included:

- **Establishing equipment baselines for clinical areas,**
- **Conducting an equipment flow study, and**
- **Creating a model for equipment storage.**

For example, oft repeated requests for additional ultrasounds in the Clatanoff Pavilion spurred a location and utilization study. The study indicated existing ultrasound units were not being effectively utilized. AAMC decided to relocate all ultrasounds to the Medical Center to maximize usage of individual units. **Projected capital savings equal \$250,000** (just in non-fulfillment of this one-time purchasing request).

The Future at AAMC

AAMC plans to conduct a Patient Tracking Pilot with automatic and passive data collection to monitor patient progression. This pilot will include real-time bed management and automated reporting for CMS. The next step will be to add staff locating to automate processes and enhance communication among caregivers. Finally, AAMC plans to integrate the Versus solution to a new nurse call system to automate nurse registry/call cancellation and direct patient calls according to acuity (with escalation timers).



Versus Technology, Inc.
2600 Miller Creek Rd.
Traverse City, MI 49684
Fax: 231-946-6775
E-mail: info@versustech.com
SS 100618 Anne Arundel

www.versustech.com
1-877-9VERSUS

© Versus Technology, Inc. 2010. All rights reserved. This product or its systems are covered by one or more of the following U.S. patents: 4,906,853; 5,017,794; 5,027,314; 5,119,104; RE 36,791; 5,276,496; 5,355,222; 5,387,993; 5,548,637; 5,572,195; 6,104,295; 6,154,139; 6,462,656; 6,838,992. Locating Advantages for Healthcare, Achieve Situational Awareness, Glance-and-Go, No False Positives, Time of Transaction, Transaction Engine, Rules Engine, Enterprise View, Floorplan View, List View, Reports Plus, Versus Advantages, and Versus are trademarks of Versus Technology, Inc.