

## CASE STUDY

# Miami VA Healthcare System

Bruce W. Carter Department Of Veterans Affairs Medical Center Miami  
Improves Access to Surgical Care to Serve More Veterans

## ■ Client Profile

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Miami VA Healthcare System (VAHS) serves over 153,000 veterans as an accredited comprehensive medical provider, providing general medical, surgical, inpatient, and outpatient mental health services and includes:

- 432 hospital beds
- 10 operating rooms
- 760,000+ patient visits per year

Miami VA Healthcare System's mission is to provide exceptional health care to improve veteran's health and well-being.

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*Real-time data enabled dramatic improvements in efficiency, quality, and patient satisfaction as surgical case volume increased by over 11 percent.*

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## ■ Goal

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The Veterans Health Administration (VHA), which includes 153 medical centers, faces an acute shortage of beds just as demand for healthcare services increases. To improve surgical care, VHA issued several initiatives designed to improve surgical safety and quality, increase access to care, improve operating room efficiency, and overall patient satisfaction.

## ■ Summary

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Miami VAHS turned to LiveData, Inc. and DSS, Inc. to address surgical initiatives and improve access to surgical care. LiveData PeriOp Manager™ enabled the team to establish baseline metrics to meet VHA's goals for patient safety, OR efficiency, quality, scheduling accuracy, and team collaboration, which enabled the team to then measure improvements and track sustainability. DSS enabled full integration with VistA - the Veterans Health Information Systems and Technology Architecture electronic health record system.

## ■ Results

### Miami VAHS results were impressive and included:

- Increased surgical case volume by 11.2%
  - An additional 249 cases over 6 months compared to the same period the previous year
  - An average of 1.8 cases completed per surgical day without additional resources (e.g. ORs, surgeons, staff, or overtime expenditures)
- Improved Block Utilization from 70.0% to 79.5% in a twelve-month time period
- Improved first case on-time starts from 37% to 82% in a five-month time period after implementation of solution
- Significantly improved team collaboration
  - 86% of clinicians agreed that PeriOp Manager improved surgical team engagement in surgical safety checklists
  - 79% of clinicians agreed that PeriOp Manager improved team communications throughout the surgical procedure
- Provided real-time analytics data for sustainable quality improvement

| Initiatives Checklist | Miami VAHS Surgical Initiatives      |
|-----------------------|--------------------------------------|
| ✓                     | Surgical Safety Checklist Compliance |
| ✓                     | Increase Case Volume                 |
| ✓                     | Improve OR Efficiency                |
| ✓                     | Improve First Case On-Time Starts    |

With PeriOp Manager Miami VAHS has achieved significant quantitative and qualitative improvements. Since information is displayed real-time, the surgical team and ancillary support staff are aligned on the current status of every surgical procedure. They are able to change and implement processes having the confidence that improvements will be sustained. The team has a better foundation to create predictable outcomes. Most importantly, there is extra time for the perioperative team to interact with the patient prior to surgery and induction of anesthesia.

In recent years, VHA hospitals faced criticism for the lengthy wait times for surgical procedures. For Miami VAHS, it's a simple question of transparency: not knowing exactly, at all times, how OR time is utilized leads to fewer patient surgeries and decreased access.

Miami VAHS solved this problem by investing in LiveData PeriOp Manager to enable situational awareness via visual displays of all surgical activity in real-time. The result has been improved team communication and consistent measurement of OR utilization, empowering lasting process change. With PeriOp Manager, Miami VAHS is experiencing:

- Improved patient safety with consistent checklist compliance and time-out management
- Expanded patient access with increased case volumes of 11.2% without additional resources required

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*Tracking improvements with PeriOp Manager, first case on-time starts went from 37% to 82% in five months and block utilization went from 70.0% to 79.5% in 12 months. Those improvements occurred by having the information readily available and accessible to all stakeholders in real time.*

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## Lack of good data impacts logistics and coordination

Until recently, Miami VAHS relied on Microsoft® Excel® spreadsheets to manage their data. Not only was it an intensely time-consuming manual process, but the insights it yielded were entirely retrospective. In the short term, Miami VAHS met its goals but individuals were monitoring lots of processes in multiple places. When monitoring every detail stopped, improvements and gains would begin to decline.

VHA-wide pressure increased to maximize existing resources - starting by increasing OR efficiency. Like VHA's throughout the country, Miami VAHS was in the spotlight.

## Identifying problems leads to understanding how to improve processes and patient access to care

Miami VAHS searched for ways to improve access to care and reduce wait times by improving operating room utilization and found that data is the way to understand where the problems are, how to fix them, and how to anticipate them.

The point was to make small changes, tweak the system - not a radical change to the workflow or the processes. Miami VAHS was looking for a better understanding of the issues, and to uncover opportunities for greater efficiency.

## Transparency improves safety, communication, and satisfaction

Miami VAHS is realizing benefits, both tangible and intangible. Each person used to focus on their own job. Now, with PeriOp Manager in place everyone has access to surgical dashboards that display the information that is necessary to assure patient safety and compliance amongst team members. It provides a valuable tool, assisting the team to maintain situational awareness and assuring that everyone is on the same page. PeriOp Manager displays all critical information about a patient and his or her procedure so that all clinical team members have the same knowledge. When a staff member comes into the OR suite, they immediately know the name of the patient and the procedure being performed, which clinical team members are in the room, and the status of the surgery being performed. The display gives them visual confirmation that the surgical safety checklist was completed, and how long the time-out took to complete. These checks and balances have created alignment within the teams - and greater engagement - because everyone is aware of the plan and progress of the surgical case in real time.

One example of how PeriOp Manager has helped to improve patient and employee satisfaction is the ability to track the amount of time surgeons need to complete a specific type of procedure - either through the type of procedure or the individual provider. Prior to the use of PeriOp Manager, surgeons routinely underestimated

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*LiveData PeriOp Manager Analytics™ provided the detailed data needed to identify root causes of inefficiency and highlight areas for improvement. The most important short term need was to increase access for VA patients to surgical care. PeriOp Manager Analytics helped the Miami VAHS perioperative team identify areas for change and monitor the outcomes of the implemented solutions in real time.*

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the amount of time it took to complete a surgical procedure. When armed with data collected through PeriOp Manager, surgeons and staff have a more realistic idea of their activity, and are able to more accurately allot the amount of time scheduled per case. This means that patients' expectations of surgery length are more closely met. Staff are staying late to finish a case that ran over less frequently. Patient, surgeon, and staff satisfaction reflects the positive change.

### Data improves efficiencies, and therefore access

PeriOp Manager enabled Miami VAHS to look at their whole service, from scheduling to procedure, to recovery and finally discharge - and all of the details in between. When the operating room team at Miami VAHS was tasked with increasing access for veterans, one of the first things they did was pull reports on first case on-time starts. They discovered that cases were started on time only 37% of the time. With PeriOp Manager, they were able to look at all aspects of the surgeries, including who the providers were, milestone accomplishment, and ultimately what the barriers were to getting each case started on time. Trends were identified and procedures implemented to address the barriers, with a staggering result of 82% on-time starts in just 5 months.

In addition, they analyzed data on operating room and block utilization by service. They found opportunities where they could improve utilization by scheduling procedures of similar nature back to back, thereby standardizing turn-over process between providers minimizing the amount of time it took to prepare the surgical suite. Staff knew exactly what was expected for each procedure and could pull their supplies in a manner that expedited room turn-over.

Block time use was also evaluated to determine which services or providers were over- or under-scheduled. If one provider was consistently using less of their block time than allotted, and another needed more, they were able to make that adjustment.

Future goals to improve access and provide better service include:

- Evaluating data on case cancellations to determine if there are trends by procedure and what steps can be taken or put in place to minimize cancellations
- More accurate scheduling of procedure duration using analytics by: provider, procedure name, and CPT code
- Improving turn-over times to increase utilization

**LiveData, Inc. and DSS, Inc. empowered Miami VA Healthcare System to meet their surgical initiatives.**

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*Knowledge is powerful. Staffing is more predictable because an operating room manager can post a realistic schedule. Patient and family satisfaction has risen along with certainty of start times. Miami VAHS teams can anticipate bed flow and achieve better overall utilization.*

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#### Increase in on-time starts in just 5 months

