Clinic Case Study

CentraCare Heart & Vascular Center
St. Cloud, Minnesota

The Paceart Optima® System: A Central System for Improved Patient Care

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Overview

CentraCare Heart & Vascular Center at the St. Cloud Hospital in St. Cloud, Minnesota is a comprehensive heart center that performs follow-up appointments for approximately 90-120 patients a day.

CentraCare recently upgraded from the Medtronic Paceart® Get Connected 3 System to the Paceart Optima System, which it uses as a centerpiece for their follow-up practice. The CentraCare team partnered closely with Medtronic to thoroughly understand the capabilities offered by the Paceart Optima System, and to effectively implement the system in their workflow. In the three months since the upgraded system has been in place, the team of follow-up RNs has realized significant efficiencies due to the use of electronic in-clinic and remote patient management. Given the simplicity of the solution, CentraCare went from 35 remote patients/day to 45-50 remote patients/day. More importantly, staff morale has reportedly climbed because of workflow efficiencies like reduced need for printing documents, seamless integration with electronic medical records and a reliable flow of information from their network of outreach centers. In addition, the department has grown in credibility with a superior follow-up record. Hospital staff increasingly see the Heart & Vascular Center as a destination department with a waiting list of nurses interested in working there. Best of all, patients receive consistent, high levels of care.

Clinic Highlights

Electrophysiology Staff	• Six nurses (roughly 700 patients per nurse) • Four full-time technicians/schedulers
Patients Currently Monitored	4,300 patients
Satellite Locations	14 outreach clinics located in rural hospitals, visited monthly by nursing staff
Use of Remote Monitoring	Roughly 90% of patients monitored remotely
Resources	• 7 clinic rooms set up for in-person visits • Two rooms for telephone checks • Single large workroom for scheduling
Clinic Focus	Monitor Pacemakers, ICDs, CRT Devices, and Insertable Cardiac Monitors

Key Benefits	• Nurses can read more remotes due to efficiencies inherent in electronic follow-up versus printing, handling, carrying, and delivering printed reports for scanning
	• Ongoing savings because of move to paperless:
	  – 62% savings in paper purchasing
	  – 75% savings in ink purchasing

Team Transition to Simplified Connectivity

Laura Van Heel is a first-hand witness to the evolution of pacing and defibrillation. She has been working with pacemaker patients for over 30 years and has seen the treatment capacity and complexity of implantable devices grow over the years. Today's patients arrive at the clinic with a mix of implantable devices that includes pacemakers, defibrillators, and cardiac resynchronization devices, along with implantable loop recorders.

"I continue to watch the industry change and grow," said Van Heel (Figure 1), "and tools such as Paceart Optima are going to be the things that save us from having chaos."

Van Heel's team had used an earlier version of the Paceart System, Paceart Get Connected 3 System software, before engaging with Medtronic to help plan and implement the new Paceart Optima System software. The team loved the earlier version but soon began to appreciate the efficiencies of the new system, like easily pulling in patient data, connectivity to a variety of programmers, and the ability to attach documentation to a patient's electronic record.

The team approach to learning the new system helped the entire team use the system more fully. Nursing staff, schedulers, and the IT staff were trained in the technology so each interaction would align with the larger department and hospital goals. Van Heel even requires schedulers to understand the Paceart Optima System.

Figure 1. Laura Van Heel.

"It [the whole team approach] is a bit unusual for some clinics," said Van Heel. "Many clinics use general scheduling people. But here we think it is valuable for schedulers to understand how Paceart Optima works, how to use the software for missed patients, to document telephone conversations, and for follow-up care."

The result of staff training with Medtronic on the new Paceart Optima System is that CentraCare is now a virtually paperless office, going from 30 reams of printer paper ($91.50) used per week to less than 5 reams per week ($15.00).

Rigorous Efficiency for a Busy Clinic

Around 100 follow-ups are performed each day among six nurses and seven clinic rooms. In the older, pre-Paceart Optima System, paper-and-ink days, remote monitoring and then processing data for 35 records a day was the limit of what was possible for the staff – especially given the thick sheaf of papers to sort and enter by hand, which must then be physically delivered to Medical Records.

"We suggested the staff do 40 follow-up records a day each," said Van Heel. "They said 'No way. Thirty-five is all we can do.' But with Paceart Optima we can do 45 or 50 records," said Van Heel, "and those 45 or 50 are completed with a lot less stress."

Expect Integrity and Connectivity
The connectivity offered by the Paceart Optima System is one key reason for increased department efficiency:

> *"With Paceart Optima, all the patient data is pulled in right away," said Van Heel. "There is no reason for nurses to be data entry people. In fact, nurses work best when focused on patient care and management, and so that's what we always try to do: help people do what they are best at."*

The fact that the Paceart Optima System allows attachments is a big reason why it is so helpful, according to Van Heel. And the CentraCare team takes full advantage of that ability, liberally attaching notes and documentation to create a full picture for each patient. The CareLink® Network, of course, "comes right over" into the Paceart Optima System, even with attachments. With other manufacturers, the team can go to their websites (for instance, Merlin.net® and LATITUDE®) and pull in the interrogation data. Other manufacturers may require different methods for transferring data (for instance, the BIOTRONIK Home Monitoring® System requires import by USB.) And even though that is a little more work, "it's worth the effort to get the information in our system and attached to Paceart Optima," said Van Heel.

Assigning tasks is another welcome improvement in the Paceart Optima System. Even though Van Heel's staff has turned the patient over to another department, they can assign a task as a reminder to keep current on this particular patient and not lose track of them. This is a plus for tracking patient safety-related issues as well as helping the team keep their promises about patient care.

One System for Clinic Efficiency
The volume of data amassed when following 4,300 patients annually is overwhelming – amounting to approximately 15,000 encounters per year. That the Paceart Optima System functions as a single data management system for most data needs is a huge plus for efficiency, according to Van Heel. Every bit of data goes into the system.

Simplified Workflow for Improved Patient Management

Editable Encounters for Efficient Collaboration
Editable encounters highlight how the system was made for a team.

> *"Say one of our nurses comes in [to our workroom] to enter records," said Van Heel. "With Paceart Optima we immediately see which record she needs to address and which record the other person is working on. This allows for efficient sharing of the workload and improves team dynamics."*

In addition to easing work together, the single data management system has translated directly into a reduction of overtime, and more importantly, an increase in satisfaction, according to Van Heel. Prior to the Paceart Optima System, the team required one to two hours of daily overtime to enter the bolus of data from paper records. Habitual overtime became significant budget overruns. But because of resource management through the Paceart Optima System, nurses actually get more done, processing 10-15 more remote follow-ups a day without adding to overtime.

"We actually save one to two hours per day. Even though follow-ups continue to increase, our costs have not. But what's more important for me is that we have more satisfied nurses," said Van Heel.

The Paceart Optima System as the single system for the clinic provides the opportunity for a seamless flow of data for most cardiac device patients and for all physicians. Not only has the system "reduced six steps into one" according to Van Heel, but the movement of data electronically is as convenient as it is efficient. Prior to using the Paceart Optima System, nurses working from home carried stacks of paper plus a printer and a ream of paper to print reports (Figure 2). Moving stacks of paper was both physically exhausting and a motivational challenge.

Figure 2. Stacks of paper data entry followed by reams of printing before the Paceart Optima System.

The single electronic data management system did away with piles of paper to carry, especially since Van Heel's staff makes use of electronic signatures from clinicians. Each day's data entry task became much more manageable (Figure 3).

Positive Finish with Each Record
From a workflow perspective, there is something satisfying about finishing a record. In the previous system, there was no confirmation that the record was completed and had been sent to Medical Records. But with the Paceart Optima System, when the record is finished, it is truly finished and delivered.
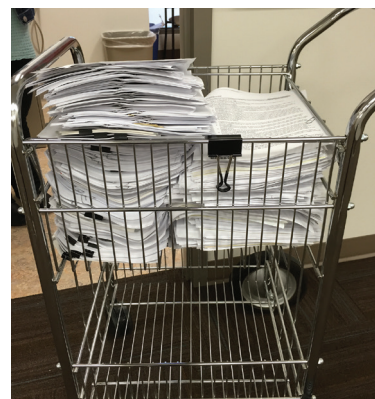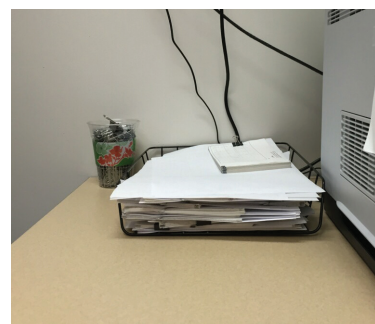

Figure 3. Electronic records made each day's follow-ups much more manageable.

"I like the idea that the record could lock," said Van Heel. "Paceart Optima makes sure you finish your work. You'd be surprised that you didn't finish work. Did you send it off to Medical Records? With the sign-off lock, you know you've sealed the deal. You know the patient's data has moved on."

Success, Satisfaction, and Morale

Clinical and cost savings from using the Paceart Optima System were clear for the CentraCare Heart & Vascular Center. But even more important are the human outcomes, both for the upbeat morale of those working the system and, especially, the patients who benefit from clear, consistent, dependable care.

Significant Cost Savings
• The CentraCare Heart & Vascular Center has seen an 11% increase in device follow-ups in the 3 months using the Paceart Optima System compared to the same time last year

• In addition, the clinic has witnessed a 15% increase in volume of patients followed up

• Going paperless (as of October 2014) resulted in regular, ongoing savings:

  – **Paper costs:** 62% savings, comparing paper ordered from July - September with October - December

  – **Ink costs:** 75% savings, from four ink cartridges per month to one cartridge every quarter

• **Staff efficiency:** Overall RN productivity gains in remote follow-up work

- **Patients monitored:** 3% increase in patients (July compared to December)
- **Compliance with missed/unscheduled patient appointments:** Paceart Optima System software allows searching for "missed appointment" as well as for "without future appointments," which had been a difficult and time-consuming task in the past (Figure 4)
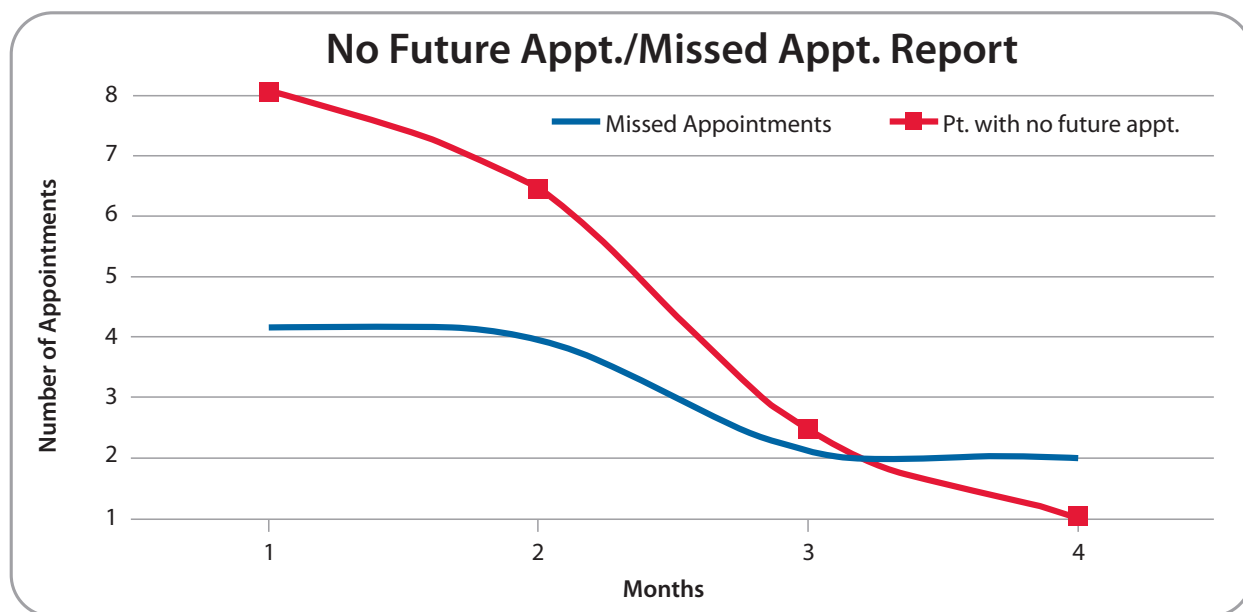

Figure 4. No future appointments/missed appointments.

One Data Management System for Improved Patient Care

The Paceart System has an unparalleled track record of over 25 years of service, working with over 2,600 devices, 40+ EMRs at 140+ clinics.[1] The CentraCare clinic has successfully shifted to a near paperless follow-up process and has benefited from clinic efficiencies and simplified connectivity with the Paceart Optima System.

Laura Van Heel is a paid consultant of Medtronic, Inc. This case study is the opinion of one clinician. Results may vary.

Data presented in this case study was prepared by CentraCare Heart & Vascular Center without involvement of Medtronic.

Merlin.net is a trademark of St. Jude Medical, Inc.
LATITUDE is a trademark of Boston Scientific, Inc.
BIOTRONIK Home Monitoring is a trademark of Biotronik SE & Co. KG.

Reference
[1] Medtronic salesforce.com (July 2011).

Brief Statement: Medtronic Paceart®
For further information regarding Paceart, please call Medtronic at 1 (800) 722-3278 and/or consult Medtronic's website at www.paceart.com. See the device manual for detailed information regarding the instructions for use, indications, contraindications, warnings, precautions, and potential complications/adverse events.

Caution: Federal law (USA) restricts the device to sale by or on the order of a physician.

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