IMPROVING PATIENT OUTCOMES:

Carilion Clinic quickly gains insights from clinical trial data

THE CHALLENGE

Navigating **data overload** in clinical trials

In the fast-paced world of clinical trials, efficient patient monitoring is critical for safety and research integrity. Carilion Clinic, a healthcare organization with over 250 locations throughout Virginia, faced a significant hurdle: managing and interpreting vast amounts of patient data to quickly identify adverse effects within a clinical trial. Dr. Lana Wahid, Vice Chair of Research in Carilion's Department of Medicine, understood the invaluable nature of this data for both treating existing patients and screening new enrollees, but she needed a more efficient tool to help her save time and improve data usability.

Reviewing patient charts involved deep manual investigation, tedious mental calculations of changing values, and a limited view of patient health. It was difficult to quickly assess the holistic impact of a trial treatment, especially when needing to simultaneously track effects on multiple organs like the liver,

lungs, and kidneys. Dr. Wahid urgently needed an efficient, comprehensive solution to review patient status and safety, summarize research findings, and ultimately enhance overall patient care.

Adding to the complexity, Dr. Wahid had created a custom workflow with the Epic team at another health system that she brought with her to Carilion to develop their Epic TurboCharger Package (TCP), a collection of records created by Epic that can facilitate transferring a new build into an existing system, enabling healthcare systems to integrate the delivered content into desired user workflows efficiently.

The Carilion Technology Services Group needed external health IT expertise to help them bridge the gap between internal competing priorities and stakeholder demand for timely delivery without disrupting their core IT operations.

THE SOLUTION
STRATEGIC PARTNERSHIP AND EXPERT EXECUTION

Recognizing the need for specialized support, Carilion sought a trusted, healthcare-focused strategic partner with a proven track record in system building and integration. Carillion chose Nordic because of the team's expertise and background in building systems, their ability to explain the program and showcase their skill sets, and their enthusiasm for the project. The healthcare organization entrusted Nordic with the bulk of the project to ensure rapid completion without compromising internal resources.

SEVERAL KEY MILESTONES:

▷ **Thorough review:** The collaboration began with an in-depth review of existing build documentation from the source system.

▷ **Workflow integration:** Nordic consultants retrieved, unpackaged, and conducted initial mapping of the TCP from Epic, laying the groundwork for seamless integration.

▷ **Deep discovery:** Beyond the TCP, Nordic undertook extensive exploration of potential solutions and cataloged additional build needs. This involved discovery and Q&A sessions with original content developers from the source system and analysts and clinical stakeholders from the target system, ensuring a complete understanding of all requirements.

▷ **Gap resolution:** Critical to success was the identification and resolution of functional or content gaps between the source and target systems. This included accounting for missing builds from the custom workflow and addressing differences in data capture, workflow, feature usage, and licensing between Epic instances.

▷ **Build completion:** All TCP build tasks and manually identified build needs were completed by the Nordic team.

▷ **Rigorous validation:** Clinical content validation was performed iteratively with analysts and clinical stakeholders, ensuring accuracy and clinical relevance. Integrated testing: The solution underwent integrated iterative testing and validation with clinical stakeholders, confirming its real-world effectiveness.

▷ **Seamless deployment:** The new solution was deployed to production, followed by diligent monitoring and go-live issue resolution.

▷ **Empowering knowledge transfer:** To ensure Carilion's long-term success and self-sufficiency, Nordic consultants produced thorough knowledge transfer documentation, presented it, and delivered it to the customer analyst team.

> "Their team's expertise enabled us to accelerate this critical project without straining our internal teams. They delivered a highly functional, validated system with seamless deployment and handoff. That specialized collaboration and partnership allowed our research teams to focus on what is most important – patient care and timely access to clinical trials."
>
> – DR. LANA WAHID, VICE CHAIR OF RESEARCH, CARILION CLINIC

THE IMPACT

Actionable insights and enhanced patient safety

The collaborative effort yielded a transformative outcome. The resulting report now provides Dr. Wahid and her team with immediate, actionable insights into patient health. It quickly identifies kidney, liver, and lung impacts on enrolled patients through intuitive design elements:

▷ **Visual cues:** Colored visual cues instantly highlight areas of concern, enabling rapid identification of adverse effects.

▷ **Hover bubbles:** Detailed values appear in hover bubbles, triggered by visual cues, providing precise data at a glance.

▷ **Comprehensive history:** Users can now click in to see a patient's full history in one centralized location, eliminating the need for fragmented investigations.

This advanced reporting solution has dramatically improved enrolled patient monitoring and streamlined the enrollment screening process. It now ensures proper qualification criteria are met in ways that were previously obscured. What began as a research-driven project focusing on the timely patient experience has far-reaching clinical applications, potentially enhancing direct patient care rather than waiting years for trial outcomes.

The transition back to Carilion was exceptionally smooth. Thanks to the comprehensive knowledge transfer documentation and an inclusive approach, Carilion and Nordic felt like a unified team at every stage of the project. This seamless handoff ensured there was no knowledge deficit, empowering the internal team to confidently manage and further develop the solution. This partnership not only met the project's tight deadlines and budget, but also fundamentally improved the safety and efficiency of patient care within the clinical trial.

NORDIC
Global Health and Technology Consulting

About Nordic

Nordic is an award-winning global health and technology consulting company that partners with health leaders around the world to create healthier systems, organizations, and people. Together, our global team of more than 3,300 professionals brings decades of experience across our key focus areas of strategic advisory, digital and cloud initiatives, implementation and support, ERP services, and managed services.

Learn more at NordicGlobal.com →

Contact us for more information
info@nordicglobal.com

Canada
144 Front St. W #300
Toronto, ON M5J 2L7

Europe
Eerste Jacob Van Campenstraat, 46 H 1072 BG
Amsterdam, Netherlands

USA
2601 W Beltline Hwy Suite 600
Madison, WI 53713