



CASE STUDY JOINT HEALTH

## Safe at-home management of ON-Q™ Pain Relief System

47.7%

REDUCTION  
in phone  
calls

87%

ENGAGEMENT  
with entire  
protocol

0

EMERGENCY  
DEPARTMENT  
visits

95%

SATISFACTION  
with Twistle

### CLINICAL PRIORITY

Anesthesia Services, P.A. (ASPA), the exclusive anesthesia provider with ChristianaCare, uses the ON-Q Pain Relief System to deliver local anesthetic for the two- to four-day postoperative period after ankle, foot, and shoulder surgery.

While the ON-Q system is an effective device for non-opioid pain management, it requires additional at-home patient support to answer questions, ensure proper catheter management, and monitor for side effects and complications.

ASPA wanted to reduce the number of phone calls for these patients, as well as prevent unnecessary emergency department visits for issues that could be addressed with timely and relevant education. In order to improve efficiency and provide added support, ASPA sought a digital communication platform to automate much of this communication, education and monitoring.

*“We have seen a significant reduction in patient phone calls and unnecessary emergency department visits because patients have the information they need to troubleshoot issues and successfully manage the device.”*

Dmitry Gorelik, MD  
ANESTHESIA SERVICES, P.A.

### APPROACH

ASPA collaborated with Twistle to build a digital care pathway to support use of the ON-Q device. Upon discharge, patients receive a welcome message to introduce them to the Twistle pathway and encourage active participation. A series of secure, HIPAA-compliant messages provides a mix of video and text content, as well as empathetic messages to optimize the patient's pain management experience and ensure that they do not feel alone.

Pathway content includes:

- Catheter management education
- Drip rate titration instructions based on pain levels
- Daily check-ins to assess pain levels and monitor for adverse events, and associated care team alerts when appropriate
- Oral medication reminders, if applicable
- Catheter removal education

ChristianaCare is a minority investor in Twistle.

*“I liked the fact that someone was checking up on me and that if I had a question, they were there. It was extremely comforting.”*

**Patient**  
ENROLLED IN TWISTLE PATHWAY

## STUDY DESIGN

A pilot program to test the efficacy of Twistle was sponsored by a sub-group of anesthesiologists within ASPA, who invited their patients undergoing ankle, foot and shoulder surgery to use Twistle.

The study analyzed resource use and complications for 46 patients who used Twistle; a total of 675 patients did not use Twistle.

## RESULTS

- Phone calls for the Twistle cohort were reduced by 47.7% - an average of 2.7 per patient compared with 5.16 in the non-Twistle cohort.
- Of the patients who enrolled in Twistle, 87.25% engaged with the full pathway.
- In the Twistle cohort, no patients had to visit the emergency department compared with 14 visits in the non-Twistle cohort.
- Patient satisfaction with the program with very high as 95% of patients rated their experience with Twistle as good or excellent.
- Patients used Twistle to share images of their ON-Q catheter, which helped the care team answer questions and resolve issues before they became serious.



### ABOUT CHRISTIANACARE

Headquartered in Wilmington, Delaware, ChristianaCare is one of the country's most dynamic health care organizations, centered on improving health outcomes, making high-quality care more accessible and lowering health care costs. ChristianaCare includes an extensive network of primary care and outpatient services, home health care, urgent care centers, three hospitals (1,299 beds), a freestanding emergency department, a Level I trauma center and a Level III neonatal intensive care unit, a comprehensive stroke center and regional centers of excellence in heart and vascular care, cancer care and women's health. It also includes the pioneering Gene Editing Institute.

ChristianaCare is nationally recognized as a great place to work, rated by Forbes as the 5th best health system to work for in the United States and by IDG Computerworld as one of the nation's Best Places to Work in IT. ChristianaCare is rated by HealthGrades as one of America's 50 Best Hospitals and continually ranked among the nation's best by U.S. News & World Report, Newsweek and other national quality ratings. ChristianaCare is a nonprofit teaching health system with more than 260 residents and fellows. With the unique CareVio™ data-powered care coordination service and a focus on population health and value-based care, ChristianaCare is shaping the future of health care.

### ABOUT ASPA

Anesthesia Services, P.A. is the largest anesthesia group in Delaware. Headquartered in New Castle, Delaware, ASPA provides anesthesia services to sites across Delaware and is the exclusive anesthesia provider to ChristianaCare.

### ABOUT TWISTLE

Twistle automates patient-centered, HIPAA-compliant communication between care teams and patients to transform the patient experience, drive better outcomes, and reduce costs. Twistle offers “turn-by-turn” guidance to patients as they navigate care journeys before, during, and after a care episode. Patients are engaged in their own care and follow best practices, communicate as needed with their care teams, and realize measurably better outcomes. Twistle integrates sophisticated automation with multi-channel communication, engaging patients through secure text messaging, interactive voice response, patient portals, or the health system's digital applications.