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IMPROVING TOTAL JOINT RECOVERY AND OPERATIONAL EFFICIENCY

AT

POWDER RIVER SURGERY CENTER

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Executive Summary

In early 2025, Powder River Surgery Center (PRSC) launched a pilot with Subflow to improve pre- and post-operative workflows for its Total Joint Replacement program.

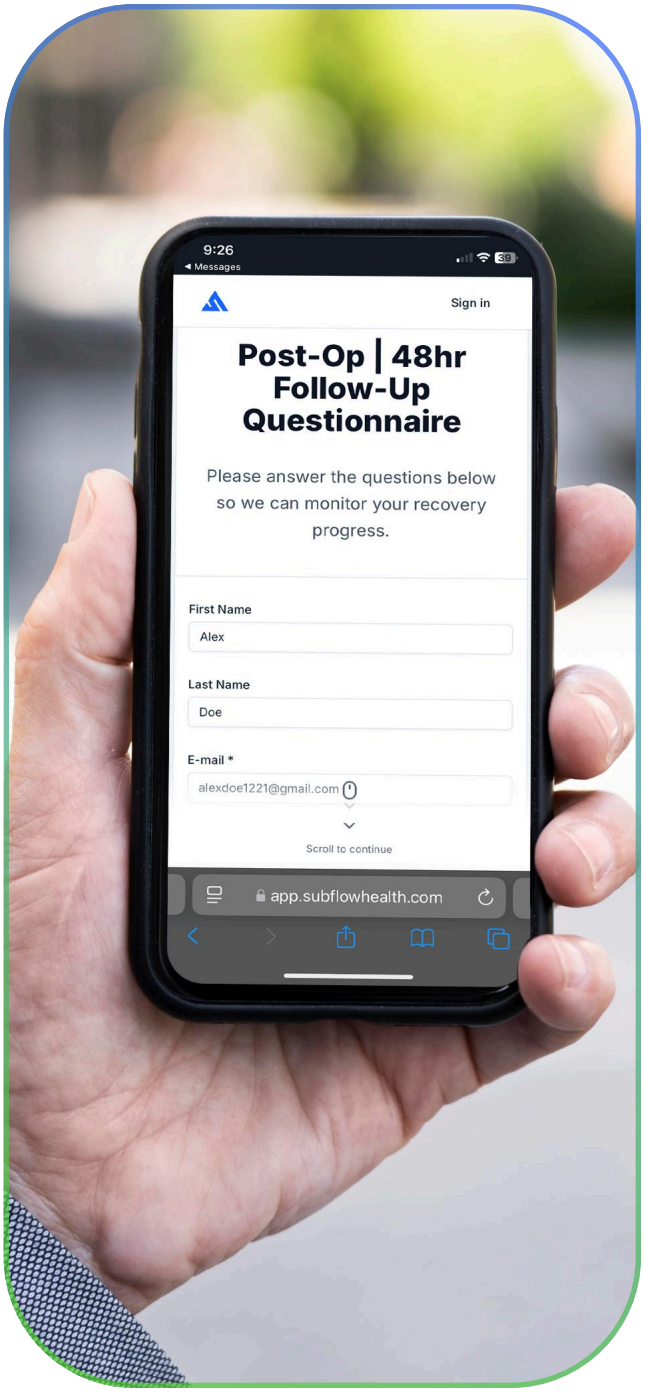
This initiative supported PRSC's participation in a value-based care (VBC) bundled payment contract with Blue Cross, aiming to increase Total Joint volume by 5 cases a month, reduce cost, and improve outcomes.

Within the first 25 days of the pilot, PRSC increased total joint cases from 13 to 16 per month and identified clear operational capacity to meet its Blue Cross Blue Shield goal of adding 5 additional cases monthly—making a positive financial impact without expanding clinical staff.

Nurse call volume decreased substantially, **saving ~6 hours of time within the first 25 days** alone—time reallocated to higher-value clinical care.

Patient satisfaction also improved, with the pilot cohort reporting a **Net Promoter Score (NPS) of 99%**, reflecting the accessibility and clarity of video-based education, digital instructions, and conversational SMS follow-up.

This paper outlines the structure, implementation, and results of the PRSC pilot, demonstrating how workflow automation can directly support case growth, improve recovery oversight, and increase care team efficiency—all without increasing overhead.



Background

Powder River Surgery Center is a Wyoming-based ambulatory surgery center with a focus on orthopedic procedures, including hip, knee, and shoulder joint replacements.

Prior to this pilot, PRSC relied on printed pre-op instructions and a manual phone follow-up model. Nurse navigators were responsible for contacting patients at 24 hours, 48 hours, 1 week, 1 month, 2 months, and 3 months after surgery. Each outreach required 5–10 minutes and often resulted in voicemails or incomplete responses.

On average, only 45% of patients completed the full follow-up sequence. Missed calls, full mailboxes, and scheduling conflicts limited the team's ability to assess outcomes consistently. Documentation was manually entered into the patient record, adding additional time and increasing variability.

As part of their participation in a Blue Cross Blue Shield bundled care initiative, PRSC sought to increase their Total Joint volume by five cases per month—raising the average from 13 to 18. Achieving this required a more scalable, efficient approach to patient engagement and recovery monitoring.

Pilot Objectives

PRSC partnered with Subflow to evaluate a structured digital engagement program.
The goals of the pilot included:

- Replacing printed pre-operative instructions with mobile-accessible digital versions
- Automating post-operative check-ins using mobile-friendly digital surveys
- Introducing asynchronous text-based communication to reduce the need for phone calls
- Delivering pre-operative education through video learning modules accessible via text message
- Enabling care teams to triage patients based on recovery status and risk indicators surfaced through digital questionnaires
- Improving data collection for post-operative complications and patient-reported outcomes

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Implementation Overview

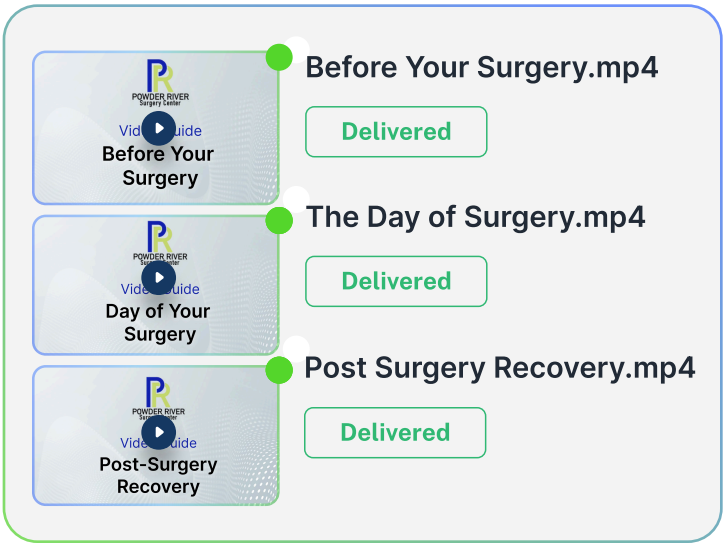
Digital Instructions

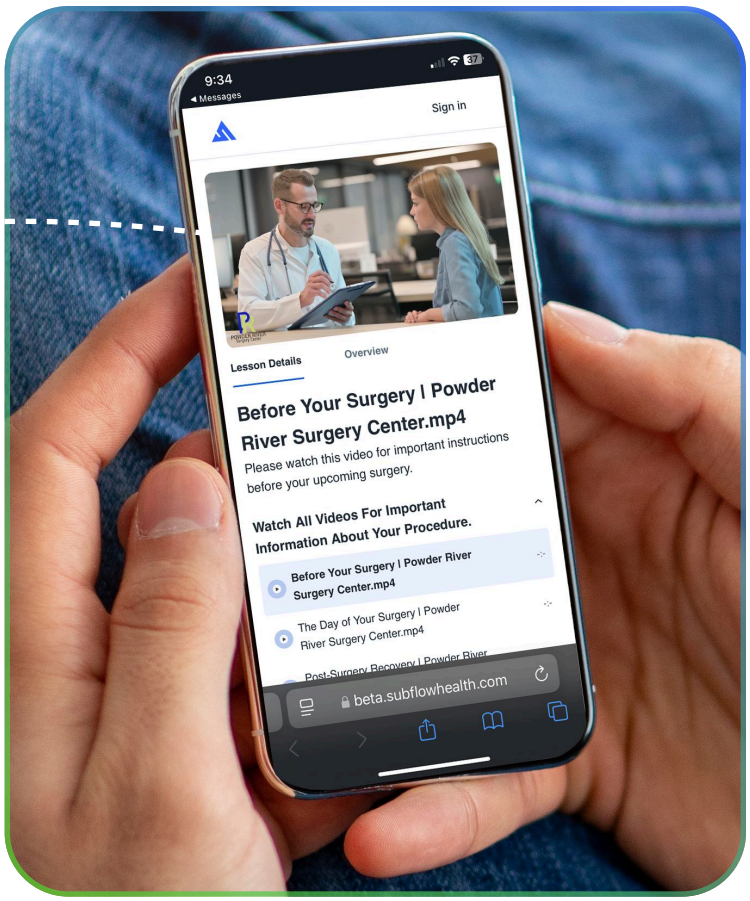
PRSC's existing printed instructions were converted into structured, mobile-accessible formats, accessible via secure text message links.

Educational videos were developed to guide patients through pre-op preparation, expectations for surgery day, and recovery planning.

These videos were designed to be accessible across devices and were particularly beneficial for patients in rural areas where in-person visits prove to be more challenging for patients seeking surgery.

Additionally, giving patients access to instructional videos on their phones made it easier for them to review the material and better understand the process before surgery.





Post-Operative Workflow Automation

Automated post-operative surveys were scheduled at the same intervals previously used for nurse navigator calls *(24h, 48h, 1w, etc.)*. Patients received a text message linking to a secure survey with clinical questions derived from PRSC's standard follow-up scripts. These included:

- **What is your current pain level?**
- **Is your pain controlled with your current medications?**
- **Are you experiencing nausea, vomiting, or signs of infection?**
- **Are you attending physical therapy?**
- **Have you visited the ER or urgent care since discharge?**

If a patient did not respond within 5 hours, a reminder was sent automatically. If no response was received within 24 hours, the care team knew which patients required a follow up by phone.

Clinical Use of Asynchronous Texting

In addition to structured surveys, PRSC began using **text-based messaging** for asynchronous check-ins with patients more frequently than the previous check-ins.

Nurses used standardized templates to send personalized messages, answer questions, and conduct brief wellness checks.

This approach replaced many redundant live phone calls, allowing nurses to communicate with multiple patients at once without requiring full phone calls. Patients responded when convenient, and the nursing team could triage and proceed accordingly.

This method improved the overall responsiveness of the care team while reducing total time spent on phone-based outreach.

Outcomes

Survey Adherence and Follow-Up Efficiency

Prior to the pilot, average adherence to phone-based surveys was 45%.
With Subflow's automated workflow pilot:

- **73% of patients completed surveys without any follow-up phone call**
- **The remaining 27% were contacted by phone, and 100% completed the survey**
- **Overall, response quality improved due to structured, mobile-based reporting**

This change reduced the number of calls per patient from three to zero in most cases. In the 15-patient pilot cohort:

- **6 patients required a call at 24 hours after surgery**
- **2 patients required a call at 48 hours after surgery**
- **4 patients required a follow-up call at 1 week after surgery**

This resulted in **~6 hours of nurse time saved in the first 25 days of the pilot.** With wider clinic adoption, this workflow has the potential to save hours of nursing time, resulting in higher quality care.

Surgical Volume Increase

With reduced manual workload and improved patient tracking, **PRSC increased case volume from 13 to 16 Total Joint procedures per month.** Nurse navigators reported having sufficient bandwidth to manage the full Blue Cross Blue Shield target of 18 cases per month.

This growth occurred without adding clinical staff and while maintaining high satisfaction and patient safety.

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Emergency Department Visits

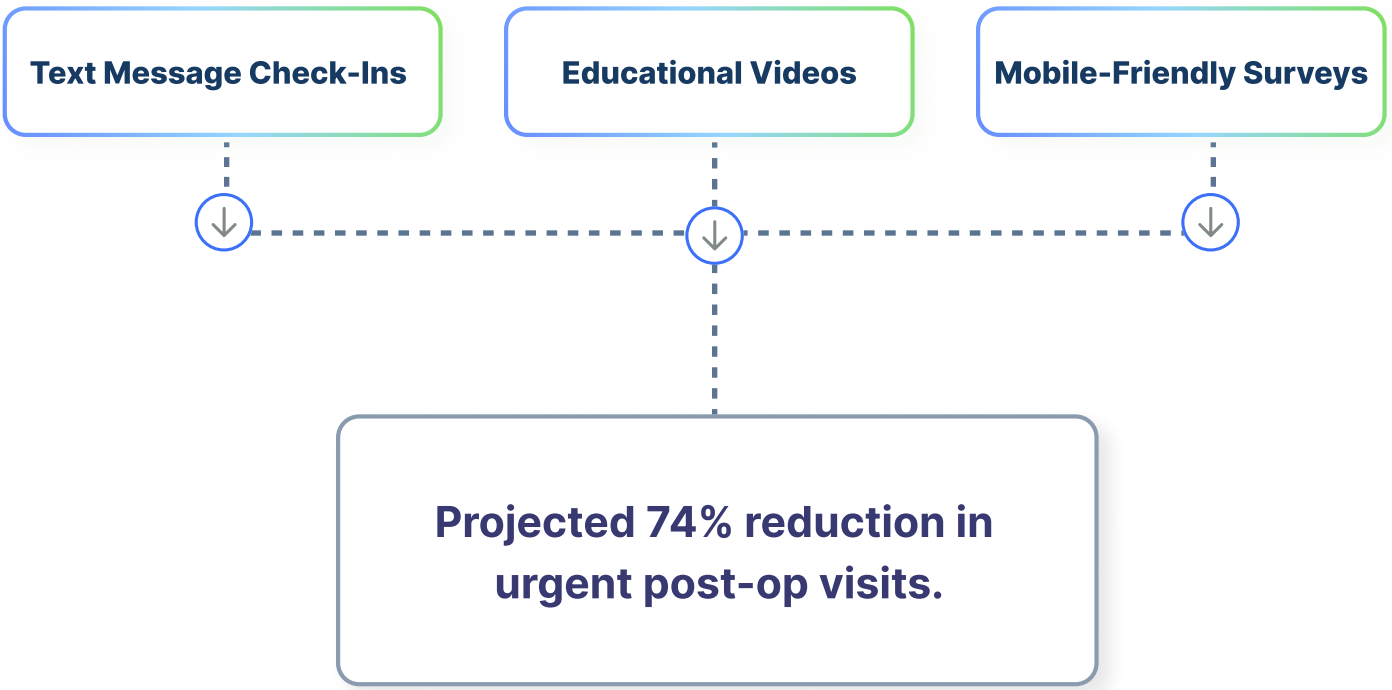
Historically, PRSC tracked an ER or urgent care visit rate of ~5% within 90 days post-operatively. These visits often stemmed from unmanaged pain or wound concerns.

During the pilot, Subflow enabled real-time monitoring of patient recovery through structured digital questionnaires and automated symptom tracking. In the first 25 days of the pilot, among the enrolled patients, **only one ER/urgent care visit was reported.**

This trend over a full 90-day period would translate to an estimated ER visit rate of approximately 1.3%, compared to the historical 5%. **This reflects a projected 74% reduction in urgent post-op visits.**

This early indicator suggests that digital patient resources like videos, PDFs, and check-ins delivered consistently, early, and with structured triage logic—are effective in surfacing complications before they escalate.

This workflow allows nurse navigators to intervene earlier and prevent avoidable acute care episodes.



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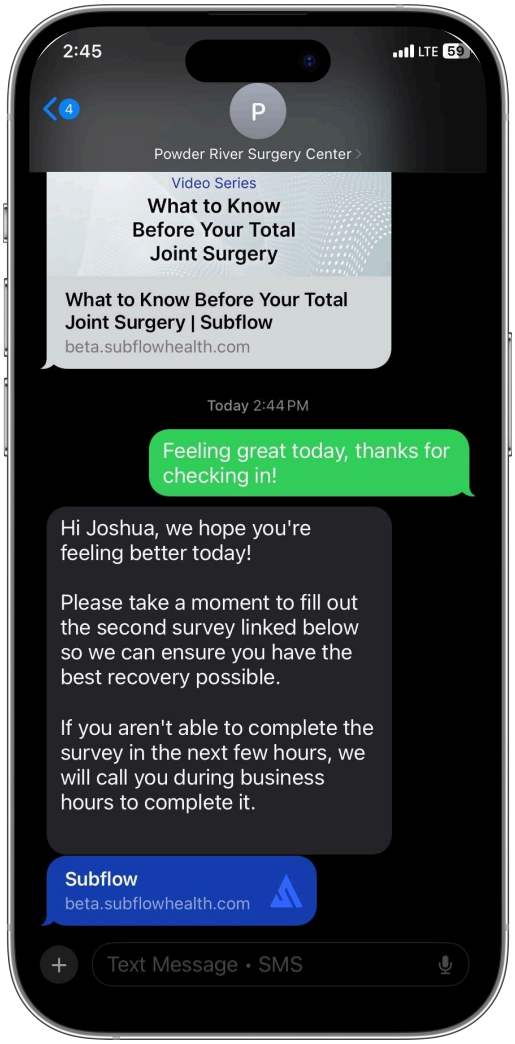
Patient-Reported Outcomes and Risk Identification

Through the use of digital surveys, PRSC collected systematic patient-reported outcomes (PROs) using Subflow. The digital surveys tracked:

- **Pain trends**
- **Recovery confidence**
- **Functional progress**
- **Wound status**

In one instance, a patient self-reported high pain through the survey. The care team was immediately able to see the patient's responses, followed up, and coordinated further treatment.

This structured data enabled real-time risk identification and more responsive care coordination.



Patient Satisfaction

Being able to access instructions on their phones, watch short educational videos, and communicate by text reduced confusion and improved convenience.

Surveyed patients in this cohort rated the experience with a Net Promoter Score (NPS) of 99%. Nurses noted that conversations—when needed—were more focused and productive.

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Conclusion

PRSC's pilot with Subflow demonstrates that digital engagement and workflow automation can deliver measurable improvements in both patient outcomes and operational efficiency for ambulatory surgery centers.

With automated post-op survey delivery, mobile-accessible educational videos, and real-time triage tools, PRSC was able to reallocate nurse time, increase patient adherence, and expand case capacity without adding staff. Key outcomes from the pilot include:

1. Volume Expansion Without Additional Staff

- Monthly total joint volume increased from 13 to 16 cases
- The care team confirmed capacity to meet their 18 per month target under the Blue Cross Blue Shield bundled care model using current staffing levels

2. Patient Experience

- Patients reported a 99% Net Promoter Score (NPS) during the pilot
- Patients cited convenience, accessibility, and clarity of communication as key benefits
- Nurses observed improved patient understanding and preparedness

3. Patient Engagement & Nurse Efficiency

- Nurse Navigators saved ~6 hours using clinical workflows within the first 25 days
- Survey adherence improved 28% starting at 45% using only phone calls to 73% without any phone calls required from nurses
- The remaining patients were reached via phone call, achieving 100% overall survey response during the pilot
- Conversations were more focused due to prior digital screening, allowing nurses to call patients who needed assistance

4. Reduction in Post-Operative ER / Urgent Care Visits

- If continued over a full 90-day period, pilot results could translate to an estimated 74% reduction in post-op ER/urgent care visits.
- Historical ER visit rate within 90 days was ~5%
- Pilot ER visit rate: 1 of 15 patients (1.3%)
- Automated symptom checks and self-reported outcomes allowed for earlier identification and intervention

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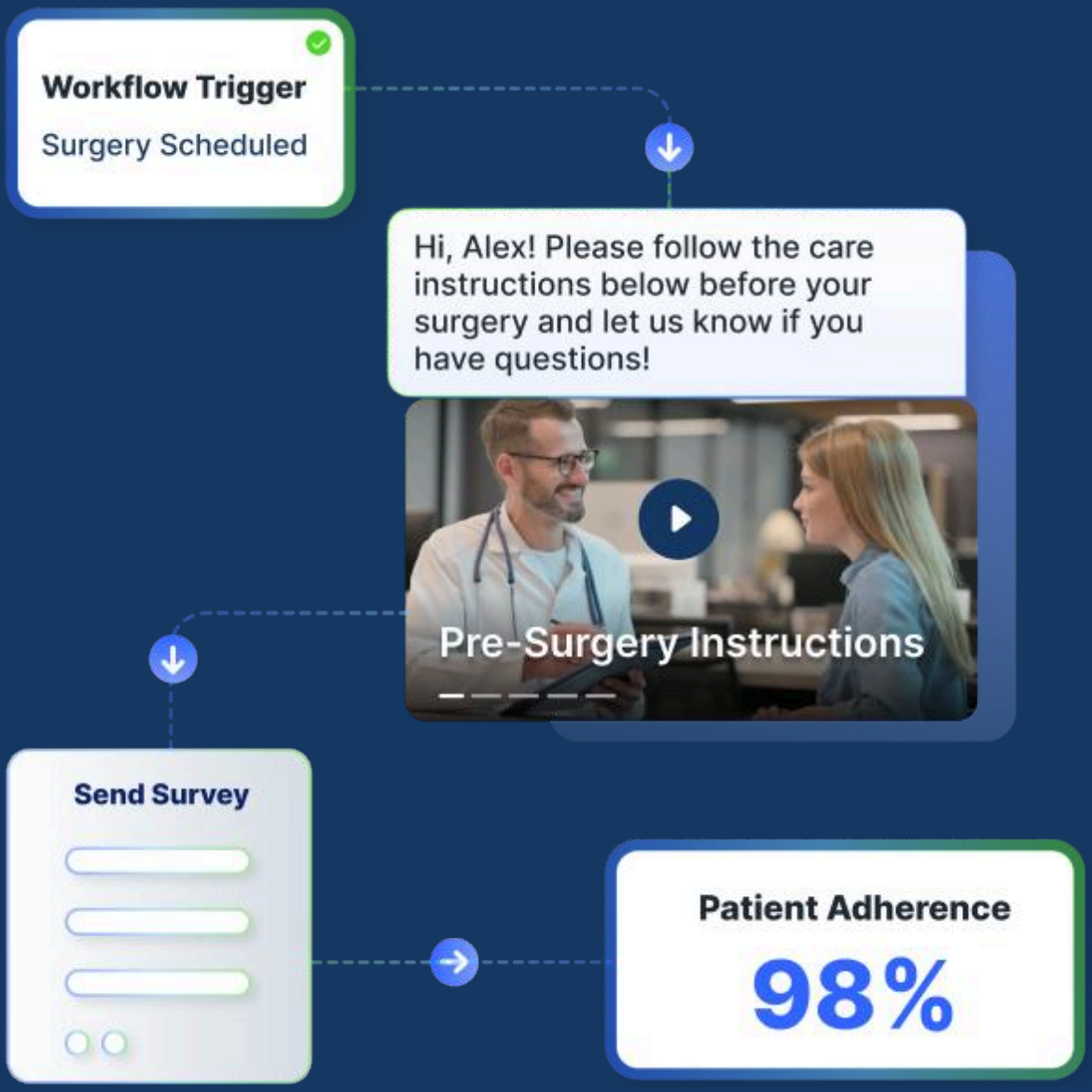
Workflow Trigger
Surgery Scheduled
Hi, Alex! Please follow the care instructions below before your surgery and let us know if you have questions!
Pre-Surgery Instructions
Send Survey
Patient Adherence
98%