Denver Health is a multi-specialty health care system serving the Denver community for over 150 years. The Denver Ear, Nose, and Throat (ENT) department addresses conditions of the head and neck.

Care Coordination Challenge: Denver Health ENT had no standard practice in place to coordinate post-operative care for their patients discharged from inpatient procedures. Providers followed up with post-operative patients in an ad-hoc fashion without a standardized process for assessing compliance or need as part of patient calls that did occur. Post-operative calls did not incorporate patient-centered principles and assessments for patient understanding or compliance for medication management, wound care, warning signs, or reminders for scheduled visits, which resulted in hospital readmissions and missed appointments, and lost revenue for the practice.

Assigning Post-Operative Care Coordination Roles: Denver Health ENT identified a nurse to make post-operative calls 24–48 hours post-discharge using a standardized checklist to review medication adherence, wound care instructions, red flags for recovery, and reasons and methods for contacting providers. The new workflows resulted in improved satisfaction for nurses and providers. Nurses felt engaged by the care coordination work, and it allowed providers to spend more time with patients. In addition, Denver Health ENT was able to work with their hospital partners to standardize post-operative instructions to ensure patients received correct, consistent information from every provider.

Patient-Centered Care Coordination: Denver Health ENT observed that patients and their families received post-operative instructions immediately upon discharge, when they were still recovering and before they had a chance to process questions. Denver Health ENT redesigned the process using patient-centered principles. Patients and their family members received calls at home, after the hectic discharge process, so they had time to think of questions and concerns. Denver Health ENT also incorporated patient teach-back techniques to assess understanding; patients described medication and dosing instructions, wound care procedures, potential warning signs, and instructions for contacting the clinic for follow-up appointments. The phone call encouraged patients to use the after-hours nursing line if there were questions or concerns prior to visiting the emergency department (ED). Nurses also helped patients schedule follow-up appointments during the calls, when possible.

Authors: National Nurse-Led Care Consortium, American Psychiatric Association, Network for Regional Healthcare Improvement, American College of Physicians
Measurable Impact on Post-Operative Care: Four critical measures were used to track the impact of this new care coordination initiative:

- Errors discovered/corrected
- Post-operative clinic visit no-shows
- ED visits within 14 days post-operation
- Use of after-hours nursing line

The Denver Health ENT team collected data for 522 successful post-operative calls between December 2016 and December 2017, comparing results with like-service outcomes from other specialty clinics: OMFS, pediatric surgery, ophthalmology, and urology.

Errors discovered/corrected: 5.6% of patients had errors discovered during follow up calls, and the Denver Health ENT team corrected 100% of them.

Figure 1: Percentage Distribution of Post-Operative Discharge Errors by Type (2016-2017), Denver Health ENT

Impact: Standardized, patient-centered, post-operative follow-up calls resulted in a reduction in medical errors and adverse events, a 50% reduction in the number of missed appointments, and a 33% reduction in 14-day post-operative ED visits. This initiative avoided 21 ED visits per year, with an average cost of $5,164 per visit and annualized savings of $108,461. In addition, this change process resulted in improved staff satisfaction; nurses felt valued and physicians had additional time with patients, which improved productivity.

Denver Health ENT’s success led to the adoption of this system by other Denver Health system departments. The orthopedics clinic adopted a similar post-operative system and their no-show rate decreased by 2.8%, while the eye clinic’s missed appointments dropped 3% in one quarter.