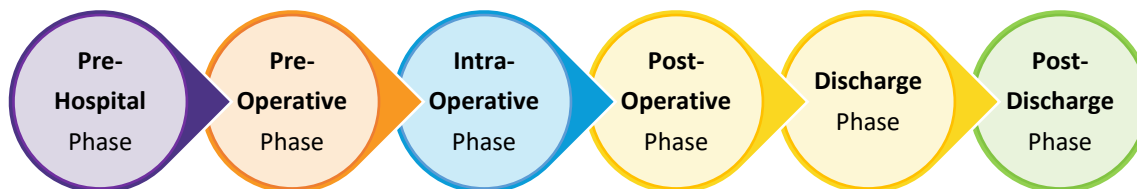


Guide to Strengthening Your Hospital Surgical Care Framework

Telligen developed this comprehensive educational guide which focuses on the surgical continuum of care: pre-, intra- and post-operative processes. This guide assists hospitals and surgical care teams in examining surgical workflows, identifying practice gaps, and implementing best practices to prevent surgical site infections (SSIs), post-operative pulmonary embolism (PE) and/or deep-vein thrombosis (DVTs). Additionally, this guide provides quality improvement recommendations that support the safety and efficacy of pain management for patients within all phases of surgical care.

This guide is not intended to provide clinical standards. The aim of this guide is to provide process-driven recommendations to build, strengthen and continuously monitor the health of the hospital surgical framework.

This guide includes recommendations from the American Association of Nurse Anesthesiology (AANA) Enhanced Recovery After Surgery (ERAS)¹ framework and layers this important clinical guidance with core quality and performance improvement tools. The guide provides a systematic process for identifying, analyzing and enhancing various aspects of the surgical delivery system.



Click on each phase to jump to the supporting section in this document.

Implementation and compliance with patient appropriate elements of a comprehensive pathway across the entire perioperative continuum, such as ERAS, have been shown to improve patient satisfaction, outcomes and reduce costs of care. Successful implementation and sustainment of a comprehensive surgical pathway rely on the following key factors:

- A cohesive and collaborative interdisciplinary team.
- Committed and engaged leadership.
- Leveraging project and change management techniques and tools.
- Continuously assessing opportunities for improvement by tracking quality metrics from embedded checkpoints within key processes. Data collection and analysis ensure process effectiveness – consider reviewing staff skills and competencies, policies and procedures, patient safety events and near misses, patient satisfaction, and staff feedback.

Enhanced Recovery Pathways can be used across any surgical service line. By implementing facility and specialty specific

evidence-based ERAS pathways (e.g., [Colorectal](#), [Total Hip and Knee](#), etc.), the team limits individual provider variation and achieves practice standardization which are important to ensure best quality and patient safety outcomes.

The curated resources below include process reviews and tools in a hybrid format. Written materials are accompanied by recordings.

If you would like guidance on a proven construct or framework to lead, develop, implement and sustain successful change initiatives, please [click here](#) for a 3-minute video that goes over **the Kotter's 8-Step Change Model**.

Recommendations for Strengthening Your Hospital Surgical Care Framework

The following patient-centered and evidence-based recommendations are intended to support the multidisciplinary team and patient to better prepare for the patient's surgical journey. The surgical journey starts before admission and extends through the patient's return home. The collective goal of the patient and team is to ensure optimal recovery for the patient. *This is not an exhaustive list of possible interventions.*

Pre-Hospital Phase

The following recommendations address the patient and family/caregiver participation expectations and the establishment of a comprehensive patient education plan; one that could be followed through the Post-operative & Discharge phases. Ensure bi-directional communication is occurring with the patient's primary care provider and other involved specialists, whenever possible, so that patients are prepared when coming to the hospital for surgery.

Include the following recommended practices:

- Partner with the patient and patient's family/caregiver to establish a comprehensive education plan (should also include the facility's pre-operative checklist – successful implementation will meet the Patient & Family Engagement PFE-1 recommendations). Be sure to consider language, [communication style](#), [cultural](#) and religious beliefs and health literacy to ensure the patient's understanding² of the entire surgical journey from pre-hospital through post-discharge. Early engagement helps the patient understand that active participation in their plan of care will result in better outcomes. Early engagement also helps the multidisciplinary team be consistent with the expectations that were set early on. Consider including the following:
 - Answers to the why, how and when patients will participate in their care *pre-procedure* (e.g., when to stop a medication, when to stop solids/liquids, how to prepare at home for discharge, potential impact of comorbidities, smoking and/or alcohol intake, etc.)
 - Answers to the why, how and when patients will participate in their care *during their hospital stay* (e.g., possible intensity of surgical discomfort and pain control, especially for patients with chronic pain or those suffering from substance use disorder).
 - Answers to the why, how and when patients will participate in their care *post-procedure*.
 - Answers to how pain will be managed throughout the hospital stay and managed post discharge. Refer to the multimodal analgesia criteria mentioned during the intra-operative phase.



Recommendations for Strengthening Your Hospital Surgical Care Framework

- Answers to how the multidisciplinary team will address potential circumstances that may delay discharge.
- Educate the patient on overall enhanced recovery after surgery expectations.
- Educate the patient on multimodal analgesia (pain management).
- Review the patient’s health, pain and anesthesia history (to be conducted in-person, via patient portal or telephone).
- Allow time for the patient and patient’s family/caregiver to review the education plan and have the opportunity to ask further clarifying questions. Please [click here](#) for a 4-minute video that reviews **Teach Back**.

Consider these quality checks* for continuous improvement:

- ✓ Audit for teach-back to ensure patient education follows expectations.
- ✓ Collect and analyze patient satisfaction feedback.
- ✓ Share findings, opportunities and successes with staff, leadership and if possible, with patients.

Based on your data analysis, if there is an opportunity for your hospital to improve any of the processes listed in this phase, then consider these resources:

- [Enhanced Recovery at a Glance – Pre-Hospital](#)
- [Before Your Operation – Medication and Surgery](#)
- [Before Your Operation – Quit Smoking](#)
- [Safe and Effective Pain Control After Surgery](#)
- [Cardiopulmonary Exercise Testing – Prevention of Pulmonary Embolism](#)
- [Working Effectively With an Interpreter](#)
- [CLAS – Cultural Competency and Humility](#)
- [Arthur Kleinman’s Eight Questions](#)
- [SAMPLE ONLY - Cleveland Clinic’s Pre-Operative Checklist](#)

Pre-Operative Phase

The purpose of a pre-operative evaluation is to evaluate and, if necessary, implement measures to prepare higher-risk patients for surgery. Pre-operative medical evaluations can decrease the length of hospital stay as well as minimize post-surgical complications. While other strategies may be proposed, the following recommendations address pre-operative medical evaluations, preoperative fasting and patient and family/caregiver education based on the patient’s comprehensive education plan.

Include the following recommended practices:

- Follow your organization’s policies and procedures regarding needed pre-operative evaluations³. This may include routine laboratory tests, additional laboratory tests based on physical evaluation findings, cardiac evaluation such as left ventricular function assessment, pulmonary assessment and nutritional assessment.
- Follow your organization’s protocol for pre-operative fasting. Current ERAS literature⁴ recommends pre-

Recommendations for Strengthening Your Hospital Surgical Care Framework

operative fasting time to be kept to a minimum to reduce pre-operative thirst, hunger and anxiety, as well as reduce perception of pain.

- Further enhance the comprehensive education plan after allowing patient and family/caregiver to review. Edit based on any additional questions they may have about the procedure, hospital stay, goals and discharge expectations.

Consider the following quality checks* for continuous improvement:

- ✓ Audit for effective completion of pre-operative checklist – including, but not limited to, ensuring the patient has completed all pre-operative testing as ordered, History and Physical (H&P) captures all relevant information and is available to the multidisciplinary team (e.g., timeliness and documentation compliance).
- ✓ Share findings, opportunities and successes with staff, leadership and if possible, with patients.

Based on your data analysis, if there is an opportunity for your hospital to improve any of the processes listed in this phase, then consider these resources:

- [Enhanced Recovery at a Glance – Pre-Operative](#)

Intra-Operative Phase

Several factors play a role in the patient’s optimal recovery. Having timely and comprehensive plans for antibiotic administration, VTE prophylaxis, fluid management and pain management provide the opportunity for patients to engage more effectively in their preparation for surgery as well as post-operation recovery.

Include the following recommended practices:

- Follow your organization’s surgical safety protocol to ensure key items such as antibiotic and VTE prophylaxis, field sterility and patient-specific needs are addressed prior to the start of the procedure. Please [click here](#) for an 8-minute video that goes over a **Comprehensive Surgical Checklist**.
- Follow your organization’s multimodal analgesia criteria to achieve effective pain control.
- Follow your organization’s protocol for ensuring normovolemia.
- Follow your organization’s protocol for assessing risk and proactively manage post-operative nausea and vomiting (PONV). Use [this tool](#) as a reference.
- Follow your organization’s protocol for ensuring normothermia through active warming intra-operatively. Normothermia decreases oxygen demand from shivering post-operatively, improves healing and decreases risk of surgical site infections.
- Follow your organization’s protocol for ensuring normoglycemia (maintaining blood glucose concentrations per latest clinical recommendations). Surgical patients may develop hyperglycemia as a result of the hypermetabolic stress response that is responsible for increased glucose production and insulin resistance. Optimal and timely treatment showed a significant reduction in post-operative complications. Reference these [recommendations](#).
- Follow your organization’s protocol for the appropriate use of intra-operative nasogastric or orogastric tubes,

Recommendations for Strengthening Your Hospital Surgical Care Framework

urinary catheters, and abdominal and pelvic drains.

Consider the following quality checks* for continuous improvement:

- ✓ Collect, analyze and cross reference analgesia mode(s) used against patient's documented pain.
- ✓ Collect, analyze and cross reference intra-operative patient monitoring data against patient's outcome.
- ✓ Collect, analyze and cross reference intra-operative use of tubes and drains used against patient's outcome.
- ✓ Collect, analyze and cross reference surgical data such as length, type, skin prep and positioning against patient's outcome.
- ✓ Collect, analyze and cross reference [anesthesia/post anesthesia](#) related quality data indicators.
- ✓ Audit for completion and timeliness of all paper-based and/or electronic documentation requirements.
- ✓ Share findings, opportunities and successes with staff, leadership and if possible, with patients.

Based on your data analysis, if there is an opportunity for your hospital to improve any of the processes listed in this phase, then consider these resources:

- [Establishing Multimodal Analgesia Criteria](#)
- [Enhanced Recovery at a Glance – Intra-Operative](#)
- [CDC Guidelines for the Prevention of Surgical Site Infection \(SSI\) - 2017](#)
- [Joint Commission - Universal Protocol](#)
- [Johns Hopkins Service-Specific VTE Order Sets](#)
- [World Health Organization Surgical Safety Checklist](#)
- [Addressing Barriers in Usage of Recommended Tools](#)
- [AHRQ Normothermia Audit Tool](#)
- [AHRQ Glucose Control Audit Tool](#)
- [AHRQ Antibiotic Use Audit Tool](#)
- [AHRQ SSI Investigation Tool](#)

Post-Operative & Discharge Phase

The facility delineates specific criteria for patient assessment, evaluation, monitoring, and documentation intervals during the recovery period. The patient is assessed and evaluated, noting the patient's recovery status and return to adequate function (e.g., level of consciousness, ability to ambulate, etc.). Patients can be discharged after they meet the discharging physician's order criteria for recovery.

Includes the following recommended practices:

Post-Operative

- Educate patient on the importance of resuming the physician's diet order.

Recommendations for Strengthening Your Hospital Surgical Care Framework

- Educate the patient's family/caregiver on the importance of early mobility and to resume activities of daily living post-surgery as early as same day of surgery.
- Follow your organization's criteria for patient assessment, evaluation and monitoring during recovery period, including evaluation for signs of post-operative delirium.
- Follow your organization's protocol for the appropriate use and maintenance of post-operative nasogastric or orogastric tube, urinary catheters, and abdominal and pelvic drains. Documentation of clear indications will help staff promote post-operative feeding and mobilization, avoid dehydration and promote patient comfort.
- Follow your organization's protocol for timely cap or removal of IV catheter (fluid management).
- Follow your organization's protocol for the effective management of post-operative nausea and vomiting.
- Follow your organization's protocol for pain management, use of non-opioids and opioid analgesia, including evaluation of the patient's response to administration of opioids. See [tool](#) and additional recommendations⁵.
- Conduct shift-change huddles and bedside reporting with patients and families. Use this opportunity to plan for discharge.

Discharge

- Follow your organization's criteria for appropriate patient discharge. Consider including the following within your organization's criteria:
 - ✓ Hemodynamically stable per facility criteria.
 - ✓ Ability to eat and drink without nausea or vomiting.
 - ✓ Adequate pain control with oral analgesia or alternative technique.
 - ✓ Independently mobile (e.g., get out of bed, on/off the toilet) or return to level of pre-procedure activity (baseline).
 - ✓ No complications requiring extended hospital care.
- Schedule a follow-up appointment with surgeon/proceduralist and/or specialty care (if applicable)
- Schedule a follow-up appointment with primary care provider (PCP) if necessary. If not needed, ensure records are disclosed to PCP following patient consent.
- Review current medications (hold/continue) and order new medications from the patient's pharmacy.
- Continue to educate the patient following comprehensive education plan (one started during pre-surgery office visit). See Pre-Operative Phase.
- Document the patient's emergency contact information.
- Provide written instructions to the patient, family or caregiver on how to monitor symptoms that need to be reported and who to report them to, and what strategies to use to aid recovery (e.g., how to control pain with medicine, how to care for the incisions).
- Confirm that all appropriate supplies (e.g., suture coverings, mobility aids, etc.) have been provided to the patient/family at discharge or home-delivery has been set up.

Consider the following quality checks* for continuous improvement:

Recommendations for Strengthening Your Hospital Surgical Care Framework

- Collect, analyze and cross reference patient monitoring data against the patient's outcomes. Some key outcomes include opioid use, opioid prescribing, PE/DVT, post-operation sepsis and post-operation infections.
- Collect and analyze follow-up appointment data (e.g., are appointments being scheduled before discharge?).
- Audit for effectiveness of shift-change huddles and bedside reporting with patients and families.
- Audit for teach-back to ensure patient education follows hospital discharge expectations.
- Audit for completion and timeliness of all paper-based and/or electronic documentation requirements.
- Collect and analyze patient satisfaction feedback.
- Share findings, opportunities and successes with staff, leadership and if possible, with patients.

Based on your data analysis, if there is an opportunity for your hospital to improve any of the processes listed in this phase, then consider these resources:

- [Enhanced Recovery at a Glance – Post-Operative](#)
- [ASA Standards for Postanesthesia Care](#)
- [AANA Postanesthesia Care Standards for the Certified Registered Nurse Anesthetist](#)
- [Standards for Nurse Anesthesia Practice](#)

Post-Discharge Phase – Home Discharge ONLY

The patient's ERAS pathway and participation of the interprofessional team continues when they return home. Key aspects of this phase include follow-up appointments, rehabilitation and monitoring for signs and symptoms of infection.

Include the following recommended practices:

- Ensure the patient understands the importance of keeping follow-up appointments (e.g., reminder phone calls, reminder texts).
- Ensure the patient understands the importance of monitoring for symptoms or changes in health and when and how to seek assistance (e.g., general information available on hospital website, patient portal, and/or printed discharge instructions).
- Ensure the patient understands the importance of continuing therapy and other interprofessional activities as planned (e.g., reminder phone calls, reminder texts).

Consider the following quality checks* for continuous improvement:

- ✓ Collect and analyze follow-up appointment data (e.g., patient appointment adherence)
- ✓ Collect and analyze patient satisfaction feedback.
- ✓ Audit for teach-back to ensure patient education follows expectations.
- ✓ Collect, analyze and cross reference patient follow-up information against return to emergency department post discharge and potentially, readmission to the hospital within 30 days of initial discharge.
- ✓ Share findings, opportunities and successes with staff, leadership and if possible, with patients.

Recommendations for Strengthening Your Hospital Surgical Care Framework

*Optimal frequency will largely depend on the patient volume, organizational quality improvement plan and leadership engagement.

Based on your data analysis, if there is an opportunity for your hospital to improve any of the processes listed in this phase, then consider these resources:

- [Enhanced Recovery at a Glance – Post-Discharge](#)
- AHRQ post-discharge follow-up phone call [script](#) and [documentation](#).

CONTACT US | Please email any questions regarding this resource guide to our [Telligen HQIC Team](#).

¹AANA Enhanced Recovery after Surgery,
<https://www.aana.com/practice/clinical-practice-resources/enhanced-recovery-after-surgery>

²U.S. DHHS Think Cultural Health Resources
<https://thinkculturalhealth.hhs.gov/about>

³American Family Physician – Preoperative Evaluation
<https://www.aafp.org/pubs/afp/issues/2000/0715/p387.html#afp20000715p387-t2>

⁴Practice Guidelines for Preoperative Fasting and the Use of Pharmacologic Agents to Reduce the Risk of Pulmonary Aspiration: Application to Healthy Patients Undergoing Elective Procedures
<https://pubs.asahq.org/anesthesiology/article/114/3/495/11070/Practice-Guidelines-for-Preoperative-Fasting-and>

⁵CDC Clinical Practice Guideline for Prescribing Opioids for Pain
https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm?s_cid=rr7103a1_w