

Laparoscopic Cholecystectomy Care Pathway

Version: 2

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Introduction

This pathway was developed by an interdisciplinary clinical group from SickKids using research knowledge, clinical experience and consensus agreement. This pathway is a general guideline and does not represent a professional care standard governing providers' obligations to patients. Care is revised to meet individual patient needs.

Target Population

- Children aged 2-18 years old who have undergone a laparoscopic cholecystectomy by the General Surgery Team;
- Patients are to be removed from this pathway if there are significant underlying disease, significant postoperative complications (e.g. bowel obstruction or prolonged TPN) or a change in diagnosis; and
- **If a patient has Sickle Cell Disease please consult hematology for guidance on fluids, oxygen, and pain management. These patients are pre-admitted the day before surgery***

Target Users

- Surgeons, residents, fellows, nurse practitioners, physician assistants and nurses on ward.

Laparoscopic Cholecystectomy Care Pathway Expected Date of Discharge: within 24 hours post-op

	PRE-OPERATIVE	IMMEDIATELY POST-OPERATIVELY	POST-OP DAY #0	DISCHARGE
GOALS	1. Hydration maintained 2. Adequate pain control 3. Patient prepared for OR 4. Child/family are advised of pre-op bath. Wipes to be used upon arrival. Refer to procedure document	1. Afebrile 2. Adequate pain control 3. Ambulating as tolerated 4. Able to tolerate clears (immediately post-op) 5. Incision intact, no drainage; dry and intact	1. Afebrile 2. Adequate pain control 3. Ambulating 4. Able to tolerate diet 5. Incision dry & intact	1. Afebrile 2. Adequate pain control 3. Ambulating 4. Able to tolerate diet 5. Incision dry and intact 6. Child/ caregiver teaching completed 7. Family understands discharge teaching
PHYSICAL EXAM	• Obtain history • Complete physical exam • Assess vital signs • Complete pain assessment (refer to Pain Assessment Guidelines) • Ensure child has adequate pain control (refer to Pain Management Guidelines)	• Complete pain assessment every 4 hours • Ensure child has adequate pain control (refer to Pain Management Guidelines) • Monitor vital signs as per BPews • Obtain accurate in and out • Complete wound assessment • Complete abdominal assessment • Assess for jaundice	• Complete pain assessment every 4 hours • Ensure child has adequate pain control (refer to Pain Management Guidelines) • Monitor vital signs as per BPews • Obtain accurate in and out • Assess for jaundice • Complete wound assessment • Complete abdominal assessment • Remove surgical dressing but leave steristrips	
DIET & IV FLUIDS	• Ensure NPO	• Clear fluids to diet as tolerated • Administer D5W/0.9 NaCl with 20mmol KCL/L at maintenance • Bolus as indicated • Refer to Fluid and Electrolyte Guidelines	• Clear fluids to diet as tolerated • Administer D5W/0.9 NaCl with 20mmol KCL/L at maintenance until adequate oral fluid intake • TKVO once adequate oral fluid intake	• Diet as tolerated
LABS & MEDICATION	• Complete CBC and differential • Cross and type	• Labs as clinically indicated • If pain/fever, administer acetaminophen as indicated • Ketorolac/ibuprofen every 6 hours as needed for pain • Morphine as indicated	• Labs as clinically indicated • If pain/fever, administer acetaminophen as indicated • Ketorolac/ibuprofen every 6 hours as needed for pain	• If needed, provide prescription for oral medication
ACTIVITY & EDUCATION	• Activity: as tolerated • Consent for surgery • Pre-op procedures for child and caregiver	• Activity: out of bed to chair and ambulating in hallway X5 • Review when diet will start • Review need for pain management • Review need for mobility • Review need for parental involvement in care	• Activity: out of bed to bathroom and ambulating in hallway at least 5 times • Review incision care: leave steristrips until they fall off or remove after 10 days • Review bathing: may shower 48 hours after surgery and wash incision gently with soap and water • May swim 48 hours post-op • May return to normal activities of daily living as tolerated • Review signs and symptoms of wound infection: fever, redness around incision, drainage from incision, increasing pain around incision, and fluid accumulation under incision	• Review when to call surgeon's office: wound infection, vomiting, fever, jaundice, and/or pain • Confirm follow up appointment with primary surgeon 6-8 weeks post-op (if indicated) • Book appointment with family doctor/pediatrician within 1 week • Review post-op day # 1 teaching

[PRINTABLE VERSION](#)

Related Documents

[Care of Patients Receiving Continuous Infusion of Opioids ==>](#) 

[Care of Patients Receiving Patient Controlled Analgesia ==>](#) 

[SickKids Formulary](#)

[Fluid & Electrolyte Administration in Children ==>](#) 

References

- Akhtar-Danesh G, Doumouras AG, Bos C, Flageole H, Hong D. (2018). Factors Associated With Outcomes and Costs After Pediatric Laparoscopic Cholecystectomy. *JAMA Surgery* 153(6), 551–557. doi:10.1001/jamasurg.2017.5461
- Berrios-Torres,S, Umscheid, C., Bratzler D., et al. (2017) Centers for Disease Control and Prevention Guideline for the Prevention of Surgical site Infection 2017. *JAMA* 152(8), 784-791. doi:10.1001/jamasurg.2017.0904
1. Boscarelli, A., Giangreco, M., Codrich, D et al. (2025). Management of Cholelithiasis in Children With Associated Diseases: Should Prophylactic Cholecystectomy be Recommended? - A Retrospective Analysis. *Asian Journal of Endoscopic Surgery* (18)1. <https://doi.org/10.1111/ases.70036>
 2. Cairo, S., Ventro, G., Meyers, H. & Rothstein D. (2017). Influence of discharge timing and diagnosis on outcomes of pediatric laparoscopic cholecystectomy. *Surgery* 162(6), 1304-1313. <https://doi.org/10.1016/j.surg.2017.07.029>

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3. Curwen, O.A. (2024). Who should perform pediatric laparoscopic cholecystectomies? A systematic review of the literature. *Pediatric Surgery International* 40(173). <https://doi.org/10.1007/s00383-024-05754-511>
4. Diez, S., Muller, H., Weiss, C., Schellerer, V & Besdorfer, M. (2021). Cholelithiasis and cholecystitis in children and adolescents: Does this increasing diagnosis require a common guideline for pediatricians and pediatric surgeons? *BMC Gastroenterology* 21(186). <https://doi.org/10.1186/s12876-021-01772-y>
5. Daodu, O., Zondervan, N, Urban, D., MacRobie, A & Brindle, M. (2018). Deriving literature-based benchmarks for pediatric appendectomy and cholecystectomy complications from national databases in high-income countries: A systematic review and meta-analysis. *Journal of Pediatric Surgery* 54(22), 2528-2538.
6. Kareem Omran, Duaa Faruqi, Oluwaseun Ladipo-Ajayi, Charlotte Holbrook, Manasvi Upadhyaya, SP1.7 (2024). Cholecystectomy in Children: Tertiary Institutional Review of 10-years, *British Journal of Surgery* 111(8). <https://doi.org/10.1093/bjs/znae197.015>
7. McKie, KA., Moturu, A., Graham, DA. et al. (2025). Antimicrobial Prophylaxis Use and Outcomes for Children Undergoing Cholecystectomy. *JAMA Pediatrics*. Published online February 24, 2025. doi:10.1001/jamapediatrics.2024.6391
8. Pio, L., Tulelli, B., Ali, L., Carvalho, L., Chalhoub, M., Julien-Marsollier, F., & Bonnard, A. (2023). Enhanced Recovery after Surgery Applied to Pediatric Laparoscopic Cholecystectomy for Simple Cholelithiasis: Feasibility and Teaching Insights. *Children*, 10(12), 1881. <https://doi.org/10.3390/children10121881>
9. Registered Nurses' Association of Ontario (2025). *Pain: Prevention, assessment and management* (fourth edition). Toronto, ON: Registered Nurses' Association of Ontario.
10. Sinha, A., Mattson, A., Njere, I & Sinha CK. (2024). Comparison of laparoscopic cholecystectomy in children at paediatric centres and adult centres: a systematic review and meta analysis. *The Annals of the Royal College of Surgeons of England* 107(2). <https://doi.org/10.1308/rcsann.2023.004>
11. Tablan, O., Anderson, L., Besser, R., et al. (2003). Guidelines for Preventing Health-Care-Associated Pneumonia, 2003 Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). Retrieved from: <https://www.cdc.gov/infection-control/media/pdfs/Guideline-Healthcare-Associated-Pneumonia-H.pdf>
12. Yeh, A., Butler, G., Srotmeyer, S., Austin, K., Visiou, M., Cladis, F. & Malek M. ERAS protocol for pediatric laparoscopic cholecystectomy promotes safe and early discharge. *Journal of Pediatric Surgery* 55(1), 96-100. <https://doi.org/10.1016/j.jpedsurg.2019.09.053>

Guideline Group and Reviewers

Guideline Group Membership

1. Anna Kazimierczak RN (EC), MN-NP (Paediatrics), NP General and Thoracic Surgery

Internal Reviewers

1. Annie Fecteau MD Pediatric Surgeon

Implementation Plan

- Education and awareness building by General Surgery Program (Surgeons, NPs, fellows, Physician Assistants, Nurse Educator, Nurse and Allied Health) at: fellow orientation (once per year) nursing orientation (every 3 months), and residents orientation (every month).
- Surgeons to communicate any updates in practice to Division of General Surgery.

Attachments:

[lap chole final 2019.pdf](#)