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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, fellow 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	<ol style="list-style-type: none"> <li>1. Hydration maintained</li> <li>2. Adequate pain control</li> <li>3. Patient prepared for OR</li> <li>4. Child/family are advised of pre-op bath. Wipes to be used upon arrival. Refer to <a href="#">procedure document</a></li> </ol>	<ol style="list-style-type: none"> <li>1. Afebrile</li> <li>2. Adequate pain control</li> <li>3. Ambulating as tolerated</li> <li>4. Able to tolerate clears (immediately post-op)</li> <li>5. Incision intact, no drainage; dry and intact</li> </ol>	<ol style="list-style-type: none"> <li>1. Afebrile</li> <li>2. Adequate pain control</li> <li>3. Ambulating</li> <li>4. Able to tolerate diet</li> <li>5. Incision dry &amp; intact</li> </ol>	<ol style="list-style-type: none"> <li>1. Afebrile</li> <li>2. Adequate pain control</li> <li>3. Ambulating</li> <li>4. Able to tolerate diet</li> <li>5. Incision dry and intact</li> <li>6. Child/ caregiver teaching completed</li> <li>7. Family understands discharge teaching</li> </ol>
PHYSICAL EXAM	<ul style="list-style-type: none"> <li>• Obtain history</li> <li>• Complete physical exam</li> <li>• Assess vital signs</li> <li>• Complete pain assessment (refer to <a href="#">Pain Assessment Guidelines</a>)</li> <li>• Ensure child has adequate pain control (refer to <a href="#">Pain Management Guidelines</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Complete pain assessment every 4 hours</li> <li>• Ensure child has adequate pain control (refer to <a href="#">Pain Management Guidelines</a>)</li> <li>• Monitor vital signs as per BPews</li> <li>• Obtain accurate in and out</li> <li>• Complete wound assessment</li> <li>• Complete abdominal assessment</li> <li>• Assess for jaundice</li> </ul>	<ul style="list-style-type: none"> <li>• Complete pain assessment every 4 hours</li> <li>• Ensure child has adequate pain control (refer to <a href="#">Pain Management Guidelines</a>)</li> <li>• Monitor vital signs as per BPews</li> <li>• Obtain accurate in and out</li> <li>• Assess for jaundice</li> <li>• Complete wound assessment</li> <li>• Complete abdominal assessment</li> <li>• Remove surgical dressing but leave steri strips</li> </ul>	
DIET & IV FLUIDS	<ul style="list-style-type: none"> <li>• Ensure NPO</li> </ul>	<ul style="list-style-type: none"> <li>• Clear fluids to diet as tolerated</li> <li>• Administer D5W/0.9 NaCl with 20mmol KCL/L at maintenance</li> <li>• Bolus as indicated</li> <li>• Refer to <a href="#">Fluid and Electrolyte Guidelines</a></li> </ul>	<ul style="list-style-type: none"> <li>• Clear fluids to diet as tolerated</li> <li>• Administer D5W/0.9 NaCl with 20mmol KCL/L at maintenance until adequate oral fluid intake</li> <li>• TKVO once adequate oral fluid intake</li> </ul>	<ul style="list-style-type: none"> <li>• Diet as tolerated</li> </ul>
LABS & MEDICATION	<ul style="list-style-type: none"> <li>• Complete CBC and differential</li> <li>• Cross and type</li> </ul>	<ul style="list-style-type: none"> <li>• Labs as clinically indicated</li> <li>• If pain/fever, administer acetaminophen as indicated</li> <li>• Ketorolac/ibuprofen every 6 hours as needed for pain</li> <li>• Morphine as indicated</li> </ul>	<ul style="list-style-type: none"> <li>• Labs as clinically indicated</li> <li>• If pain/fever, administer acetaminophen as indicated</li> <li>• Ketorolac/ibuprofen every 6 hours as needed for pain</li> </ul>	<ul style="list-style-type: none"> <li>• If needed, provide prescription for oral medication</li> </ul>
ACTIVITY & EDUCATION	<ul style="list-style-type: none"> <li>• Activity: as tolerated</li> <li>• Consent for surgery</li> <li>• Pre-op procedures for child and caregiver</li> </ul>	<ul style="list-style-type: none"> <li>• Activity: out of bed to chair and ambulating in hallway X5</li> <li>• Review when diet will start</li> <li>• Review need for pain management</li> <li>• Review need for mobility</li> <li>• Review need for parental involvement in care</li> </ul>	<ul style="list-style-type: none"> <li>• Activity: out of bed to bathroom and ambulating in hallway at least 5 times</li> <li>• Review incision care: leave steri strips until they fall off or remove after 10 days</li> <li>• Review bathing: may shower 48 hours after surgery and wash incision gently with soap and water</li> <li>• May swim 48 hours post-op</li> <li>• May return to normal activities of daily living as tolerated</li> <li>• Review signs and symptoms of wound infection: fever, redness around incision, drainage from incision, increasing pain around incision, and fluid accumulation under incision</li> </ul>	<ul style="list-style-type: none"> <li>• Review when to call surgeon's office: wound infection, vomiting, fever, jaundice, and/or pain</li> <li>• Confirm follow up appointment with primary surgeon 6-8 weeks post-op (if indicated)</li> <li>• Book appointment with family doctor/pediatrician within 1 week</li> <li>• Review post-op day # 1 teaching</li> </ul>

## [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

1. Guidelines for preventing health-care-associated pneumonia, 2003 Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC)
2. RAO Best Practice Guidelines: Assessment and Management of Pain (2007)
3. Mangram, A., Horan, T., Pearson, M., Silver, L. & Jarvis, W. (1999). [Guideline for Prevention of Surgical Site Infection 1999](#).
4. Balaguer, E., Price, M., & Burd, R. (2006). National trends in the utilization of cholecystectomy in children. **Journal of Surgical Research**, 134, 68-73.
5. Peter, S., Keckler, S., Nair, A., Andrews, W., Sharp, R., Snyder, C., Ostlie, D. & Holcomb, G. (2008). Laparoscopic cholecystectomy in the pediatric population. **Journal of Laparoendoscopic & Advanced Surgical Techniques**, 18, 127-130.

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9. (Draft). Doyle, J., Nathens, A., Morris, A., Nelson, S. & McLeod, R. (2010). Guideline #4: Management of complicated intra-abdominal infections. *Best Practice in General Surgery*.

## Guideline Group and Reviewers

### Guideline Group Membership

1. Monping Chiang RN (EC), MN, FNP, NP General Surgery
2. Fatma A. Rajwani, PT, Quality Management

### Internal Reviewers

1. Jacob Langer MD Pediatric Surgeon

### External Reviewer

1. Sharifa Himidan MD Pediatric Surgeon, North York General Hospital

## Implementation Plan

- Education and awareness building by General Surgery Program (Surgeons, NPs, fellows, nurse educator) 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.

## Evaluation Plan

- Abdominothoracic Approach order set utilization
- Length of stay (LOS)
- Correlation between LOS and order set utilization

## Attachments:

[lap chole\\_final\\_2019.pdf](#)