**Pediatric Surgery Rotation**

**Children’s & Women’s Health Centre of BC**

**Rotation Manual**

# DESCRIPTION

Children's & Women's Health Centre of British Columbia (C&W) consists of B.C. Children's Hospital, B.C. Women's Hospital and Health Centre, and Sunny Hill Health Centre for Children. C&W has the largest maternal-fetal-newborn clinical service in Canada and is the major referral centre for acutely ill or injured children in B.C. C&W has more than 400 in-patient beds including pediatric and neonatal intensive care units.

The Pediatric Surgery rotation consists of 4 weeks on the T6 and T7 Medical/Surgical wards at BC Children’s Hospital. The main surgical services offered at this site include general surgery, neurosurgery, orthopedics, plastics, urology, and ENT. Common surgeries performed include but are not limited to scoliosis surgeries, appendectomies, tonsillectomies, cleft lip and palate surgeries. Services are comprised of multidisciplinary teams including attending physicians, residents, medical students, pharmacists, nurses, physiotherapists, occupational therapists, social workers and dietitians.

The pharmacist on T6/T7 provides clinical services on weekdays only and is responsible for maintaining daily familiarity with medication regimens for all patients on the ward, through patient profile/chart review, discussions with patients, patients’ caregivers and nurses, and consultations with surgical teams. The pharmacist sets patient care priorities based upon an assessment of individual patients’ likelihood of experiencing drug-related problems and identification of existing drug-related problems. The pharmacist develops and implements a care plan for priority patients, defines monitoring criteria, and evaluates outcomes of recommendations. Significant patient care events (e.g. medication history, pharmacokinetic evaluation, adverse reaction/drug interaction documentation, patient/family medication counselling) are documented in the patient’s health record. The pharmacist also provides drug information, in-service education, formulary and medication policy review and support to the nursing and medical staff.

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# GOAL

* The Resident will develop the organizational and clinical skills required to provide pharmaceutical care on a pediatric surgery ward.
* The Resident should be able to function effectively and independently in the pediatric surgery setting
* The Resident will integrate with the multidisciplinary team to provide effective patient care
* The Resident will become familiar with the postoperative management of common pediatric surgeries

# LEARNING OBJECTIVES

Per those listed for all LMPS Direct Patient Care (DPC) Rotations, available on our Evaluation Outcomes page at [http://www.lmpsresidency.com/residents/resident-manual/evaluation-](http://www.lmpsresidency.com/residents/resident-manual/evaluation-outcomes) [outcomes](http://www.lmpsresidency.com/residents/resident-manual/evaluation-outcomes)

The expected level of resident performance by the completion of this 4-week rotation is outlined in the Direct Patient Care In-Training Evaluation of Resident (ITER).

# ROTATION-SPECIFIC OBJECTIVES

Surgery:

* + Discuss general pharmacotherapies used in postoperative management of various pediatric surgical procedures
		- Antibiotic prophylaxis
		- Pain control
		- Nausea and vomiting
		- Constipation
		- Fluid and electrolyte management
	+ Describe management of post-operative complications of common pediatric surgical procedures

General Pediatrics:

* + Describe how pediatric patients are different as they grow and develop with respect to drug therapy (e.g. dosing, pharmacodynamics and pharmacokinetics, etc)
	+ Describe the challenges and barriers encountered in the delivery of pharmaceutical care to the pediatric population
	+ Describe techniques to administer medications to pediatric patients of different ages and developmental levels
	+ Create patient-specific therapeutic plans including:
1. Gather and organize patient medical information
2. List and prioritize drug-therapeutic problems
3. Compare and contrast therapeutic alternatives
4. Develop goals of therapy
5. Make and implement recommendations
6. Create and implement monitoring plan
	* Apply knowledge about changes in pediatric parameters with age (e.g. dosing, pharmacodynamics and pharmacokinetics, etc) with respect to creating a therapeutic plan.
	* Demonstrate ability to communicate with health care team both verbally and in-writing.
	* Calculate pharmacokinetic parameters and make patient-specific recommendations about adjustment of drug doses

The resident will encounter a variety of pediatric conditions, disease states and their pharmacotherapy (during patient care activities and discussions with the preceptor), which may include the following:

Gastrointestinal

Short Bowel Syndrome Inflammatory bowel disease

Gastro-esophageal reflux

Infectious Diseases

Intra-abdominal infections Cellulitis

Septic arthritis

Osteomyelitis Hardware infections

General Pediatrics Immunizations

Antibiotic choices in pediatric patients Pharmacodynamic and Pharmacokinetic differences

# RESIDENT’S OWN OBJECTIVES

Residents will identify several of their own learning objectives for the rotation. These should be documented in their ePortfolio prior to the start of the rotation, discussed with the preceptor on day 1 of the rotation, and assessed at the various evaluation points throughout the rotation.

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# REQUIRED ACTIVITIES

The resident will:

1. Provide pharmaceutical care to the medical patients on the ward as per the objectives above. This involves daily patient evaluation for efficacy and toxicity of existing therapy as well as identifying and resolving potential drug-related problems. Patient load will be determined based on the Resident’s previous experience and proficiency and will be modified at the discretion of the preceptor.
2. Perform best possible medication histories, as required for patient care.
3. Recommend/assist in the initiation and continuation of appropriate drug therapy.
4. Provide medication counselling and education for all patients under his/her care when appropriate
5. Facilitate seamless care by liaising with community pharmacists and physicians when appropriate
6. Document clinical activities in the patient’s health record when appropriate. Notes should

be discussed with the preceptor BEFORE placing them in the chart.

1. Attend pharmacy education sessions (e.g., journal club and other scheduled presentations). The student may attend Grand Rounds/Advances in Pediatrics at The

Chan Centre for Family Health Education on Friday mornings from 8:30am - 9:30am if

relevant. Schedule of topics available at:

<http://pediatrics.med.ubc.ca/events/grand-rounds-schedule-and-presentations/>

1. Prepare topics for discussion with preceptor. Most topics will be discussed in context of patient care. See end of this document for a list of potential topics.
2. Meet daily with preceptor to discuss the patients being followed, issues of interest,

therapeutic controversies, ongoing evaluation, and special topics.

1. If applicable during the practicum, identify an adverse drug reaction and report it to Health Canada using the proper form. The ADR should also be posted on the patient’s

PharmaNet profile when appropriate.

1. Present one patient-case to the pharmacy staff.
2. Provide an in-service to nursing or medical staff at the discretion of the preceptor OR lead a journal club for the pharmacy staff at the discretion of the preceptor.
3. Other activities as assigned by preceptor.
4. Complete and submit any relevant procedure logs to the preceptor via one45 during the course of the rotation. Please see [http://www.lmpsresidency.com/residents/resident-](http://www.lmpsresidency.com/residents/resident-manual/procedure-logs) [manual/procedure-logs](http://www.lmpsresidency.com/residents/resident-manual/procedure-logs) for further details.

# COMMUNICATION EXPECTATIONS

1. The resident will discuss all recommendations with the preceptor prior to implementation, unless otherwise arranged with the preceptor.
2. The resident will discuss all written chart notes with the preceptor prior to placing them in the chart, with the exception of medication histories and allergy clarifications, unless otherwise arranged with the preceptor.
3. The resident will notify the preceptor in advance (i.e.: prior to the start of the rotation) of all required off-site activities (e.g.: ADS, BC Wide case presentations, etc.) and absences during the rotation.
4. The resident is encouraged to provide on-going, daily feedback to the preceptor to assist in enriching his or her own learning experience throughout the course of the rotation.

# PRECEPTOR RESPONSIBILITIES

The preceptor will:

1. Meet with the resident on day 1 of the rotation to discuss the goals and objectives of the rotation and work with the resident to develop a schedule for all rotation-specific activities and therapeutic discussions.
2. Clearly communicate expectations of the resident at the start of the rotation and throughout the rotation as required.
3. Provide the resident with a brief orientation and introduction to the pharmacy department,

ward, and health care team.

1. Meet with the resident briefly every morning to triage and identify patients for work-up.
2. Meet with the resident daily to discuss and review all patients under the resident’s care, incorporating clinical and therapeutic topic discussions at least 2 times per week.
3. Be available to the resident in person or by phone at all times during the rotation.
4. Schedule a presentation date and time with the department and assist the resident in selecting their topic for their journal club/nursing in-service/case presentation at least 2 weeks in advance of the scheduled date.
5. Review and provide feedback on any relevant procedure logs submitted by the resident via one45 during the course of the rotation.
6. Provide informal feedback to the resident on their performance on a daily basis, and complete and discuss all required written evaluations with the resident by the completion of the rotation.

# EVALUATION PROCESSES

Guidance on Evaluation Policies and workflow are available at

<http://www.lmpsresidency.com/residents/resident-manual/evaluation-policies>

1. The resident will receive a written, formative evaluation at the midpoint of the rotation. This evaluation will take into account the rotation-specific objectives and the resident’s own learning objectives.
2. The resident will receive a written, summative evaluation at the end of their rotation. This evaluation will take into account the rotation-specific objectives and the resident’s own learning objectives.
3. The resident will receive continuous feedback throughout the rotation and this will be considered part of the evaluation process.
4. The resident will provide written evaluations of both the preceptor and the rotation and complete a written self-evaluation prior to the last day of the rotation.
5. The preceptor and resident will discuss their respective evaluations in person at midpoint and on the last day of the rotation.

# REQUIRED READING & RESOURCES

Surgery:

* + ASHP Clinical Practice Guidelines for Antimicrobial Prophylaxis in Surgery 2013.

Available: [https://www.ashp.org/-/media/assets/policy-guidelines/docs/therapeutic-](https://www.ashp.org/-/media/assets/policy-guidelines/docs/therapeutic-guidelines-antimicrobial-prophylaxis-surgery.pdf) [guidelines-antimicrobial-prophylaxis-surgery.pdf](https://www.ashp.org/-/media/assets/policy-guidelines/docs/therapeutic-guidelines-antimicrobial-prophylaxis-surgery.pdf)

* + Olutoye O, Watcha MF. Management of postoperative vomiting in pediatric patients. Int Anesthesiol Clin 2003; 41(9): 99-117
	+ Frizzell KH, Cavanaugh PK, Herman MJ. Pediatric Perioperative Pain Management.

Orthop Clin North Am 2017; 48(4) 467-480

General Pediatrics:

* Wood AJ. Developmental Pharmacology – Drug Disposition, Action, and Therapy in Infants and children. N Engl J Med 2003; 349: 1157-1167