APPHON/ROHPPA NEWSLETTER

Atlantic Provinces Pediatric Hematology/Oncology Network
Réseau d'Oncologie et Hématologie Pédiatrique des Provinces Atlantiques

Summer 2016

New APPHON/ROHPPA LOC Coordinator - Maritimes

Please welcome Deborah Parker as our new APPHON/ROHPPA Levels of Care Coordinator. Deb has worked 13 years at the IWK; initially as a child life worker and then as a ward clerk for the Hematology, Oncology & Nephrology unit. Deb has worked as an RN on 6 Link for 13 years, and also as a hematology front line RN for 1 year. Other notables about Deb: prior to taking her Bachelor of Science in Nursing, she completed a kinesiology degree; she has two school age boys; loves camping; and has an orange belt in karate. Deb comes with a solid practice and knowledge foundation in the hematology/oncology patient population and is excited to work with and learn from all of you in our shared care model. Congratulations Deb!

Deborah.Parker@iwk.nshealth.ca
Phone: 902-470-3842
Fax: 902-470-6510

Mary Jean Howitt, our previous APPHON/ROHPPA LOC Coordinator, is now filling a dual position of COG Regional Clinical Trial Coordinator and Clinical Nurse Specialist for the Hematology/Oncology/ Nephrology service at the IWK, so has not gone far. Mary Jean sends her sincere thanks to all of you who allowed her to serve in this role and she looks forward to continuing to work with you in the future.

MaryJean.Howitt@iwk.nshealth.ca
902-470-8751

Katherine Webber Retirement

Kathy is retiring from APPHON/ROHPPA at the end of August. Kathy has been tireless in her efforts with APPHON/ROHPPA and will be missed. She will continue to work casually until the end of December when we will fill the position.

Happy golfing Kathy!

Spring 2017 APPHON/ROHPPA Conference

As you know, we are moving the conference to the spring. We will be booking rooms in October. If anyone knows of potential conflicts for the end of April or May, please let Carol Digout know:

carol.digout @iwk.nshealth.ca
(902)470-7429

Nausea and Vomiting

The nausea and vomiting guideline was approved at the APPHON/ROHPPA conference in 2015. Attached to the end of newsletter are the algorithms for easy use.

Levels of Care Document

The Levels of Care document has been up-dated to reflect current practices. Overall the revisions/updates reflect current practice and not necessarily new information for the APPHON/ROHPPA partners. Listed below are the changes to the document for your information:

1. On page 3 the wording around where radiation was changed to reflect that radiation for non-study purposes can be considered closer to home when applicable.

2. Wording changes to reflect that Oral Chemotherapy Dose Modifications are determined and confirmed *only* at the subspecialty centers by health professionals with the Beyond Entry Level Competency (page 14). However, ongoing reinforcement by shared care partners to help families administer the correct dosing is very important and helpful.

3. Removal of wording reflecting that IV chemotherapy may be given in a physician's office, independent of the rest of the health care team (page 13). This is not our APPHON/ROHPPA shared care practice. As well, an APPHON/ ROHPPA Chemotherapy competent RN (see Appendix V) would be given the IV chemotherapy in all settings.

4. Changed wording to reflect that all APPHON/ROHPPA supportive care guidelines should be accessed on the website (rather than binders) to ensure that the most up to date information is being utilized.

5. Wording updates to reflect the changes made about a year ago regarding the presence of APPHON/ROHPPA chemo-therapy competent RNs requirements depending on the level of care (see Levels of Care Cheat Sheet on the website under LOC as a quick reference).

6. Appendix I previously contained a list of criteria for care required at a subspecialty center AND a table of the LOC Assessments of Chemotherapy. This Appendix was split into two different Appendixes to ease the locating of pertinent information. This shuffled the numbering system of the Appendixes as well.

7. The Criteria for Care at a subspecialty center was also updated to reflect actual practice: patients under 100 days post allogenic BMT and 60 days past autologous BMT stay close to subspecialty center; patients in induction would need to be within 45 mins of an advanced or subspecialty center in order to go home; and because advanced centers may now have overnight presence of APHON trained nurses, it is a possibility that overnight infusions with no special monitoring could be given in these centers (to be considered on a case by case basis).

8. The Table of Chemotherapy Agents was updated with more recent agents that are able to be administered at the intermediate, advanced and subspecialty centers.

9. Because not all patients require CMV negative blood products (in many cases CMV safe is quite adequate) the availability of these products were added to the criteria.

If anyone would like to review the document in its entirety, please let APPHON/ROHPPA know.

Save the date – NB Palliative Care Day

Enhancing your knowledge in Pediatric Palliative Care: A day of education and networking with colleagues & guests

Where: The Moncton Hospital
When: September 26th 2016

Highlights: Philosophy of Pediatric Palliative care, communication strategies, pain management, family & staff bereavement, and much more!

***There is **no cost** to attend, however registration will be required. Detailed agenda and registration information to follow at a later date.

Our Vision

To facilitate access for Atlantic province children and youth to comprehensive, current, effective, evidence-based hematologic/oncologic treatment delivered as close to home as safely feasible.

APPHON/ROHPPA Prevention and management of CINV in Pediatric Cancer Patients Low and Minimal Emetogenic Risk (adapted from POGO 2012)

Low emetogenic Risk → **Ondansetron**

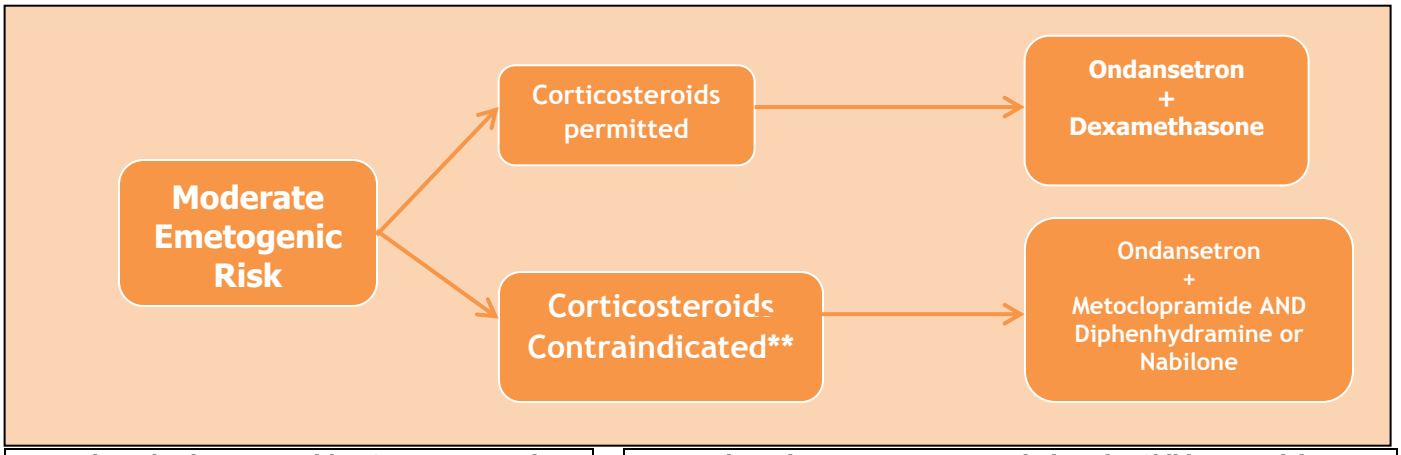
Antineoplastic Agents with LOW Emetic Risk 10% to <30% frequency of emesis in absence of prophylaxis	
Single agent antineoplastic therapy	
Cytarabine ≤200 mg/m^2	Mitomycin
Cytarabine intrathecal	Mitoxantrone
Docetaxel	Nilotinib
Doxorubicin (liposomal)	Paclitaxel
Etoposide	Paclitaxel-albumin
Fludarabine (oral)	Pemetrexed
5-Fluorouracil	Teniposide
Gemcitabine	Topotecan
Methotrexate >50 mg/m^2 to <250 mg/m^2	Vorinostat
Multiple agent antineoplastic therapy	
Multi-day antineoplastic therapy	
Emetogenicity is classified based on the most highly emetogenic agent on each day of therapy.	

Antiemetic Dosage Recommendations for Children receiving LOW Emetic Risk Antineoplastic Therapy	
Drug	**Dose**
Ondansetron	10 mg/m^2/dose OR (0.2-0.3 mg/kg/dose) OR Maximum 16 mg/dose IV (See exemptions under antiemetic management section) 24 mg/dose PO pre-therapy x 1 Breakthrough nausea and vomiting: Dimenhydrinate – 1 mg/kg (maximum 50 mg/dose) IV/PO q4h as needed OR lorazepam 0.025-0.05 mg/kg/dose (max 2 mg/dose) IV/PO/SL q6h as needed. If ineffective see Management of Antiemetic Failure. Anticipatory nausea and vomiting: Lorazepam - 0.04-0.08 mg/kg/dose (max 2 mg/dose) the night before chemotherapy and repeat a dose just prior to chemotherapy.

Minimal emetogenic Risk → **No routine prophylaxis**

Antineoplastic Agents with MINIMAL Emetic Risk <10% frequency of emesis in absence of prophylaxis		
Single agent antineoplastic therapy		
Alemtuzumab	Erlotinib	Rituximab
Alpha interferon	Fludarabine	Sorafenib
Asparaginase (IM or IV)	Gefitinib	Sunitinib
Bevacizumab	Gemtuzumab ozogamicin	Temsirolimus
Bleomycin	Hydroxyurea (oral)	Thalidomide
Bortezomib	Lapatinib	Thioguanine (oral)
Cetuximab	Lenalidomide	Trastuzumab
Chlorambucil (oral)	Melphalan (oral low-dose)	Valrubicin
Cladribine	Mercaptopurine (oral)	Vinblastine
Dasatinib	Methotrexate ≤50 mg/m^2	Vincristine
Decitabine	Nelarabine	Vindesine
	Panitumumab	Vinorelbine
	Pentostatin	
For multiple agent and multi-day antineoplastic therapy – Please refer to recommendations in Low emetic risk table.		

APPHON/ROHPPA - Prevention and management of CINV in Pediatric Cancer Patients Moderate Emetogenic Risk (adapted from POGO 2012)



Antineoplastic Agents with MODERATE Emetic Risk 30-90% frequency of emesis in absence of prophylaxis
Single agent antineoplastic therapy
Arsenic trioxide Azacitidine Bendamustine Carmustine ≤250 mg/m^2 Clofarabine Cyclophosphamide <1 g/m^2 Cyclophosphamide (oral) Cytarabine >200 mg to <3 g/m^2 Daunorubicin Doxorubicin Epirubicin Etoposide (oral) Idarubicin Ifosfamide Imatinib (oral) Irinotecan Lomustine Methotrexate ≥250 mg to <12 g/m^2 Oxaliplatin >75 mg/m^2 Temozolomide (oral) Vinorelbine (oral)
Multiple agent antineoplastic therapy
With the exceptions listed under high emetic risk, emetogenicity is classified based on the most highly emetogenic agent.
Multi-day antineoplastic therapy
Emetogenicity is classified based on the most highly emetogenic agent on each day of therapy.

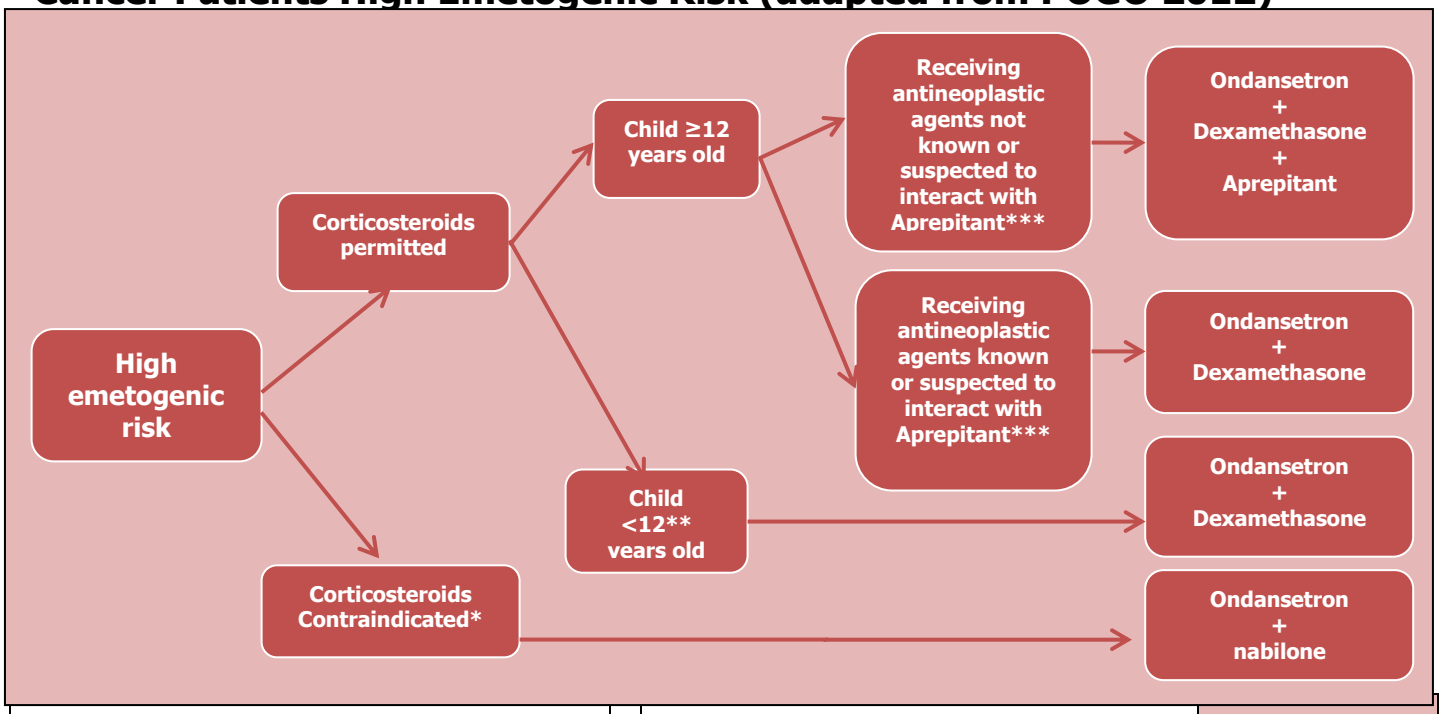
Antiemetic Dosage Recommendations for Children receiving MODERATELY Emetogenic Antineoplastic Therapy	
Drug	**Dose**
Dexamethasone	≤0.6 m^2: 2 mg/dose IV/PO q12 hr >0.6m^2: 4 mg/dose IV/PO q12hr
Ondansetron	(0.15 mg/kg/dose; maximum 8 mg/dose) IV/PO pre-therapy x 1 and then q12h
Metoclopramide	1 mg/kg/dose (max 40 mg/dose) Give diphenhydramine 1 mg/kg/dose (max 50 mg/dose) concurrently with metoclopramide pre therapy and then q6h.
Nabilone	<18 kg: 0.5 mg/dose PO twice daily 18 to 30 kg: 1 mg/dose PO twice daily >30 kg: 1 mg/dose PO three times daily Maximum: 0.06 mg/kg/day

* Corticosteroid contraindicated in CNS tumours, AML and any study that prohibits their use as an antiemetic.

Breakthrough nausea and vomiting: Dimenhydrinate - 1 mg/kg IV/PO q4h as needed
OR lorazepam 0.025-0.05 mg/kg/dose (max 2 mg/dose) IV/PO/SL q6h as needed.
Anticipatory nausea and vomiting: Lorazepam - 0.04-0.08 mg/kg/dose (max 2 mg/dose) the night before chemotherapy and repeat a dose just prior to chemotherapy.

Continue antiemetics around the clock for at least 48 hours after the end of chemotherapy then may switch to as needed.
Dexamethasone should be discontinued 1 day after chemotherapy is complete.
If ineffective see Management of Antiemetic Failure.

APPHON/ROHPPA - Prevention and management of CINV in Pediatric Cancer Patients High Emetogenic Risk (adapted from POGO 2012)



Antineoplastic Agents with HIGH Emetic Risk >90% frequency of emesis in absence of prophylaxis

Single agent antineoplastic therapy

Carboplatin	Dactinomycin
Carmustine >250 mg/m^2	Methotrexate ≥12 g/m^2
Cisplatin	Procarbazine (oral)
Cyclophosphamide ≥1 g/m^2	
Cytarabine 3 g/m^2/dose	
Dacarbazine	

Multiple agent antineoplastic therapy

With the exceptions listed below, emetogenicity is classified based on the most highly emetogenic agent. The following are also classified as high emetic risk:

Cyclophosphamide + anthracycline
- Cyclophosphamide + doxorubicin
- Cyclophosphamide + epirubicin

Cyclophosphamide + etoposide
Cytarabine 150-200 mg/m^2 + daunorubicin
Cytarabine 300 mg/m^2 + etoposide
Doxorubicin + ifosfamide
Doxorubicin + methotrexate 5 g/m^2
Etoposide + ifosfamide

Multi-day antineoplastic therapy

Emetogenicity is classified based on the most highly emetogenic agent on each day of therapy.

Antiemetic Dosage Recommendations for Children receiving HIGHLY Emetogenic Antineoplastic Therapy

Drug	Dose
Aprepitant	Day 1: 125 mg PO x 1 Days 2 and 3: 80 mg PO once daily
Dexamethasone	6 mg/m^2/dose IV/PO once daily may increase to BID (maximum 20 mg/day) If given concurrently with aprepitant, reduce dexamethasone dose by half
Ondansetron	0.15-0.2 mg/kg/dose (max 8 mg/dose) IV/PO Pre-therapy x 1 and then q8hr
Nabilone	<18 kg: 0.5 mg/dose PO twice daily 18 to 30 kg: 1 mg/dose PO twice daily >30 kg: 1 mg/dose PO three times daily Maximum: 0.06 mg/kg/day

***Drugs that interact with aprepitant

- Bortezomib
- Busulfan
- Cyclophosphamide
- Dasatinib
- Daunorubicin
- Docetaxel
- Doxorubicin
- Etoposide
- Imatinib
- Ifosfamide
- Irinotecan
- Lapatinib
- Melphelan
- Nilotinib
- Paclitaxel
- Sorafenib
- Sunitinib
- Tamoxifen
- Teniposide
- Thiotepa
- Vinblastine
- Vincristine
- Vinorelbine

* Corticosteroid contraindicated in CNS tumours, AML and any study that prohibits their use as an antiemetic.

**For children less than 12 years may consider the use of aprepitant check with clinical oncology pharmacist for dosing.

***When prescribing aprepitant always check with the pediatric oncology clinical pharmacist for interactions with chemotherapy agents. The list provided above may not include newly identified interacting drugs.

Breakthrough nausea and vomiting: Dimenhydrinate - 1 mg/kg IV/PO q4h as needed OR lorazepam 0.025-0.05 mg/kg/dose (max 2 mg/dose) IV/PO/SL q6h prn.

Anticipatory nausea and vomiting: Lorazepam - 0.04-0.08 mg/kg/dose (max 4 mg/dose) the night before chemotherapy and repeat a dose just prior to chemotherapy for anticipatory nausea and vomiting

Continue antiemetics around the clock for at least 48 hours after the end of chemotherapy then may switch to as needed. Dexamethasone should be discontinued 1 day after chemotherapy is complete.

If ineffective see Management of Antiemetic Failure.