APS manual @ Holland centre (and analgesic protocols)

APS coverage

During weekdays 08h30 till 16h30 APS is covered by APS NP's.

- Eri Maeda Mon - Fri (647.654.0887)
- Shirley Musclow Thurs - Fri (416.988.7424)

Coverage after 16h30 is provided by Anesthesia on call at the Holland Centre until this person leave the hospital. After that care is provided by APS@ SB.

Our APS NP's are very experienced, knowledgeable and real team players. Please ask them if any advice needed.

The majority of your APS duties will be rounding on Sat mornings and Stat holidays. No APS round takes place on Sundays. Your pain management plan should thus includes Sunday as well.

Please assess all patients on the printed APS list. Eri or Shirley
will inform you by email on the Friday pm of complex cases that will need extra input.

APS rounds on Saturdays / Stat Holidays

When you arrive - **print out 2x APS lists** (one for making notes when rounding, the other to submit for billing - see later) at any computer workstation

How to print out APS list:

1) Log on Sunnycare
2) Choose "**Acute Pain Service – Holland Centre**" (right upper corner)
3) Choose "**Print** (right upper corner of the list)
4) Choose **eSignout Nursing Report"** (unlike Bayview where Physician report is printed)
5) Print

Inform 3E once you start rounding (this will avoid calls to APS@Bayview for HC patents while you are in house.

Each inpatient unit (3E, 6E, 7E) has an '**APS clip board'** that is used by nursing staff to communicate concerns re. specific patients. Review this quickly before rounding

Upon completion of rounds: Update the APS patient list on Sunnycare - move patients you have discharged by using the 'Save & Discharge List' option. This is very helpful for the APS NP when rounding on Mondays.

All encounters require a note in the paper chart (no charting on Sunnycare is done at HC)

Lastly - call 3E to tell them you are **leaving** the hospital unless you want to be paged re HC patients the rest of the day.

APS billing

For residents: Please submit the **printed APS list to the staff on call on Monday** (for billing purposes) - indicate which patents on the list was NOT seen. If you are not here on Monday after Saturday rounds, please leave a copy at computer desk.

Fellows and staff

1. Any catheter G247 + E402, **PLUS** C101 if in SPECIAL CARE UNIT
2. Any non-catheter (PCA or PO) **PLUS** C101 if in SPECIAL CARE UNIT
3. Saturday: A013 + C963/C982 for first patient, C987 subsequently (up to 20 times) +/- C101 for ICU/PACU

APS orders online vs. hand written

Admission APS orders are completed online via Sunnycare - subsequent orders/changes to orders will need to be done on a blank 'prescriber order set'

Analgesic protocols:

1. TOTAL KNEE REPLACEMENT (primary, unilateral, no or low dose opioid use)

Please click on text in blue above to view pathway.

Above **does not apply** to patients that are opioid tolerant (> 90 mg oral Morphine or equivalent dose /day or those on Methadone or Suboxone) or have a history of severe intolerance (severe nausea and vomiting, hallucinations) to opioids. These patients are most likely to stay 2-3 days and an **individualized approach** which often includes a **sciatic nerve** block (single shot or continuous catheter) and/or a low dose **ketamine** infusion is needed.

Please discuss the use of a bolus dose via sciatic catheter (before vs. after surgery) with staff surgeon.

DO NOT stop IV PCA and adduktor catheters for these 06h00 for these patients, check 'APS to re-asses' on APS orders.

In case of a **femoral nerve catheter in this group**: either stop at 06h00 (APS can provide a bolus

via the catheter and restarted the infusion) **OR** check APS to re-assess.

2. Bilateral TKA

- Bilat continuous femoral or adduktor nerve blocks **OR** rarely Epidural analgesia for 24-36h
- Do **NOT** order IV PCA and nerve catheters to be stopped - check 'APS to re-asses' on APS orders for both modalities.

3. Primary THA

The majority of primary hip replacement surgery ONLY requires multimodal analgesia (Acetaminophen, Celecoxib, prn oral opioids) with rescue IV push opioids (two dose options based on risk factors for opioid induced ventilatory impairment). Reserve PCA for those with predictors of higher opioid use.

4. Major Revision THA

- order IV PCA (this exclude a 'liner exchange only' which can be managed as primary THR)

- **DO NOT order IV PCA to be stopped at 08h00** - APS will make the decision when they assess them on day 1.

- Consider low dose ketamine infusion.

- If a major revision (prolonged procedures) - some of these case will require a CSE technique - discuss with surgery options of leaving epidural cath till morning of D1. Please inform the surgical team as the anticoagulation protocol needs modification as below:

NO Rivaroxaban to be ordered until the epidural catheter has been removed.

Enoxaparin 40 mg sc at 14:00 daily are ordered up to (and including) the day of epidural removal. Rivaroxaban is started the day **after** the epidural removal (10 mg po at 10:00 daily).

5. Total shoulder, total elbow arthroplasty and rotator cuff (staying overnight)

- Continuous Brachial Plexus Nerve Block

- If block provides analgesia to whole surgical area, use PCRA (suggest rate of 7 ml/h with 3cc bolus q15min) and prn Hydromorphone.

- Order Acetaminophen and Celecoxib as discussed above.

- If **nerve catheter does not cover the whole surgical area** (and high opioid use is expected

postop) - do not order a bolus option on the nerve catheter as patient can't manage 2x 'buttons to push' - rather use a continuous rate only and order IV PCA.

6. **Spine surgery:**

- Please discuss the need for APS involvement with the staff surgeon. In my view the majority patients benefit from APS involvement. Please order Acetaminophen, Celecoxib, oral opioids (short acting) and IV push opioids. This protocol is similar to the one in use for total hip arthroplasty (see above)

The following applies to all upper extremity nerve catheters:

- DO NOT write a time for removal of the catheter.
- Upper extremity nerve catheters are kept in as close to time of discharge as possible.
- BOLUS the catheter (I recommend 10 cc of pump solution) before removal to extend duration of analgesia.
- Consider discharging above patients with an ambulatory nerve catheter (see later)

Ketamine intravenous infusion

- available in all patient care areas at HC

- Ensure a **weight** is entered on the order set.

Fentanyl PCA

- reserved for those with:
- True allergy to both Morphine **and** Hydromorphone **OR**
- Severe intolerance (persistent nausea for days, hallucinations) to both above **AND** Oxycodone unlikely to be adequate.

Please notify the Pharmacy (x 8625) and APS (x 8591) on day of Pre-assessment clinic visit. Pharmacy needs minimum of 2 days to order Fentanyl cassettes fro CADD pumps from Bayview campus. In cases where this is indicated but has not been pre-arranged, please call Pharmacy as soon as possible. Inform PACU as soon as possible on day of surgery to ensure it will be available on patient's arrival in PACU.

Notes on other adjuncts:

1. **Gabapentin or Pregablin (beyond the dose on admission)** has **limited benefits** in terms of

prevention of persistent post surgical pain and/or as an opioid sparing adjunct, and frequently causes dizziness and sedation in elderly patients.

Order Gabapentin or Pregablin on APS only if the patient is using daily at home (suggest use same dose as before admission) or in patients with severe opioid tolerance or clear indicators of neuropathic pain.

2. Standing **long-acting opioids** is not indicated in the management of acute postoperative pain in opioid naive patents. Nausea and vomiting as well as sedation are common side-effects. Mild - moderate sedation may delay the ability of patient to start their rehabilitation.

3. NSAID

1. **Bone healing** is NOT considered a contra-indication by staff surgeons at the Holland Centre.
2. An allergy to Sulphonamide antibiotics is not a contra-indication to Celecoxib.
3. If high intraoperative blood loss and/or prolonged hypotension - omit NSAID until next Cr level is available
4. NSAID and Celebrex does increase the risk of an ACS event within a week of use. Omit if you feel this risk does not justify the opioid sparing effect (20% reduction)
5. If your patient is a candidate for an NSAID, but not a candidate for Celebrex for any reason, please order Naproxen.

Discharge script for analgesics:

D/C scripts are written the day before surgery by ortho - by default Tylenol, Celecoxib and HYDROMORPHONE.

If this is an inappropriate prescription (due to contra-indications, side-effects etc) and/or does not reflect the medication used on the day of discharge home, as APS often rotate opioids, an up-dated script is needed (exceptions are ketamine and Gabapentin/Pregablin which are not continued after d/c).

When rounding, inform nursing staff that d/c script need to be changed by the orthopaedic team.

Please advise the orthopaedic team in the OR if you are aware of reasons why this default d/c script would be inappropriate.

Home nerve catheter program

We are able to offer patients undergoing upper extremity surgery that meets certain criteria a ‘home’ nerve catheter to extend analgesia for another 48h at home.

Patient criteria:

- Need to stay within a certain distance from Holland (or Bayview campus) for the duration of the infusion. (See map in block area)
- Patients staying in a hotel are NOT candidates, but ok if they stay with family or friends.
- Needs to be able to follow instructions re troubleshooting and removal of nerve catheter.
- Need to have family/friend staying with them while catheter is in situ.
- Willing to bear responsibility for managing the nerve catheter.

Process in POP clinic:

- Please discuss this option in the pre-assessment clinic when obtaining consent for nerve block **and review** this information on day of surgery (prior to any sedation). Patient informations pamphlet (click on link)

Process on day of surgery:

- Bolus nerve catheter as usual in block area (no need to start infusion before end of surgery)
- Fill 'baby bottle' (see instructions in block area re. dilution)
- Patient need to be clear who to contact in case of pain/leakage/concerns
- Complete the progress note at the block room computer to enable follow up and leave in block area at computer:
  - make sure we have a contact number where we can actually reach the patient or family - their home number is no help if they will stay elsewhere !
- Inform APS NP re patient (text Eri @ 647.654.0887)

Follow up of patients with a home nerve catheter:

- Daily phone calls as long as catheter is in situ (including day of removal) is essential.
- Primary responsibility for catheter management is with MD that placed catheter, but this can be delegated to NP (weekdays) or block room fellow.
- Complete the white form and leave in block area or email to Eri.

Anti-emetic orders on pre-printed APS order set:

- Please check off all three options for anti-emetics: ONDANSETRON (select one of the 2x Ondansetron options), HALDOL and NALBUPHINE **unless** you have a valid concern in an individual patient.
- Incomplete orders leads to unnecessary calls to APS.

Created by Dr. Van der Vyver
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