PCCL Session: Summary Report and Resources

PCCL session topic: "Crossroads of Care: Severe Brain Injury and End of Life"

Date: July 18, 2025

Learning objectives:

1. Review considerations for traumatic brain injury in pediatrics
2. Review an approach to palliation of a pediatric patient
3. Identify resources for family supports

Case:

- Setting the stage: Tier 3 hospital. Adult ICU beds (no PICU). 4 Pediatric general med-surg beds. 24/7 Pediatrician, Critical Care RNs, and RRT support. On-call gen-surg overnight with limited pediatric surgical access
- Patient Demographics: 8-year-old, PMHx: previously healthy. Medication(s): no prior meds, Immunization(s): fully immunized
- Focus History of Presenting Illness:
    - Motor vehicle accident
    - Significant open skull fracture
    - Intubated in the field by BCEHS due to decreased LOC and compromised airway
    - Unable to fly out to BCCH due to weather conditions
    - After CT and case reviewed by BCCH Neurosurgery, injuries deemed non-survivable, and patient made palliative after discussions with family
    - Patient palliated in the adult ICU
- Initial Management:
    - Prior to Arrival: IV placement, Intubation & Ventilation, RSI Meds: Fentanyl & Ketamine, TXA
    - Emergency Department: CT scan, Labs, Xrays, Ketamine & Fentanyl PRN to assist with sedation, PRBCs, Ancef, Hypertonic Saline, Arterial Line, OG, Foley, additional IV placements
- Progression:
    - Presenting Vital Signs: GCS 1 (1/NT/NT) d/t intubation & sedation, T 36.3 Rectal, HR 118 Irregular, BP 87/43, MAP 50, SpO2 100% FiO2 1.0, RR 12
    - Presenting Physical Exam Findings: L-Pupil fixed & dilated, No spontaneous limb movement (rec'd Fent/Ketamine for intubation). Brain tissue evident on examination
    - Changes in Physical Exam over course of ED care: Eventually both pupils fixed & dilated, HR down to 50s during CT, with BP up to 116/54 MAP 71, bradycardic repeatedly during course of care w/ max BP 153/58 MAP 87
- Investigations: CT: severe left frontal skull fracture with brain extrusion and associated para-fracture brain injury, evidence of brainstem injury @ pons level, diffuse brain swelling

- Labs: Hgb: 78 (on arrival), down to 70 at 1-hour mark, ABG: pH 7.25, pCO2 49, pO2 392, HCO322, BE -6.0, Lactate 2.3, Lytes: unremarkable, Misc: Trop 290, CK 504, ALT 242

- Palliation Management: Due to severity of brain injury & inability to transport patient in a timely manner to BCCH due to weather, patientcare shifted to palliation after discussions with family. The was moved to the adult ICU to palliate shortly afterwards. The patient was extubated per family's readiness. Comfort care: family presence, Morph/Midaz IV PRN. End-of-Life care: Saging ceremony, handprints inpatient's favourite colour, heart print ornaments, music, Canuck place 24/7 support line.

Learnings:

Providing End of Life Care for Children and Families

- Pediatric end-of-life care is complex and emotionally charged; requires a coordinated, compassionate approach.
- Emphasis should be placed on clear, compassionate communication with families as the situation evolves.
- Consider anticipatory guidance and preparation for death, even when diagnosis remains uncertain.
- Shifting from life-saving care to comfort care must be intentional, well-communicated, and unified across the team.
- When withdrawal of care is the only reasonable action, it is best to refrain from asking families if they "want" to withdraw care. This places undue burden on the family as though they are making a "choice" to end their child's life. If care is no longer beneficial, the clinical team should advise withdrawal, based on the medical reality.
- The family should be fully consulted on their wishes around the process of end of life (who they want present, any memory making, any religious needs etc)
- The location of withdrawal should be thoughtfully considered; transporting a child to another hospital may remove families from their support systems and community.
- Local sites may have pediatric/neonatal RNs who can support compassionate care locally when withdrawal is appropriate.

Family Presence

- Families should be offered the option to be present during resuscitation when possible.
- Presence may bring comfort, closure, and reduce long-term trauma.
- Provide a designated staff member to support the family in the moment. Challenges in rural/remote settings (e.g., no social work, limited staff) noted—**Victim Services** may be a helpful support in these circumstances.

Sibling Support

- Siblings benefit from being included in end-of-life experiences when appropriate.

- Presence during or after death may support understanding and reduce anxiety; absence often leads to imagination filling in gaps.
- Encourage rituals and memory-making to include siblings in the family's bereavement journey.
- Recognize and validate the sibling's experience during and after the dying process.
- Offer age-appropriate explanations and emotional support.

Canuck Place - Pediatric Palliative Care Resource

- A provincial program offering support across BC and the Yukon, including virtual services.
- 24/7 referral line: Access to a nurse and on-call provider with links to BCCH.
- Services include:
    - Clinical guidance, family conversations, and medication support.
    - Psychosocial and bereavement care: spiritual care, social work, music therapy.
    - Memory-making activities to support legacy and grief processes.

Organ Donation Discussions

- The loss of a child or infant is always tragic, and the option of organ donation is especially hard on parents and families, who are the decision makers in such an event. Pediatric donation is a difficult subject for everyone.
- Unless introduced by the family, it is generally not advised to bring up organ donation in the initial end-of-life conversation. Allow families to first process the gravity of the situation.
- **It is advised to call BC Transplant to review the case prior to initiating discussions around organ donation (as there may be children deemed ineligible negating the need for an organ donor conversation)**. Consider bringing it up in a second or third conversation when appropriate.
- All pediatric deaths must be reported to BC Transplant, regardless of family decision (aim for a 100% "conversation" rate).
- Being in a remote community should not deter transplant discussions—some families may find deep meaning and legacy through donation.

Staff Support Post End of Life

- Set up structured debriefs: Debriefs provide space for emotional processing and clinical reflection.
    - Ideally occur within 24–72 hours post-event.
    - Can include all disciplines involved in the case.
- Clinical event debriefing guides can be helpful for the immediate conversation/take 5 check in prior to the more formalized debrief.
- Access BCCH support for debriefs: BCCH staff can join virtually to help facilitate or support local teams during debriefs.

Resources:

- Canuck Place Referrals
- Canuck Place Resources:
  - Grief and bereavement care - Canuck Place Children's Hospice
  - When a Child Dies
  - Resources For Bereaved Parents | Just Enduring
  - British Columbia Bereavement Helpline - Homepage New
  - Amos Pewter
  - The Remembering Heart
- Virtual Support Pathways
- Debrief Support
- Organ Donation – BC Transplant
- Head Injury – In a Hurry
- TBI Guidelines – In a Hurry

Here's how to **bookmark the Pediatric Critical Care Resources Website as a shortcut on your smartphone home screen**, depending on your device and browser:

📱 **For iPhone (Safari Browser):**

1. **Open Safari** and go to the website you want to save.
2. Tap the **Share icon** (square with an arrow pointing up) at the bottom of the screen.
3. Scroll down and tap **"Add to Home Screen."**
4. You can edit the name if you like, then tap **Add**.
5. The shortcut will appear on your **Home Screen** like an app icon.

☑ *Only Safari supports this on iPhone (not Chrome or Firefox).*

🤖 **For Android (Chrome Browser):**

1. Open **Google Chrome** and go to the website.
2. Tap the **three-dot menu** in the upper-right corner.
3. Tap **"Add to Home screen."**
4. Edit the name if desired, then tap **Add.**
5. Confirm by tapping **Add automatically** or drag it to your preferred location.

☑ *Works with most Android devices using Chrome. Firefox has a similar option under its menu.*

The resources shared throughout this session are for reference purposes only. Please consult your health authority leaders for guidance on adoption and use of these resources within your local context. The advice provided during the PCCL sessions is not intended to replace the clinical judgment of the healthcare providers who are with the patient. While PCCL sessions may suggest recommendations, the final decisions regarding a child's care and treatment should always rest with the healthcare professionals involved in their care at both the referring and receiving centres.
If you need additional in the moment support refer to the Provincial Real Time Virtual Support Pathways: If you need additional in the moment support refer to the Provincial Pediatric Virtual Support Pathways: https://childhealthbc.ca/pcc/provincial-pediatric-virtual-support-pathways