EBP PROJECT

- In Pediatric surgeries, for myringotomy and/or adenoidectomy in MPLS campus using a protocol of timed administration of non-narcotic analgesics versus current practice to decrease the post-op pain score, LOS time, PONV and emergence delirium.

When I first started it was the practice to give dose of Tylenol 45-60 minutes prior to surgery along with an oral dose of Versed.
During surgery Fentanyl would be given IV or Intranasally.
Post surgery in the PACU, repeat doses of Fentanyl and if needed Versed.
The year prior to working on this EBP we had removed the use of Versed prior to surgery and introduced Precedex during surgery when able.

INTRODUCTION

Why am I looking at this and wanting to see if we can make the changes?

Over the years of working here I have seen many families question our use of medications. Mostly the use of Fentanyl. For many families this is their first encounter with anesthesia, and they are very nervous about the whole process. Then we use words like Fentanyl, and they began to wonder what is happening. I know that we explain to them that it is very safe, and we are well practice with giving it, but for some, it can still be scary.

What If we could offer a different way of medicating their child, that has been proven as effective and safer? What if we could reduce emergence delirium, while returning the child to their family quicker? I feel that we can do this if we work as a team across the whole department.

Would we need to make changes? Yes, but it would be small changes.

CHAMPIONS/TEAM

The following team have put together the procure for BMT's and Adenoids or both together

- Terrance Rawson RN, ASN (EBP project leader)
- Gillian Wiser, DNP, APRN, CRNA Champion for CRNA
- Ben Klosel, Anesthesiologist MD Champion for Anesthesiologist
- Jill Maresh, Anesthesiologist MD Champion for Anesthesiologist
- Abby Meyer, Surgeon, MD, MPH Champion for ENT
- Andrew Redmann, Surgeon, MD Champion for ENT
- Shayna Fleming, DNP, RN, CNOR (project mentor)

TIMELINE

- January 2024, Started asking the question about removing Fentanyl from some surgeries, based on an article that I read from Seattle Childrens.
- February to April 2024, Did research and defind my PICO question
- June to October 2024, Project roll out and data collection.
- November 2024 to January 2025, Compiled the data and shared with team members and staff.
- January 2025, Put in place new practice change with the help of the team.

BMT-NO IV PROTOCOL

- Preoperatively
  - PO Tylenol 15mg/kg (versus rectal second line, aim for 20-40 mg/kg).
- Intraoperatively
  - IM Toradol up to 0.5mg/kg to a max of 15mg.
- Postoperatively
- PO Ibuprofen (10mg/kg) if Toradol was not given Intraoperatively.

ADENOIDECTOMY PROTOCOL

- Preoperatively
  - Tylenol 15mg/kg PO/G/J tube, or Rectal
- Intraoperatively
  - Precedex 0.5mcg/kg upfront.
  - Toradol 0.5mg/kg (max 15 mg)
  - Dexamethasone 0.5 mg/kg (8mg max)
  - Zofran 0.15 mg/kg (4mg max)

ADENOIDECTOMY PROTOCOL

- Postoperatively
  - PO Ibuprofen (10mg/kg) if not given intraoperatively
  - Rescue Analgesics: Precedex 0.4 mcg/kg, (max of 16mcg)
  - Narcotic, if prior doses of Precedex did not work
  - Rescue Antiemetics: Benadryl 0.5-1 mg/kg (12.5 mg max)

PRE-OP RN ROLE?

- Standard Pre-op routine
- Oral meds, may use the Tylenol Protocol that Dr Altman has put in place.
- Rectal meds, if child is unable or unwilling to take an oral dose. May be differed to the Inter-op or Post-op phase.
- Start Post-op education during the Pre-op.
- After the child has gone into surgery check in with family and talk about the next step of discharge.

INTER-OP – ANESTHESIA

- For BMT's, dose of IM Toradol to be given at the time of induction
- Prepare for Bypassing patient to Phase 2.

- For Adenoids;
- At the time of Induction give Precedex, Dexamethasone, and Toradol.
- At the end give dose of Zofran
- Prepare patient for PACU transfer

PACU RN ROLE? POST OP ROLE?

- As Phase 2 nurse, check in with family and complete the discharge process, include medication times if able. Cover with the family what to expect when reunited with the child, and what is needed for them to be ready to go home.

- If child does Bypass and is return to family Post-op.
- Give Tylenol and/or Ibuprofen, if not given already.
- Complete Discharge process with family.

- If child doesn't Bypass and comes to PACU,
- Give any Post-op medication that are needed. If Tylenol was not given in the Pre-op phase give now, Rectal or IV.
- Be prepared to give rescue medications if needed. The first line would be Precadex, second would be an Opioid.
- Return child to family when ready.

WHAT HAVE WE LEARNED?

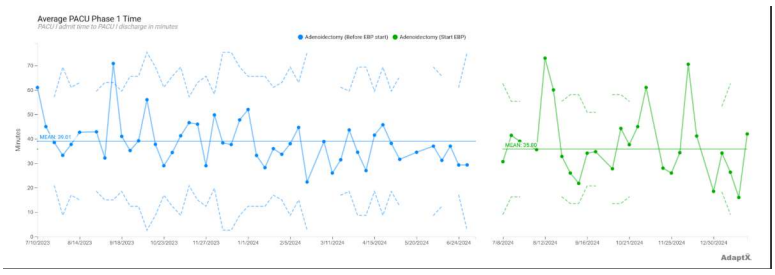
In the following slides we will see data comparing LOS, (length of stay), Pain Scores, and use of Recue medications.

What we saw was a reduce LOS, Pain scores that improve slightly, and a reduction in Recue medications.

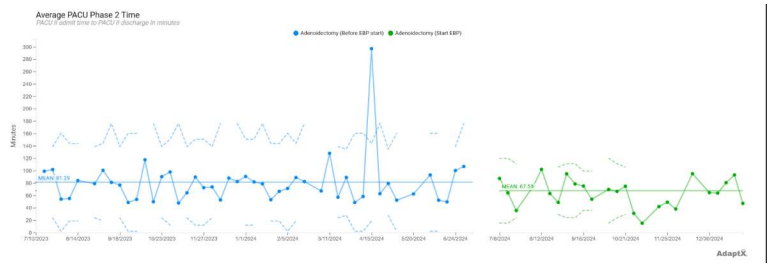
What we are not able to show is how well the children did coming out of the stages of emergence. The results we got on this is subject to the nurse who rated the child based on their experience. What I thought was a good wake up, some crying and settling easily with a bottle or pacifer, someone else may feel that was more of a moderate emergence.

Overall our rate of emergence delirium was about the same to slightly improved, depending on who you asked.

AVERAGE PACU/PHASE I TIME, ADENOIDECTOMY

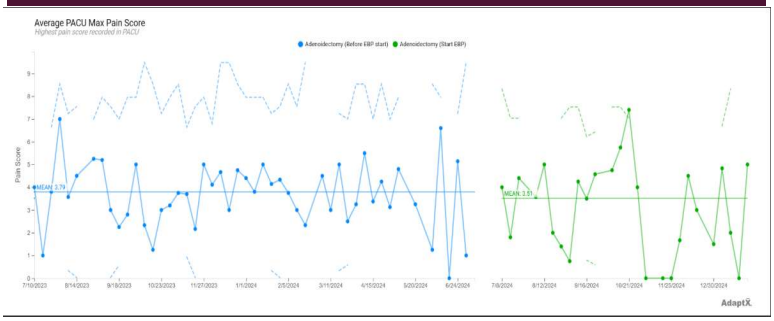


AVERAGE PACU PHASE 2 TIME ADENOIDECTOMY



COMBINED PHASE I AND PHASE 2 TIMES BMT'S

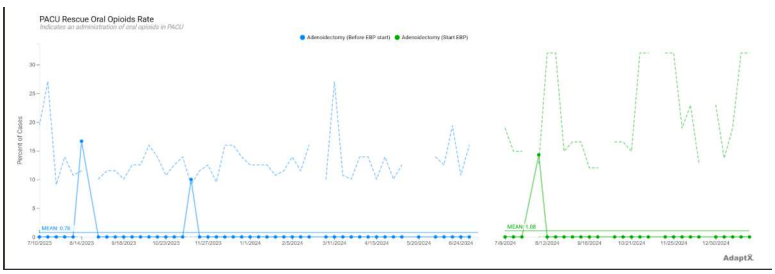
AVERAGE PACU PAIN SCORES FOR ADENOIDECTOMY



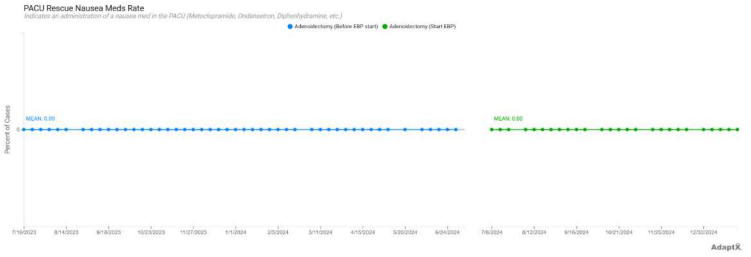
AVERAGE PAIN SCORES FOR BMT'S

IV OPIOIDS RESCUE RATE

ORAL OPIOIDS RESCUE RATES



EBP PROJECT



SUMMARY OF DATA, LOS

In the Adenoidectomies we see our LOS decrease by 18 minutes overall, and for our BMT's 14 minutes overall.

PAIN SCORES

In the Adenoidectomies and BMT's pain scores there is little change, which suggest that the use of Tylenol and Toradol works just as well as Tylenol and Fentanyl. The benefit would be happier families knowing that their child did not get Fentanyl at all.

QUESTIONS AND CONTACT

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- Co-Chair Professional Governance Board
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