TABLE 1

5:00	**Improving Time to Provider Seen in the Emergency Department for Non-English Speaking Patients**
5:10	**Emergency Department Neonatal Resuscitation**
5:20	**Discharge Criteria and Interprofessional Collaboration to Facilitate Timely Discharge**
5:30	**Naltrexone for Alcohol Use Disorder (AUD) from the Emergency Department—QI project**
5:40	**Botulinum Toxin Use During Pregnancy: Maternal and Fetal Outcomes**

Improving Time to Provider Seen in the Emergency Department for Non-English Speaking Patients

Vi Nguyen

Improving Time to Provider Seen in the Emergency Department for Non-English Speaking Patients

Vi Nguyen, MD

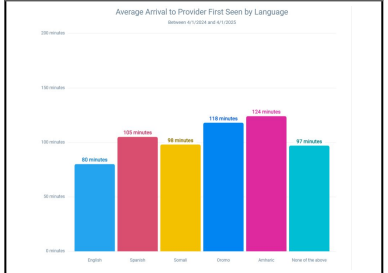
Quality Issue

- Of 102,444 Emergency Department (ED) patient encounters at Hennepin County Medical Center over the last year, 22,634 involved encounters with patients who did not have English as their preferred language
- Studies have shown that Limited English Proficiency (LEP) impacts access to health care. [1,2]
- A barrier to use of interpreter services in the ED included the perceived time and labor associated with getting an professional interpreter. [1,3]
- One study found that LEP visits involving trained on-site interpreters showed no significant difference in mean exam and visit length when compared with English speaking clinic visits. But visit time increased by 6-8 minutes when phone interpreters and nonprofessional interpreters were used. [4]
- Heart attacks, stroke and sepsis, are among the many critical diagnoses that require prompt assessment in the ED

Specific Aim

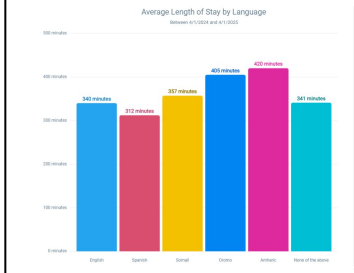
The aim of this project is to decrease the time it takes for providers to see non-English speaking patients in the Emergency Department by 10 minutes over the next 12 months

Figure 1



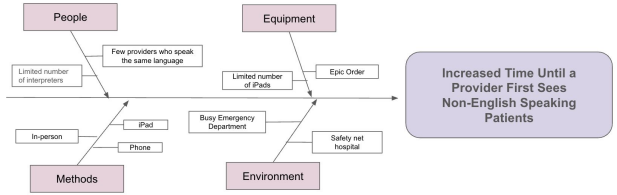
Breakdown of time until a patient is seen by a provider in the Emergency Department by the top 5 languages spoken.

Figure 2



Average length of stay in the Emergency Department by the top 5 languages spoken.

Root Cause Analysis



Tests of Change

- Emergency Department providers at all levels will be trained on how to adequately use interpreter services
- The number of readily available in-house interpreters should increase; specifically the number of interpreters dedicated to just the ED for languages including Somali, Oromo and Amharic
- The number of iPad interpreter machines will also be increased

Measure of Improvement

The time to provider seen for non-English speaking patients in the Emergency Department will be statistically analyzed and compared between the pre- and post- intervention groups.

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Emergency Department Neonatal Resuscitation

Hamdi Sheikh Said

Emergency Department Neonatal Resuscitation

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Background

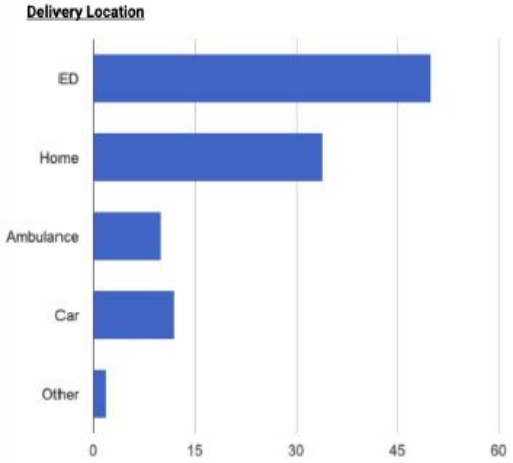
- Neonatal resuscitations are high acuity, low frequency emergencies.
- Neonatal resuscitations program (NRP) biannual certification training is not required for most credentialing bodies and NRP is not directed toward emergency physician
- Literature shows 10% of neonates need help at birth with breathing (stimulation, Oxygen), 6% need positive pressure ventilation (PPV) but approximately 1% need intensive resuscitative (intubation and CPR).

Objectives

- Determine the incidence of prehospital and emergency births, the resuscitative needs , and outcomes at a urban level 1 trauma and pediatric hospital.
- Identify risk factors associated with advanced neonatal resuscitation in the emergency department (ED) setting

Methods

- Retrospective chart review study from 2010-2023 investigating the frequency of emergency medical services deliveries, the need for neonatal resuscitation, and the outcomes of those births.
- Exclusion criteria:
  - >6 hours old or who have been discharged from the hospital previously.
  - Children born with a DNR order or plan in place
  - Children born in OBGYN Department



Counts/frequency: ED (50, 46.3%), Home (34, 31.5%), Ambulance (10, 9.3%), Car (12, 11.1%), Other (2, 1.9%)

Intervention	Yes (%)	No (%)
Positive Pressure Ventilation (PPV)	21 (20%)	86 (80%)
Intubation	14 (13%)	95 (87%)
CPR	14 (13%)	95 (87%)

Results

- 108 births included during the 13 yr study period
- 60% of the patients arrived by EMS
- Most (94%) births occurred vaginally, 6% by resuscitative hysterotomy
- 55% occurred in the ED or ambulance
- 37% of neonates presenting to the ED came from planned home births or birth center deliveries
- Maternal risk factors: substance use (21%), multiparous (57%), lack of prenatal care (37%)
- 20% of the births received advanced neonatal resuscitation
- ED outcomes included 75% admitted to the nursery, 17% to the NICU, and 8% deceased; hospital discharges were 87% to home, 8% to foster care, 2% to long-term care, and 3% deceased.

Discussion

- Compared to NRP literature citing 1% of birth needing advanced resuscitation, in the prehospital and ED setting, 20% of birth required advanced resuscitation.
- Most neonates cared for in the ED have good outcomes, however 8% died, so having support for the ED team in debrief may be valuable.
- It is imperative to prepare and train EMS and ED personnel in neonatal resuscitation for non-traditional settings because 37% of ED neonates came from planned home births or birth centers deliveries.

background

- precise incidence of US ED deliveries of pregnant full-term patients is unknown[1]

results

- 114 births from 2010-2023 ,, 6 excluded for no information.
- Mode of arrival: “60% arrived by EMS and 40% presented to the front door”
- 75% of births had no complications, while the rest had issues like meconium release (15.7%), nuchal cord
- **Delivery Type:** Most births were vaginal (102, 94.4%), with a few by C-section (6, 5.6%).
- **Birth Locations & Care Needs:** 58.9% of vaginal births happened in the ED or ambulance, and 37.3% o ED neonates came from planned out-of-hospital deliveries—highlighting the need for EM and EMS teams to be skilled in neonatal resuscitation.
- **C-Section Details:** Two C-sections were emergency procedures due to fetal distress; the remaining fou were perimortem cases linked to trauma or unexplained cardiac arrest.

https://pubmed.ncbi.nlm.nih.gov/30940371/

https://pmc.ncbi.nlm.nih.gov/articles/PMC8606598/

Discharge Criteria and Interprofessional Collaboration to Facilitate Timely Discharge

Carleigh Rand, Brandon O'Connor, & Banke Adele

Discharge Criteria and Interprofessional Collaboration to Facilitate Timely Discharge

Brandon O'Connor MD, Carleigh Rand MD, Banke Adele MD

Background: A Multidisciplinary team at Children's Minnesota set out to improve the timeliness of patient discharges through standardized discharge criteria as exampled by:

- White CM, Statile AM, White DL, et al. *Using quality improvement to optimise paediatric discharge efficiency* BMJ Quality & Safety 2014;23:428-436.
    - Through standardized discharge criteria, nurse readiness timestamps in the EMR, interdisciplinary process changes, and consult timeliness discharges within 2 hrs of readiness improved from 42% to 80%

Initial AIM (2023): Increase the percentage of patients, admitted to resident teams, who have clear discharge criteria included in their initial admission notes from 48% to 60%.

Result: Through the Implementation of standardized discharge criteria for 11 different admission diagnoses, H&P notes containing discharge criteria increased from 48% to 90% over a 9 month period.

- There was no obvious effect on time to discharge
- Nurse readiness timestamp only used 6% of the time

The Next Phase

New Goal: Increase the frequency that discharge criteria are discussed on rounds between nurses, providers, and patients and families.

Pre-intervention data: collected by medical students using a standardized charts to mark the presence of each party and whether or not discharge criteria had been discussed.

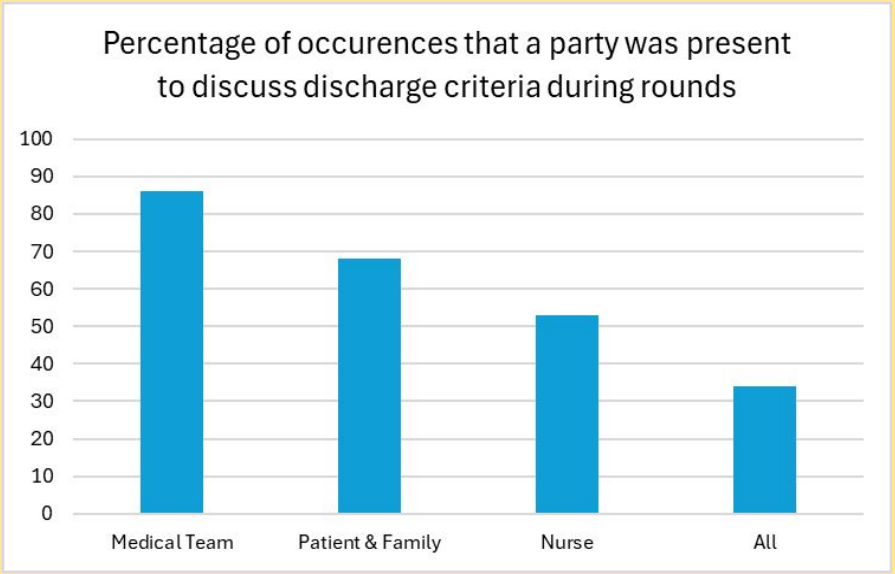


Figure 1: Bar graphs representing a percentage for which a certain party was present for discussion of discharge criteria during rounds. This is representative of pre-intervention data, over 85 different patient interactions. 86% of interactions had discharge criteria discussed. Patients and families heard it 68% of the time, nurses 53%, and all parties were together at one time 34% of the time.

Pre intervention data suggests a need to improve interprofessional communication. Nurse presence is only 52%.

New AIM: Increase the frequency for which nurses are included during discussion of discharge criteria on rounds from 52% to 75% by May 1st 2025.

Targets for change:

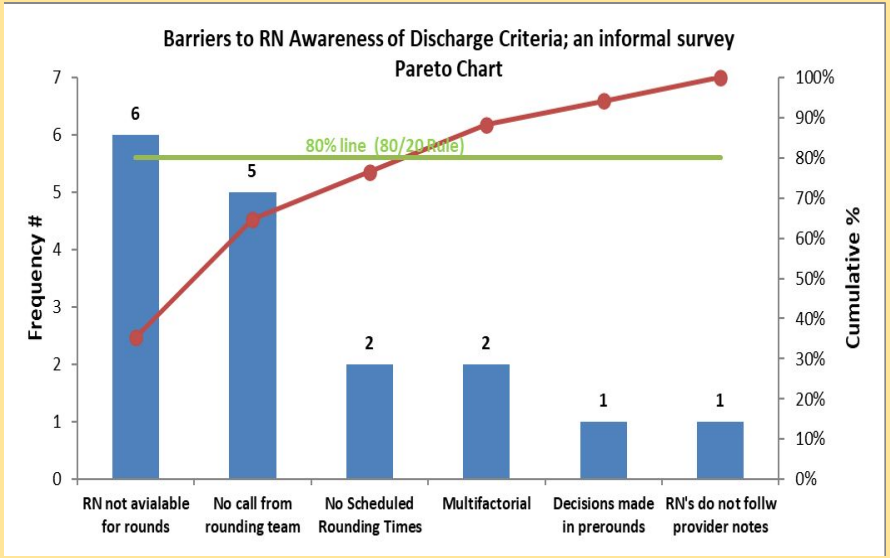
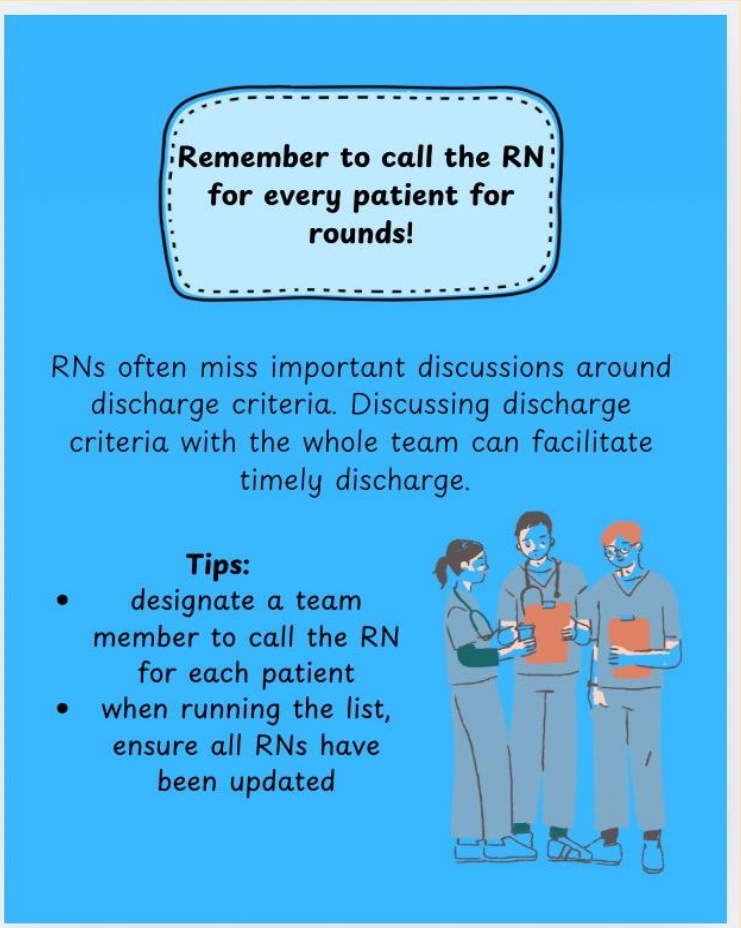


Figure 2: pareto chart showing frequency of barriers to nursing awareness of discharge criteria. 80% line in combination cumulative % line defines availability and absent calls as significant

Intervention



- Based on the Pareto chart, a good first place to start is with interprofessional communication
- Flyers were placed at resident workstations and provided in attending bulletins
- Flyers also added to the resident rotation onboarding email
- At a minimum an RN should be updated after rounds every day for every patient

Results

- Figure 3 had no significant shifts or trends and according to Perla et al 2011 there were no significant runs and all data represented is within the scope of chance.

- Pre intervention data show nurses were present 52% of the time (n=85). Post intervention, nurses were present 65% (n=112), a 25% increase.

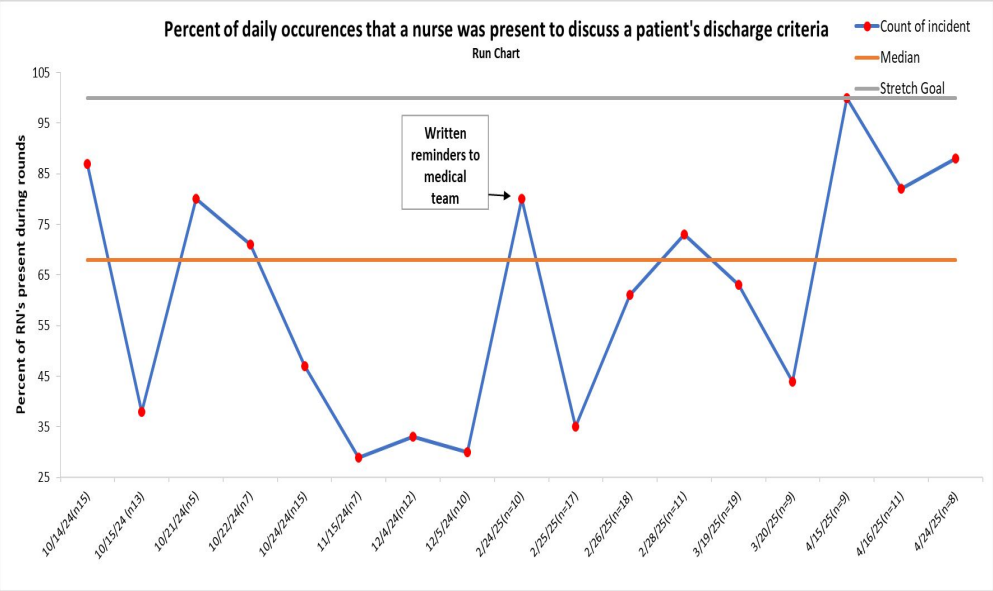


Figure 3: Run chart representing the daily percentage that nurses were present for discussion of discharge criteria. Each point represents a particular days percentage. The intervention began 3 days prior to further data collection. No significant runs, shifts, or trends occurred over 197 patient interactions.

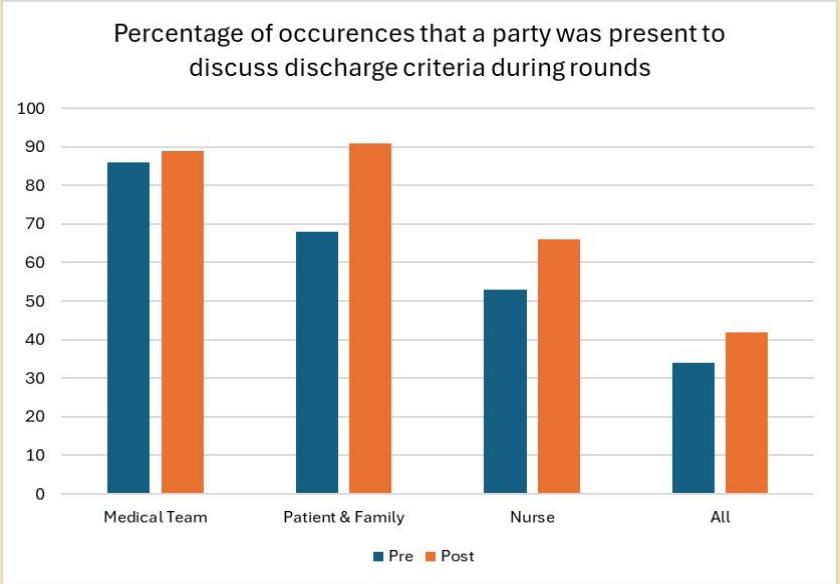


Figure 4 Bar graph representing pre and post intervention data of the percent times a specific party was present for discussion of discharge criteria. The Medical team discussed it now 89% of the time, patients heard it in 91% of occurrences, and nurses were present in 65%

Discussion/conclusion

Discussion:

- No statistically significant change was found after implementing a reminder-based intervention.
- There were increases in all realms of inquiry including discussion of discharge criteria among the rounding team; between the rounding team and the patient and families, and between the rounding team and the nurses.
- In all, while standardized discharge criteria has been implemented there still needs to be widespread interprofessional buy-in to help streamline the process of timely discharges

Barriers

- It is challenging to track how often the rounding team is able to circle back to families or nurses, if they were originally absent on rounds.
- It does not reveal how increasing discussion of discharge criteria affects patient/family satisfaction or admission time.
- We cannot control nurse availability at specific times during rounds.

Future

- Intervention to increase RN awareness of the valuable role they play to patient's discharging
- Monitor/Improve awareness and use of the RN discharge readiness timestamp
- Incorporate discharge criteria into an order that is readily modifiable by the entirety of the interdisciplinary team - requiring that each item be met prior to discharge.

Conclusion

- Rounding teams specifically struggle to communicate a patient's discharge criteria with nurses relative to other parties of a care team.
- Reminder-based intervention provides potential opportunity to increase communication of discharge criteria among providers, nurses, and patients and their families.
- Further research needs to be done to evaluate how increasing communication translates to other quality metrics such as patient satisfaction or admission duration.

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Naltrexone for Alcohol Use Disorder (AUD) from the Emergency Department—QI project

Hamdi Sheikh Said & Sarah Usher

Naltrexone for Alcohol Use Disorder (AUD) from the Emergency Department—QI project

Danielle Hart, MD; Kysa McSky, MD; Hamdi Sheikh Said, MD; Sarah Usher, MD

Hennepin Healthcare

BACKGROUND

- In 2023, 28.1 million U.S. adults reported alcohol use disorder (AUD), 7% globally
- Naltrexone reduces alcohol use and cravings, available in oral or injectable forms
- Despite frequent ED visits for AUD, medication-assisted treatment like naltrexone is rarely used in our current practice

Objectives

- Training session on AUD and naltrexone
- Increase the number of ED patients discharged with naltrexone
- Increase the number of ED patients with AUD who follow up in addiction medicine

Methods

Step 1: Research volunteer prompts provider to discuss **AUD** and offer **naltrexone**

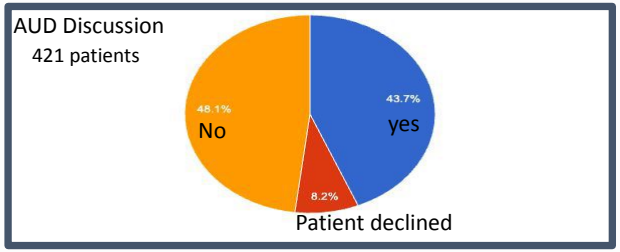
Step 2: Patient completes baseline questionnaires if accepted treatment:

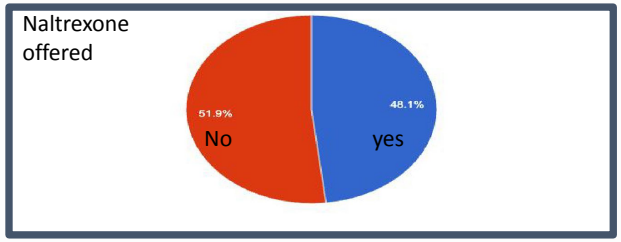
- **AUDIT-C** – alcohol use screening
- **Penn Alcohol Craving scale (PACS)** – measures alcohol cravings

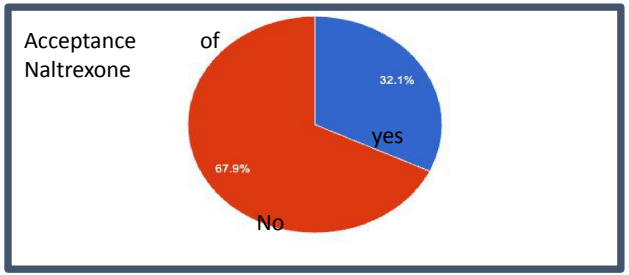
Step 3: 14-Day Follow-Up

- Survey: Is patient taking naltrexone?
- Repeat **AUDIT-C** and **PACS**

Results







DISCUSSION

- There is evidence that naltrexone is an effective medication to assist with etoh cessation[3]
- 32% of patients offered naltrexone accepted
- Educating providers has allowed patients to begin naltrexone therapy

LIMITATIONS/PLANS

- We are not collecting data on co-ingestions or opioid use
- No questions regarding patients' desire for etoh cessation
- Evaluate the difference in # of ED visits for those who accepted and those who did not

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1. World Health Organization. (2024). *Alcohol*. https://www.who.int/news-room/fact-sheets/detail/alcohol
2. National Institute on Alcohol Abuse and Alcoholism. (2024). *Alcohol use disorder (AUD) in the United States: Age groups and demographic characteristics.*
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Erratum in: JAMA. 2024 Oct 2. doi: 10.1001/jama.2024.11331. PMID: 37934220; PMCID: PMC10630900.

Botulinum Toxin Use During Pregnancy: Maternal and Fetal Outcomes

Shannon Zhou

Botulinum Toxin Use During Pregnancy: Maternal and Fetal Outcomes

MEDICAL SCHOOL
UNIVERSITY OF MINNESOTA
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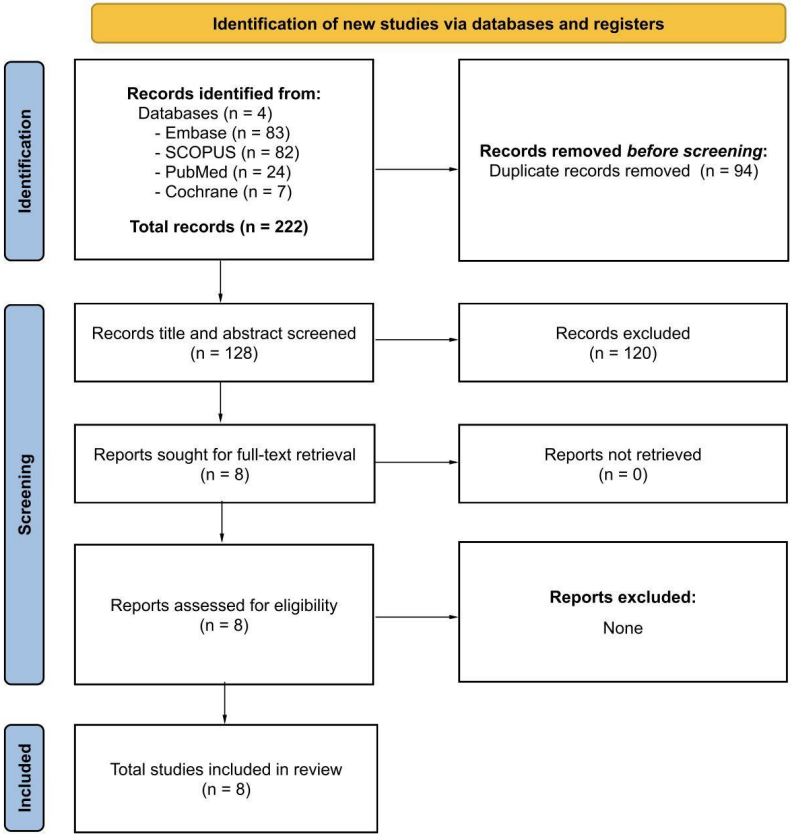
Shannon Zhou, BS[1]

[1]University of Minnesota Medical School

Background

- Botulinum Toxin (BoNT) derives from Clostridium botulinum neurotoxin, blocking acetylcholine at the neuromuscular junction.[1]
- Uses: headache, dystonia, hyperhidrosis, achalasia, aesthetics[2,3]
- Is it safe in pregnancy? Category C drug per FDA, with uncertain safety. Murine studies showed when 500U was administered, there was fetal weight reduction and decreased skeletal ossification.[1]
- Current guidelines: advise against use in pregnancy[1-3]

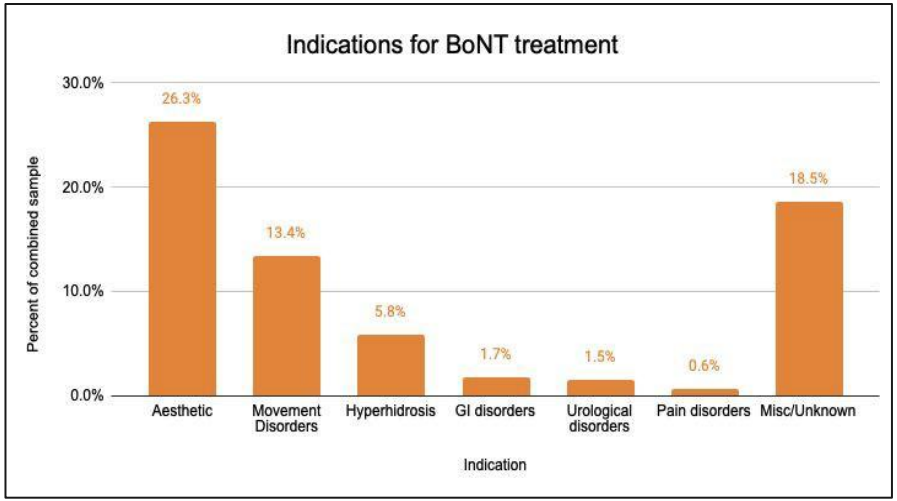
Methods

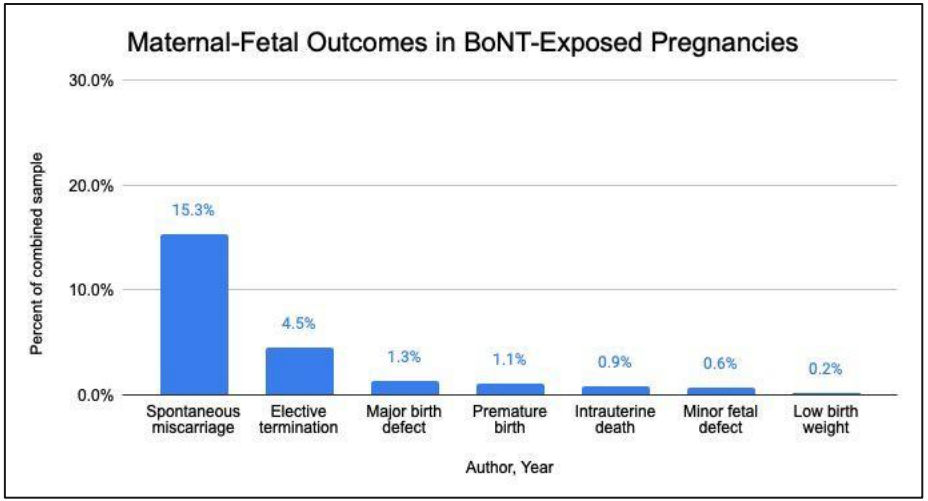


Results

Author, Year	Sample size (n)	Average Maternal Age (years)	Timing of exposure					Dosage (units)			
			Pre-conception	1st tri	2nd tri	3rd tri	Unknown	<50U	50 to <100	≥100	Missing
Brin, 2023	397	-	51	250	12	5	79	78	27	137	155
de Oliveira, 2006	2	35.5	0	2	0	0	0	0	2	0	0
Hooft, 2015	1	23	0	0	1	0	0	0	0	1	0
Morgan, 2006	16	-	0	12	1	1	2	-	-	-	16
Robinson, 2014	1	26	0	0	1	0	0	0	1	0	0
Wataganara, 2009	1	39	0	0	0	1	0	0	1	0	0
Wong, 2020	45	30.9	45	0	0	0	0	-	-	-	45
Yim, 2010	1	17	0	1	0	0	0	1	0	0	0
Total, n (%) or *Average*	464	*28.57*	96 (20.7%)	265 (57.1%)	15 (3.2%)	7 (1.5%)	82 (17.7%)	79 (17.0%)	31 (6.7%)	138 (29.7%)	216 (46.6%)

Results


Indications for BoNT treatment
Percent of combined sample
30.0%
20.0%
10.0%
0.0%
26.3%
13.4%
5.8%
1.7%
1.5%
0.6%
18.5%
Aesthetic
Movement Disorders
Hyperhidrosis
GI disorders
Urological disorders
Pain disorders
Misc/Unknown
Indication


Maternal-Fetal Outcomes in BoNT-Exposed Pregnancies
Percent of combined sample
30.0%
20.0%
10.0%
0.0%
15.3%
4.5%
1.3%
1.1%
0.9%
0.6%
0.2%
Spontaneous miscarriage
Elective termination
Major birth defect
Premature birth
Intrauterine death
Minor fetal defect
Low birth weight
Author, Year

Discussion

- BoNT exposure is not consistently linked to adverse maternal/fetal outcomes.
- Poor study quality with lack of control groups.
- Spontaneous miscarriage rate (15.%) aligned with population baseline (10-20%).
- Most BoNT exposures occurred in the first trimester or preconception period.

Next Steps

- Meta-analytic analyses
- Timing-specific risk evaluation
- Dose-response analysis
- Need for prospective, controlled research to guide recommendations

References

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