Outcomes Associated with Elective Induction of Labor vs. Expectant Management

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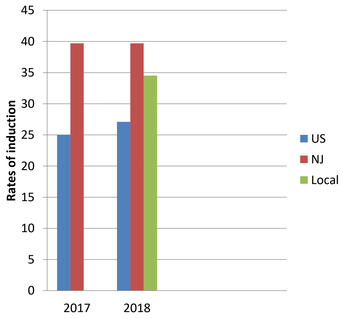
Introduction

- Current recommendations allow for labor to be electively induced at 39 weeks GA
- Rates for induction of labor (IOL) constituted almost one-third of all deliveries in the United States (US) in 2018.
- March-May, 2020 elective IOLs in NJ were temporarily suspending providing an opportunity to evaluate its impact.

Background & Significance

Current trends

- IOLs trending upward



Maternal health outcomes

- Longer duration of time between admission and delivery
- Lengthened time in the labor and delivery unit
- Higher rates of operative delivery
- Risk of post-partum hemorrhage

Financial outcomes

- Higher cost of care for patient & hospital
  - Increased with obesity, low Bishop score on admission, or failed/unsuccessful IOL (delivery via C/S)

Purpose

Evaluate differences in length of labor, length of hospitalization, and resource utilization among women with natural onset of labor or women electively induced by comparing the same time periods in 2019 and 2020, and develop labor admission recommendations

Methodology

Design

- Retrospective chart analysis: March-May, 2019 & March-May, 2020

Setting

- Labor and delivery unit with a level IIII NICU in northern NJ

Inclusion criteria

- Nulliparous
- 39-42 weeks gestational age
- Singleton pregnancy
- Admission for EIOL, MIOL, or EM (dilation 3cm or >)

Exclusion criteria

- Previous C/S
- Scheduled C/S
- Multiples
- Delivery before 39 weeks

Outcomes Measured

- Length of labor
- Length of stay
- Bishop score on admission
- Resources used during labor

Scoring Tool

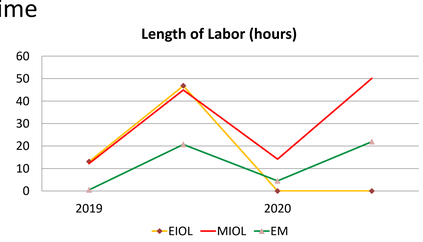
	Factor				
Score	Dilation (cm)	Position of Cervix	Effacement (%)	Station*	Cervical Consistency
0	Closed	Posterior	0–30	–3	Firm
1	1–2	Midposition	40–50	–2	Medium
2	3–4	Anterior	60–70	–1, 0	Soft
3	5–6	—	80	+1, +2	—

*Station reflects a –3 to +3 scale.
Modified from Bishop EH. Pelvic scoring for elective induction. Obstet Gynecol 1964;24:267.

Results

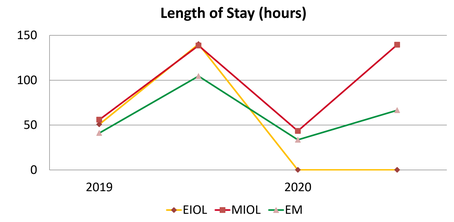
Length of labor

- Expectant management was associated with the shortest mean length of labor – 50% less time



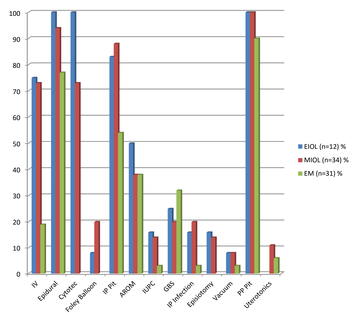
Length of stay

- Expectant management was associated with the shortest mean length of hospital stay – 25% less time



Other findings

- Expectant management had lowest resource utilization overall
  - Higher rate AROM & uterotonics
- Expectant management had higher mean Bishop score
- 41 weeks in MIOL highest C/S rate in 2020



Limitations

- Inclusion/exclusion criteria modified to increase statistical analysis
- Second aim not met
  - Variability in admission diagnosis
  - Provider preferences
  - Inability to make direct changes
- Shortened timeframe of project

Implications

Clinical practice/Health Policy

- Reconsider EIOLs at 39 weeks “best practice”
- Consider delaying admission until labor process has occurred
- Utilizing patient safety checklist for requested EIOLs

Resource Associated Costs

- Evaluation of appropriate use of resources
  - Identify areas to reduce costs

Education

- Patient education on risks & benefits of IOL
- Pamphlet or information packet

Further Research

- Evaluation of 12-month cycle to identify new or reoccurring patterns

References

- American College of Obstetricians and Gynecologists. (2009). ACOG practice bulletin number 107: Induction of labor. *Obstetrics & Gynecology*, *114*(2), 386-389
- Association of Women’s Health, Obstetric, and Neonatal Nurses. (2019). Elective induction of labor. *Journal of Obstetric, Gynecological, & Neonatal Nursing, 48*(2), 227-229. https://doi.org/10.1016/j.jogn.2019.01.004
- Einerson, B. D. (2019). The cost of elective induction of labor in the MFMU ARRIVE Trial [190P*]. Obstetrics & Gynecology, 133*, 4. https://doi.org/10.1097/01.AOG.0000559079.76443.7c
- New Jersey Department of Health. (2019). Maternal health hospital report card 2018-2019. https://nj.gov/health/maternal
- Souter, V., Painter, I., Sitcov, K., & Caughey, A. B. (2019). Maternal and newborn outcomes with elective induction of labor at term. *American Journal of Obstetrics & Gynecology, 220*(3), 273E1-273E11. https://doi.org/10.1016/j.ajog.2019.01.223

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