# DEPARTMENT of Obstetrics and Gynecology
# Accurate Reporting of Obstetrical History at Initial Prenatal Visit: Retrospective Case Study

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## INTRODUCTION

The potential for recall bias at initial intake visit of multiparous obstetrical patients is a common concern. Accuracy of initial obstetrical history reporting can drastically alter the course of pregnancy management if information documented during pregnancy is inaccurate. A large portion of obstetrical management can depend heavily on the ability of patients to self-report accurate obstetrical histories. Inaccurate history can lead to mismanagement of care and potential for costly errors. The discrepancy between self-reporting and documented electronic medical records could be partially due to health literacy of the patient population. Studies examining the validity of self-reported data have shown that age, sex, race and education have no major effect on the accuracy of self-reported medical history.

## OBJECTIVES

Our objective was to assess the overall accuracy of obstetrical history reporting at intake visit for multiparous obstetrical patients. The information obtained from this study will be to create measures of improving our patient's obstetrical history reporting. The data from this study will be used as follow up in a prospective case study to create measurements in our intake history to assure accurate history reporting at initial visit. The follow up prospective study will compare this rate with history reported at postpartum interview after a thorough obstetrical history review has been performed to see if rates of recall bias are improved.
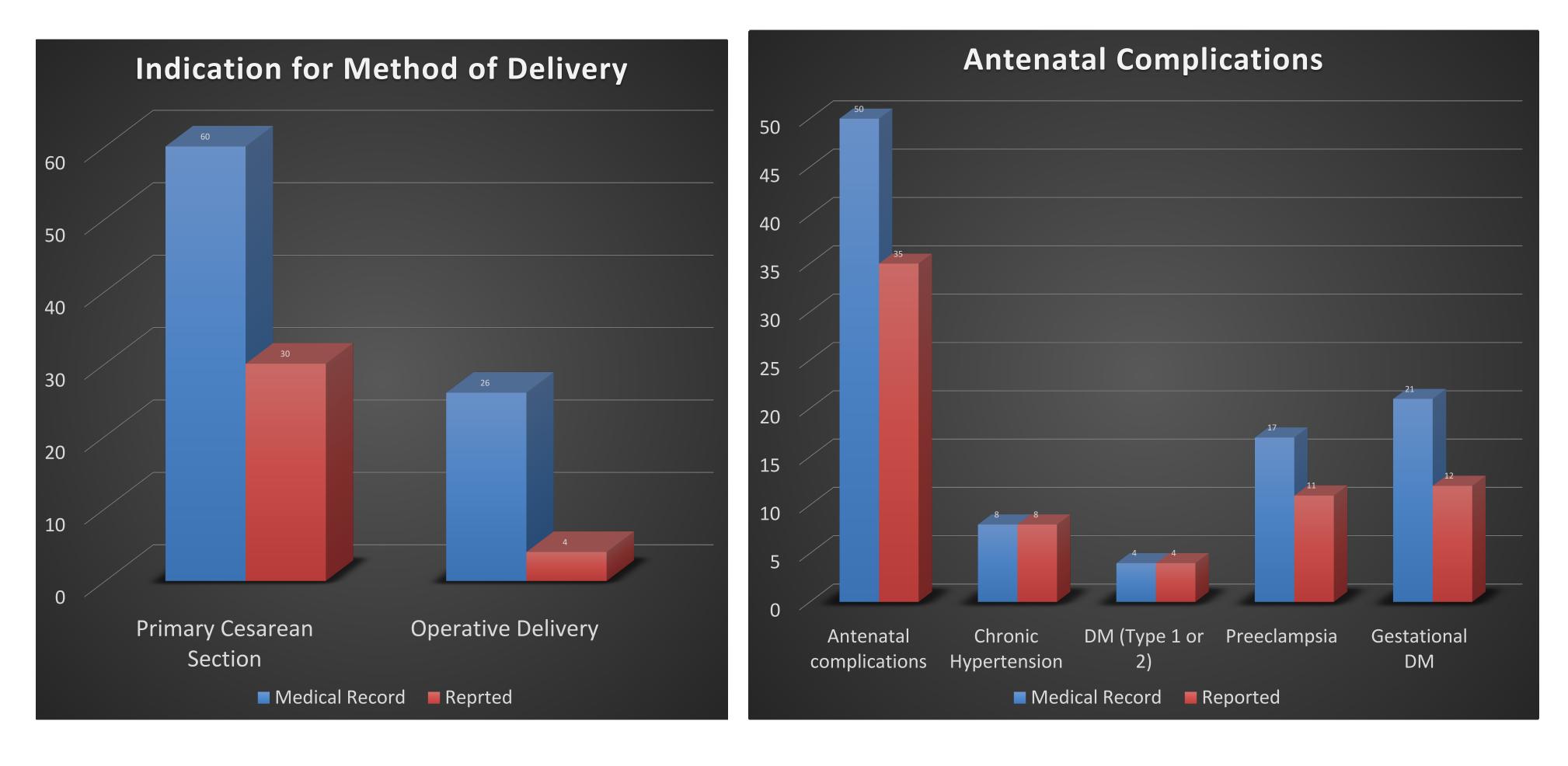
## METHODS

Delivery record data was collected from January 2016-Febuary 2018 (time frame of our current EMR use within the department clinic). List of delivery records using our attending physicians name for the delivering physicians. This list was generated from the HIT department at both of our delivering institutions. A separate list of initial prenatal visits within our clinic was obtained using the previously established time period. Research collection included the following patient reported obstetrical history:
• Gravida and Para history, Year of deliveries, Gestational Age of deliveries
• Weight of delivery
• Type of delivery- C/S, SVD or operative delivery - If C/S or Operative what was the indication
• Delivery Complications (perineal/vaginal lacerations, post-partum hemorrhage, shoulder dystocia's)
• Antepartum complications (placental abnormalities, hypertension, history of preeclampsia, diabetes mellitus type 1 or 2 and gestational diabetes)

**Screening Records for Eligibility**
Delivery records retrieved from the initial electronic medical record searches were screened by all authors. To qualify for inclusion, the delivering patient must have filled out an initial intake obstetrical history report or if transfer of care would need to have delivery records at our facilities. Patients were excluded in the event where medical records with deliveries outside of our network were not available or if initial intake history was not available. For this study, we did not include early 1st trimester losses (gestational age under 9 weeks). Final list of medical records included in analysis were double verified by co-authors. In order to achieve an appropriate sample of delivery type, records were then separated into 4 separate groups by type of delivery (primary cesarean section, repeat cesarean section, vaginal delivery and operative delivery). A random sample of delivery records were blinded and electronically selected from each group. Finally, EMR delivery record data was compared with the obstetrical history accessible at our department clinic for comparison of accuracy in data reporting.

## RESULTS

Between January 2016-Febuary 2018 there were 917 deliver recorded on our delivering institutions EMR. Of these 917 delivery records, we initially excluded 45 due to duplication of delivery record. 872 delivery records were retained for initial screening and included in evaluation. After initial screening to determine if delivery records qualified for inclusion, 20 studies were excluded for incomplete delivery information. Of the 852 delivery records identified, 264 cesarean sections, 535 SVD's, and 53 operative deliveries were performed. After separation of deliver records and random selection a total of 426 delivery records remained. Of those 426 records, 105 records were excluded due to incomplete or missing patient initial screening information. 321 delivery records were retained for final analysis. Of these remaining records, 318 (99%) recorded accurate type of delivery, 301 (94%) accurately recorded year of delivery, 292 (91%) accurately recorded Gravida and Para history, 208 (65%) reported accurate gestational age at delivery, and 186 (58%) accurately recorded delivery weight.

Of 318 patients accurately reporting type of delivery, sixty patients were recorded to have primary cesarean sections. Of those 60, 30 (60%) of patients reported accurate indication for primary cesarean section. Twenty six patients were recorded to have operative vaginal deliveries. Of those 26, 4 (15%) of patients reported indication for operative delivery. 31 delivery complications were documented in EMR. Of those 31, 12 (39%) complications were reported. Within this subset 19 vaginal/perineal lacerations were documented with only 2 (1%) reported, 15 postpartum hemorrhages were documented with 6 (40%) reported and 7 shoulder dystocia's were documented with 4 (57%) reported.

Of the 321 delivery records 50 antepartum complications documented in EMR. Of the 50 documented antepartum complications, 35 (70%) of those complications were reported. Of this subset, 8 records indicated chronic hypertension with all reporting this diagnosis, 4 records indicated diabetes mellitus, type 1 or 2, with all reporting diagnosis, 17 records indicated a history of preeclampsia with 11 (65%) accurately reporting this diagnosis, and 21 records indicated history of gestational diabetes with only 12 (35%) reporting the diagnosis. Of the 321 delivery records, 22 preterm deliveries were documented with 14 (63%) reporting history of preterm delivery with only 5 (23%) records reporting known cause of preterm delivery. Of the remaining 299 delivery records documenting term delivery, 15 (5%) inaccurately reported preterm delivery.

## CONCLUSION

Overall our patient population was accurate at reporting general obstetrical and chronic conditions pertinent to obstetric care. Results show patients were most inaccurate in reporting indications for methods of delivery as well as delivery complications. The information obtained from this study will be to create measures of improving our patient's obstetrical history reporting.



Indication for Method of Delivery



Antenatal Complications



Accuracy Rates of Final Analysis



Total Delivery Records Reviewed 01.2016 to 02.2018