

Introduction

- Up to 12% pregnant patients have an emergency department (ED) visit within 6 weeks of delivery.
- Preventing hospital readmissions is important for postpartum quality improvement.
- Association between ‘treat & discharge’ ED visits and postpartum readmission is unknown.

Methods

Data source: Linked hospital discharge data, vital statistics birth certificate data, and ED visit data in California.

Study Cohort: Women who underwent delivery hospitalization in California between January 1, 2008 and December 31, 2012.

Outcomes: Hospital readmission ≥ 1 day after an ED visit.

Methods: We examined the incidence, most frequent diagnoses codes, and risk factors for readmission using a mixed-effects logistic regression model.

Results

Table: Strongest Risk Factors for Postpartum Readmission after an ‘Treat and Discharge’ ED visit.	
Characteristic	Adjusted Odds Ratio (95% CI)
Prepregnancy BMI	
Underweight	0.7 (0.6 – 0.9)
Normal	Ref
Overweight	1.2 (1.1 – 1.3)
Obese 1	1.5 (1.4 – 1.6)
Obese 2	1.6 (1.5 – 1.8)
Obese 3	1.9 (1.7 – 2.0)
Coagulation Disorder	1.6 (1.1 – 2.4)
Severe Maternal Morbidity	1.5 (1.3 – 1.7)
Gestational Age (weeks)	
≥ 37 weeks	Ref
34 – 36	1.3 (1.2 – 1.4)
<34	1.3 (1.2 – 1.5)
Nulliparity	1.2 (1.1 – 1.3)

BMI = Body mass index; CI= Confidence Interval; OR = Odds Ratio.
Other variables in model included: race/ethnicity, insurance, education, DM, hypertensive disorder, infection, mental health conditions, thyroid disorder, PPH, perineal trauma, delivery mode, prolonged length of stay.

Results

- 160, 980 patients had a postpartum ED visit.
- 7,522 were readmitted (4.7%).
- Median time-period between the ED visit and readmission = 8 [IQR: 23] days.
- Most frequent primary diagnoses for the ED visit were delivery-related complications (24.2%), ill-defined (19%), and gastrointestinal (18.7%).
- Most frequent primary diagnoses for readmission were gastrointestinal (33.4%), delivery-related complications (26%), and infections (8.7%).
- Strongest risk factors for readmission were prepregnancy obesity class 3; coagulation disorder, and severe maternal morbidity (Table).

Conclusion

- 5% patients with ‘treat and discharge’ postpartum ED visits undergo postpartum readmission.
- More recent data needed to assess whether differences in readmission rates have changed over time.
- Studies needed to assess how EDs manage postpartum complications and to develop quality improvement strategies in the ED.