

# Emergency Department Visits for Early Pregnancy Complications: A Statewide Registry-Based Study

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## INTRODUCTION

- ED visits during pregnancy are common
- U.S. legal changes in June 2022 reduced access to family planning services, such as abortion
- EDs in states that maintain abortion access, such as Michigan, may experience an increase in out-of-state patients seeking care for early pregnancy complications (EPC)
- **Hypothesis:** Michigan ED visits for EPC will increase after June 2022 due to increased visits by non-MI residents

## METHODS

- ED visits for female patients with any EPC-related ICD-10 code from 7-2021 to 6-2023 were identified at continuously enrolled sites in the Michigan Emergency Department Improvement Collaborative (MEDIC) database, a statewide multi-ED Collaborative Quality Initiative
- **Primary outcome:** rate of EPC-related ED visits in year before & after July 2022, stratified by state residency status (determined by ZIP code)
- Sociodemographic risk factors for ED revisits & hospitalization are described using OR & 95% CI

## RESULTS

**Total visits:** 6,120 at 26 EDs (5,338 patients)

**ED revisits:** 11.7%

**Hospitalization:** 28.4%

**Table 1.** Rate of EPC-related ED visits.

	July 2021 - June 2022	July 2022 - June 2023	95% CI of the difference
Visit rates (per 100,000)			
<i>All visits</i>	161	176	+0.6 to +2.3
<i>Non-MI residents</i>	2.05	2.84	-0.02 to +0.18

**Table 2.** Sociodemographic risk factors for ED revisits & hospitalization among all patients with EPC-related ED visit from July 2021 – June 2023.

Variable	ED revisits		Hospitalization	
	OR	(95% CI)	OR	(95% CI)
Insurance payer				
<i>Private</i>	Ref		-	-
<i>Medicaid</i>	<b>1.17</b>	(1.00 - 1.38)	-	-
Race/ethnicity				
<i>White</i>	Ref		Ref	
<i>Black</i>	<b>1.31</b>	(1.09 - 1.57)	<b>1.14</b>	(1.00 - 1.30)
Age				
<i>18-29</i>	-	-	Ref	
<i>30-39</i>	-	-	<b>1.28</b>	(1.13 - 1.44)

**Table 3.** Ten most common EPC-related ICD-10 diagnosis codes among patient cohort.

Diagnosis code	Diagnosis description	Cohort cases
O03	Spontaneous abortion	4,448
O039	Complete or unspecified spontaneous abortion without complication	2,906
O00	Ectopic pregnancy	1,523
O034	Incomplete spontaneous abortion without complication	1,383
O009	Ectopic pregnancy, unspecified	779
O02	Other abnormal products of conception	548
O001	Tubal pregnancy	477
O021	Missed abortion	404
O002	Ovarian pregnancy	172
O020	Blighted ovum & nonhydatidiform mole	83

## CONCLUSION

- ED visit rates for EPC among non-MI residents did not differ in the year after national changes to abortion policy
- Publicly insured & Black patients were more likely to have repeat ED visits
- **Limitations:** overall small number of visits for EPC limits ability to detect a difference, short period of time since national policy change
- Future studies should explore EPC-related ED visits at national level, particularly in states that maintain abortion access

## REFERENCES



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