IMPACT OF OVERTURNING ROE VS. WADE ON OBSTETRIC EMERGENCIES IN THE PREHOSPITAL SETTING

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INTRODUCTION

Prior studies have suggested the overturning of Roe vs Wade (oRvW) ruling would lead to disproportionate obstetric emergencies (OE) amongst minority, younger, and impoverished women.[1-2]

OBJECTIVE

The purpose of this study was to describe OE incidents, associated factors, and compare incidents with differing state abortion access after RvW was overturned.

METHODS

- We included EMS incidents from ImageTrend's Collaborate dataset with 9-1-1 response among 12-40 year old females during the 11-month time span before oRvW (07/24/2021-06/23/2022) and after oRvW (06/24/2022 – 05/24/2023).
- OE incident was defined by provider impression or patient symptom (ICD-10 codes O, P, Z32-Z39, and Z3A).
- States were grouped by restrictions encompassing most of the year 2022 after oRvW.
- Patient and encounter characteristics before and after oRvW were compared using chi-square testing.
- Multivariable logistic regression (aOR, 95%CI) was used to explore the relationship between OE and oRvW, adjusted for age, race, poverty, before/after oRvW, state restrictions, and significant interaction terms. Complete case analysis was used to manage missingness.

Access to Abortion Services by State, 2022

NO ACCESS		SOME ACCESS	OPEN ACCESS	
Alabama	North Dakota	Arizona	Alaska	Michigan
Arkansas	Oklahoma	Florida	California	Montana
Idaho	South Dakota	Georgia	Colorado	New Mexico
Kentucky	Tennessee	Iowa	Connecticut	New Hampshire
Louisiana	Texas	Nebraska	Delaware	New Jersey
Mississippi	West Virginia	North Carolina	Hawaii	Rhode Island
Missouri	Wisconsin	Ohio	Illinois	Vermont
		South Carolina	Indiana	Virginia
		Utah	Kansas	Washington
		Wyoming	Maine	
			Maryland	
			Massachusetts	
			Minnesota	

Fig. 1
NO ACCESS – Total or near total ban
SOME ACCESS – Access to abortion is limited to certain methods and/or providers or limited to certain early gestational ages (<18 weeks)
OPEN ACCESS – Abortions allowed through pregnancy or up until fetus viability

Incident Descriptives for Patients with Obstetric Emergencies in the Prehospital Setting Before & After Roe Vs Wade ruling was Overturned

Variables	N Incidents	Before RvW Overturned[1]	After RvW Overturned[1]
N All Obstetric Emergencies	64,086 (4.5%)	32,735 (4.4%)	31,351 (4.6%)
Top 3 Dispatch Reasons			
Pregnancy/Childbirth/Miscarriage	52,181(81.5%)	26,547 (81.1)	26,634 (81.9%)*
Sick Person	2,171 (3.3%)	1,116 (3.3%)	1,055 (3.3%)
Abdominal	2,061 (3.2%)	1,032 (3.2%)	1,029 (3.3%)
Age			
Median ± IQR	26 ± (21,31)	28 ± (23,33)	27 ± (22,32)
12-20 years	10,375 (16.2%)	5,302 (16.9%)	5,073 (16.2%)
21-30 years	34,147 (53.3%)	17,587 (53.7%)	16,560 (52.8%)*
31-40 years	19,564 (30.5%)	9,846 (30.1%)	9,718 (31.0%)*
Race			
White	16,046 (30.8%)	8,778 (32.3%)	7,268 (29.2%)*
Black/African American	22,639 (43.4%)	11,656 (42.8%)	10,983 (44.1%)
Other/Multiple Races[a]	13,428 (25.8%)	6,788 (24.9%)	6,640 (26.7%)
Missing	11,973	5,513	6,460
Acuity[b]			
Lower Acuity	35,717(68.7%)	17,702 (67.2%)	18,015 (70.1%)*
Emergent	14,507 (27.9%)	7,646 (29.0%)	6,861 (26.7%)*
Critical	1,778 (3.4%)	966 (3.7%)	812 (3.2%)
Dead	22 (<0.1%)	13 (0.1%)	9 (0.4%)
Missing	12,062	6,408	5,654
Abortion Access at State Level			
No Access	25,433 (39.7%)	13,057 (39.9%)	12,376 (39.5%)
Some Access	16,272 (25.4%)	9,091 (27.8%)	7,181 (22.9%)*
Open Access	22,374 (34.9%)	10,583 (32.3%)	11,791 (37.6%)*
Level of Poverty within County[c]			
Low Poverty (≤ 20%)	37,357 (60.2%)	19,437 (61.4%)	17,920 (59.0%)*
High Poverty (>20%)	24,666 (39.8%)	12,200 (38.6%)	12,466 (41.0%)*
Missing	2,063	1,098	965

[a] Other Races included American Indian or Alaska Native, Asian, Hispanic or Latino, and Native Hawaiian or Other Pacific Islander
[b] Acuity used Initial patient acuity and used final patient acuity, if initial acuity was missing
[c] Percentage of County Population utilizing Medicaid (https://www.ahrq.gov/sdoh/data-analytics/sdoh-data.html)

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RESULTS

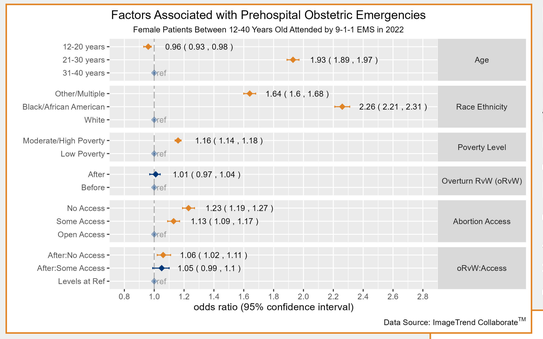

Fig. 2
Multivariate Logistic Regression Model
Main effects are unchanged from interaction effects for levels containing "Before oRvw" or "Open Access". At levels involving "After oRvW" and "Some Access" or "No Access" main effects are subsumed in the interaction effects.

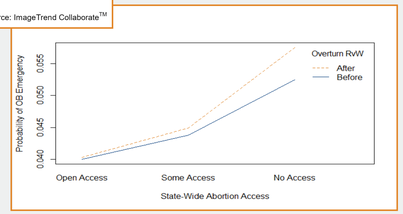

Fig. 3
Interaction Plot for oRvW and State-Wide Abortion Access

LIMITATIONS

Data is extracted as a convenience sample of OE and non-OE patients in the United States.

Missing data were excluded, possibly biasing results.

CONCLUSION

oRvW and the corresponding access to abortion was associated with an increase in OE. This increase after oRvW for low acuity and high poverty counties warrant further investigation and attention to reduce the underlying need for EMS for potentially preventable OE.

References
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2. Compton S, Greer S L. What overturning Roe v. Wade means for the United States BMJ 2022; 377 :o1255 doi:10.1136/bmj.o1255
3. Agency for Healthcare Research and Quality. (2020). https://www.ahrq.gov/sdoh/data-analytics/sdoh-data.html

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