

Improving Maternal Health Equity by Addressing Severe Maternal Morbidity (SMM) Among Vulnerable Women in South Carolina

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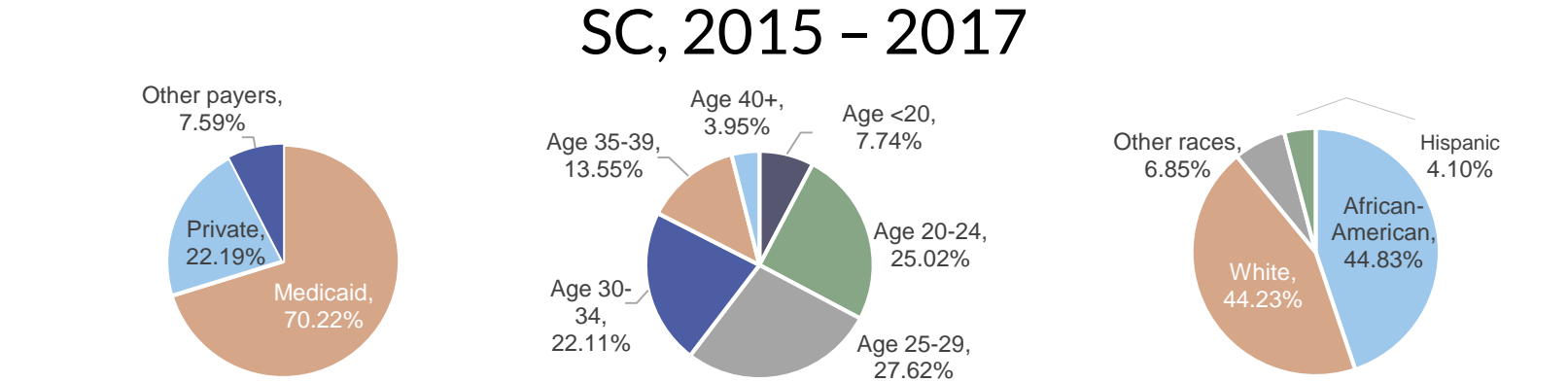
INTRODUCTION

- SMM refers to life-threatening outcomes of labor and delivery (ACOG, 2016).
- The SMM rate in the US has significantly increased, raising concerns about its consequences for women's health and cost for families (ProPublica, 2017).
- For every maternal death, 70 mothers nearly die (CDC, 2019).

DATA SOURCE AND METHODS

- UB-04 all-payer billing data from 2015-2017 were used to calculate delivery-related SMM from 21 SMM conditions.
- SMM demographics were summarized and compared using multiple logistic regression.
- SMM indicators, cost, and utilization patterns were investigated.

SMM distribution by payer, age group, and race/ethnicity, SC, 2015 - 2017



RESULTS

- SMM rates were highest at Perinatal Level II facilities.
- Most counties with high SMM rates were in the Midlands.
- Women who were Medicaid beneficiaries, ages 35 and above, and African-American were at higher risk ($p < 0.05$).
- A majority of women with SMM were Medicaid beneficiaries and ages 20-34 years old.
- SMM mothers also have other high-risk maternal indicators.
- Hospital charge and stay were double for deliveries with SMM.

Acknowledgements

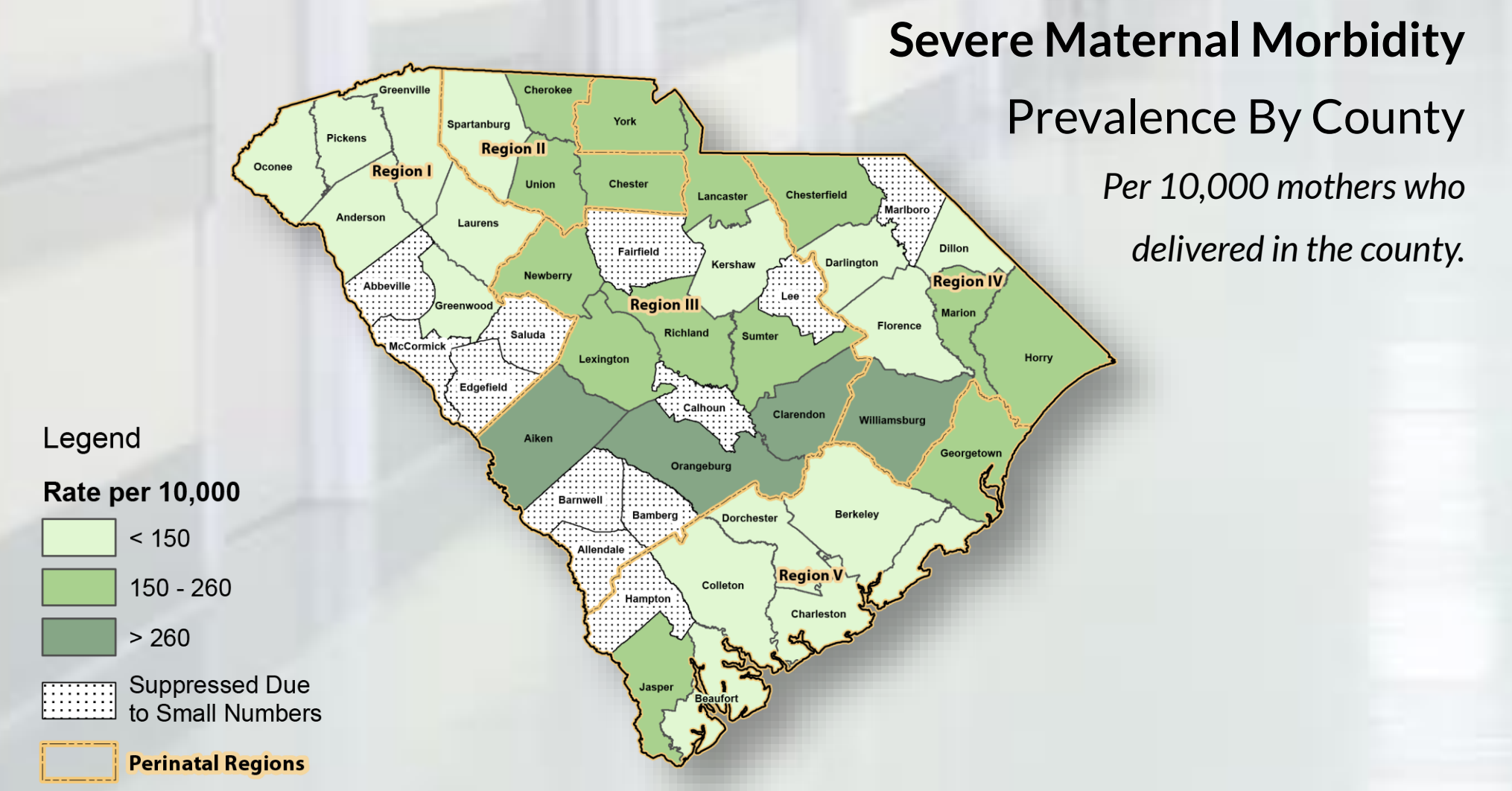
- The SC Department of Health and Human Services (DHHS) whose support has been instrumental in the development and sustainability of all South Carolina Birth Outcomes (SCBOI) initiatives.
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Severe Maternal Morbidity is a maternal health equity issue predominantly affecting vulnerable populations and driving health care costs.

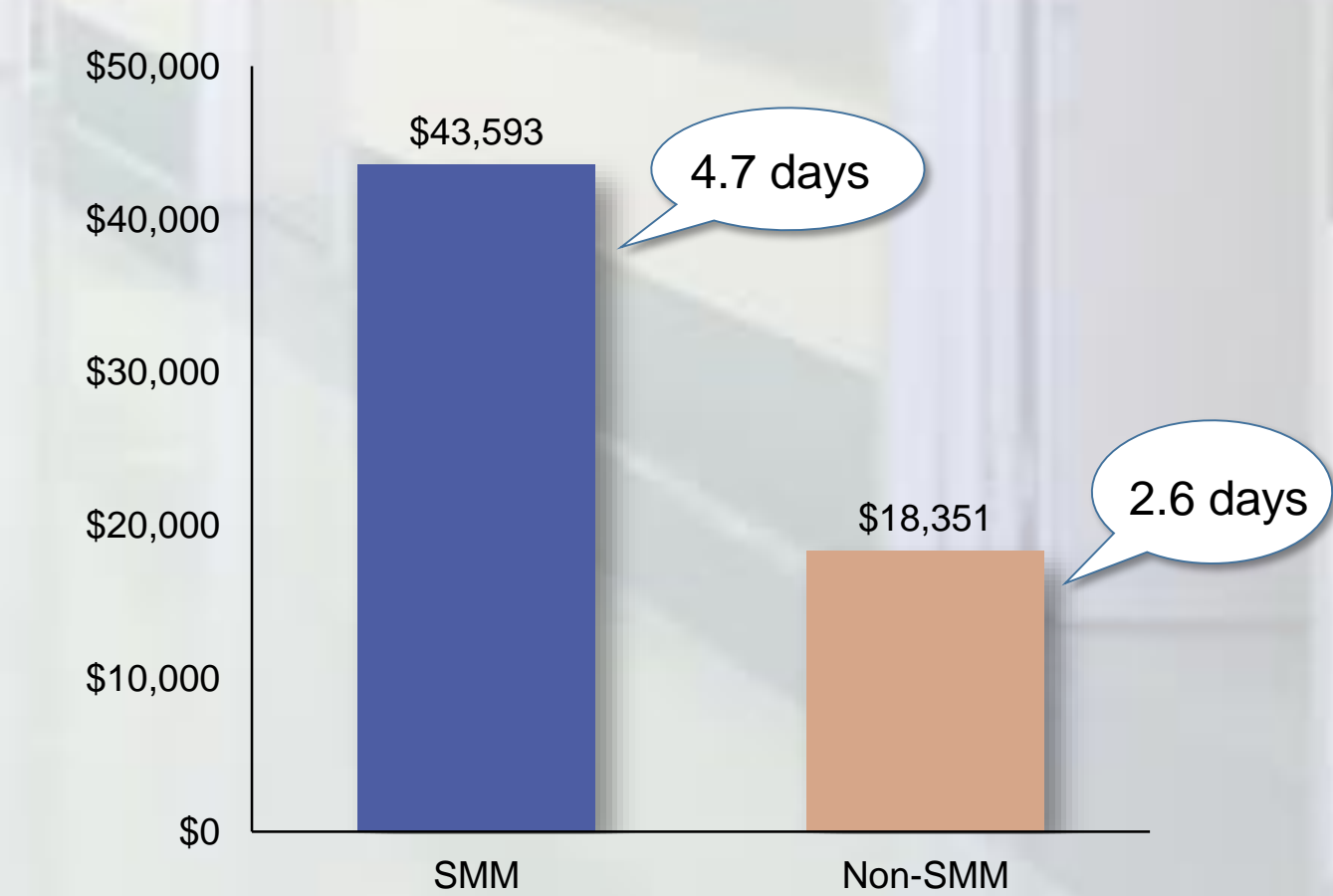


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Average hospitalization charge and stay per delivery by SMM, SC, 2015 - 2017



DISCUSSION

Strategies to reduce SMM in South Carolina include:

- ❖ Implement hospital maternal safety bundles.
- ❖ Reduce medically unnecessary cesareans.
- ❖ Coordinate emergency and obstetric services.
- ❖ Expand whole-patient prenatal and postpartum care.

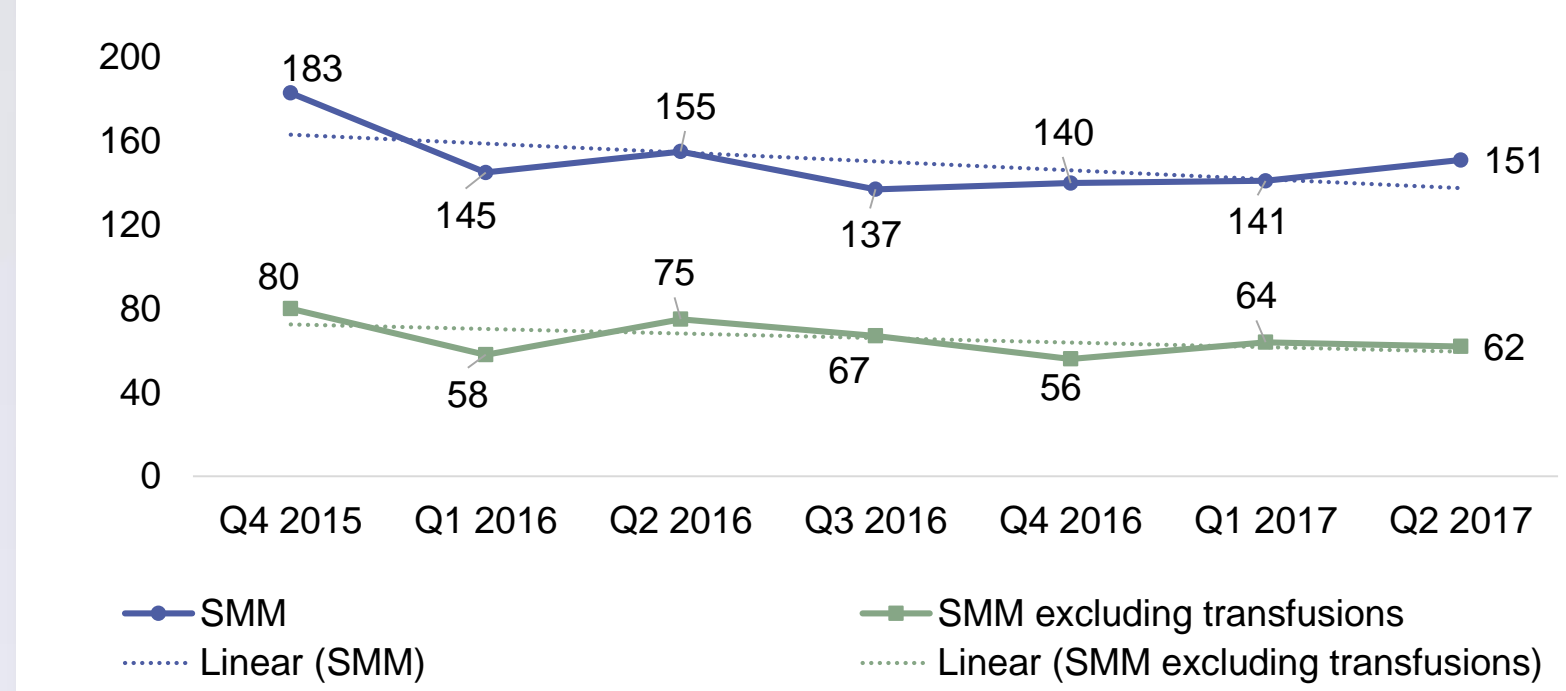
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Supporting SMM Visualizations, SC, 2015-2017

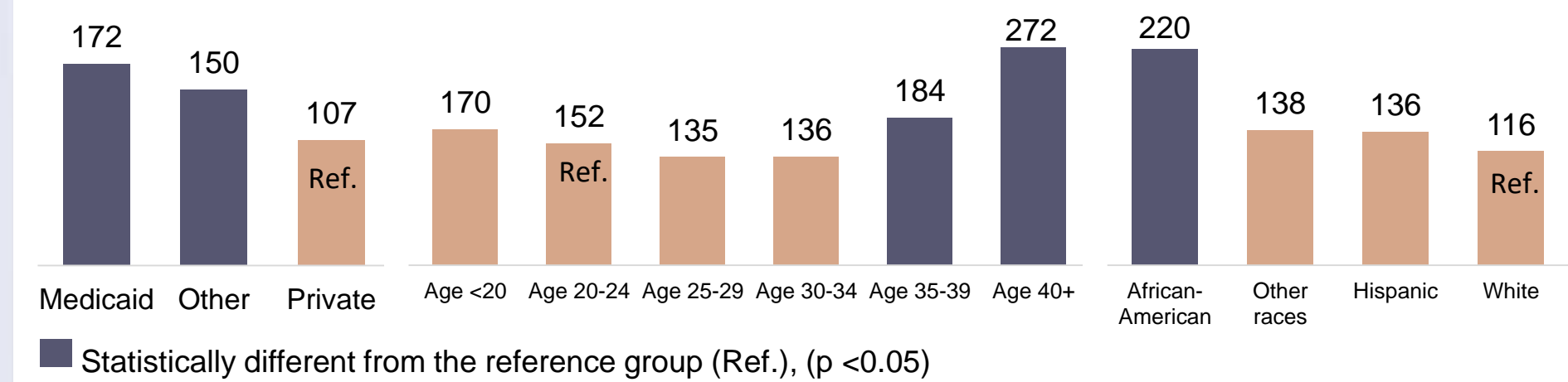
❖ SMM rates per 10,000 deliveries by quarter



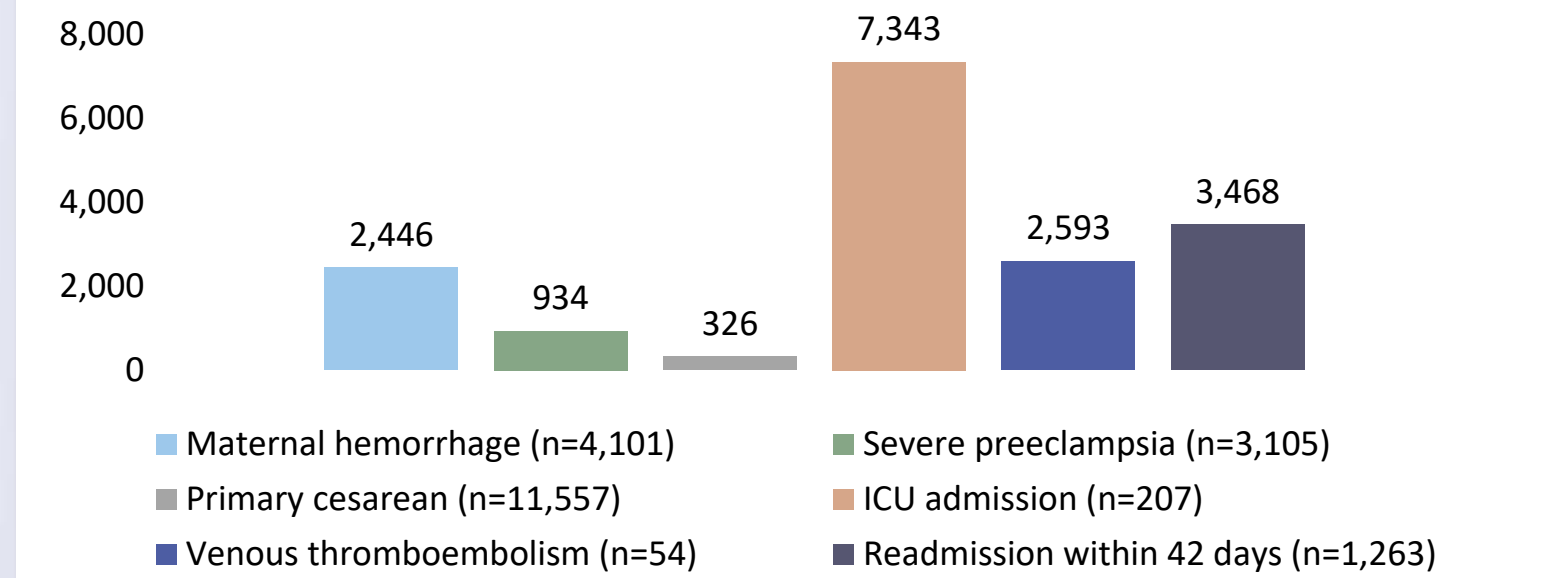
❖ SMM cases and rates by conditions

SMM condition	# case	SC rate per 10,000 deliveries	National rates in 2014 ¹
All SMM conditions	1,343	150	144
SMM excluding blood transfusion	591	66	35
Blood transfusion	854	96	122.3
Hysterectomy	118	13	10.7
Disseminated intravascular coagulation	114	13	7.2
Eclampsia	97	11	2.0
Acute renal failure	93	10	5.2
Adult respiratory distress syndrome	90	10	6.1
Acute heart failure/Pulmonary edema	73	8	2.4
Sepsis	55	6	4.2
Shock	45	5	3.0
Ventilation	44	5	7.9
Puerperal cerebrovascular disorder	23	3	0.9
Air and thrombotic embolism	22	2	0.9
Sickle cell crisis	13	1	0.5

❖ SMM rates per 10,000 deliveries by payer, age group, and race/ethnicity



❖ SMM rates per 10,000 deliveries by high-risk indicator



❖ SMM distribution by high-risk indicator

