

Medicaid infant claims, costs and regional characteristics for women receiving maternity care coordination in North Carolina

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Introduction and Background

- Health Care Utilization
 - Disparities in diagnoses
 - Disparity in utilization of services without determining all possible factors that contribute to this disparity
 - Role of regional characteristics and location of services on receipt of care.
- Disparities in care should diminish with the introduction of comprehensive health programs that assist families in connecting with health services.
 - Maternity Care Coordination is a comprehensive case management program for Medicaid eligible pregnant women in North Carolina.

Research Question

- Is there an association between perinatal care region and number/costs Medicaid claims for infants?

Hypothesis

- Women residing in the western perinatal region of NC will have Medicaid claims and expenditures below the mean compared to women in the central and eastern counties

Data source

2004 NC de-identified composite birth file with Medicaid and WIC files

Inclusion Criteria

- Of 119,773 births in NC in 2004, 55,554 were included in the analysis:
 - Singleton pregnancy
 - Mother received Medicaid (45% of all births in NC in 2004)
 - Infant was not born with a birth defect
 - Infant was born in NC
 - Infant lived at least 365 days
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Variables for Analysis

□ **Dependent Variables**

- Amount paid by Medicaid for infant claims
- Total number of Medicaid infant claims
- Mean calculated using total of hospital, physician and outpatient claims for infants receiving Medicaid in NC (2004).

□ **Main Exposure Variable**

- Type of county: perinatal care region

□ **Major Covariates**

- Receipt of Maternity Care Coordination (MCC)
 - Number of infant diagnoses at birth
 - Race/Ethnicity
 - Maternal Age
 - Maternal Education
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Descriptive Statistics

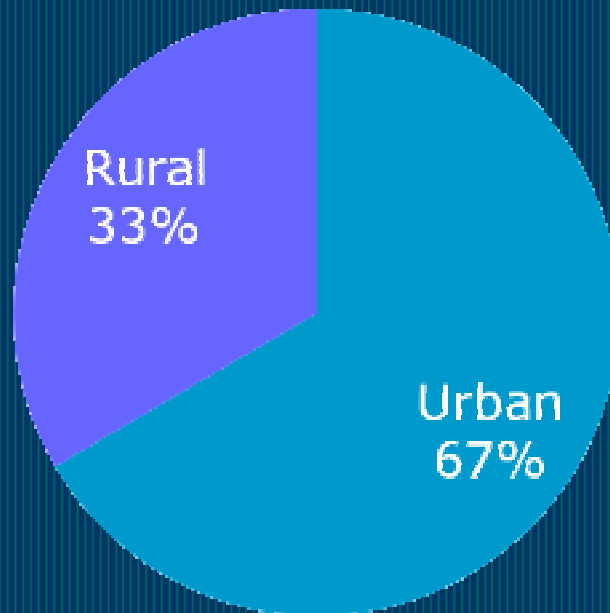
- County
 - Perinatal Care Regions
 - Maternity Care Coordination
 - Race/Ethnicity
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County of Residence

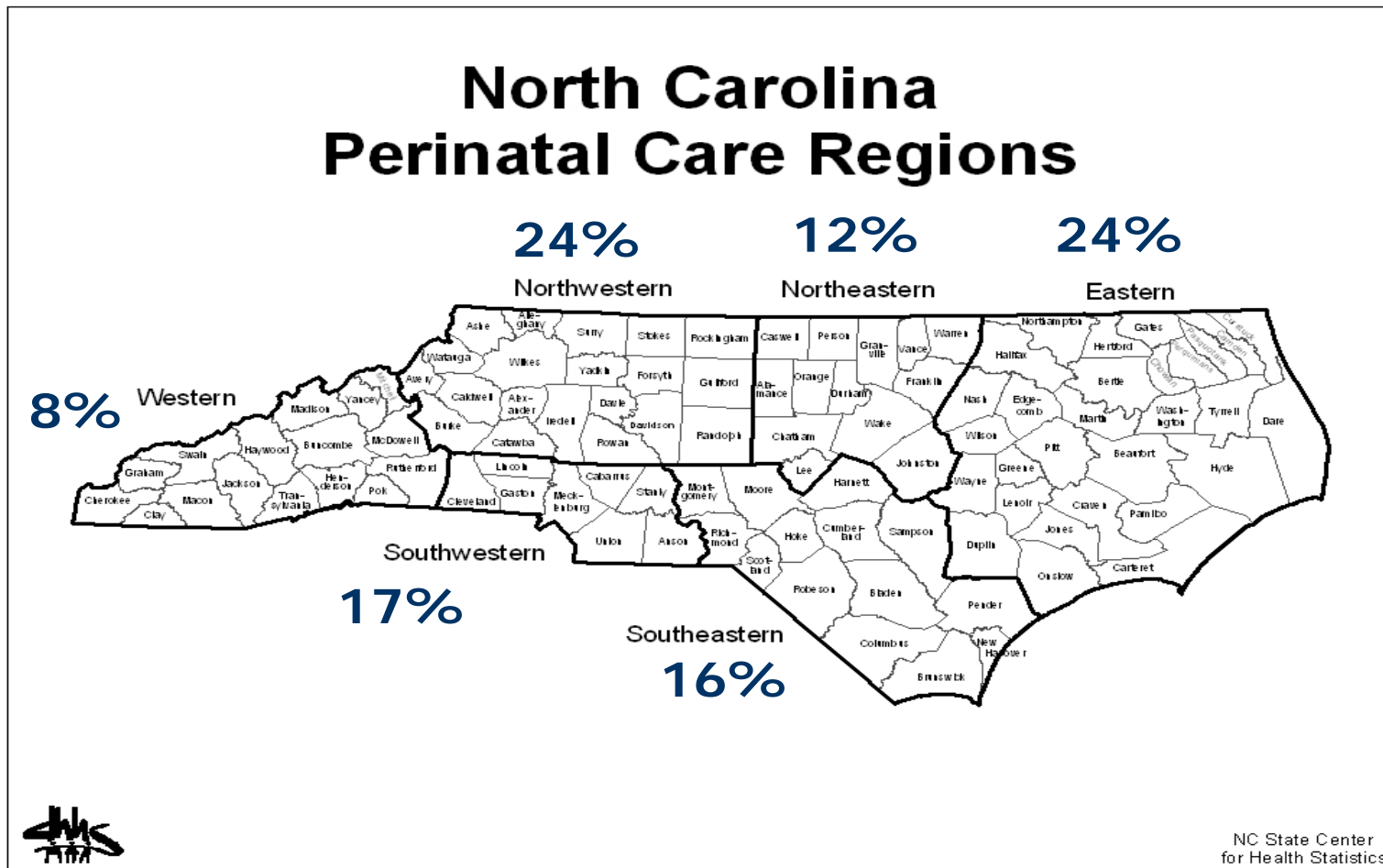
N=55,554

- 100 Counties in NC (all represented)

County



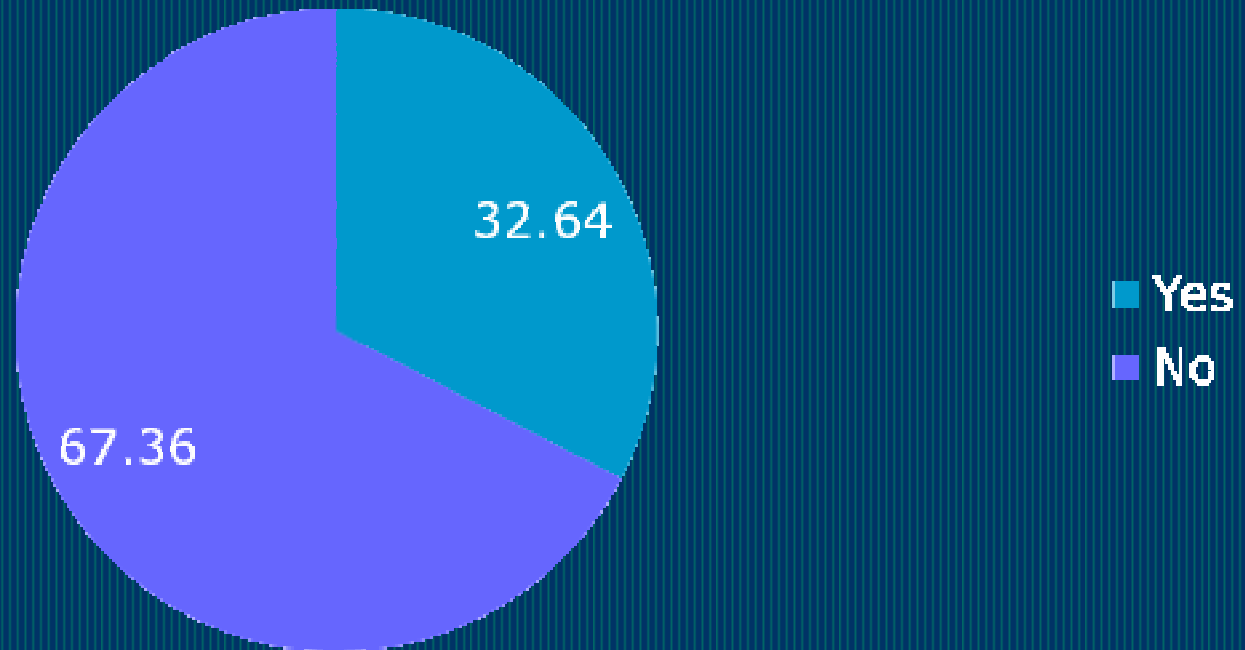
Map of NC with Perinatal Care Regions



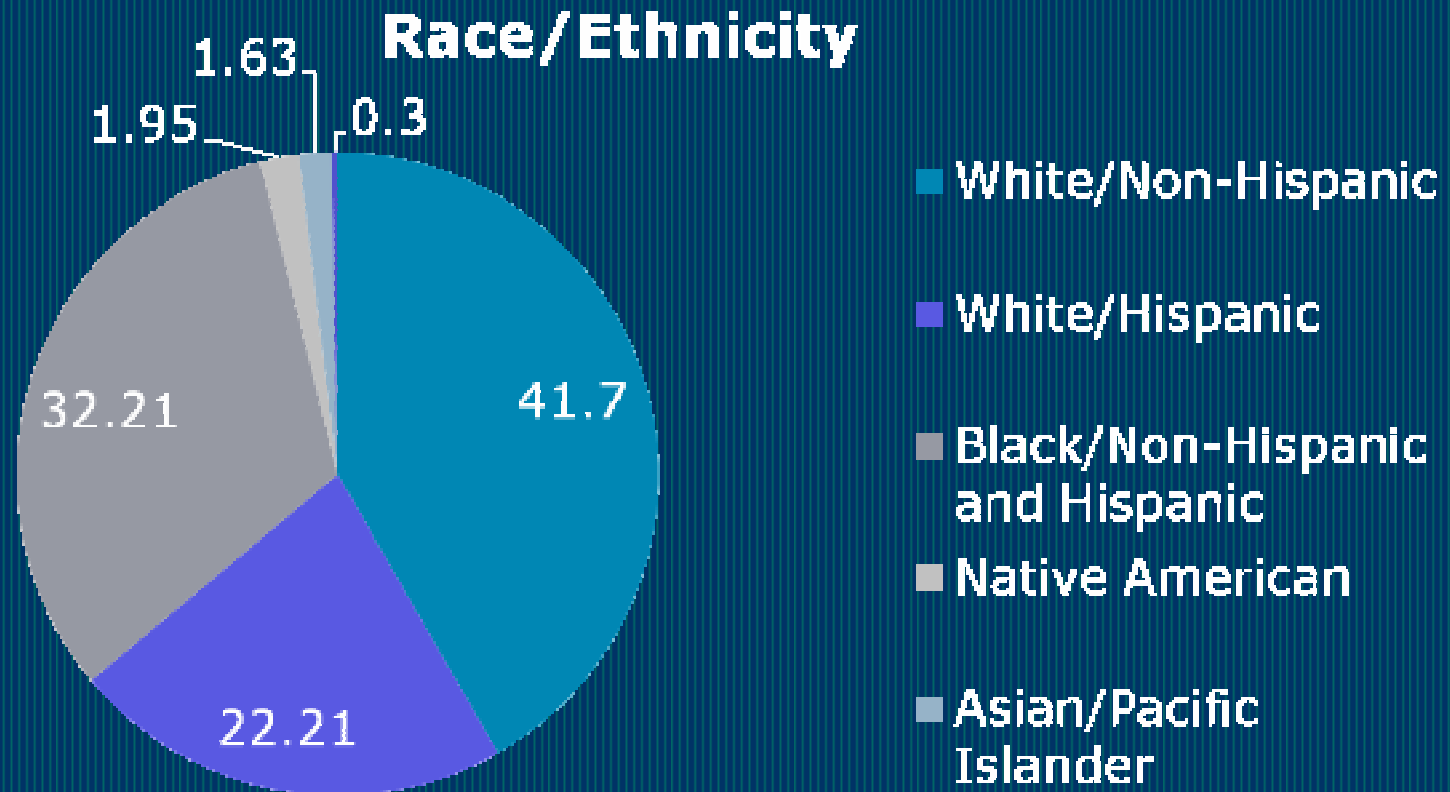
Original map created by Dianne Enright (DHHS, NC SCHS)

Maternity Care Coordination

Participation



Race/Ethnicity



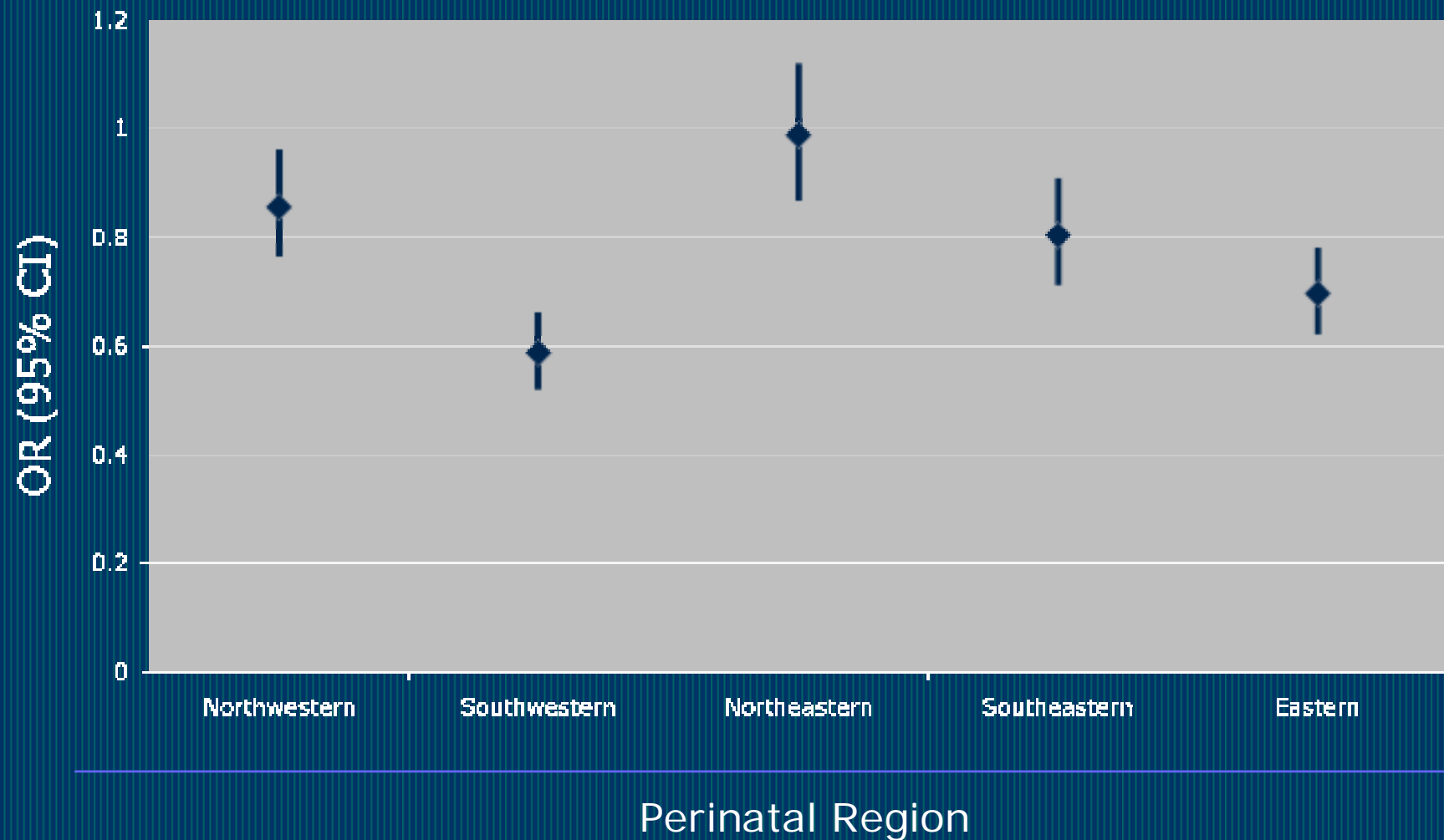
Analytic Strategy

- Logistic regression to derive odds ratios (OR) and 95% confidence intervals
 - Adjusted for:
 - MCC, number of infant diagnoses, use of tobacco, race/ethnicity, maternal age and maternal education

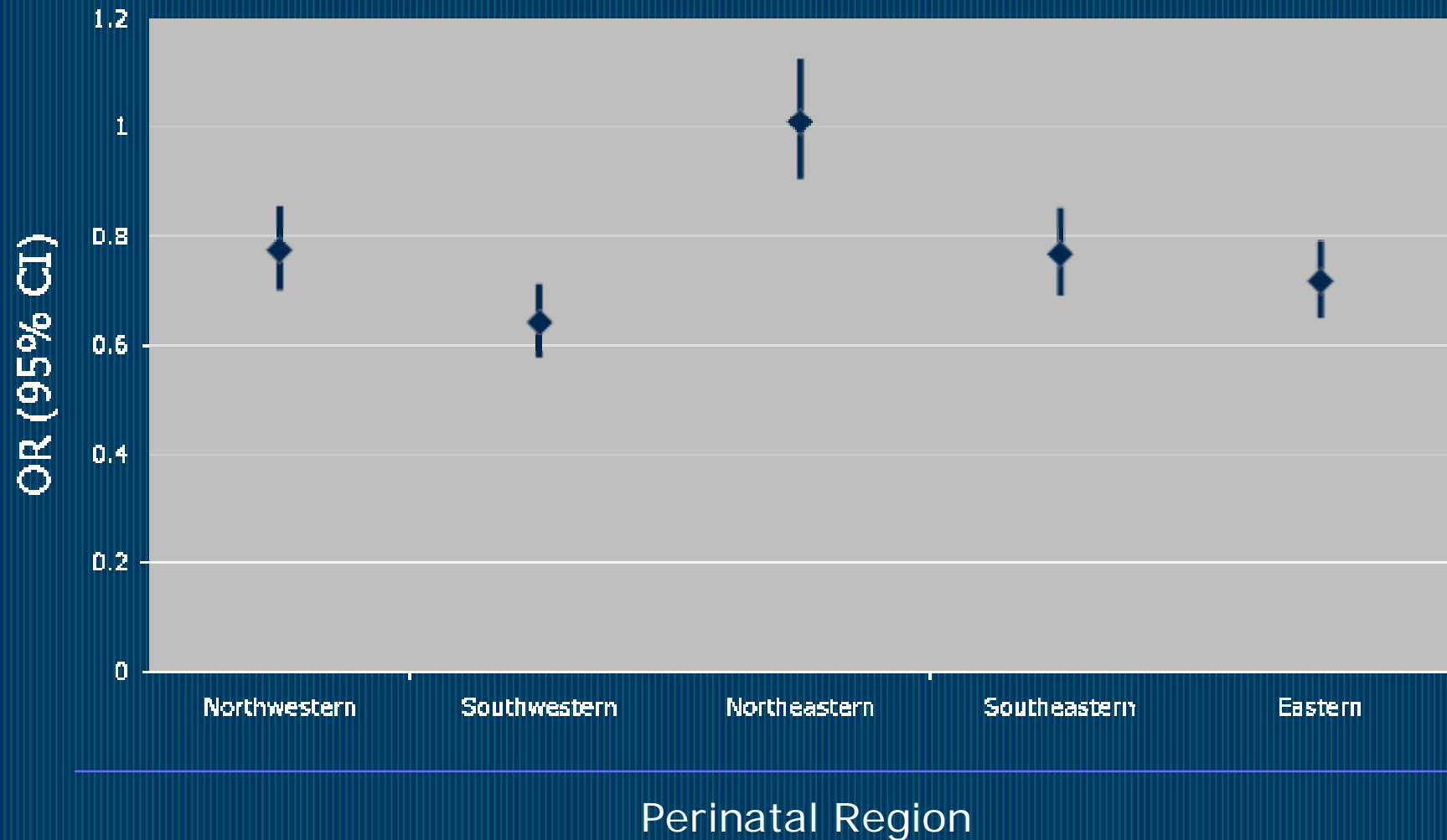
Results

- Is there an association between perinatal care region and number/costs Medicaid claims for infants?
 - There was an association between region and number/costs of Medicaid claims
 - Women living in the western region of the state were significantly more likely to have number and costs above the mean compared to women living in other parts of the state
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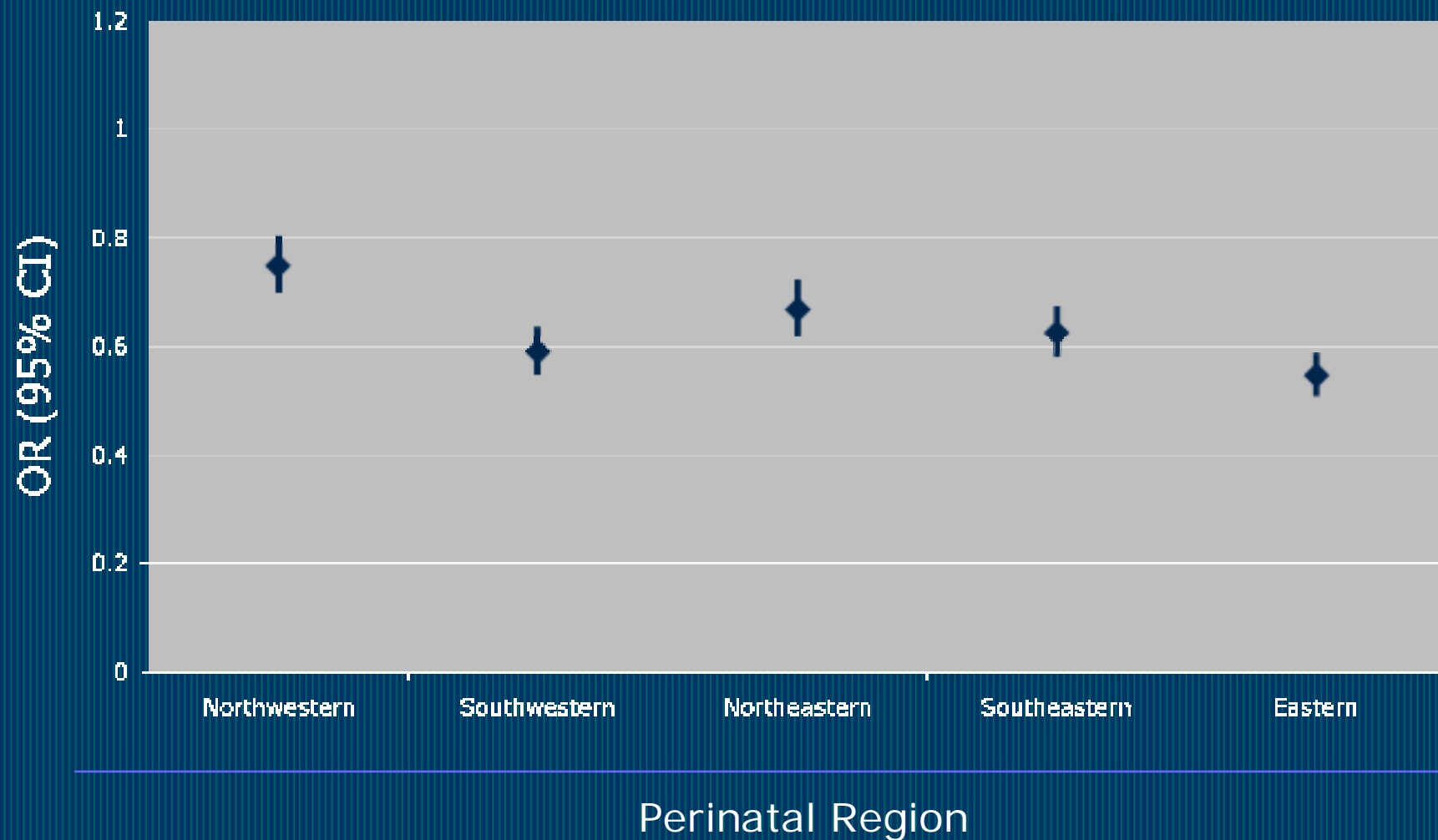
Amount paid: 1st 60 days of life



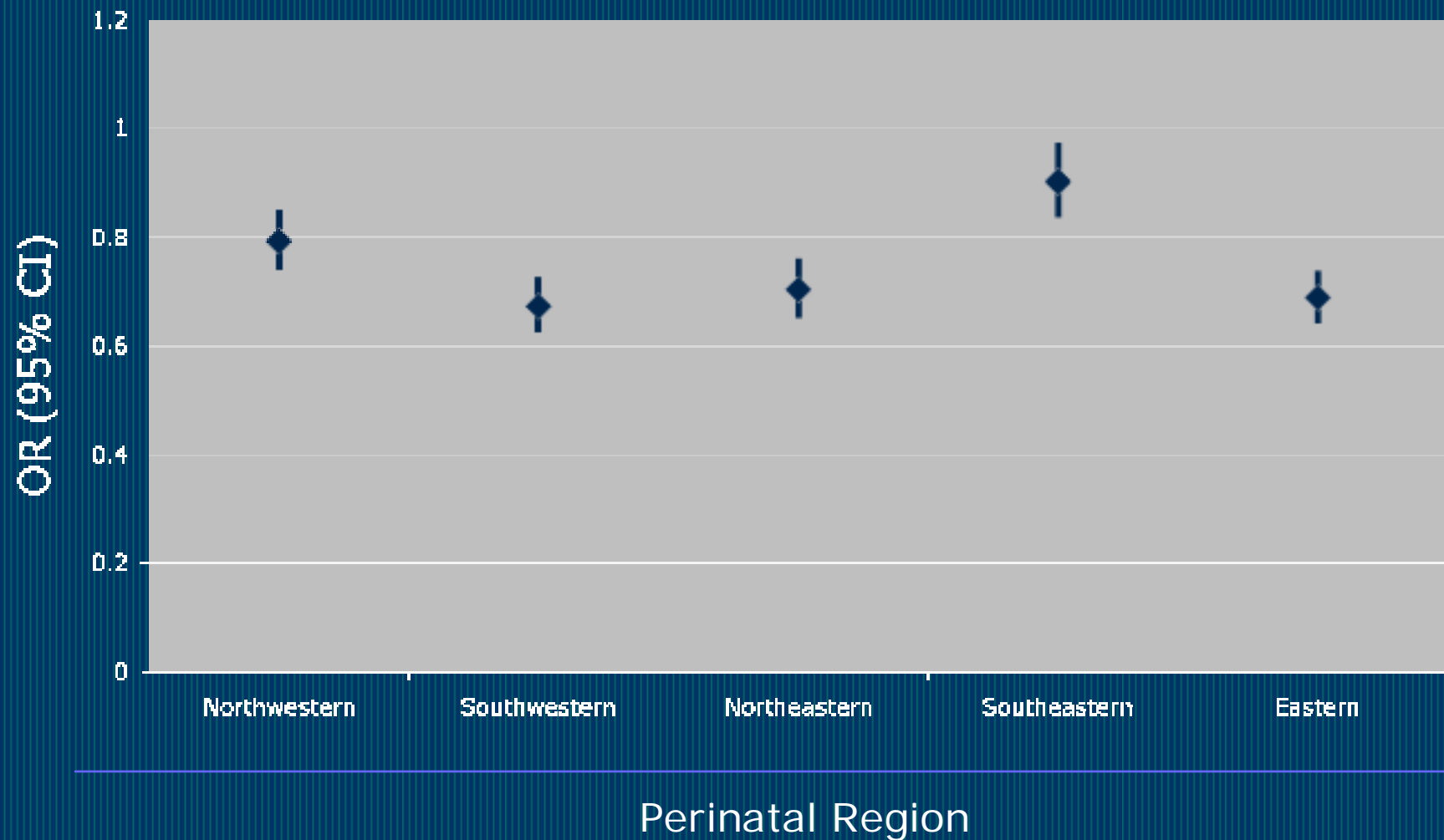
Amount paid: 1st year of life



Total number of claims: 1st 60 days of life



Total number of claims: 1st year of life



Discussion

- This analysis demonstrates an association between perinatal care regions, urban/rural county and total number and paid claims by Medicaid
 - Understanding the effects of regional characteristics such as provision of services on the state and county levels provide insight on developing policies and initiatives with the goal of connected the low-income population with such services
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Public Health Implications

- ❑ Providing comprehensive care to pregnant women and families
 - ❑ Preconceptional care and providing care regardless of childbearing
 - ❑ Targeting rural areas and areas with less access to preventative health services and other community resources
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Next Steps

- ❑ Multilevel model
- ❑ Explore racial and ethnic differences in costs and number of claims
- ❑ Explore the relationships between provision of services and utilization of services and how the two are influenced by structural factors

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