



Epidemiology of Stillbirth in Newfoundland and Labrador, Canada: A Population-Based Study

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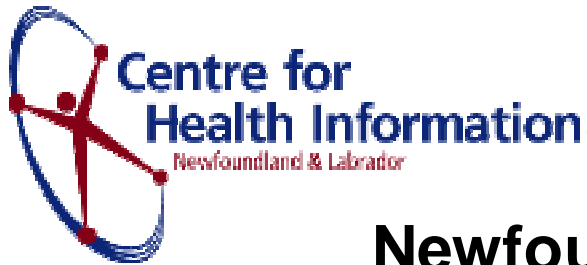
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Overview

- Newfoundland and Labrador Centre for Health Information
- Background
- Objective
- Methods
- Results
- Conclusions
- Limitations
- Implications
- Questions







Newfoundland and Labrador Centre for Health Information

- Provincial crown agency reporting to the Minister of Health and Community Services
- Seven Departments
 - Infrastructure
 - Pharmacy Network
 - Electronic Health Record
 - Data Quality and Standards
 - Privacy and Corporate Services
 - Finance and Administration
 - Research and Evaluation



Newfoundland and Labrador Centre for Health Information

- Research and Evaluation Department
 - Staff are trained in Community Health and Epidemiologic research methods.
 - Business Lines:
 - Requests for Information
 - Preparing and Publishing Health Reports
 - Information/Database Management
 - EHR Benefits Evaluation
 - Applied Health Research
 - Databases maintained:
 - hospital data
 - births/deaths
 - fee-for-service physician claims
 - Census and population estimates (Statistics Canada)
 - National Surveys (CCHS, NPHS, etc.)
 - Other

Background

- Definition:
 - A Stillbirth is the delivery of a fetus which did not at any time after birth breathe or show signs of life.
 - Gestational age of 20 weeks or a birth weight of 500 grams is required for a stillbirth to be registered in Canada.
- Prevalence:
 - Higher in less developed countries
 - Rates of stillbirths in the US have been decreasing steadily in the last 2 decades.
 - The Canadian stillbirth rate has not fluctuated much in the last 10 years.



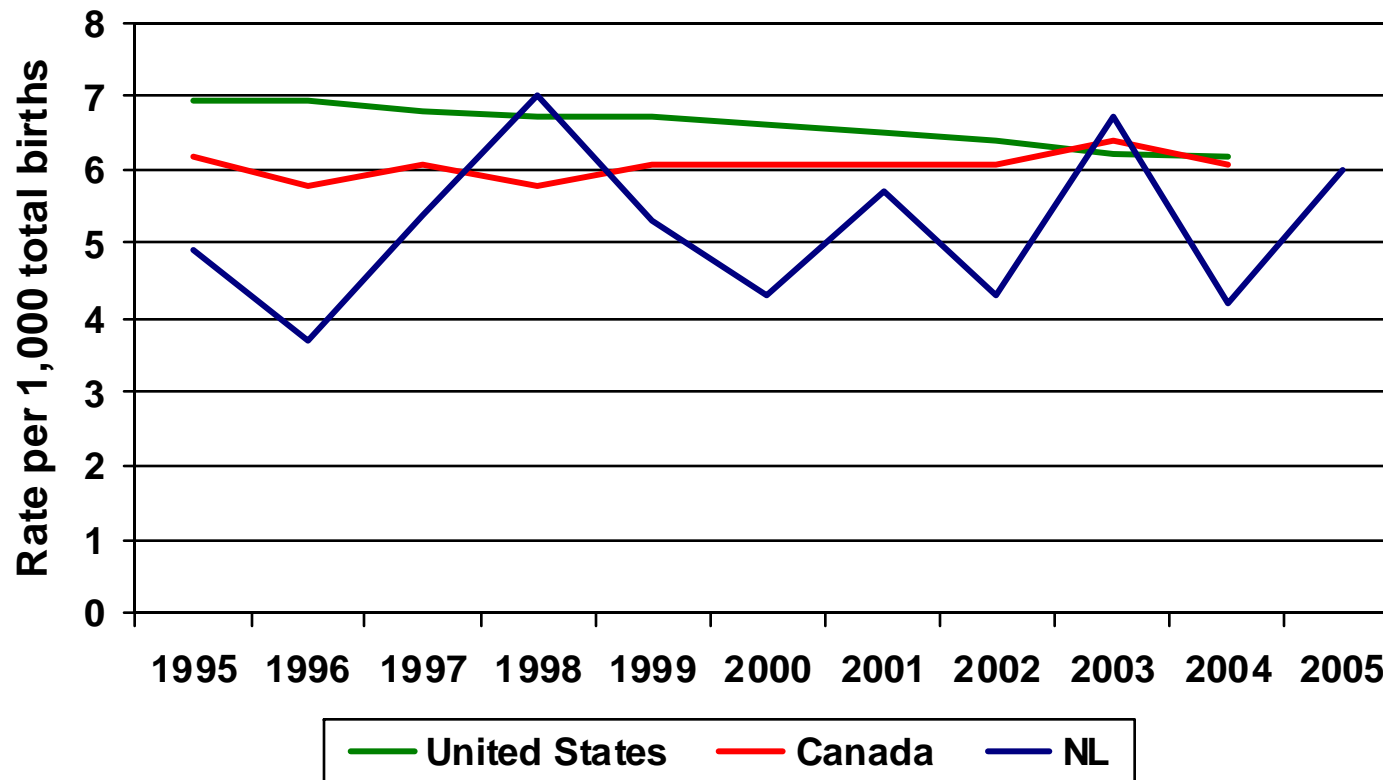
Objective

To investigate the epidemiologic characteristics of stillbirth in the province of Newfoundland and Labrador, Canada.

Methods

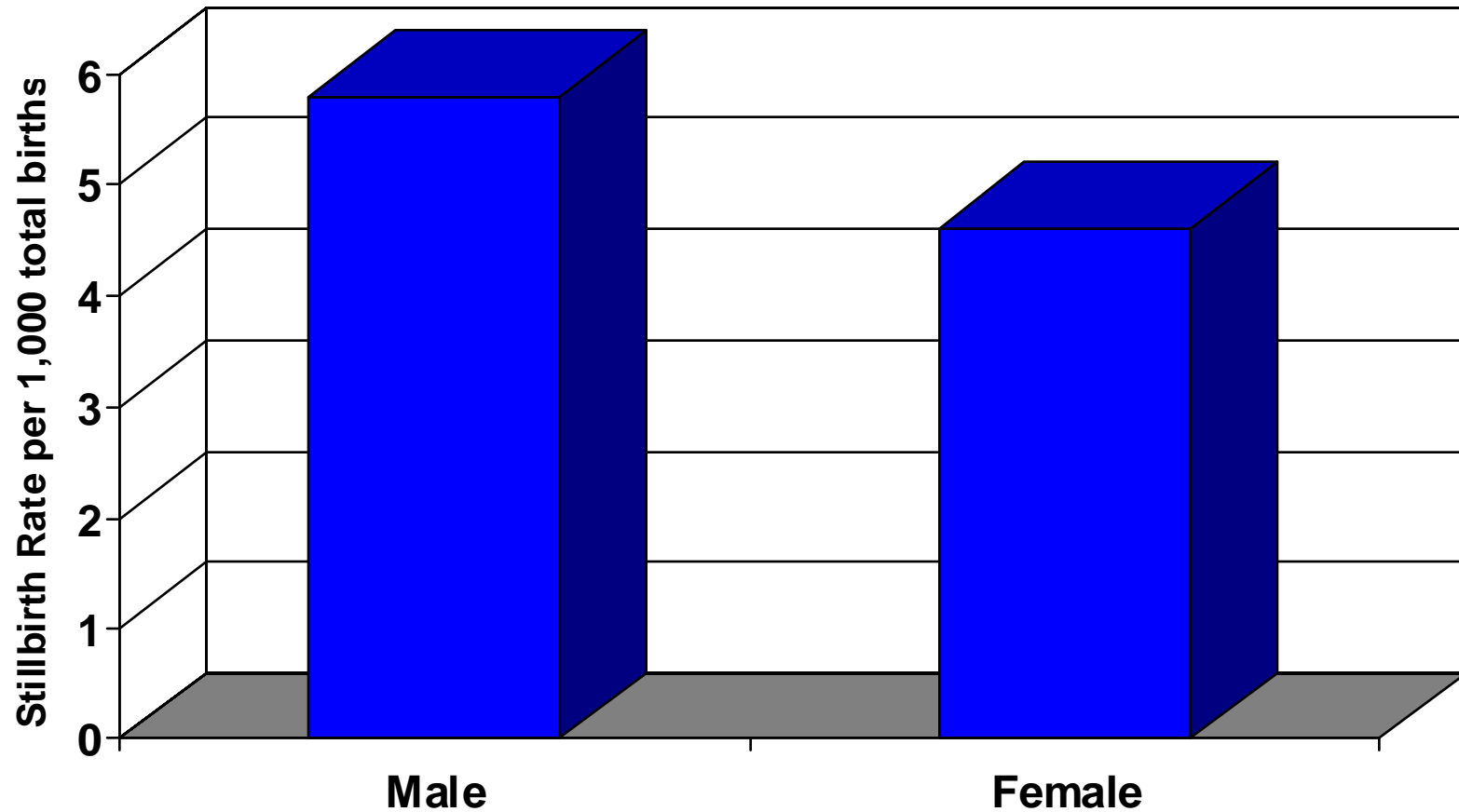
- Data Sources:
 - Stillbirth database (1995-2005)
 - Live Birth system (1995-2005)
- Data Analysis:
 - Rates were calculated by dividing the number of stillbirths by the number of total births (live births and stillbirths) in a given time period, and multiplying the result by 1,000.

Stillbirth Rate

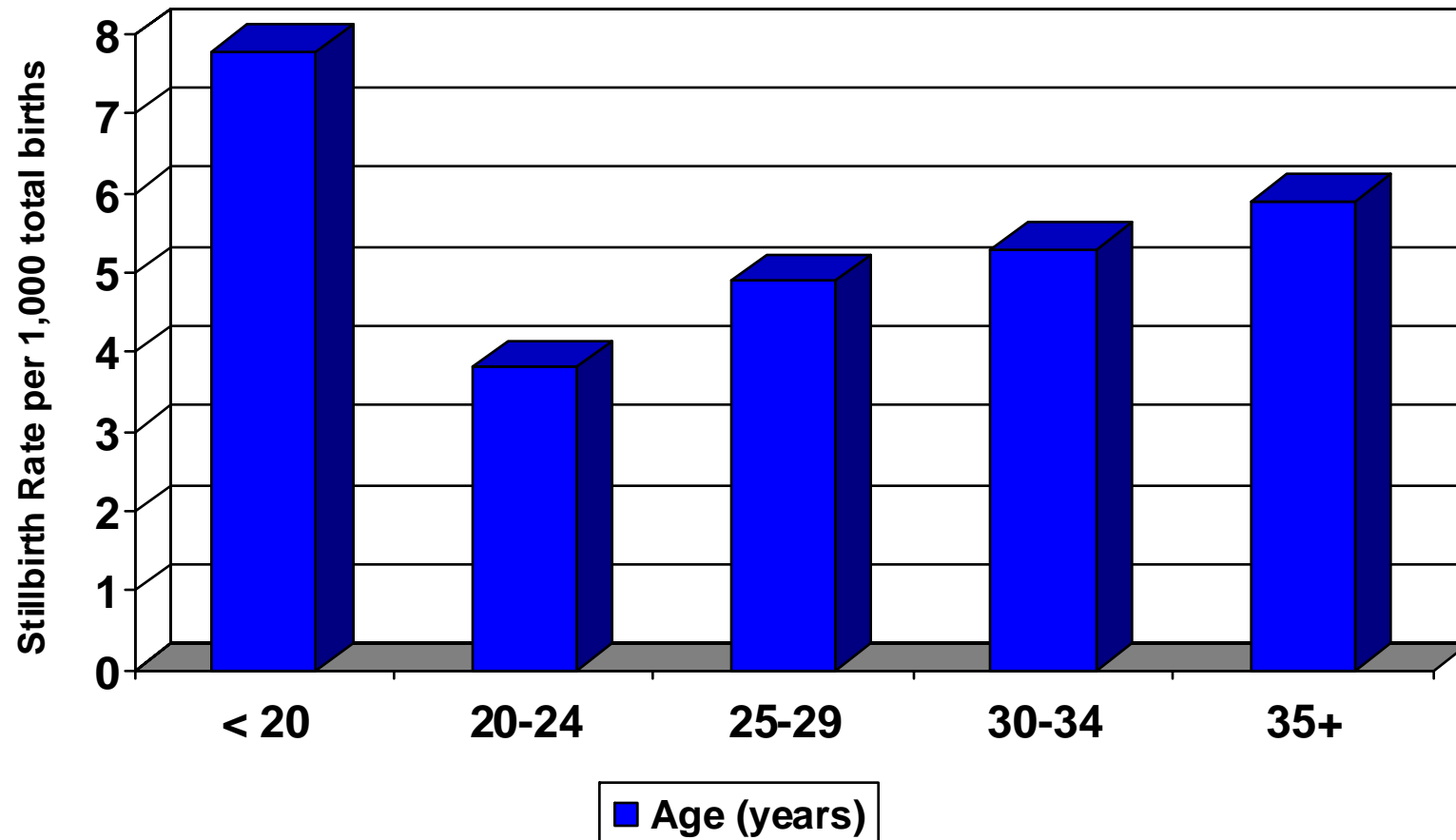


Source: National Center for Health Statistics, 2007; Statistics Canada; Newfoundland and Labrador Centre for Health Information

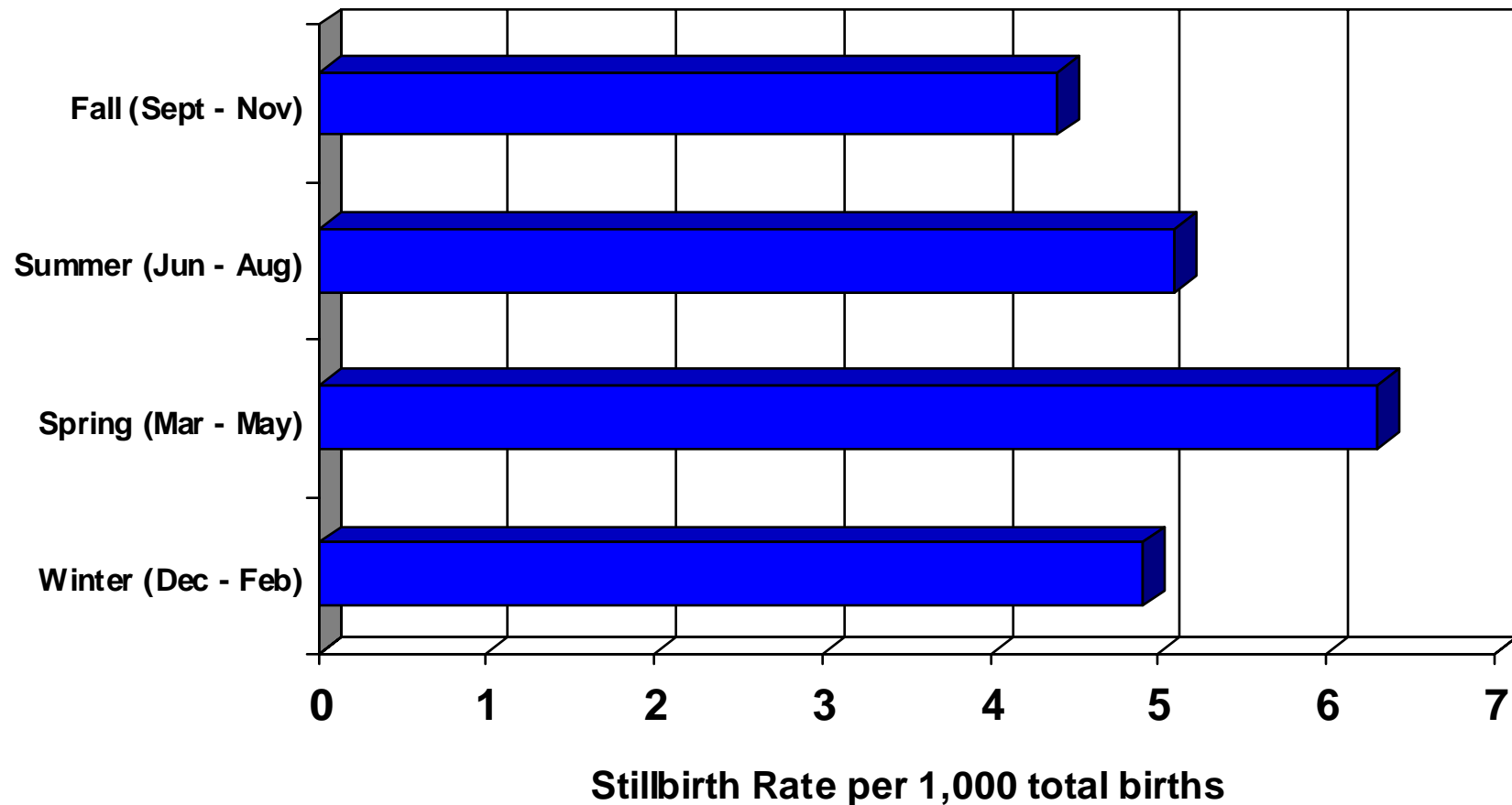
Stillbirth Rate by Sex, 1995-2005



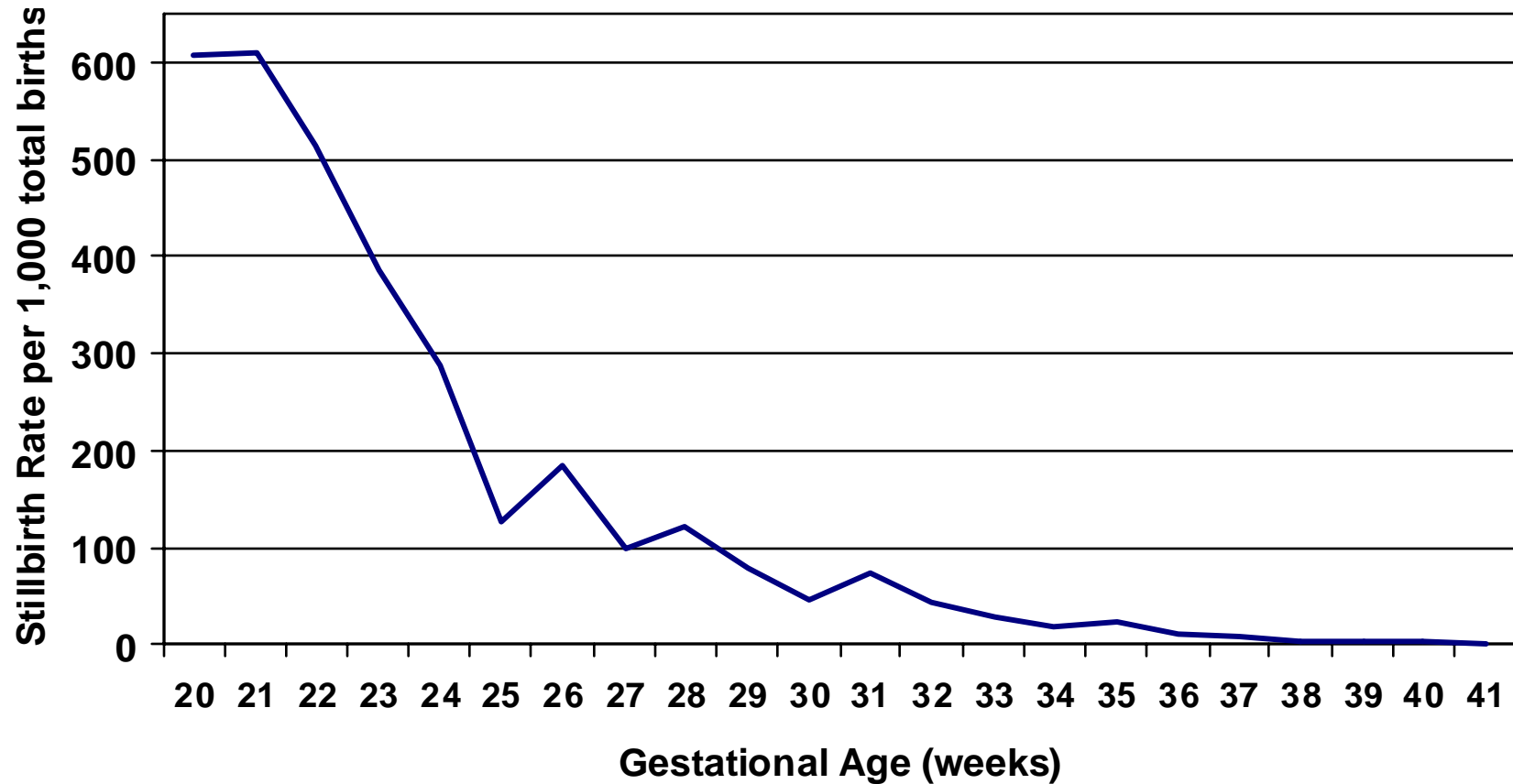
Stillbirth Rate by Maternal Age, 1995-2005



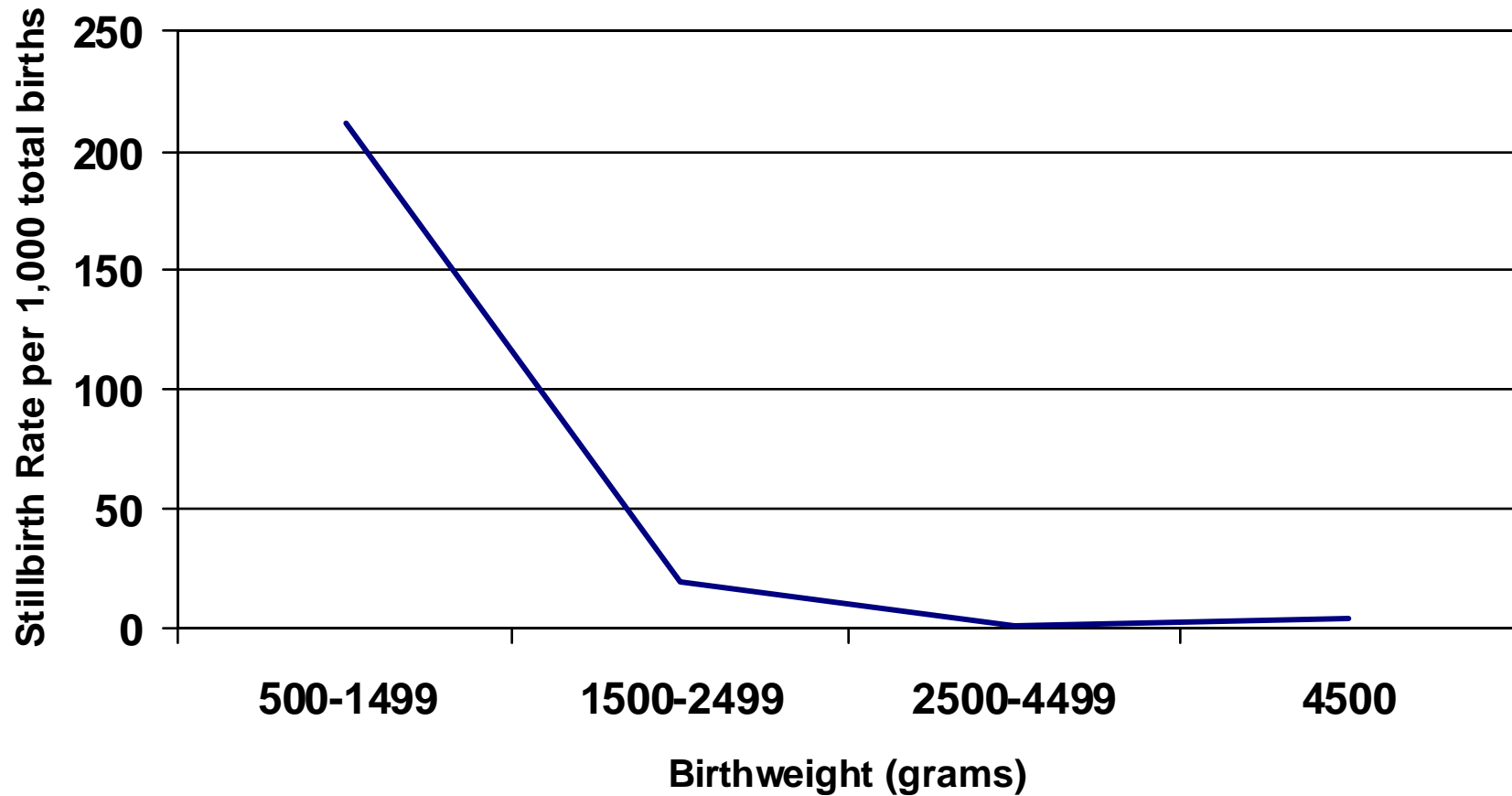
Stillbirth Rate by Season, 1995-2005



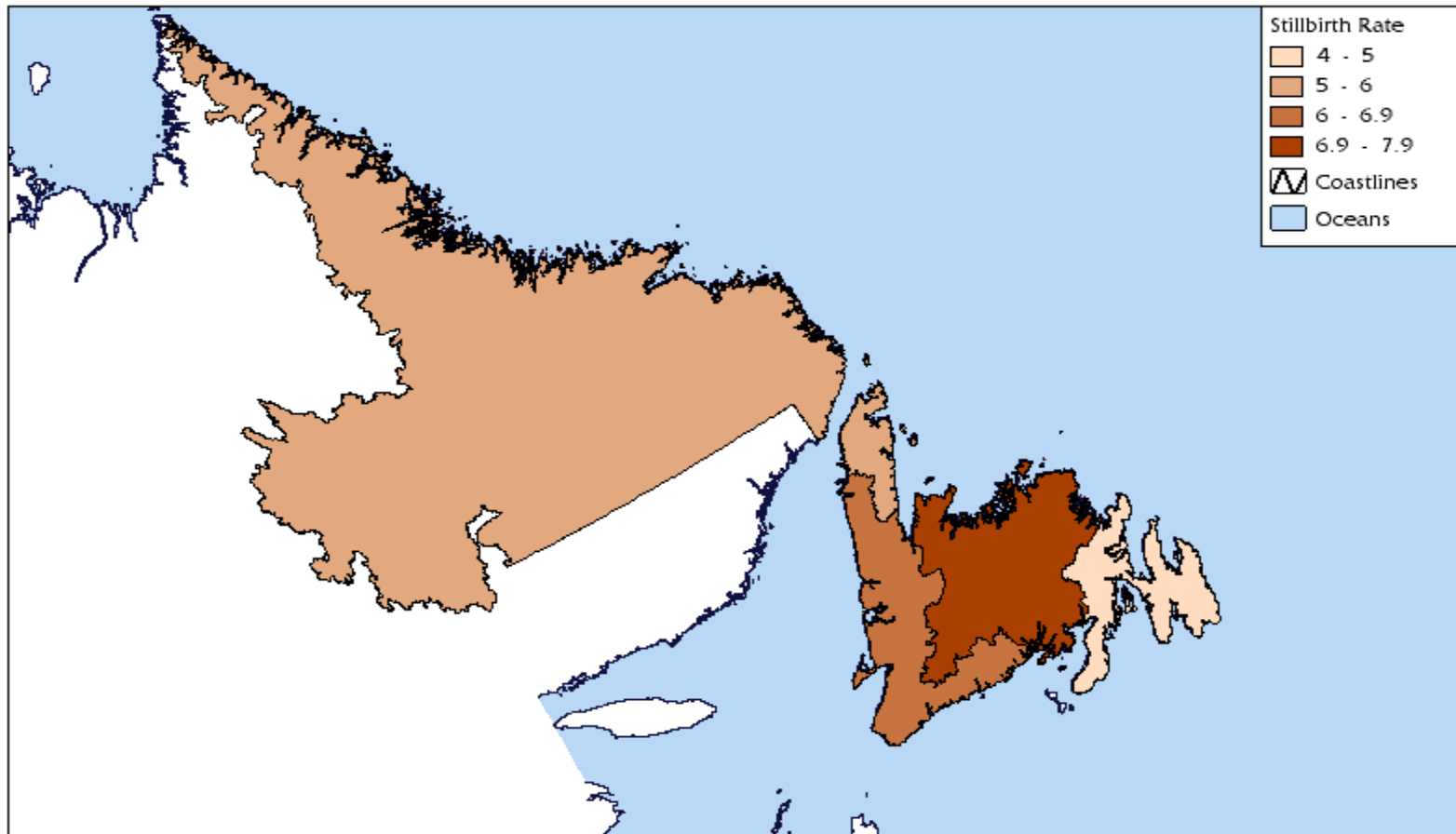
Stillbirth Rate by Gestational Age, 1995-2005



Stillbirth Rate by Birthweight, 1995-2005



Stillbirth Rate per 1,000 total births by Regional Health Authority, 1995-2005



Conclusions

- From 1995 to 2005, 286 stillbirths were recorded in NL
 - overall stillbirth rate of 5.2 per 1,000 total births
- Sex:
 - Males had a higher rate of stillbirth than females.
- Maternal Age:
 - Mothers < 20 years of age had the highest rate (7.8 per 1,000 total births).
 - significantly different from mothers aged 20-24 ($P < 0.001$) and mothers aged 25-29 ($P < 0.05$)
- Season:
 - Higher in spring (6.3 per 1,000 total births) than other seasons.
 - significantly different from Fall ($P < 0.05$)

Conclusions

- Gestational Age:
 - Stillbirth rate is highest at very low gestations and decreases with increasing gestation.
- Birthweight:
 - Stillbirth rate is highest at low birthweights and decreases with increasing birthweight.
- Region:
 - The central health region had the highest rate of stillbirth (7.9 per 1,000 total births)
 - Significantly higher than the provincial rate ($P < 0.0001$) and the Eastern rate ($P < 0.001$).

Limitations

- Data were not available on important stillbirth risk factors, including:
 - smoking
 - maternal BMI
 - time of stillbirth (antepartum vs intrapartum)

Implications

- This study highlights epidemiologic features, geographic disparities and groups at greater risk of stillbirth in the province.
- This study will help guide future research and generate hypotheses as to why certain regions have higher rates of stillbirth
 - Effect of Previous Caesarean Section, Small for Gestational Age and Preterm Birth and the risk of Future Stillbirth in Newfoundland and Labrador
- Findings will be shared with the provincial government and regional health authorities.



Thank you

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