

Disparities in health outcomes by insurance payer groups for pregnant women in Kansas

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Introduction

- Evidence shows that uninsured and publicly insured patients experience worse health outcomes than privately insured peers.
- Adverse pregnancy outcomes have a substantial impact on both short and long-term morbidity, mortality, and health care costs.
- Research suggests that access to prenatal care positively impacts women's pregnancy outcomes.

Objectives

To examine disparities in health outcomes by insurance payer group for pregnant women in Kansas.

It is hypothesized that uninsured and publicly insured women will experience worse health outcomes than people with private insurance.

Methods

- Retrospective secondary analysis
- Data is from the Kansas Department of Health and Environment Vital Statistics on Kansas resident mothers from 2005 to 2007.
- Subjects were stratified based on primary insurance status: Medicaid, private insurance, uninsured, and other government insurance.
- Key Variables: insurance payer status, delivery method, breastfeeding before leaving hospital, birth weight, gestational diabetes, gestational hypertension, hypertension, pre-pregnancy weight, and prenatal care
- Statistical Analysis: Data was analyzed using descriptive statistics and chi-square tests to examine health outcomes based on insurance payer status for pregnant women in Kansas. The effect size was evaluated using Cramer's V.

Results

Table 1: Sample population demographics by insurance payer group

Variable	Medicaid	Private Insurance	Uninsured	Other Government
Total, n (%)	25283 (29%)	48972 (55%)	6258 (7%)	8260 (9%)
Mother's Age, mean \pm SD	23.55 \pm 5.055	28.81 \pm 5.358	26.64 \pm 6.058	24.90 \pm 5.304
Mother's Race, n (%), p<.001				
White	19721 (78%)	43813 (90%)	4602 (74%)	6605 (80%)
Black	3620 (14%)	1630 (3%)	206 (3%)	1082 (13%)
American Indian or Alaskan Native	627 (3%)	370 (1%)	38 (1%)	178 (2%)
Asian or Pacific Islander	356 (1%)	2042 (4%)	199 (3%)	239 (3%)
Other	959 (4%)	1117 (2%)	1213 (19%)	166 (2%)
Mother's Ethnicity, n (%), p<.001				
Hispanic	4319 (17%)	4125 (8%)	3719 (59%)	1221 (15%)
Not Hispanic	20964 (83%)	44847 (92%)	2539 (41%)	7049 (85%)
Mother's Education, n (%), p<.001				
Less than or equal to 8th grade	961 (4%)	782 (1%)	1500 (24%)	224 (3%)
9-12 grade, no diploma	7015 (28%)	2310 (5%)	1754 (29%)	1470 (18%)
High school graduate or GED	9467 (37%)	7994 (16%)	1366 (22%)	2730 (33%)
Some college, no degree	6010 (24%)	10906 (22%)	774 (13%)	2337 (28%)
Associate degree	935 (4%)	4456 (9%)	213 (3%)	427 (5%)
Bachelors degree	684 (3%)	15943 (33%)	470 (8%)	806 (10%)
Master's degree	97 (<1%)	5177 (11%)	81 (1%)	215 (3%)
Doctorate or professional degree	16 (<1%)	1261 (3%)	22 (<1%)	36 (<1%)
Father's Age, mean \pm SD	26.36 \pm 6.556	31.17 \pm 6.056	29.85 \pm 7.271	27.36 \pm 6.267
Father's Race, n (%), p<.001				
White	14159 (57%)	41830 (86%)	4048 (65%)	5490 (67%)
Black	3027 (12%)	2064 (4%)	191 (3%)	1005 (12%)
American Indian or Alaskan Native	391 (2%)	368 (1%)	39 (1%)	144 (2%)
Asian or Pacific Islander	328 (1%)	1835 (4%)	163 (3%)	171 (2%)
Other	7072 (28%)	2788 (5%)	1763 (28%)	1355 (17%)
Father's Ethnicity, n (%), p<.001				
Hispanic	9778 (39%)	5712 (12%)	3911 (63%)	2285 (28%)
Not Hispanic	15192 (61%)	43175 (88%)	2292 (37%)	5881 (72%)
Father's Education, n (%), p<.001				
Less than or equal to 8th grade	1001 (5%)	921 (2%)	1473 (27%)	221 (3%)
9-12 grade, no diploma	4852 (26%)	2285 (5%)	1380 (25%)	874 (13%)
High school graduate or GED	8011 (42%)	9978 (21%)	1251 (23%)	2675 (38%)
Some college, no degree	3493 (19%)	10429 (22%)	638 (12%)	1904 (27%)
Associate degree	744 (4%)	3550 (8%)	157 (3%)	287 (4%)
Bachelors degree	639 (3%)	13934 (29%)	385 (7%)	661 (10%)
Master's degree	111 (1%)	4137 (9%)	90 (2%)	288 (4%)
Doctorate or professional degree	38 (<1%)	1921 (4%)	67 (1%)	66 (1%)
Marital Status, n (%), p<.001				
Married	7815 (81%)	42055 (98%)	3580 (95%)	4847 (94%)
Not Married	1805 (19%)	855 (2%)	195 (5%)	296 (6%)

Table 2: Health outcomes by insurance payer group for pregnant women in Kansas

Health Outcomes	Medicaid	Private Insurance	Uninsured	Other Government
Breastfed, n (%), p<.001, V=.227				
Yes	14702 (61%)	39164 (83%)	4805 (81%)	5793 (73%)
No	9294 (39%)	7818 (17%)	1115 (19%)	2160 (27%)
Birth Weight, n (%), p<.001, V=.051				
Low Birth Weight	2245 (9%)	2903 (6%)	408 (7%)	641 (8%)
Normal Birth Weight	23038 (91%)	46066 (94%)	5848 (93%)	7629 (92%)
Gestational Diabetes, n (%), p<.001, V=.031				
Yes	801 (3%)	1883 (4%)	307 (5%)	202 (2%)
No	24482 (97%)	47089 (96%)	5951 (95%)	8068 (98%)
Gestational Hypertension, n (%), p<.001, V=.016				
Yes	968 (4%)	1956 (4%)	195 (3%)	258 (3%)
No	24315 (96%)	47016 (96%)	6063 (97%)	8012 (97%)
Hypertension, n (%), p<.001, V=.036				
Yes	17850 (71%)	33711 (69%)	4122 (66%)	5386 (65%)
No	7433 (29%)	15261 (31%)	2136 (34%)	2884 (35%)
Mother's Pre-Pregnancy Weight, n (%), p<.001, V=.050				
Underweight	1438 (6%)	1638 (3%)	273 (5%)	461 (6%)
Healthy Weight	11250 (45%)	25301 (52%)	2942 (49%)	4034 (49%)
Overweight	5907 (24%)	11882 (25%)	1631 (27%)	1986 (24%)
Obese	6181 (25%)	9628 (20%)	1106 (19%)	1711 (21%)
Prenatal Care, n (%), p<.001, V=.073				
Yes	24975 (99%)	48850 (>99%)	6020 (96%)	88058 (99%)
No	308 (1%)	121 (<1%)	238 (4%)	724 (1%)
Delivery Method, n (%), p<.001, V=.024				
Vaginal (Spontaneous)	16428 (65%)	31477 (65%)	4436 (71%)	5599 (68%)
Vaginal (Forceps)	538 (2%)	1052 (2%)	128 (2%)	141 (2%)
Vaginal (Vacuum)	910 (4%)	1628 (3%)	227 (4%)	270 (3%)
C-section	7405 (29%)	14811 (30%)	1467 (23%)	2260 (27%)

Figure 1: Delivery method by insurance payer groups for pregnant women in Kansas

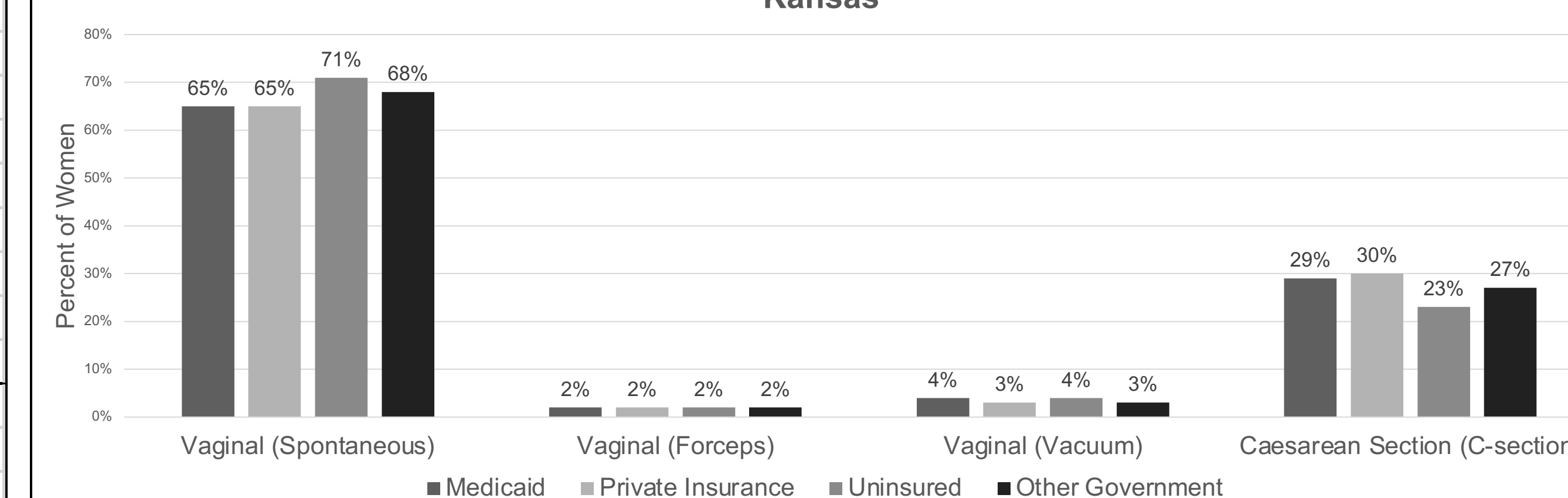
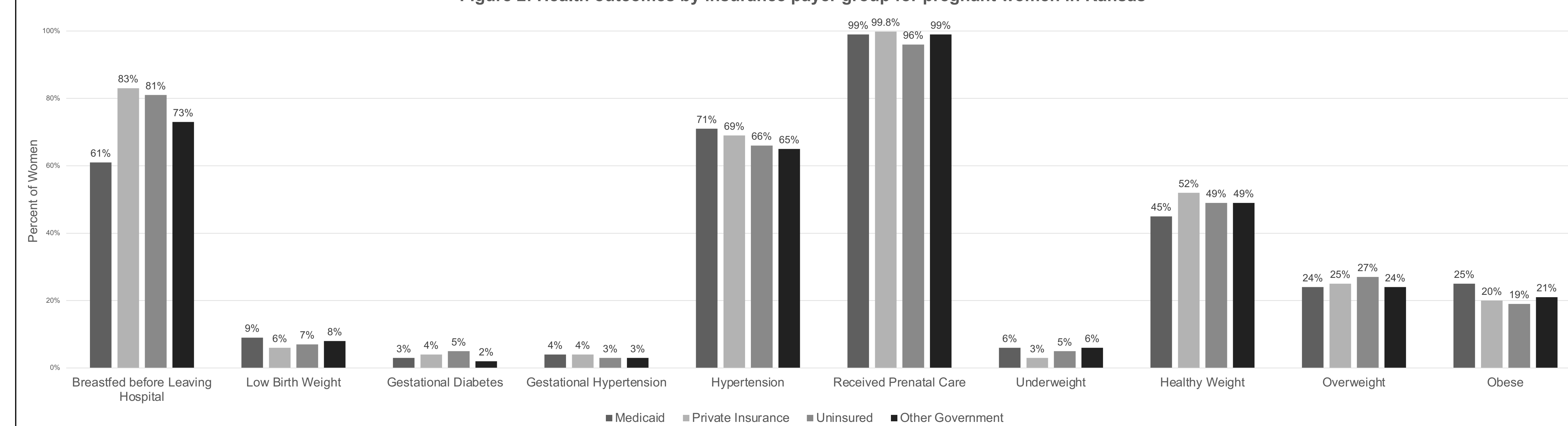


Figure 2: Health outcomes by insurance payer group for pregnant women in Kansas



Discussion

- Uninsured patients were less likely to have a c-section and more likely to have a spontaneous vaginal delivery than other payer groups.
- Medicaid mothers were less likely to breastfeed their babies than members of other payer groups.
- Mothers on Medicaid and other government insurance were more likely to deliver a low birth weight baby.
- Uninsured women were more likely to develop gestational diabetes.
- Uninsured women were less likely to have prenatal care and privately insured women were more likely to have prenatal care than members of other payer groups.
- Mothers on Medicaid and other government insurance were more likely to be underweight or obese than members of other payer groups. Uninsured mothers were more likely to be overweight than members of other payer groups.

Conclusions

This study revealed that individuals with different types of health insurance report significant differences in health status and their utilization of prenatal care services.

Limitations: The analysis did not control for age, race, or education.

Future Research: Future research could evaluate the difference in health outcomes by insurance payer status when controlling for age, race, and/or education.

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