Patient Perspectives of Rural Kansas Maternity Care

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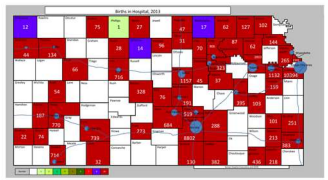
Background

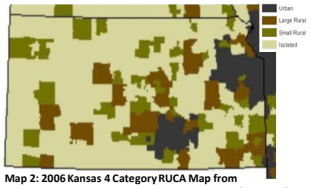
Problem: Pregnant women in rural areas face a unique set of challenges due to a geographic maldistribution of obstetric services. An Australian study found that rural women are more often dissatisfied with maternity care than urban women.[1] Additionally, two Canadian qualitative studies found that birth experience is influenced by geographic realities.[2,3] While areas where maternity services are not available have been identified in Kansas, the behaviors of women in response to this maldistribution have yet to be characterized.

Study Aims: Our study aims to investigate the birth experiences of women in rural Kansas using discussion groups to better understand opinions of maternity care, gather information about satisfaction of care using a survey instrument, and report aggregate data discriminated by Rural-Urban Commuting Area (RUCA) codes as described by the Kansas Department of Health and Environment (KDHE).

Hypothesis: It is our hypothesis that geographical area and access to maternity care in rural and remote areas in Kansas impact patient birth experience and satisfaction with care.



Map 1: Number of births in hospital during 2013 by Kansas county. Data from Kansas Hospital Association. Counties without recorded hospital births can be interpreted as not having obstetric services.



Map 2: 2006 Kansas 4 Category RUCA Map from Washington, Wyoming, Alaska, Montana, Idaho (WWAMI) Rural Health Research Center. Commuting codes are useful in health studies because the communities to which persons flow (for employment) may also be places where they receive health care.

Methods

Medical student research assistants facilitated discussion groups in rural Kansas communities. Inclusion criteria were women who had given birth in the last 24 months. Convenience sampling was used based on student and clinic location. Six guiding questions were used to facilitate discussion. Participants completed a survey to collect demographic information and data regarding distance traveled for care and satisfaction of care received. Respondents gave their informed consent to participate before discussion or survey questions were asked. Survey results were captured on paper and then transferred to REDCap, an on-line firewall protected survey instrument. Results were de-identified and analyzed by a subgroup of researchers. Discussions were transcribed and codified for qualitative analysis by a subgroup of researchers. The opinions and survey results were aggregated and discriminated by RUCA codes. All aspects of our study were approved through the Institutional Review Board at KUMC.

Guiding Questions for all discussion groups:
1) Tell us about your most recent experience of birth.
2) What maternity care services did you have access to in your community?
3) How satisfied were you with the services available?
4) Did you go to another community for maternity care, and if so, why?
5) What items are important in choosing where you get maternity care?
6) If you could change things to promote better maternity care in your community, what would they be?

Findings

Descriptive Statistics: 14 groups with 47 total participants completed the survey and discussion. Average group size was 3 participants. General demographics were: mean age 28.3 (range 20-37), 45/47 respondents identified as White/Caucasian, 18/47 (38%) reported annual household income less than $50,000, 29/47 (62%) reported annual household income of $50,000 or above. Participants were distributed by RUCA codes per Four Category Classification as follows: 1/47 (2%) Urban, 17/47 (36%) Large Rural, 12/47 (26%) Small Rural, 17/47 (36%) Isolated.

Qualitative Results: Discussion groups were recorded, transcribed, de-identified, and coded by theme.

Participant responses to Question 1 (**Tell us about your most recent experience of birth**):

Experiences coded as Positive	Experiences coded as Negative
• Doctor characteristics • "available," "open," "makes me laugh," "supportive," "good bedside manner," "trust," "confidence in," "answered questions," "approachable" • Personal relationship with doctor • Delivery with my doctor • Staff related experiences • Convenience • Options for alternative labor practices including tub labor	• Delivery with different doctor • Doctor not there until delivery • Doctor had poor bedside manner • Long wait times for prenatal appointments • Doctor moved away • Anesthesiologist wait time • Distance of drive • Staff complaints

Participant responses to Question 4 (**Did you go to another community for maternity care, and if so why?**):

- preference for female provider
- established relationship with doctor in neighboring county
- referral for high risk pregnancy

Participant responses to Question 5 (**What items are important in choosing where you get maternity care?**):

- Delivering with my doctor
- Doctor characteristics
  - "comfortable with doctor," "character," "personality," "prior experience with doctor," "good bedside manner," "relatable"
- Female provider
- Labor options including tub labor and doula

Participant responses to Question 6 (**If you could change things to promote better maternity care in your community, what would they be?**):

- Patient education
  - Topics included education about "birthing options and facility," "maternal post-partum care and expectations," " nutrition during pregnancy," "infant CPR," " caring for circumcision"
- Additional staff
  - Midwife, lactation consultant, female provider

Quantitative Results: There was a statistically significant difference between groups (Large Rural, Small Rural, Isolated) as determined by one-way ANOVA ($p = 0.0021$). A series of t-tests revealed that the satisfaction of care in home county was statistically significantly higher in small rural ($p = 0.0276$) and isolated ($p = 0.000412$) compared to the large rural. There was no statistically significant difference between the small rural and isolated groups ($p = 0.371$).

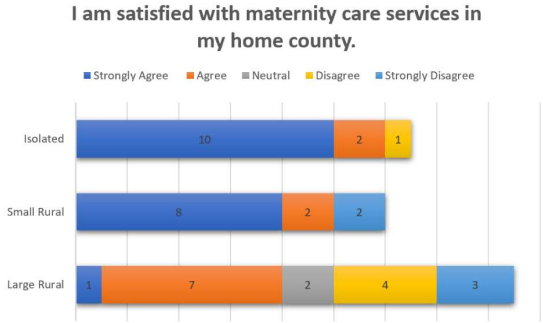


Figure 1: Survey results by 4 Category RUCA Code.

Conclusions

Insights: Women in Small Rural and Isolated RUCA codes appear to be more satisfied with care contrary to previous study findings. The number of participants was low making the results not generalizable and the convenient sampling method makes the results subject to bias. But from the discussions these results seem to be a factor of the closer relationship with their doctor and hospital staff that was more responsive to the patients' needs.

Next Steps: Next steps include continuation of qualitative data analysis; additionally, the identified themes will inform future research questions and projects including a clinic survey of women in rural areas regarding satisfaction of care.

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References:
[1] Brown, S. and J. Lumley, Satisfaction with care in labor and birth: a survey of 790 Australian women. Birth, 1994. 21(1): p. 4-13.
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