CRISIS ON THE HORIZON: DECREASING ACCESS TO OBSTETRICAL SERVICES IN FRONTIER KANSAS

A descriptive study of Rural and Frontier Obstetricians and Family Physicians

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DISCLOSURES: NONE

ALL ASPECTS OF OUR STUDY WERE APPROVED THROUGH THE IRB
OH, GIVE ME A HOME
WHERE THE BUFFALO ROAM...
2018, The Washington Post set out to find the “middle of nowhere”
# The most remote towns in the country

Towns that are farthest from any metro with more than 75,000 people, ranked by travel time in hours

<table>
<thead>
<tr>
<th>RANK</th>
<th>POPULATION 1,000 TO 4,999</th>
<th>5,000 TO 24,999</th>
<th>25,000 OR MORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Glasgow, MT</td>
<td>Colby, KS</td>
<td>Garden City, KS</td>
</tr>
<tr>
<td>2</td>
<td>Scobey, MT</td>
<td>Glendive, MT</td>
<td>Aberdeen, SD</td>
</tr>
<tr>
<td>3</td>
<td>Wolf Point, MT</td>
<td>Ulysses, KS</td>
<td>Roswell, NM</td>
</tr>
<tr>
<td>4</td>
<td>Oakley, KS</td>
<td>Houghton, MI</td>
<td>Dodge City, KS</td>
</tr>
<tr>
<td>5</td>
<td>Battle Mt., NV</td>
<td>Rock Springs, WY</td>
<td>Carlsbad, NM</td>
</tr>
<tr>
<td>6</td>
<td>Presidio, TX</td>
<td>Sidney, MT</td>
<td>Gillette, WY</td>
</tr>
<tr>
<td>7</td>
<td>Scott City, KS</td>
<td>Pierre, SD</td>
<td>Del Rio, TX</td>
</tr>
<tr>
<td>8</td>
<td>Holcomb, KS</td>
<td>Spring Creek, NV</td>
<td>Clovis, NM</td>
</tr>
<tr>
<td>9</td>
<td>Tonopah, NV</td>
<td>Marquette, MI</td>
<td>Lewiston, ID</td>
</tr>
<tr>
<td>10</td>
<td>Lakin, KS</td>
<td>Ishpeming, MI</td>
<td>Butte, MT</td>
</tr>
</tbody>
</table>

Note: Populations are as of 2012-16. Town sizes are based on populated places; travel is measured from their centerpoint. With the exception of Canadian border cities, city sizes are based on metro and micropolitan areas; travel is measured based on distance from any spot in their territory with a density of above 1,500 per square kilometer.

Sources: Malaria Atlas Project (travel); Census Bureau (cities); NASA (density, Canada, Mexico)

THE WASHINGTON POST
155 miles or 2.5 hours
Many of these births occurred in workforce-stressed settings.
KANSAS POPULATION DENSITY PEER GROUPS

Kansas Defines “rurality” by the following population densities:

- 36 Frontier Counties - less than 6 persons per sq. mile
- 32 Rural Counties - 6 to 19.9 persons per sq. mile
- 21 Densely-Settled Rural Counties - 20.00 to 39.9 persons per sq. mile
- 10 Semi-Urban Counties - 40 to 149.9 persons per sq. mile
- 6 Urban Counties - 150+ persons per sq. mile
2,457 (6.3%) of births occurred in frontier or rural hospitals (KDHE, 2013)
ABOUT OBSTETRICIANS IN KANSAS

- Mostly located in the top 25 most populated counties
- There are no OB/GYNs in the 36 frontier counties in Kansas
- There is 1 OB/GYN in a rural county of the 32 rural counties
3,132 (8.1%) women had to drive to another county to deliver, 2013
HOME BIRTH IN KANSAS
BACKGROUND FOR THE STUDY
BACKGROUND AND PURPOSE

- There is a maldistribution of access to maternity care in Kansas.
- Kansas has some of the most remote towns in the nation.
- There are anecdotal reports of women were driving up to 150 miles to access prenatal care and delivery services.
- The purpose of our research is to identify barriers to adequate prenatal care and explore potentially health consequences to mother and infant.
- There has not been a previous comprehensive work of this kind for Kansas.
ISSUES ADDRESSED

- Barriers to providing obstetrical services in rural and remote areas are multifaceted and, as yet, poorly defined for Kansas in the literature.
- Our study looked to define the barriers.
- We believe that rural and frontier physicians are stopping their OB practice despite the need for OB care. We explored why.
- We profiled current OB services in Kansas.
- We examined projections for future OB care.
- We explored the reasons listed for stopping OB services.
METHODS

Data Collection

- Student volunteers on rural summer rotations made cold calls to FM and OB doctors registered with the Kansas State Board of Healing Arts (2016-2017)
- Survey included 70 items, multiple choice & open-ended

Data Analysis

- Descriptive statistics & demographics of respondents
- Item response descriptives
- Qualitative analysis of responses to open-ended items
KEY FINDINGS

- Maldistribution of OB Services and identification of OB Deserts
  - 3,132 (8.1%) women traveled from their home county to deliver their baby
  - According to Kansas Vital Statistics, of the 332 FM and 24 OBGYN in non-urban counties in Kansas, 138 had signed a birth certificate in the last year.
- 42 (32%) of overall completed our survey. But, in frontier counties, 18/20 (90%) of the FM-maternity providers completed the survey. 21/45 (47%) of rural completed survey.
- 33% of frontier, 45% of rural and 37% of DSR family physicians currently providing OB services are planning on retiring in the next 4-7 years.
- 77% of those who stopped are male (69% of respondents were male), implying that males are stopping at a faster rate.
- Reasons cited for stopping were based somewhat on rurality of practice with lack of cross coverage and issues with hospital support as primary concerns. 70% of all respondent physician perform their own C-sections.
- 51% of respondents were interested in telemedicine.
- 29% of respondents had returned to their hometown to practice.
82% in Frontier and Rural and DSR Counties

Age 54

Age 47

25/38 (66%) attended KUMC

RETURN TO HOMETOWN
38/131 physicians (29%) have returned to their hometown to practice.
WHO RESPONDED

Respondents by Peer-Population Density Group

- Count
- Vaginal Delivery
- C-Sections

Bars for different groups (F, R, DSR, SU) with varying counts.
FAMILY MEDICINE DOCTORS THAT PROVIDE SVD AND C/S

<table>
<thead>
<tr>
<th></th>
<th>SVD + C/S</th>
<th>SVD Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>R</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>DSR</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>SU</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>
BY THE NUMBERS

64% Of respondents currently practice obstetrics

46 Average age of respondents currently practicing OB

46
AGE, GENDER, SPECIALTY DESCRIPTIVES:

![Age Distribution by Population Density](image1)

![Gender Distribution by Population Density](image2)

![Specialty by Population Density](image3)
Access to obstetrical care in Kansas is headed for a major crisis in the next 4-7 years. The issue is much more acute in frontier and rural counties. Retirement is the main issue but stresses from lack of support and low volumes were also cited as reasons for stopping. The reason men are stopping at a higher rate than women could not be elucidated from this survey.
FINDINGS: REASONS FOR QUITTING

The top reason for discontinuing OB practices were that the coverage was not offered at the local hospital. These reasons varied between not having another physician to help take the call required for OB, and the hospital not staffing surgeons in case the birthing process required a cesarean section. In the Densely Settled Rural areas, the top reason was due to low volume of patients, and therefore, not being able to afford the high malpractice costs.
RESPONSES FROM WOMEN
“HOW HAS PRACTICING OBSTETRICS IMPACTED YOU?”
MEN CURRENTLY PRACTICING: “MAIN REASONS THAT YOU PROVIDE OBSTETRICAL SERVICES IN YOUR AREA”
FINDINGS: INTEREST IN TELEMEDICINE FOR CONSULT

Interest in TeleMed and ECHO for Challenging OB Cases by PDPG
(1=no interest 5=very interested)

<table>
<thead>
<tr>
<th>PDPG</th>
<th>TeleMed</th>
<th>ECHO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONTIER</td>
<td>3.3</td>
<td>3.7</td>
</tr>
<tr>
<td>RURAL</td>
<td>2.9</td>
<td>2.5</td>
</tr>
<tr>
<td>DSR</td>
<td>2.8</td>
<td>2.4</td>
</tr>
<tr>
<td>SEMI-URBAN</td>
<td>2.9</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Interest in TeleMed and ECHO for Challenging OB Cases by Age Cohort
(1=no interest 5=very interested)

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>TeleMed</th>
<th>ECHO</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-39 YRS</td>
<td>3.2</td>
<td>3.9</td>
</tr>
<tr>
<td>40-49 YRS</td>
<td>2.6</td>
<td>3.1</td>
</tr>
<tr>
<td>50-59 YRS</td>
<td>2.1</td>
<td>2.4</td>
</tr>
<tr>
<td>60-69 YRS</td>
<td>2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>70+ YRS</td>
<td>2.0</td>
<td>1.3</td>
</tr>
</tbody>
</table>
COULD GENERAL SURGEONS OFFER C/S SUPPORT?

Not found in the OB Deserts, but...
Currently offering some backup which helps
Overall, need more general surgeons in frontier and remote Kansas
SO NOW WHAT...

More OBG – Limited to cities of larger size due to number needed to maintain practice. In Kansas these cities are the top 25 most populated and not in the OB deserts.

CNMW – Limited in Kansas to collaborative practice. Located in the same larger towns and FM-Mat not aware of any that practice in their area.

Midwives – There were only 336 deliveries. Respondents were unaware of local practicing Midwives. Hard to say how many of the 393 home deliveries were attended by a midwife. Most in counties where OB services are available.

Tele-med – Some interest in decision support. Not much use for delivery.

More FM-Mat – This is being actively pursued by residency programs in the state. Also there are active recruitment programs.
SO NOW WHAT...

More women drive to get OB – Likely going to be the case. Need to carefully monitor the potential for impact on birth outcomes.

PNC clinics in remote areas – Could be a possible remedy. Would likely need to be state sponsored.
NEXT STEPS

- Hospital Survey
- Patient Focus groups
- Study relationship between distance driving and birth outcomes