Obstetrical Services Survey of Rural Kansas Physicians

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(Presented at: 2017 AAMC Annual Workforce Research Conference)
There are no financial disclosures to report for this research project.

- We submitted the abstract with preliminary data analysis.
- Upon further review of the data, we noted duplications in survey responses.
- The data has been cleaned, and we are presenting the updated information today.
A maldistribution exists between urban and rural areas; the ratio of physicians to 100,000 population in rural areas is approximately one-half of that of urban areas (209.6 urban versus 113.2 rural). Significant variation also exists within rural designated counties. Kansas is a largely rural state with 68 of 105 counties designated as rural and frontier and an additional 10 counties designated as “densely settled rural.” In Kansas, large rural counties have a total physician to 100K population ratio of 146.9 and isolated, small rural areas have a ratio of 52.3, which is well below the averages listed in other states [17].

**Red** = frontier
**Purple** = rural
**Green** = densely settled rural
**Ligth green** = semi-urban
**Tan/Brown** = urban
Pilot Study Revealed Significant Issues in OB Access

A pilot study in 2014 surveyed 30 FM/OB Physicians in rural/frontier practice.

Comments revealed some disturbing issues

Some patients drove 150 miles for OB care
Some FM/OB providers said they were thinking about stopping OB care
Some stated that their hospital planned to stop OB
It takes 1.5 hrs to drive from Tribune, KS to the nearest Hospital in Garden City, KS

- Range of distances traveled surveyed: 0-150 miles
- Roadside deliveries and complications imposed by this are at increased risk
This map shows the number of births in hospitals with NO OB/GYN in the county.

- **Red counties** = more than 20
- **Blue counties** = less than 20
- **Green counties** = 1

2,457 (6.3%) of births occurred in frontier or rural hospitals (KDHE, 2013)
Counties in KS that have zero (red), 1 or 2 physicians of any specialty. Physicians in these states tend to be family physicians.
Map Shows:

- Counties where surveys were completed for this data set
  - note that this follows the same distribution of the previous 2 maps
    - 1) birth in hospitals with no OB/GYN
    - 2) counties with only 1 or 2 physicians

Survey respondents per county designation
- Frontier = 25
- Rural = 26
- Densely settled rural = 27
- Suburban = 16
- Urban = 2
Purpose of our study:

Survey physicians in rural and frontier settings to better understand the issues surrounding access to obstetrical services in Kansas.
Methods

- Cross-sectional study of Rural Physicians in KS practicing Family Medicine and OB
- Mixed-method survey administered either in person, by phone or web-based in summer 2016
  - Demographics (8)
  - Quantitative (19)
  - Qualitative Items (6)
- Sampling
- Analysis

- Survey administered in Summer of 2016 by students on an elective rural, clinical rotation.
- Survey elements include demographic information about the physician, quantitative items regarding practice, and qualitative items regarding reasons for changes in practice.

Plans to make prospective study, plans to revise ad repeat survey administration this summer (2017) (The remaining 432)

Cross-sectional study is a snapshot of MDs practicing OB in KS
- Obtained a list of Family Medicine & OB/GYN physicians from the Kansas State Board of Healing Arts, excluding physicians practicing in urban/suburban counties
- Students attempted to contact all physicians on the list with the resulting sample of 96 respondents (N=96)
Blue is male and red is female respondents by birth year
1965 birth year was first year seeing increased female physicians in respondent group

Demographics data (not sure how we want to represent this in graph form)
  Gender
    Males = 64
    Female = 32
  Ethnicity:
    99% of respondents were caucasian
Results

- 53 of 55 perform vaginal deliveries as part of OB care
- For Physicians doing C-sections
  - 41 of 55 do C-sections
  - 29 physicians (53%) report being the only provider for C-sections
  - 26 respondents have C-S coverage through either FM partners or OB/GYN
  - 5 of 55 (9%) report referring to General Surgery for C-sections

- 53/55 respondents report performing vaginal deliveries

C section data:
- 41/55 (74.5%) physicians surveyed stated they perform C-sections
- 5/55 (9%) report referring to General Surgery for C-sections

PDPG = Population Density Peer Groups
Results

81 of 96 respondents have provided OB services in their career
26 of 96 respondents have already stopped
55 of 96 respondents continue to provide OB services
17 out of 55 (31%) currently providing OB care in rural and frontier Kansas stated they plan to stop in the next 5-7 years
9 hospitals have stopped providing OB care/delivery

-Distance travelled: Range 0-150 miles
-15/96 (16%) physicians surveyed never started providing OB Care
-17/55 (31%) of the physicians interviewed currently providing OB care plan to stop in the next 5-7 years
-9 hospitals have stopped providing OB care/delivery and 3 hospitals plan to stop providing OB care/delivery
In the next 5-7 years there will be significant challenges to meeting access need for rural women seeking OB care
Results from the qualitative analysis were aggregated and analyzed as a whole using QDAminer™. This slide shows top 50 terms clustered using the jaquard index. Colors represent clusters, proximity of bubbles represent proximity of word use and overlapping bubbles contain words that were used in same phrase. Size of bubble correlates with the frequency of work use. Major themes reflecting original questions (why did you stop, what do you like about doing OB) Some groups show representative experience of the surveyed physicians and deserve further analysis. Reasons for quitting more tightly clustered - so the reasons for physicians stopping to do OB were more frequently heard together.
Brown clusters
- show reasons why physicians stopped providing maternity care
  - Time and time constraints, issues related to call →
    - most frequently cited***

Red clusters on the left
- Lifestyle and family issues
  - Vacation
  - Family commitments
  - Time demands

Purple on the right
- Systems/environment
  - Lack anesthesia
  - Lack of C-section coverage
  - Lack of support
  - Lack of provider
  - ***overlaps with call/time

Green clusters
- Why they provide OB care
  - ENJOY!!!
  - Rewarding
  - Service
  - Relationships with patients
Major point = 17/55 (31%) of respondents who currently provide OB care plan to stop within 5-7 years

- Reasons
  - Personal stress and family issues
  - Cross-coverage barriers
    - Lack of anesthesia call
    - Lack of partner cross coverage
    - Lack of C-section coverage
  - Time constraints
    - Family commitments
    - Lack of personal time (e.g. vacations, relaxation)
    - Always on call

Positive factors reported in the study:
- Rewarding and enjoyable experience
- Community need
- Building relationships with patients
- Keep practice young
- Maintain skills
Limitations and Opportunities for Future Research

Limitations

Small sample size limits our ability to generalize this data to the Kansas OB physician workforce.

Future Research

Administer this survey to more rural FM/OB physicians to expand our number of respondents and better understand the issues surrounding OB access in Kansas.
There is a storm on the horizon. Can we make it down the road to eliminate issues in OB access?