Introductions

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- Medical Director - MAHEC Family Health Centers
- Co-chair, Clinical Workgroup, National Preconception Health and Healthcare Initiative
Learning Objectives

- **Review** and discuss the number and type of health care and maternity care providers in rural Western North Carolina.
- **Describe** the financial, liability, geographic and demographic issues influencing rural hospitals decisions to provide such services.
- **Discuss** the concerns of families in seeking care during pregnancy
- **Describe** the role of family medicine in meeting rural community needs for obstetrical services
- **Review** the effect of medical students and family medicine residents in providing maternity services in rural communities.
Frame Problem

North Carolina has 22 counties where you can’t be born
North Carolina Hospital Closings

- **Pitt County, Belhaven, NC.** Owned by Vidant Health and closed 7/2014. Opening a multispecialty clinic this year in Belhaven.
- **Cherokee County, Murphy, NC Andrews Hospital** – wasn’t a merger but a Chapter 11 acquisition. Andrews Hospital was acquired around 2000 but didn’t officially close until around 2002.
- **Yadkin County, Yadkin Valley Community Hospital.** It was critical access and closed around May, 2015.
- **Blowing Rock Hospital in Blowing Rock, NC** converted to a skilled nursing center in 2013.
- **Franklin Medical Center, Louisburg, NC,** closed 10/2016 – owned by Novant
- **Transylvania Regional Hospital, Brevard, NC** stopped doing deliveries June 2015
- **Avery County, Cannon Memorial Hospital, Linville, NC** stopped doing deliveries October 2015
Perinatal Care

Obstetric and Delivering Family Practice Providers

System Affiliation
- BRHC
- CHS
- Independent
- MAHEC
- MedWest
- Mission
- None
- Pardee
- Park Ridge
- UNC
- WestCare

Total Ob-Gyn
- 0
- 31
# Female Population - Child-Bearing Years

<table>
<thead>
<tr>
<th>County</th>
<th>State</th>
<th>2013 Total Population</th>
<th>2013 Females 18-44</th>
<th>2018 Females 18-44</th>
<th>2013-2018 Growth</th>
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</thead>
<tbody>
<tr>
<td>Avery</td>
<td>NC</td>
<td>17,293</td>
<td>2,420</td>
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<tr>
<td>Buncombe</td>
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<td>42,424</td>
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<td>13,880</td>
<td>13,693</td>
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<tr>
<td>Cherokee</td>
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<td>26,884</td>
<td>3,551</td>
<td>3,421</td>
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<tr>
<td>Clay</td>
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<td>1,311</td>
<td>1,288</td>
<td>-2%</td>
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<tr>
<td>Graham</td>
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<tr>
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<td>Henderson</td>
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<td>15,193</td>
<td>15,373</td>
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<td>Jackson</td>
<td>NC</td>
<td>40,282</td>
<td>8,087</td>
<td>7,975</td>
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<tr>
<td>Macon</td>
<td>NC</td>
<td>34,240</td>
<td>4,453</td>
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<tr>
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<tr>
<td>McDowell</td>
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<td>45,213</td>
<td>6,921</td>
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<tr>
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<tr>
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<td>Yancey</td>
<td>NC</td>
<td>17,551</td>
<td>2,481</td>
<td>2,417</td>
<td>-3%</td>
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</table>

- Declining population of women of child bearing age
  - Declines in immigration
  - Smaller family size
- Total birth volume fell during recession
- Likely 10 years until volumes reach past high in 2007
Factors Influencing Rural Delivery Services

- Location
- Delivery Volumes
- Obstetric, Pediatric, Anesthesia and Surgical services
- Risk
- Financial
- System support
# Mission Women’s Health

**Obstetrics and Newborn Care**

<table>
<thead>
<tr>
<th>Hospital</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>YTD FY16</th>
<th>FY09-15 Trend</th>
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<td>Angel</td>
<td>227</td>
<td>193</td>
<td>159</td>
<td>162</td>
<td>209</td>
<td>220</td>
<td>389</td>
<td>208</td>
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<tr>
<td>Blue Ridge</td>
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<td>126</td>
<td>157</td>
<td>138</td>
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<td>174</td>
<td>80</td>
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<tr>
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<td>113</td>
<td>113</td>
<td>166</td>
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<td>218</td>
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<td>Mission</td>
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<td>3,739</td>
<td>3,770</td>
<td>3,799</td>
<td>3,854</td>
<td>3,946</td>
<td>4,103</td>
<td>2,055</td>
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<tr>
<td>Transylvania</td>
<td>143</td>
<td>135</td>
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<td>138</td>
<td>122</td>
<td>127</td>
<td>70</td>
<td>5</td>
<td></td>
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</tbody>
</table>

Source: Strata FY09-FY16
WNC Outreach and Support

- Engagement in reaching out to support rural FM and OBs to assist with call/education (Linville, Franklin, etc.)
- Engaging FM to provide additional call coverage and newborn resuscitation
- ALSO Program
- Birth center support
- The OB fellowship – MCH fellowship for the future
- The Rural Educational Initiative in development
Barriers

- Hospital bias towards OB and Pediatric care providers
- Credentialing turn around
- Payment models
- Stark and anti-kickback laws
- Systems to manage high risk populations
Neonatal Abstinence Syndrome (NAS)
Mission Hospital Volumes

Rx Treated Neonatal Abstinence Syndrome (NAS)
Mission Hospital Volumes

Source: Strata (Cerner)
ICD9 DX (2010-2015): 779.5 - Drug withdrawal syndrome in newborn
ICD10 DX (2016): P96.1 - Neonatal withdrawal symptoms from maternal use of drugs of addiction
Keys to Success

- Design a regional strategy
- Build relationships with communities and hospital leadership
- Build partnerships among OB, Surgery, Pediatrics and Family Medicine physicians and APs
- Align training programs with community needs
- Engage faculty and learners in problem solving around regional needs.
Training for Rural Practice

- Well established national shortage of physicians practicing in rural areas
- In NC, mal-distribution of physician workforce is most pressing issue:
  - Physicians are concentrated in academic medical centers and urban areas leaving the western and northeastern regions underserved
- As a Family Medicine Residency, how do we respond?
There is No “Silver Bullet”

- Rural Training Tracks (RTT) have developed as a strategy to provide FM residents with rural exposure and to encourage residents to become rural practitioners
- “1+2” model
- While RTTs have seen some success in increased rural placement, the cons can outweigh the pros
- Residency programs need multi-faceted approach
Recruitment vs. Retention

These are two distinct issues
Incorporating Other Strategies

1. Decentralized Training
2. Amount of rural training in residency
3. Pipeline programs
4. Support for FM residency grads via Fellowship Programs
5. Retention strategy
   1. Opportunity to teach
   2. Increase regional collegiality
Decentralized Training

- 56% of family physicians stay within 100 miles of where they attended residency
- Policy implication: decentralized training helps ameliorate the mal-distribution of family physicians in the US
- Realizing this implication has helped advocates of FM to lobby for funds to support Teaching Health Center residency slots
Rural Training During Residency

- Increased exposure to rural training results in higher likelihood of practicing in rural setting
- Exposure helps prepare residents for challenges of rural medicine and culture, debunk unwarranted preconceptions, and helps resident develop a “rural identity”
- The Inoculation Effect - How much time is enough time?
  - 8 weeks over 3 year residency good baseline
Developing a Rural Identity

- Rural upbringing
- Clinical exposure in school, college
- Medical school and residency admissions favor rural upbringing, rural identity, and underserved focus
- Medical school and residency includes rural rotations, the longer the better, and community engagement activities
- Medical school and residency located rural, have a rural mission, have rural faculty and mentors, train learners in rural living and community leadership

Figure 1: Factors Encouraging Rural Physician Recruitment and Retention

RURAL EXPOSURE

- In residency: training in OB, procedures, emergencies/trauma
- Spouse’s rural upbringing
- Desire for breadth of practice
- Desire for clinical autonomy

RURAL IS A GOOD FIT

RURAL IDENTITY

Rural Placement
- Financial incentives
- Option to work part-time
- Recruit in pairs or teams to keep call manageable

Rural Retention
- Integration into community socially, civically, professionally
- Good fit for whole family (spouse’s work, school, recreation, socially)
- Reasonable call
- Comfort with trauma, broad scope of practice
- Peer support
- Continuing education
Pipeline Programs

We know that if you’re from a rural community, you’re more likely to practice in a rural community.
Opportunities for Exposure

Middle School
- GEAR UP
  - Exploration Station (WAKE AHEC)

High School
- ETSU-Med Camp
  - ASU-Future Doctors & Scientist Camp
  - UNC-Healthy Career Day
  - MAHEC/UNC-A-Future Leaders in Healthcare
  - WAKE-Mini Med School
    - Project PROMISE

College
- ARC Internship
  - WAKE-Mini Med School

Medical School
- Kenan Primary Care Medical Scholars
  - Primary Care & Population Health Scholars Program
    - Fully Integrated Readiness for Service Training (FIRST)

Residency/Fellowship
- MAHEC-Family Medicine Residency

Placement
- Blue Ridge Regional Hospital
  - Celo Health Center
    - Mission Family Medical
    - Bakersville Health Clinic
    - Grassy Creek Urgent Care
    - Mountain Medical Arts
Rural Fellowships

- When polled, 50% of recent FMRP grads expressed the intention to practice a broader scope (inpatient, OB) than their peers from other disciplines
- However, there is a discrepancy b/w intention and what FM docs actually practice
- What is cause of this discrepancy?
  - Lack of support when out of residency
  - Lack of preparation for certain skills/procedures
- Using Fellowships to address problem
Retention Strategy

- We cannot look at recruiting/supporting current FM residents alone
- Must also engage rural physicians and listen to their needs
- Offer opportunities to educate to reduce burnout
- Increase regional collegiality
Learners Providing Maternity Service

- Rural hospitals need providers to do newborn stabilization, (NRP)
- MAHEC FM residents want to practice in these settings and be able to perform NRP but some feel uncomfortable doing so by themselves
- Solution → Start a Maternal Child Health Fellowship
  - Will provide more NRP opportunities and high-risk OB
References

References, contd.


References, contd.


Thank You

For more information please contact
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Karen.Hyman@MAHEC.net