Curriculum Design for Rural Programs
Randall Longenecker MD
Assistant Dean Rural and Underserved Programs
Ohio University Heritage College of Osteopathic Medicine
It’s all about the **place**!
It’s all about the place!
...and adopting an organic approach
Place-based education

“A strategy that starts with place holds promise for a more organic, ecological and sustainable enterprise - medical education conceived, birthed, shaped and nourished in rural communities.”

Longenecker, *Rural Medical Education: Practical Strategies*, 2011
Participants will be able to:

- Articulate at least 3 principles for place-based education, and applying the rules of accreditation in a unique rural place

- Describe a number of current and proposed innovations, including:
  - Longitudinal integrated clerkships, and rural streams in other specialties,
  - Integration of telemedicine and tele-education,
  - Virtual rural grand rounds
Challenges and Opportunities

- What makes curricular design for a rural place challenging?
- What opportunities do these challenges present?
Challenge

- Inexperience

Opportunity

- Learning together; teaching each other – ever the mind of a novice

- Active experimentation
Challenge

- Low volume of cases

Opportunity

- Longitudinal curricula
- Expanded scope of rotation
- Rolling jeopardy and home call (“capture the learning”)
**Hospital Care**

Duty hours begin at 0630

Revised 11-9-2010

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>6:30 AM Hospital Rds. Mon-Sat.*</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
</tr>
<tr>
<td>Noon</td>
<td>Teaching Rds</td>
<td>Peds Teaching Rds</td>
<td>Residency Conf.</td>
<td>Clinical Jazz</td>
<td>Staff Mlg</td>
<td>Emerg. Med.**</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>6 hours</td>
<td>Emerg. Med.**</td>
<td>1:30-2:30 CL Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 2</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>6:30 AM Hospital Rds. Mon-Sat.*</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
</tr>
<tr>
<td>PM</td>
<td>6-10 hours</td>
<td>Emerg. Med.**</td>
<td>1:30-2:30 CL Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 3</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>6:30 AM Hospital Rds. Mon-Sat.*</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
</tr>
<tr>
<td>Noon</td>
<td>Teaching Rds</td>
<td>Emerg. Med.**</td>
<td>Rural Grand Rounds</td>
<td>Clinical Jazz</td>
<td>MedNet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>6-10 hours</td>
<td>Emerg. Med.**</td>
<td>1:30-2:30 CL Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 4</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>6:30 AM Hospital Rds. Mon-Sat.*</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
<td>MRH</td>
</tr>
<tr>
<td>Noon</td>
<td>Teaching Rds</td>
<td>OB Teaching Rds</td>
<td>Practice Management</td>
<td>Pract Mlg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Morning Report @ 7:15
**Scheduling hours, even the scheduled day, is somewhat flexible; encouraged to go home by 8:30 PM, must be off duty by 10:30 PM
Challenge
  - Few faculty

Opportunity
  - Expanded scope of practice
  - Continuity of relationship
Challenge

- Small number of learners

Opportunity

- Interprofessional education
- Apprenticeship; individualized education
- Field trips
- Faculty keep up their skills
Challenge

- Distance

Opportunity

- Autonomy
- Telemedicine and tele-education
- Travel
Place-based education

- Starts with a rural place and it’s assets
- Uses various models, options for program design, modified rather than imposed upon the local context (organic medical education)
Place-based education

- Follows a developmental process that is community engaged, i.e. Community Engaged Medical Education (CEME)
  
  **CERE-R**: CEResidencyE for Rural Places

- The intention is not to circumvent the rules of accreditation, but to know them so well that you will be able to creatively adapt them to the rural context

RTC 2016
### The OSU Rural Program – Three Year Curriculum

Intensive immersion experiences embedded in a continuing rural practice

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>Hospital Care (Shared)</th>
<th>Hospital Care</th>
<th>Pediatrics</th>
<th>Hospital Care (NRP)</th>
<th>Special Care Nursery</th>
<th>OB – Newborn</th>
<th>Hospital Care</th>
<th>Cardiology</th>
<th>Hospital Care (Wound Healing)</th>
<th>MICU</th>
<th>ICU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MRH</td>
<td>MRH</td>
<td>ORL</td>
<td>OSUH</td>
<td>MRH</td>
<td>MRH</td>
<td>OSUH</td>
<td>MRH</td>
<td>MRH</td>
<td>OSUH</td>
<td>OSUH</td>
</tr>
<tr>
<td></td>
<td>2 Half-days</td>
<td>2 Half-days</td>
<td>1 Half-day</td>
<td>2 Half-days</td>
<td>1 Half-day</td>
<td>2 Half-days</td>
<td>1 Half-day</td>
<td>2 Half-days</td>
<td>1 Half-day</td>
<td>2 Half-days</td>
<td>1 Half-day</td>
</tr>
</tbody>
</table>

**Mad River Family Practice – Periodic office patient care, daily hospital rounds**

<table>
<thead>
<tr>
<th>Scholarship</th>
<th>Activity</th>
<th>Elective</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


**Mad River Family Practice – Periodic office patient care, daily hospital rounds, and Community Medicine**

<table>
<thead>
<tr>
<th>Ambulatory and</th>
<th>GYN</th>
<th>Elective</th>
<th>Surgical Subspecialties – Ophthalmology, ENT, Urology, Podiatry</th>
<th>Elective</th>
<th>Sports Medicine</th>
<th>Elective</th>
<th>Medical Sub-specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 3</th>
<th>Geriatrics, Physical Medicine, and Psychiatry</th>
<th>GYN</th>
<th>Surgical Subspecialties – Ophthalmology, ENT, Urology, Podiatry</th>
<th>Elective</th>
<th>Sports Medicine</th>
<th>Elective</th>
<th>Medical Sub-specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td>Office</td>
<td></td>
</tr>
</tbody>
</table>

**Mad River Family Practice – Periodic office patient care, daily hospital rounds, Practice Management and Community Intervention**

<table>
<thead>
<tr>
<th>Scholarship</th>
<th>Activity</th>
<th>Elective</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
<th>Office</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Gray shaded rotations occur at least in part in Columbus, Ohio |

“Intensive immersion experiences embedded in a continuing rural practice”
The OSU Rural Program – Three Year Curriculum

Intensive immersion experiences embedded in a continuing rural practice

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hospital Care</td>
<td>Hospital Care</td>
</tr>
<tr>
<td>MRH</td>
<td>MH</td>
<td>OHC</td>
</tr>
<tr>
<td></td>
<td>Half-days</td>
<td>Half-days</td>
</tr>
<tr>
<td>Mad River Family Practice – Periodic office patient care, daily hospital rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Half-days</td>
<td>2 Half-days</td>
<td>1 Half-day</td>
</tr>
<tr>
<td></td>
<td>Ambulatory Cardiology</td>
<td>Elective</td>
</tr>
<tr>
<td>MRH/Off.</td>
<td>MH</td>
<td>MRH</td>
</tr>
<tr>
<td></td>
<td>4 Office Half-days</td>
<td>0-4 Half-days</td>
</tr>
<tr>
<td>Mad River Family Practice – Periodic office patient care, daily hospital rounds</td>
<td>Scholarly Activity and Community Medicine</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Practice Management and Community Intervention</td>
<td></td>
</tr>
<tr>
<td>0-4 Half-days</td>
<td>5 Office Half-days</td>
<td>8 Half-days</td>
</tr>
</tbody>
</table>

[Gray shaded rotations occur at least in part in Columbus, Ohio]
Methods

- Emergent curricular strategies
- Longitudinal design
- Tele-education
Methods – Emergent Curricula

- Self-organizing
- Experiential education: The “curriculum walks through the door”
- Examples:
  - BlackBoard with students in Australia
  - Clinical Jazz
- Key is documentation
How do you begin to build trust in Someone who is so mistrustful of the medical profession?
Minimal structure

- Jotter draws a case in context and tells the story.
- The group then explores the case and clarifies the question.
- Reframes the question into a useful one.
- Interacts around it, and in the end.
- Comes up with an actionable clinical pearl, specific to the jotter’s question, and then, generalizable to practice.
Opening

Describe the Case

Pose a Question

Explore the Case

Divergent thinking; Open-ended questions
Closing

“The Action Turn”

Reframe the Question

Answer the question

Arrive at Clinical Pearl

Convergent thinking; “What if” and “How” questions; Solution statements
What is the realistic scope of practice for a Family Doc?

How do I find the outer boundaries of Family practice and realize my vision?

- You can do whatever you want. Just not everywhere.
- Talk to people
Keywords

- specialty choice
- watch what you say
- reputation
- primary care
- professional identity
- respect
- primary care status
- perspective
- perception
- motivational interviews
- choose words wisely
- image
Methods – Longitudinal Design

- Clinical Longitudinal Integrated Clerkship
  - Students meet curricular requirements longitudinally, rather than in separate blocks
  - Students are attached over time to a continuing preceptor, in the same place, either continuously, or intermittently
- Examples: Minnesota RPAP, Montana TRUST, “Mini-LIC,” RTT’s

RTC 2016
Methods – Distance Education

- Weekly didactics
- Virtual Grand Rounds
- Telemedicine married to tele-education, ECHO Style (an expert on both ends of the connection), e.g. as proposed in Sulphur Springs, TX
Methods – Distance Education

“A unique aspect of the year two/three curriculum is the subspecialty education in neurology, endocrinology, pulmonology and psychiatry (NEPP).

Each block (4 weeks)...provides six full days of neurology, four days of endocrinology, two days of pulmonology and two full days of psychiatry. Residents have two NEPP blocks in year two and three blocks in year three.”

Leslie M. Tingle MD, Developing RTT, Sulphur Springs, TX
Methods – Distance Education

“Each week, three of the seven specialty clinic half days are conducted in the telemedicine format and four are traditional live clinic consultations with the preceptors on-site. MSCSS physicians also provide after-hours telemedicine consultations for our hospital patients, including those in the ICU.”

Leslie M. Tingle MD, Developing RTT, Sulphur Springs, TX
Summary

My intent in taking this approach is to develop and implement a plan that is:

- rooted in the fertile soil of rural practice and embedded in rural communities,
- deliberately designed to grow through the course of medical school and residency, and
- nurtured through “drip irrigation” and ongoing attention to the rural learning environment and the informal, as well as the formal, curriculum.
Discussion
References


- Strasser R; Worley P; Cristobal F; Marsh DC; Berry S; Strasser S; Ellaway R. “Putting Communities in the Driver’s Seat: The Realities of Community-Engaged Medical Education,” Academic Medicine 2015 Nov;90(11):1466-70.

- Community Engaged Residency Education for Rural Places (CERE-R)