All Aboard!

Set Sail on a New Course with a Longitudinal Integrated Curriculum for your OB/GYN Clerkship

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CONFLICT OF INTEREST

None of us and none of our spouses have any relevant relationships with any commercial interests related to this presentation.

No discussion of off-label/investigational use of a commercial product or device

“So, I’m the only one who sees a conflict of interest here?”
Objectives
CLIMB ABOARD
- Review present data on current models of OB/GYN in longitudinal curricula at other institutions
- Compare and contrast our three different longitudinal models with respect to how OB/GYN is incorporated

Objectives
Get Your Bearings
- Discuss unique benefits, challenges, and opportunities that the longitudinal OB/GYN clerkship provides
- Share strengths and challenges for OB/GYN at home institutions and brainstorm opportunities for improvement considering the models shared in the session.

Objectives
Take the Helm
- Participants will leave with the following:
  - Use of templates of three working OB/GYN longitudinal curricula
  - Understanding of challenges and opportunities specific to the OB/GYN clerkship in a longitudinal curriculum
  - Ideas for improvement in clerkship or curriculum design for their home institution
General Outcomes for Students in Longitudinal Curriculum

Brittany Papworth, MS IV
UNC School of Medicine Asheville Campus

Why LIC?

- Practice of medicine has changed
- “Hidden curriculum” or ethical erosion in the inpatient model
- Repetition of concepts over time
- Study results:
  - Same/better on measures of knowledge
  - Better on preservation of patient-centeredness
  - Work force development in underserved areas
Consensus Definition of LIC *

Longitudinal Integrated Clerkships are characterized by:

- Participation in the comprehensive care of patients over time
- Continuing learning relationships with patients’ clinicians
- Meeting the majority of the core clinical competencies across multiple disciplines simultaneously


Who has a LIC?

- Florida State University College of Medicine
- University of North Carolina*
- University of South Florida*
- University of California, San Francisco
- Harvard Medical School
- University of Hawaii

Institutions with Longitudinal Curricula
Longitudinal Students

- Students demonstrate:
  - Richer perspective on the course of illness
  - More insight into social determinants of illness and recovery
  - Increased commitment to patients

- Longitudinal Students specific to OB/GYN when compared to the traditional clerkship:
  - Higher student satisfaction
  - Higher performance in clinical skills testing
  - Students perform a greater number of pelvic exams and Pap smears when they are enrolled in a longitudinal curriculum.
  - Increased student observation and personal feedback

OB/GYN Match Impact

- "A higher proportion of students in the longitudinal integrated clerkship program matched into Ob/Gyn residency than from the traditional clerkship program. The longitudinal integrated clerkship at this academic medical center has resulted in overall higher student interest in Ob/Gyn. The longitudinal clerkship is an important approach to increasing recruitment in Ob/Gyn."– Lager (University of California, San Francisco).

OB/GYN in the 3rd year at UCSF

- PISCES Program Core Clerkship: one year at Aloma Bay, Alerta Zehr, and Lakeshore during which students care for their own panel of pregnant patients while working with the ob-gyn faculty preceptors over the year.
  - UCSD Longitudinal Experience: PISCES (Parnassus Integrated Student Clinical Experiences)
  - 3rd year students follow 50-80 patients for an entire year.

- Longitudinal Integrated Clerkship (LIC) where students work with Ob/Gyn faculty throughout the year.

- There are additional two-week clerkships after the core clerkship period.

- Additional Two-Week Electives: A- gynecologic oncology, reproductive endocrine or advanced obstetrics.

- Career meetings several times a year: logistics of how to match in Ob/Gyn, matching student dinner where matched students tell their interview stories, and dinner at faculty homes.

- Big Sib Mentoring program with residents available.
Andrea Currens, MD
MAHEC OB/GYN Clerkship Director

Serves Western North Carolina

- 3,500 births
- 51 bed Level III NICU
- 101,579 ER visits
- 13,479 annual inpatient/
  21,290 outpatient surgeries
- 38,131 admissions
- 1,579 ER visits

UNC School of Medicine
Asheville Campus

- Collaboration with UNC SOM, Mission Hospitals, MAHEC
- Started in 2009 with 4 students
- 10 students in 2012-2013 and 2013-2014
- 20 students for 2014-2015 and 2015-2016
- OB/GYN and surgery remained in traditional block (followed 2 longitudinal pregnant patients) until 2013 when OB/GYN became longitudinal
- Rural Scholars started in 2013
- 6 students chosen in winter and make up part of the 20 students
Structure of Longitudinal Program

- 12 weeks of inpatient
  - 10 students start on 10 week inpatient block
  - 5 weeks surgery (2 general, 2 rural, 1 subspecialty)
  - GYN/GYN Oncology surgery
  - Labor and delivery days or nights (another in the spring)
  - Neurology
  - Inpatient Medicine (another in the spring)
  - Inpatient pediatrics
  - 10 start on 10 week longitudinal ambulatory
- Cardiology, radiology, ER shifts scheduled intermittently
- Same preceptors half day/week (internal med, fam med, peds, psych) or every other week (OB/GYN and Neuro) in core specialties

<table>
<thead>
<tr>
<th>Number of weeks</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orientation</td>
<td></td>
</tr>
<tr>
<td>10 weeks</td>
<td>Inpatient weeks</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>18 weeks</td>
<td>Longitudinal</td>
<td>Inpatient weeks</td>
</tr>
<tr>
<td>1 week</td>
<td>Surgery shelf and OSCE</td>
<td></td>
</tr>
<tr>
<td>2 weeks (during below 27 weeks)</td>
<td>Remaining inpatient weeks (OB, Medicine)</td>
<td></td>
</tr>
<tr>
<td>27 weeks</td>
<td>Longitudinal</td>
<td></td>
</tr>
<tr>
<td>3 weeks</td>
<td>Holiday (winter and spring breaks)</td>
<td></td>
</tr>
<tr>
<td>Shelf exams</td>
<td>Every other week starting in March (OB, Psych, Ambulatory Med, Inpatient Med, Family Med, Neuro)</td>
<td></td>
</tr>
</tbody>
</table>
Other sessions

- Cardiology - ~18 sessions per student this year about 8 individual + echo and cath labs and then 6 case reports/ didactics sessions as group
- Radiology - 20 sessions per student
- ER - 3 five-hour shifts per month
- Ethics - once a month for each group of 10 students
- Monthly evening "Art of Medicine" sessions at a faculty home
- Monthly Master Clinician series - multidisciplinary case presentations

Why Longitudinal Programs Work

- Relationship and continuity of Ps
  - Preceptors, Patients, Place, Peers
- Autonomy/Authentic roles with patients
- White space/Flexibility of unscheduled half days for self-directed learning

INPATIENT BLOCK-RESIDENT TEAM

- OB DAYS
- OB NIGHTS
- GYN ONCOLOGY (and some benign GYN)
Longitudinal Outpatient block-FACULTY PRECEPTOR

• MAHEC faculty preceptor, Asheville community preceptor, or rural community preceptor
• A half day every other week (about 15 half days)
• Some students will have 8 full days through the year (rural sites)

Clinical Outpatient Opportunities

• Centering Pregnancy
• Genetics/Ultrasound
• Behavioral Medicine

Specialty clinics: Colposcopy clinic, Vulvar Clinic, Breast Clinic, Urodynamics, Pediatric/Adolescent GYN, Nutritionist

Early Outcomes of the Asheville Longitudinal Curriculum

Brittany Papworth, MS IV
UNC School of Medicine, Asheville Longitudinal Campus
Important Outcomes

- High Shelf and Step 2 scores
- Residency matches top choices
  - High primary care rate
- Wide variety of clinical exposure to patients
- Maintain empathy and patient centeredness (rather than “ethical erosion”)
- High student satisfaction

Outcomes of the Asheville Longitudinal Curriculum

- Compared UNC School of Medicine students completing Traditional Block Rotations (TBRs) with Longitudinal Integrated Clerkships (LICs)
  - Step 2 CK
- Subject Group
  - Asheville LIC students from 2009-2012 (n=27)
  - Chapel Hill TBR students who enrolled in 2007-2010
  - Propensity Score Matching established 27 matched pairs for comparison samples

Summary of Findings: Exams

<table>
<thead>
<tr>
<th>UNC SOM Traditional Block Rotation (TBR)</th>
<th>Asheville Longitudinal Integrated Curriculum (LIC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sample (n=54)</td>
<td>Selected comparison sample (p=27)</td>
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</table>

Note: At time of study, surgery and OB-GYN rotations followed a traditional block format.
**Summary of Findings: Clinical Logs**

<table>
<thead>
<tr>
<th>Course</th>
<th>Blocks</th>
<th>Duration</th>
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</thead>
<tbody>
<tr>
<td>Psychiatry</td>
<td>6</td>
<td>wks</td>
</tr>
<tr>
<td>OB</td>
<td>6</td>
<td>wks</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>6</td>
<td>wks</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>6</td>
<td>wks</td>
</tr>
<tr>
<td>Surgery</td>
<td>8</td>
<td>wks</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>8</td>
<td>wks</td>
</tr>
<tr>
<td>OBGYN</td>
<td>4</td>
<td>wks</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>4</td>
<td>wks</td>
</tr>
<tr>
<td>Neurology</td>
<td>2</td>
<td>wks</td>
</tr>
<tr>
<td>CLIC Classes</td>
<td>Twice</td>
<td>Weekly</td>
</tr>
<tr>
<td>Emergency</td>
<td></td>
<td>Department</td>
</tr>
</tbody>
</table>

*TBIR students fill out the log for each block and cannot change it once the block ends. In addition to core requirements, AVL logs also have space to record ethical concerns, which are subsequently discussed in small group sessions.*

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**CLIC**

Charlotte Longitudinal Integrated Curriculum

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**CLIC & Traditional - 3rd Year Schedule**

Longitudinal Curriculum - Sample Yearly Schedule

- Psychiatry
- OB
- Pediatrics
- Surgery
- Psychiatry
- OBGYN
- Pediatrics
- Neurology
- CLIC Classes
- Emergency Department
CLIC Weekly

Weekly Longitudinal Schedule (varies by student)

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatrics</td>
<td>Psychiatry</td>
<td>Neurology</td>
<td>Fam Med</td>
<td>Self Directed Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Directed Time</td>
<td>CLIC Thread</td>
<td>Internal Medicine</td>
<td>OB/GYN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 6-11pm (about once/week)
** Adult Emergency Dept inpatient weekend

Traditional OB/Gyn Clerkship

6 weeks total
- 2 weeks L&D days
- 1 week Nights
- 1 week Ambulatory
- Plus continuity resident ½ day per week
- 2 weeks Gyn Surgery
  - Either Benign or Onc

CLIC Ob/Gyn Curricular Details

- 3 weeks in-patient
- 28 weeks out-patient
- Attend delivery of continuity patients
- Open day on preceptor’s OR day
  - Attend surgery
CLIC Ob/Gyn Curricular Details

- 3 weeks in-patient
- 1 week L&D Days
- 1 week Nights
- 1 week Gyn Surgery
- 28 weeks LIC
  -½ day per week with preceptor
  -Usually office practice/ambulatory
  -May be OR, L&D, ultrasound, etc.

CLIC Evaluation

Evaluation of CLIC

- IRB Protocol submitted to evaluate:
  - CLIC vs. Traditional Block Curriculum (TBC)
    - Knowledge
    - Skills
    - Attitudes
  - Satisfaction of a CLIC vs. Traditional Preceptor
- Unanticipated benefits and challenges of CLIC
CLIC Evaluation of Students

Step II CLC Average Scores

Step II CLC Average Scores

Longitudinal Exposures (Residents over 1 Year)

Evaluation of the Clerkship

Traditional vs. CLIC Clerkship Evaluations

Shelf Scores

Family Medicine

OB/GYN

Surgery

Internal Medicine

Neurology

Pediatrics

Psychiatry

CLIC Score 2013-14

Traditional 2012-13

Traditional 2011-12

CLIC Score 2012-13

Traditional 2011-12

Traditional 2010-11

CLIC Score 2011-12

Traditional 2010-11

Traditional 2009-10
Course Grades

<table>
<thead>
<tr>
<th>Course</th>
<th>Family Medicine</th>
<th>OB/GYN</th>
<th>Surgery</th>
<th>Internal Medicine (inpt.)</th>
<th>Internal Medicine (outpt.)</th>
<th>Neurology</th>
<th>Pediatrics</th>
<th>Psychiatry</th>
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</thead>
<tbody>
<tr>
<td>Grade</td>
<td>0.00</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
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OSCE Scores

<table>
<thead>
<tr>
<th>Course</th>
<th>Family Medicine</th>
<th>OB/GYN</th>
<th>Surgery</th>
<th>CLIC</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>0.00</td>
<td>1.00</td>
<td>2.00</td>
<td>30.00</td>
<td>50.00</td>
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SELECT
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[Images and logos of clinical settings]
Primary Teaching Hospitals/ Affiliates

Tampa General Hospital

US News & World Report has ranked Tampa General Hospital as one of the top 50 hospitals in six medical specialties and the number three hospital in Florida nationally for 2015-16.

Moffitt Cancer Center

Moffitt Cancer Center was ranked as the number one cancer hospital in Florida, and number 18 nationwide, based on the U.S News Best Hospitals for Adult Cancer Care rankings.

USF - Tampa

Curriculum

- Primary Care
- FM, IM, Peds with Ambulatory Women's Health
- 12 weeks
- Maternal Newborn Care
- Inpatient for 4 weeks
- Surgery
- Gyn surgery (2 weeks)

Considerations

- Three opportunities to interact with the students
- No change in applicants to ob/gyn residency
Third year curriculum

- **Inpatient**
  - Adult Medicine
  - Neurology & Psychiatry
  - Women’s Health & Pediatrics
  - Surgical Care

- **Outpatient**
  - SELECT Curriculum ½ day per week

- Longitudinal primary care
  - Family medicine - yearlong
  - General pediatrics - 6 months
  - Internal medicine - 6 months

USF - Lehigh Valley

**Where is ob/gyn?**
- Women’s Health and Pediatrics
- Ambulatory women’s health in one 3 week outpatient segment of WHP
- Obstetrics in one 3 week inpatient segment of WHP
- Surgical care
  - Gyn surgery for one week of 3 week inpatient surgery segment

**Considerations**
- Ob/gyn is not part of longitudinal curriculum, but integrated throughout curriculum
- Students are questioning the true “integration” of women’s health and pediatrics
- Planning to undergo curriculum review and revision in the next year
Outcomes??

- Too new to tell
- Difficult to compare exam outcomes

GET YOUR BEARINGS

Where are you in this process?

A. Well established LIC
B. Pilot-tested LIC
C. Planning, but not implementing LIC
D. Just thinking about LIC
E. Hoping for ice cream
Small Group Challenge #1

- What do you see as the strengths/advantages of a longitudinal integrated curriculum?
- Opportunities to explore will include benefits of continuity of patients, preceptors, peers, and location.
- Consider advantages from the standpoint of the student, the patient, and the preceptor

Small Group Challenge #2

- What Challenges do you have/anticipate with a LIC?
- Challenges to consider include finances, preceptor recruitment and development, gender bias in preceptor pairing, scheduling, ensuring LCME comparability, and student selection
- Consider Challenges from the standpoint of the student, the patient, and the preceptor

Small Group Challenge #3

- Consider what it might take to implement a LIC such as one of these curricula at your institution.
  - What assets do you have to allow it to work?
  - What are the challenges you see?
  - Where/how does OB/GYN fit into LIC?
Panel Discussion

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References

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