LONGITUDES AND LATITUDES:
An Educational Map
That Fits Tight Schedules
Objectives

- Perform an assessment of resident and curricular needs to identify topics pertinent to residents medical knowledge and patient care responsibilities
- Visualize a longitudinal curriculum that incorporates ACGME competencies and how it can fit tight training schedules
- Understand the process for creating an online, clinically interactive curriculum and how this can be applied to office, inpatient, obstetric and other rotations.

Where We Started:

- Office Longitudinal Orientation
- Longitudinal Orientation book
- 30 minutes blocked out @ beginning of each clinic, 2 – 3 res/fac (once/week)
- Series of 28 articles/topics that covered medicine topics
- Residents had a check list to keep track of topics reviewed, fac signed off
Complications

- Carrying around big books
- Residents didn’t always have the article with them
- High rate of noncompliance with the program
- Faculty weren’t prepared for topic because they didn’t have ready access to the articles
- Residents worked with many different faculty, not just 1 or 2 who could monitor their understanding, grasp of the topic, and preparedness
- Different residents needed to cover different topics on same day with 1 faculty
- List got lost, faculty weren’t signing off on them

Needs Assessment

- Researched top 10 dx in FM
- Top 10 dx seen in our clinic, based on billing
- Survey to residents
- Faculty input
Challenges: Outpatient

1. ACGME requirements
   - Knowledge/skills not covered in rotations (MK)
     - Orthopedic exam
   - Some info not taught in rotations (MK, SBP)
     - Writing good notes
     - Death certificates
     - Handicapped parking permit
   - Start good self study skills to be maintained throughout their careers (PBL)
   - Foster familiarity with evidence-based resources (PBL)

2. Large service requirement
   - High volume patients
     - Had to see patients in 30 minutes or less
   - End of clinic busy with note completion

3. Patient care that meets recognized standards

4. Individual resident learning needs
   - Residents from varying backgrounds
   - Some residents out of medicine for 1 – 4 years prior to starting residency
   - Orientation at beginning of year is long enough, needed to incorporate more info spread out over time

5. Competing resident responsibilities
   - Residents coming from inpatient, outside rotations, can’t get there over lunch, call responsibilities start 5p

Content

- Created an outline of what needed to be covered
  - What did the resident need to know to function in our clinic?
  - What diagnoses were commonly seen in our clinic that all should be comfortable with?
  - What community supports did residents need to know about to help their patients?
  - Information that wasn’t well covered in other rotations that was important to the first year resident
The Solution: Modernize!

- Web based:
  - everyone can access all the time
  - link topics to articles available on line
    - Heavy use of AFP journal
  - Use our website for teaching
- Topic becomes the constant
  - everyone covers the same thing each week
  - All outpatient topics

The Solution: Modernize!

- Team based:
  - first years have clinic same afternoon each week
  - same few faculty work with a group of 2 -3 residents throughout the year (team faculty)
  - No one faculty overburdened with this responsibility
  - Residents get continuity with their faculty and still a little variety in teaching/style
  - Team learning fosters comfort level, becomes a discussion rather than a lecture
Addressing the Challenges: Curriculum Design

<table>
<thead>
<tr>
<th>ACGME</th>
<th>Competency</th>
<th>Milestone</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV.A.3</td>
<td>Program requirement</td>
<td>regularly scheduled didactic sessions</td>
<td>Weekly take 30min from each clinic session</td>
</tr>
<tr>
<td>IV.A.5.b</td>
<td>MK</td>
<td>demonstrate knowledge of broad spectrum of clinical disorders and apply to patient care</td>
<td>-Timing of discussion before clinic -can apply learning right away -Focus on spectrum of outpatient topics</td>
</tr>
<tr>
<td>IV.A.5.e</td>
<td>Prof</td>
<td>Resident...must demonstrate a commitment to carrying out professional responsibilities</td>
<td>-attendance -advance prep/read article</td>
</tr>
<tr>
<td>IV.A.5.d</td>
<td>ICS</td>
<td>...effective exchange of information and collaboration with patients, their families, and health professionals</td>
<td>-discussion format -group setting/collegial</td>
</tr>
<tr>
<td>IV.A.5.c</td>
<td>PBL</td>
<td>residents must demonstrate the ability...to continuously improve pt care based on life-long learning</td>
<td>Linked to online, evidence-based articles AFP journal, DEA website, etc</td>
</tr>
</tbody>
</table>

Content

- Quarterly based
- 1st quarter: office mechanics
- 2nd quarter: Top 10 FM diagnoses/procedures from our clinic
- 3rd quarter: orthopedics
- 4th quarter: lab, geriatrics, community resources
Content

– Using framework given, faculty in charge came up with articles
– Outline of material to be covered reviewed at faculty meeting (all have input at this stage)
– Single faculty in charge of the office longitudinal program
  • select articles (this part not decided by committee)
  • keeps articles up to date, constantly review/select new
  • Communicate/work with IT specialist for appearance of site content

Planning the Curriculum

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/1/16</td>
<td>Prepart. Physicals</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8/8/16</td>
<td>Script writing</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>8/15/16</td>
<td>Phone messaging</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>8/22/16</td>
<td>Billing coding I.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>8/29/16</td>
<td>Adult well exam</td>
<td></td>
</tr>
<tr>
<td>6 **Labor Day</td>
<td>9/5/16</td>
<td>WCC/templates</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>9/12/16</td>
<td>Gym exam</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>9/19/16</td>
<td>Death Certificates</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9/26/16</td>
<td>DM</td>
<td></td>
</tr>
</tbody>
</table>
Tour of the web site

• Goppert.org

A Work in Progress

• Professionalism
  – Attendance
  – Starting on time
  – preparation
• Medical Knowledge
  – Out with the old, in with the new
• Systems Based Practice
  – Billing and coding
### A Work in Progress
Professionalism: Attendance

<table>
<thead>
<tr>
<th>Initial</th>
<th>Transition</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Web based attendance log (myevaluations.com)</td>
<td>• Multiple rotations where resident can’t make it by start time</td>
<td>• Residents are expected to be present/prepared @ 60% of time</td>
</tr>
<tr>
<td>• 100% attendance required, residents expected to makeup missed sessions</td>
<td>• Vacation/cme days</td>
<td>• Calculated the number of sessions they would be able to attend over first year</td>
</tr>
<tr>
<td>• This can be done with any faculty, can be done in clinic when a pt doesn’t show, teaches effective utilization of their clinic time</td>
<td>• Tried: online quiz that residents had to complete if they missed a session</td>
<td>• Tracked with TimeStation - Ipad based technology/app; Residents swipe in/out with a badge; Website helps you pull together attendance stats</td>
</tr>
<tr>
<td>• “no excuses” policy, we make sure this material is covered with first year residents</td>
<td></td>
<td>• At quarterly review, each resident’s attendance is reviewed for problems</td>
</tr>
</tbody>
</table>

### End of Q quiz
- resident takes online
- use medhub testing function
- resident has to retake test until they get 100%
- open book test
- all questions are from articles reviewed during the quarter
A Work in Progress: Professionalism

- Resident prepared: read article?
- Resident & faculty on time?
- Timely completion quiz

Work in Progress: MK

- February: Faculty in charge begins prep for next academic year
- March: Updated planning worksheet to curriculum committee
- May: Changes made if necessary, final curriculum with links submitted to IT
- Changes made if necessary, final approval at faculty meeting
- July: New year posted on website
ACGME
Program Requirements

MEDICAL INFORMATION ACCESS:

“Residents must have ready access to specialty-specific and other appropriate reference material in print or electronic format.”
ACGME
Program Requirements

REGULARLY SCHEDULED DIDACTIC SESSIONS:

“The program must provide a regularly scheduled forum for residents to explore and analyze evidence pertinent to the practice of Family Medicine.”

MILESTONES

FAMILY MEDICAL MILESTONES: (MK)

- Improve medical knowledge through targeted study
- Access and act on personal learning needs
- Synthesize information to make clinical decisions
NEEDS ASSESSMENT

- Inpatient medicine didactics were an identified need by residents and faculty alike

- Need was identified as a priority during a Strategic Planning Retreat in 2010

MODELING AFTER SUCCESS

- R-1 Office LONGITUDINAL ORIENTATION
GOALS
of inpatient medicine “Longitudinal Orientation”

• Structured didactic of “needs to know” adult inpatient medical knowledge

• Integrated “EBM” into daily discussion of patient care

• Provide ongoing orientation of expected standards of care

• Standardized clinical decision making in a large physician practice

• Challenge senior residents to practice teaching skills

GOALS
linked to the “competencies” or “milestones”

• Topics mirror patient care needs and an established inpatient medicine curriculum (MK and PC)

• Attendance and participation expected (Prof)

• Faculty, resident and specialist roles as instructors (Communication)

• Published topics calendar linked to both “required” and “enrichment” reading resources (PBLI)

• Interactive discussion tailored to resident learner and patient care needs (MK and PC)
INPATIENT MEDICINE

Didactics

• CHALLENGES:
  - Faculty resources for preparing and staffing
  - Large service requirement
  - Patient care that meets recognized standards
  - Individual resident learning needs
  - Competing residency responsibilities

THE LEARNERS

• 3-4 R-1’s
• 2 R-2’s
• 2 R-3’s
• 2 Faculty rounders
• Medical students
• Pharmacy students
• Resident applicants (during interviews)
THE PATIENTS

- >350 bed tertiary urban hospital

**INPATIENT MEDICINE SERVICE:**
- Average daily census 36 patients
  - 45% from continuity practice
  - 45% unassigned ED admissions
  - 10% hospitalist services for community FM providers

WHEN?

6:30-9:30am - resident rounding (R-1, R-2)
7:00-8:00am - night float checkout (faculty, R-3)
9:30-11:30am - sit down rounds (all team)
9:30-11:30am - bedside rounds*
11:45am-12:30pm - luncheon conference
1:00pm - clinic, outreach OB, home visits, NH
WHEN?

revised

- 6:30-9:15am - resident rounding (R-1, R-2)
- 7:00-8:00am - night float checkout (faculty, R-3)

- 9:15-9:45am - LONGITUDINAL ORIENTATION
  - 9:45-11:30am - sit down rounds (all team)
  - 9:45-11:30am - bedside rounds*
  - 11:45am-12:30pm - luncheon conference
  - 1:00pm - clinic, outreach OB, home visits, NH

WHERE?

- Appropriate/flexible space for learners
- Location convenient to patient care
- Communication support for patient care
- White board and audiovisual support
- ...and a BATHROOM
WHO?

• LECTURES:
  – 23% R-3’s
  – 54% FM (rounding) faculty
  – 23% specialists (radiology, critical care/pulm)

• Faculty with IT literacy or IT specialist
• Faculty administrative time for content updates
• Administrative support for purchasing material and intellectual property resources

WHAT?

*Medical Knowledge Content Assessment*

• Top admission diagnosis

• Society of Hospital Medicine-Core Competencies
  SHM core competencies

• The Joint Commission Quality/Accountability Measures

• Hospital identified programs of excellence (Stroke, STEMI, etc)
WHAT?
*Medical Knowledge Content Resources*

- **Individual subscriptions:**
  - American Family Physician
- **Institutional license:**
  - Up-To-Date
  - New England Journal of Medicine
- **Local Intranet resources:**
  - Hospital order sets
  - Resident survival guide
- **Web based resources:**
  - Society of Hospital Medicine Core Competencies
  - Published guidelines

THE CALENDAR

17 topics per month
- 12 general adult medicine
- 2 radiology
- 2 simulation
- 1 M&M/Peer Review

Topics presented Tues/Wed/Thurs/Friday
Topics calendar repeats monthly, rotating to new topics every 4 months
Residents exposed to same topic 2x in 36 months

*http://www.goppert.org/*
PUTTING IT TOGETHER

• http://WWW.GOPPERT.ORG

IMPLEMENTATION

Challenges

• Faculty leadership and example
  – Ownership and preparation variable
  – Teaching skills variable
  – Overseeing resident accountability

• Flexible teaching methods
  – Learning from “residents at teachers”

• Interactive/participatory
  – The “flipped classroom” and accountability for preparation

• Limited resources to access intellectual property

• Firewalls
MAINTENENCE

• **Updating Curriculum (PCEC)**
  – annually

• **Updating Medical Knowledge Resources (Faculty champion)**
  – Every 3-4 months

• **Updating On-Line Calendar and Links (IT)**
  – every 3-4 months

OPPORTUNITIES

*for Longitudinal Curriculums*

• Link to MK assessment tools to monitor learning
• Expand to MK needs/resources of “non-core” rotations
• Incorporate procedures with video links for “real time” instruction based on patient care needs
• Upload prepared lectures with instructor notes to standardize “core curricular” topics
• Link to other available internet based resources for longitudinal enrichment in radiology, EKG interpretation, physical diagnosis, communication, etc
• Incorporate longitudinal curriculum for administrative skills (IT, coding and billing, documentation, etc)
QUESTIONS???

Please…

Complete the session evaluation.

Thank you.