Ambulatory Immersion Experiences: How they can help you add up the ACGME Milestone math

SGIM
April 25th, 2013
Who We Are

• **TEMPLE**
  • Elizabeth Leilani Lee, M.D.
    – Associate Program Director
  • Vishnu Kulasekaran, M.D.
    – Medical Director
  • Maureen Miller, M.D.
    – Chief Resident
  • Lawrence Ward, M.D.
    – (Former) Medical Director

• **CHRISTIANA**
  • John Donnelly, M.D.
    – Associate Program Director
  • Heather Ragozine-Bush, M.D.
    – Chief Resident
Learning Objectives

• Provide 2 examples of ambulatory immersion programs. The 4+1 and 4+2.
• Summarize the benefits and limitations of such ambulatory immersion programs in residency training.
• Provide the basic tools to implement the ACGME milestones in an immersion system.
Outline of Workshop

• Introduction ambulatory immersion programs: Structure and Implementation
  – Breakout Session
    • Shared Challenges & Lessons Learned

• Benefits of ambulatory immersion programs
  – Breakout Session
    • Milestones, Quality improvement, Scheduling, & Precepting

• Session Wrap Up & Evaluation
How familiar are you with ambulatory block schedules (ie 4+1, 4+2)?

• Very Familiar- *we use this at my institution*

• Pretty Familiar- *I have spoken with institutions that use this or have been to conferences about this*

• Unfamiliar- *I do not have much experience with this*
How interested are you today in hearing about the implementation of a block schedule?

• Very interested - *the main reason I came to this talk*

• Somewhat interested

• Not interested - *I already know about this and want to hear about the milestones!*

Anyone currently switching over to a block schedule?
Do you currently use the milestones in your evaluations?

- Yes
- No
Christiana Care Health Systems

• 2 hospital system in Northern Delaware
  – Christiana Hospital is a tertiary care 913 bed center
  – Wilmington Hospital is a 250 bed urban hospital

• A primary affiliate of Jefferson Medical College and Philadelphia College of Osteopathic Medicine

• 36 Categorical residents, 6 preliminary medicine interns, 9 transitional interns, 16 Med/Peds residents, 15 EM/IM residents
Temple University Hospital

- Large Urban Hospital in Philadelphia, P.A.
- Tertiary care ~500 bed center
- 96 Categorical residents, 11 preliminary
  - Primary care track
  - 2 outpatient clinic sites
Ambulatory Immersion Experiences

• Outpatient immersion to improve residents’ outpatient experience and education

• 4 weeks of core rotations without clinic time (ICU, floors, ER, nights) followed by 1-2 weeks of outpatient medicine

• No grant/funding was necessary
# 4+2 Yearly Block Schedule

<table>
<thead>
<tr>
<th>Block 1</th>
<th>Block 2</th>
<th>Block 3</th>
<th>Block 4</th>
<th>Block 5</th>
<th>Block 6</th>
<th>Block 7</th>
<th>Block 8</th>
<th>Block 9</th>
<th>Block 10</th>
<th>Block 11</th>
<th>Block 12</th>
<th>Block 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICU</td>
<td>NF/ Elec</td>
<td>CH Floor</td>
<td>Wilm Floor</td>
<td>CH Floor</td>
<td>Elective</td>
<td>CCU</td>
<td>Elective</td>
<td>CH Floor</td>
<td></td>
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</tbody>
</table>

= Ambulatory Week
<table>
<thead>
<tr>
<th>Pod</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Week 8</th>
<th>Week 9</th>
<th>Week 10</th>
<th>Week 11</th>
<th>Week 12</th>
<th>Week 13</th>
<th>Week 14</th>
<th>Week 15</th>
<th>Week 16</th>
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<th>Week 20</th>
<th>Week 21</th>
<th>Week 22</th>
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<tbody>
<tr>
<td>A</td>
<td>Med A</td>
<td>ER</td>
<td>Med C</td>
<td>Med D</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>B</td>
<td></td>
<td>Med B</td>
<td>Med C</td>
<td>Med D</td>
<td>Med A</td>
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<td></td>
<td>Med C</td>
<td>Med D</td>
<td>Med A</td>
<td>Med B</td>
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<tr>
<td>D</td>
<td>C</td>
<td>Med D</td>
<td>Med A</td>
<td>Med B</td>
<td>Med C</td>
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</tbody>
</table>

Sample: 4+1 Schedule
Ambulatory Blocks

• 4 -5 ½ day sessions resident Continuity Clinic

• Ambulatory subspecialty time

• Built in Time for urgent care, admin, PI/QI, & didactics
Sample: 4+2 Resident Weekly Ambulatory Schedule

<table>
<thead>
<tr>
<th>AM</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-8:30</td>
<td></td>
<td>Clinic Conference*</td>
<td>Grand Rounds</td>
<td>Clinic Conference*</td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td>Ambulatory Subspecialty</td>
<td>Continuity Clinic</td>
<td>Continuity Clinic</td>
<td>Ambulatory Subspecialty</td>
<td>Ambulatory Subspecialty</td>
</tr>
<tr>
<td>PM</td>
<td>Ambulatory Subspecialty</td>
<td>Continuity Clinic</td>
<td>Continuity Clinic</td>
<td>Ambulatory Subspecialty</td>
<td>Ambulatory Subspecialty</td>
</tr>
<tr>
<td>12-1pm</td>
<td></td>
<td>core conference</td>
<td></td>
<td>core conference</td>
<td></td>
</tr>
</tbody>
</table>

*Clinic Conference is a mixture of PI, academics, and evidence based reviews
## Sample: 4+1 Resident Weekly Ambulatory Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-9am</td>
<td>didactics</td>
<td>Didactics/QI mtg</td>
<td>didactics</td>
<td>Screening by R1s</td>
<td>PICO by R2s</td>
</tr>
<tr>
<td>AM</td>
<td><strong>Continuity Clinic</strong></td>
<td><strong>QI</strong></td>
<td><strong>Urgent Clinic</strong></td>
<td><strong>Subspecialty Clinic</strong></td>
<td><strong>Continuity Clinic</strong></td>
</tr>
<tr>
<td>12-1pm</td>
<td>core conference</td>
<td>core conference</td>
<td>core conference</td>
<td>core conference</td>
<td>core conference</td>
</tr>
<tr>
<td>PM</td>
<td>Outreach</td>
<td><strong>Continuity Clinic</strong></td>
<td><strong>Continuity Clinic</strong></td>
<td><strong>Telephone Triage</strong></td>
<td>Admin</td>
</tr>
</tbody>
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**TEMPLE UNIVERSITY HOSPITAL**
Outpatient Curriculum

- 18 month curriculum
  - Cycled through 3 years
- Didactics focused on common outpatient medicine topics

<table>
<thead>
<tr>
<th>Block</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>2011-2012 Ambulatory Year</strong></td>
</tr>
<tr>
<td>1</td>
<td>Intro to Office based practice I</td>
</tr>
<tr>
<td>2</td>
<td>Intro to Office based practice II</td>
</tr>
<tr>
<td>3</td>
<td>Pain Management</td>
</tr>
<tr>
<td>4</td>
<td>Cardiology</td>
</tr>
<tr>
<td>5</td>
<td>Urban Curriculum</td>
</tr>
<tr>
<td>6</td>
<td>Psychiatric Disease</td>
</tr>
<tr>
<td>7</td>
<td>Pulmonary</td>
</tr>
<tr>
<td>8</td>
<td>ID/HIV</td>
</tr>
<tr>
<td>9</td>
<td>Palliative Care</td>
</tr>
<tr>
<td>10</td>
<td>Endocrine</td>
</tr>
<tr>
<td></td>
<td><strong>2012-2013 Ambulatory Year</strong></td>
</tr>
<tr>
<td>11</td>
<td>Intro to Office based practice III</td>
</tr>
<tr>
<td>12</td>
<td>Musculoskeletal</td>
</tr>
<tr>
<td>13</td>
<td>Gastroenterology/Renal</td>
</tr>
<tr>
<td>14</td>
<td>Geriatrics</td>
</tr>
<tr>
<td>15</td>
<td>Women's Health</td>
</tr>
<tr>
<td>16</td>
<td>Neurology/Dermatology</td>
</tr>
<tr>
<td>17</td>
<td>ENT/Ophto</td>
</tr>
<tr>
<td>18</td>
<td>High Value Cost Conscious Care</td>
</tr>
</tbody>
</table>
Faculty Requirements

• Used existing faculty
• 8 core preceptors at Temple
  – (precept 2-3 sessions/week)
• 5 other faculty precept ~ 1 time/week
• 1 main clinic site with 90 residents
  – + PC site: 6 primary care residents located across the street
  – Joint didactic sessions for the 2 sites
Why Change

• Our Goals
  – Eliminate the disruption
  – Create atmosphere of outpatient practice that gives residents a feeling of importance
  – Allow resident on electives to truly feel they are invested in that
  – Keep team continuity on inpatient blocks
  – Integrate with combined residents, prelim interns and off service residents that are not using this system
  – Meet ACGME requirements
How can we make this change?

• Eliminates weekly clinic responsibilities

• Residents can have no more than one month off between clinic sessions except for vacations

• Clinic sessions should be through 30 months of training

• At least 130 clinic sessions throughout residency
General Considerations

- 20% reduction in all other rotations
  - Floors, ICU, electives
- Decreased flexibility to change schedules
- Timing of switch
  - All at once vs. with one class at a time

- Number of clinic sites
  - Implication on didactics
- Number of residents and workspace
  - Need space for subspecialty clinics and continuity clinics

- Preserve ambulatory time
Break-out Session #1

I have implemented an immersion program

I am in the process of implementing an immersion program

I want to implement an immersion program
Positives & Benefits

(What worked well)
Benefits of block schedule

• Resident satisfaction in clinic
  – Less interruptions/distractions without concurrent floor responsibilities
  – More concentrated period of time to adjust to the clinic flow and resources
• Remove the inpatient/outpatient balance frustrations
• Better organization of concentrated didactics
Benefits of block schedule

• Dedicated time for QI projects, PICOs, outreach, etc
• Concentrated observation for evaluations of residents
• Compliance with duty hours & ACGME requirements
Drawbacks to the block schedule

- Less continuity between ambulatory blocks
  - Clinic resources to overcome this: microfirms, pharmacy and nurse educator visits
- Less flexibility with resident schedules
- Logistical challenges (scheduling 26/52 blocks)
Drawbacks to the block schedule

• Less elective time
  – Added outpatient elective time into the ambulatory week

• Conflict with combined programs
Results
Resident: Data Collection

• Surveys before and 8 months after curriculum change of:
  – Residents (n = 22)
  – Outpatient clinic preceptors (n=14)
  – Subspecialists (n = 20)

• Focus group of PGY-2 & PGY-3 residents (15 of 20)
Focus Group Themes

**Better Focus**
- No longer split in two directions
- Fewer distractions
- Better focus on rotation and clinic

**Less Stress**
- Not rushed to get to clinic or back to hospital
- Less time pressure
- No longer doing back to back intense rotations

**Better Clinic Experience**
- Patient & practice ownership
- More time for education

**Improved Continuity**
- Easier to schedule outpatients
- No longer needing to handoff patients on the inpatient setting
Resident Survey .. Statistically Significant Findings

It is difficult to get to clinic on time

Before After

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>After</td>
<td>80</td>
<td>20</td>
</tr>
</tbody>
</table>

I have adequate breaks between intense rotations

Before After

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>69</td>
<td>31</td>
</tr>
<tr>
<td>After</td>
<td>73</td>
<td>27</td>
</tr>
</tbody>
</table>
With the new schedule...

I have more time to manage my inpatients effectively

- Agree: 93%
- Disagree: 7%

I am less stressed on inpatient blocks

- Agree: 87%
- Disagree: 13%

I am more satisfied with my outpatient experience in the clinic

- Agree: 80%
- Disagree: 20%
Faculty Survey…
Statistically Significant Findings

There are many interruptions in the residents’ schedules

Before | After
--- | ---
88 | 83
12 | 17

The residents view the clinic as their practice

Before | After
--- | ---
50 | 100
50 | 0

= Disagree

= Agree
Preceptor Quote

• *I think across the board the schedule change has been absolutely wonderful!!!! Makes everyone feel like being in [the clinic] is not a chore/second place and just something to finish so they can get back to floors. This schedule has really changed the overall mind set… and [the residents] really take ownership of the patients they see.*
Disadvantages of the Ambulatory Immersion Curriculum Structure
Disadvantages

• Conflict with combined programs using ½ day clinic per week schedule
  – Combined program residents need other residents to cover on floors
  – Sign out delayed when waiting for combined program resident to return from clinic

• More residents in clinic creates crowding
What about the bottom line?

When asked if changing the curriculum was a good idea…
Faculty Response
Was changing the curriculum a good idea?

General Internal Medicine Faculty

Subspecialty Faculty

= Agree

= Disagree
Residents’ Response
Was changing the curriculum a good idea?

- Agree: 93
- Disagree: 7
Milestones
Definition

- Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME competencies that describe the development of competence from an early learner up to and beyond that expected for unsupervised practice.

*Alliance for Academic Internal Medicine*
Goals of Milestones

• Create a logical trajectory of professional development in essential elements of competency and meet criteria for effective assessment, including feasibility, demonstration of beneficial effect on learning, acceptability in the community
142 Curricular Milestones

Specific & Concrete

Generalized Synthetic and Narrative

“Reportable Milestones” ACGME
Organized by 6 competency domains (22 sub competencies)

INNOVATION
- Internal Collection maybe more comprehensive
- Individual/Customizable

TEMPLE UNIVERSITY HOSPITAL

CHRISTIANA CARE HEALTH SYSTEM
### Reportable Milestones

| 11. Transitions patients effectively within and across health delivery systems. (SBP4) |
|----------------------------------------|----------------------------------------|----------------------------------------|
| **Critical deficiencies**               | **Ready for unsupervised practice**     | **Aspirational**                       |
| Disregards need for communication at time of transition | Inconsistently utilizes available resources to coordinate and ensure safe and effective patient care within and across delivery systems | Appropriately utilizes available resources to coordinate care and ensures safe and effective patient care within and across delivery systems |
| Does not respond to requests of caregivers in other delivery systems | Written and verbal care plans during times of transition are incomplete or absent | Coordinates care within and across health delivery systems to optimize patient safety, increase efficiency, and ensure high quality patient outcomes |
| Inefficient transitions of care lead to unnecessary expense or risk to a patient (e.g., duplication of tests readmission) | Communication with future caregivers is present but with lapses in pertinent or timely information | Anticipates needs of patient, caregivers, and future care providers, and takes appropriate steps to address those needs |
| **Comments:**                           |                                       | Role models and teaches effective transitions of care |

Example subcompetency for systems-based practice.
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Ambulatory Immersion Weeks: Implementing the Milestones

Advantages:

• More Time for Direct Observation
  – Increased total number of clinic sessions
  – Increased opportunity for CEXs
  – Pick up patterns earlier with more frequent precepting in a condensed period

• Increased Multisource feedback
  – More preceptors evaluating resident in clinic
  – Subspecialty attending input
Ambulatory Immersion Weeks: Implementing the Milestones

Advantages Continued:
• Dedicated time for Quality Improvement projects
• Protected conference time
  – Evidence–based Medicine conferences & evaluation
Ambulatory Immersion Weeks & Implementing the Milestones

Disadvantages:

• More time consuming upfront
  – Curricular milestones are front loaded in first 12 months of residency.

• Actual Evaluations that include milestones are Long
  – This in particular burdens Continuity Preceptors/Faculty
Ambulatory Immersion Weeks & Implementing the Milestones

Disadvantages:

• Not all Milestones can be demonstrated in outpatient setting
  – must create separate inpatient evaluation.

• Reportable Milestones are not necessarily best suited for feedback the resident

• Faculty/Resident unfamiliarity to NEW evaluation system
Implementing the Milestones: An Example-Temple University

• Using the curricular milestones a 3 year longitudinal evaluation for ambulatory was created that evaluates residents at 6 month intervals and is organized by 6 core competencies

• Each milestone correlates and is coded to one of the 22 reportable milestones

*Disclaimer: There is no evidence data; This is uncharted territory
<table>
<thead>
<tr>
<th>Patient care</th>
<th>Medical knowledge</th>
<th>Interpersonal and communication skills</th>
<th>Professionalism</th>
<th>Systems based practice</th>
<th>Practice based learning &amp; Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>6mo</td>
<td>Acquire accurate and relevant history from the patient in an efficient customized, prioritized, and hypothesis driven fashion 1-5 (PC1)</td>
<td>Understand the relevant pathophysiology and basic science for common medical conditions 1-5 (MK1)</td>
<td>Deliver appropriate, succinct, hypothesis-driven oral presentations 1-5 (ICS2) Request consultative services in an effective manner 1-5 (ICS2)</td>
<td>Document and report clinical information truthfully (1 month) 1-5 (PROF 4) Follow formal policies (1 month) 1-5 (PROF 2)</td>
<td>Appreciate roles of a variety of health care providers, including but not limited to consultants, therapist, nurses, home care workers, pharmacist and social workers 1-5 (SBP 1)</td>
</tr>
<tr>
<td>6mo</td>
<td>Perform an accurate physical examination that is appropriately targeted to the patient's complaints and medical conditions. Identify pertinent abnormalities using common maneuvers 1-5 (PC-2)</td>
<td>Provide legible, accurate, complete, and timely written communication that is congruent with medical standards 1-5 (ICS3)</td>
<td>Accept personal errors and honestly acknowledge them 1-5 (PROF 4) Demonstrate empathy and compassion to all patients (3 month) 1-5 (PROF 1)</td>
<td>Work effectively as a member within an interprofessional team to ensure safe patient care 1-5 (SBP 1)</td>
<td></td>
</tr>
<tr>
<td>6mo</td>
<td>Recognize when to seek additional guidance 1-5 (PC2)</td>
<td></td>
<td>Respond promptly and appropriately to clinical responsibilities including but not limited to calls and pages (1 month) 1-5 (PROF 2)</td>
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<td></td>
</tr>
<tr>
<td>6mo</td>
<td>Provided appropriate preventive care and teach patient regarding self-care 1-5 (PC3)</td>
<td></td>
<td>Carry out timely interactions with colleagues, patients, and their designated caregivers 1-5 (PROF 2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SCALE 1-5**
1- unsatisfactory
2- approaching expected
3- expected
4- above expected
5- excellent
<table>
<thead>
<tr>
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<th>Medical knowledge</th>
<th>Interpersonal and communication skills</th>
<th>Professionalism</th>
<th>Systems based practice</th>
<th>Practice based learning &amp; Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6mo</strong></td>
<td></td>
<td></td>
<td>Treat patients with dignity, civility and respect, regardless or race culture, gender, ethnicity, age, or socioeconomic status 1-5 (PROF3)</td>
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<td></td>
</tr>
<tr>
<td>12 mo</td>
<td>Obtain relevant historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may or may not often be volunteered by the patient 1-5 (PC1)</td>
<td>Understand basic indications for and basic interpretation of common diagnostic testing, including but not limited to routine blood chemistries, hematologic studies, coagulation tests, ABGs, ECG, chest radiographs, PFTs, UA, and other body fluids 1-5 (MK-2)</td>
<td>Use communication skills to build a therapeutic relationship 1-5 (ICS1)</td>
<td>Understand unique roles and services provided by local health care delivery systems 1-5</td>
<td>Appreciate the responsibility to assess and improve care collectively for a panel of patients 1-5 (PBLI 1)</td>
</tr>
<tr>
<td>12 mo</td>
<td>Effectively use verbal and nonverbal skills to create rapport with patients/families 1-5 (ICS1)</td>
<td>Consider alternative solutions provided by other teammates 1-5</td>
<td>Identify learning needs (clinical questions) as they emerge in patient care activities 1-5 (PBLI 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 mo</td>
<td>Effectively communicate with other caregivers in order to maintain appropriate continuity during transitions of care 1-5 (ICS1)</td>
<td>Recognize health system forces that increase the risk for error including barriers to optimal patient care 1-5 (SBP 2)</td>
<td>Assess medical information resources to answer clinical questions and support decision making 1-5 (PBLI 4)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coded to corresponding Reportable milestone
Our Goals

• Create an evaluation system that accurately evaluates our residents
• Meets the Reportable Milestones Requirements
• Provides meaningful feedback back to residents
Our Pilot Findings…

- Residents were given more concrete goals for future performance
- Faculty became less subjective
  - (Reduced evaluation inflation)
- Residents felt concrete feedback was helpful
Break-out session #2

• Small group discussions:
  – Milestones
  – Quality Improvement Projects
  – Scheduling: Resident/Faculty
How you can get started....

• The toolkit:
  – Template of Master Schedule for residents in Christiana’s 4+2 and Temple’s 4+1 program
  – Temple’s Ambulatory Milestone database
  – Example of Temple’s Ambulatory weekly didactic curriculum
  – Please email or sign up to obtain the tool kit
Contact Information

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Email for toolkit

TEMPLE UNIVERSITY HOSPITAL

CHRISTIANA CARE HEALTH SYSTEM