Implementation of a Longitudinal Continuity Clinical Experience to Improve Quality, Safety & Patient Outcomes

2014 Integrating Quality Webinar Series

June 26, 2014
Welcome & Introductory Remarks

• Submit your questions and comments to the “Panelists” using the Chat feature on the right side of your screen

• The recording and presentation slides will be made available within one week of this web conference at www.aamc.org/iq

• At the completion of the webinar, please complete the brief evaluation to provide feedback on today’s program and suggestions for future topic areas
Clinical Care Innovation Challenge

This program recognizes AAMC member teaching hospitals and medical schools that have implemented—or are developing—programs to address clinical care innovations, including new delivery, payment and training models, which integrate education and research to improve value and quality.

<table>
<thead>
<tr>
<th>Challenge Award Winners</th>
<th>Pilot Project Winners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleveland Clinic</td>
<td>University of Illinois College of Medicine at Peoria and UnityPoint Health Methodist</td>
</tr>
<tr>
<td>University of Missouri School of Medicine</td>
<td>Cincinnati Children’s Hospital Medical Center</td>
</tr>
<tr>
<td>University of Colorado School of Medicine</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>LSU Health Sciences Center</td>
<td>NYU School of Medicine</td>
</tr>
<tr>
<td>Vanderbilt University</td>
<td>Massachusetts General Hospital</td>
</tr>
</tbody>
</table>

Awardee profiles are available at [www.aamc.org/iq](http://www.aamc.org/iq)
2014 IQ Webinar Series

July 7, 1:00-2:00 p.m. ET
Innovations in Clinical Care Delivery Models that Integrate Care Across Settings to Improve Outcomes, Access, and Value

July 22, 2014, 12:00-1:00 p.m. ET
Aligning Maintenance of Certification (MOC) and Performance Based CME with On-Going Quality Improvement

August 4, 2014, 12:00-1:00 p.m. ET
Overcoming Obstacles to Research During Residency
Presenters: Vanderbilt University Medical Center

Jesse M. Ehrenfeld, M.D., M.P.H.
Associate Professor of Anesthesiology, Surgery and Biomedical Informatics
Department of Anesthesiology, Surgery, & Biomedical Informatics

Morgan McDonald, M.D.
Assistant Professor
Department of Internal Medicine & Pediatrics

Heather A. Ridinger, M.D.
Assistant Professor
Department of Internal Medicine

Jennifer Green, M.D.
Associate Professor
Department of Internal Medicine & Pediatrics
Continuity Clinical Experience:
Implementation of a Longitudinal Student Clinic
Morgan McDonald, MD
Heather Ridinger, MD
Jesse M. Ehrenfeld, M.D, M.P.H.
Jennifer K. Green, M.D., M.P.H.

June 26, 2014
Learners will assume meaningful roles in a continuity clinical experience in the first year that will evolve throughout their training. Clinical experiences will stimulate a “need to know,” promoting curiosity and making the relevance of other coursework more apparent to the student.

A longitudinal experience in a specific setting allows students to observe, and ultimately to influence, the impact of systems science on patient outcomes. Early and active clinical work will foster professional identity formation.
Timeline and Structure

• 2008-Vanderbilt Program in Interprofessional Learning (VPIL) launched
  – 4 professions, 2 year program
  – Student teams in 16 clinic sites
  – One afternoon per week

• 2012-CCX launched
  – All medical students
  – 151 clinical sites
  – Similar objectives/structure
Course Goals

The CCX course will integrate students into clinical teams to care for individual patients while learning about the larger care delivery system. By immersing students in a longitudinal four year continuity clinical experience, the CCX course will:

- Create self-directed learners
- Integrate the patient care experience with medical knowledge
- Integrate systems knowledge with clinical care
- Cultivate respectful professionals

*These goals evolved out of the Vanderbilt Program in Interprofessional Learning, funded by the Josiah Macy Foundation.*
Expected Skill Acquisition

- Team Roles and Responsibilities
- Patient-centered Care
- Health Coaching
- Medication Reconciliation
- Transitions of Care
- Advocacy
- Quality Improvement
- Patient Safety
- Systems Engineering
- Communication
Year 1 – Foundations in Medical Knowledge Phase

- **Themes:** team roles and responsibilities, patient-centered care, medication reconciliation, health coaching, patient safety
- **Structure:**
  - Longitudinal clinical setting for one half day per week (M-Thurs)
  - Small group sessions every 8 weeks

Year 2 – Foundations in Clinical Care Phase (clerkships)

- **Themes:** transitions of care & settings of care; patient advocacy
- **Structure:**
  - One afternoon of protected time during clerkships to complete tasks utilizing their patient panel (from clinic and clerkship)
  - Small group sessions every 8 weeks

Years 3 & 4 – Self-Directed Immersion

- **Themes:** quality improvement and patient safety; advanced communication; interprofessional education
- **Structure:** asynchronous modules; must complete some modules in their home clinical setting
CCX Clinical Sites

Current Preceptors: (EC 2012 & 2013): **155**
Vanderbilt: 130
Community: 25

<table>
<thead>
<tr>
<th>Department</th>
<th>CCX Preceptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>70</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>25</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>16</td>
</tr>
<tr>
<td>Surgery</td>
<td>10</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>8</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>8</td>
</tr>
<tr>
<td>Neurology</td>
<td>3</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>3</td>
</tr>
<tr>
<td>Neurological Surgery</td>
<td>2</td>
</tr>
<tr>
<td>Radiation Oncology</td>
<td>2</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>1</td>
</tr>
<tr>
<td>Cardiac Surgery</td>
<td>1</td>
</tr>
<tr>
<td>Hematology/Oncology</td>
<td>1</td>
</tr>
<tr>
<td>Oral Surgery</td>
<td>1</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>1</td>
</tr>
<tr>
<td>Pulmonology</td>
<td>1</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>1</td>
</tr>
<tr>
<td>Urologic Surgery</td>
<td>1</td>
</tr>
</tbody>
</table>
Teaching Structure, Year 1

• Activities
  – 19 Clinical Sessions
  – 8 Seminars

• Clinical Sessions
  – Student in clinical placement **one afternoon a week** as an educational home
  – Goal: to immerse students in the patient experience, team-based care, and the larger system of care delivery while equipping them with skills to become a **"value added" member of the team** in years 2-4
  – Students as **self-directed learners** with assignments tied to their clinical encounters

• Seminars
  – Approximately once every other month to discuss their assignments and learn skills for the upcoming month in their clinical placement
  – Compare and contrast clinical systems
Teaching Structure, Year 2

• Activities
  – Student-led task assignments
  – Small group sessions every 8 weeks

• Settings of Care/Transitions of Care
  – Wednesday afternoons set aside to complete CCX assignments
  – Students completed assignments with a panel of patients they have seen in either clinic or on inpatient clerkships.

• Advocacy
  – Social determinants of health
  – Needs and resource identification
  – Legislative advocacy
<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar 1</td>
<td>Introduction to CCX</td>
</tr>
<tr>
<td>Seminar 2</td>
<td>CELA Vital Signs (in conjunction with Physical Diagnosis)</td>
</tr>
<tr>
<td>Seminar 3</td>
<td>Team Roles &amp; Responsibilities &amp; Through the Patient’s Eyes (The Clinic Microsystem)</td>
</tr>
<tr>
<td>Seminar 4</td>
<td>Medication Reconciliation</td>
</tr>
<tr>
<td>Seminar 5</td>
<td>Health Coaching &amp; Motivational Interviewing</td>
</tr>
<tr>
<td><strong>Spring Semester</strong></td>
<td><strong>Topic</strong></td>
</tr>
<tr>
<td>Seminar 6</td>
<td>Introduction to Quality</td>
</tr>
<tr>
<td>Seminar 7</td>
<td>Systems Engineering in Healthcare</td>
</tr>
<tr>
<td>Seminar 8</td>
<td>Introduction to Patient Safety</td>
</tr>
<tr>
<td>Seminar 9</td>
<td>QI Workshop/Wrap-Up</td>
</tr>
</tbody>
</table>
Successes

• Early meaningful clinical experiences for every medical student
  – Students see an average of 30 patients during their first year
  – Class total of >7600 patients to date

• Engagement of students into clinical teams

• Active participation in patient care
Contributions to Patient Care

**FIRST YEAR**

- Health Coaching
  - Counseled patients in 155 monitored encounters
- Medication Reconciliation
  - Inventoried medication reconciliation processes in 155 clinical sites
- Quality Improvement/Patient Safety
  - Problem identification, fish bone and flow chart analysis in 155 clinical sites
  - Discussed patient safety with 300 clinical team members

**SECOND YEAR**

- Transitions of Care
  - Monitored over 300 care transitions, identifying areas for improvement
- Advocacy
  - Connected 77 patients to community resources
## Clinic Preceptor Feedback

<table>
<thead>
<tr>
<th>Clinical Preceptor Survey – Year 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How satisfied are you with the course?</td>
<td>92% (4 or 5)</td>
</tr>
<tr>
<td>How well do you understand course objectives?</td>
<td>86% (4 or 5)</td>
</tr>
<tr>
<td>Recommend to colleagues?</td>
<td>86% yes</td>
</tr>
<tr>
<td>Have students been contributing to clinical care?</td>
<td>86% yes or somewhat</td>
</tr>
<tr>
<td>How much time does student add per session?</td>
<td>47 minutes</td>
</tr>
</tbody>
</table>
Student Feedback

- 91% (CCX1) and 94% (CCX2) students agree or strongly agree that CCX will contribute to their professional development as a physician.
- Students agree that CCX allows them opportunities to meet the course goals.
- Qualitative feedback:
  - Want more time in clinic!
  - Struggle with transitioning to active participation
  - Didactic sessions → more discussion, less lecture
  - Integrate systems knowledge
  - Integrate medical knowledge
  - Self-directed learning
  - Interprofessional respect
Moving Forward

CHALLENGES

• Consistency across clinical sites
• Clinic recruitment
• Preceptor engagement
• Effective communication
• Integration with timing and curriculum of other courses
• Level of learner
• Funding

STRATEGIES FOR SUCCESS

• Clinic selection
• Departmental support
• Faculty development
• Student contribution to patient care and systems
• Curricular Design (content and structure)
• Regular communication – students and faculty
Continuity Clinical Experience

Course Directors:

• Jesse M. Ehrenfeld, M.D, M.P.H.
  Associate Professor
  Department of Anesthesiology, Surgery, & Biomedical Informatics
  jesse.ehrenfeld@vanderbilt.edu

• Jennifer K. Green, M.D., M.P.H.
  Assistant Professor
  Department of Internal Medicine & Pediatrics
  jennifer.green@vanderbilt.edu

• Morgan McDonald, M.D.
  Assistant Professor
  Department of Internal Medicine & Pediatrics
  morgan.mcdonald@vanderbilt.edu

• Heather A. Ridinger, M.D.
  Assistant Professor
  Department of Internal Medicine
  heather.a.ridinger@vanderbilt.edu

ccx@vanderbilt.edu
medschool.vanderbilt.edu/ccx