• What I do?

• What do you do?
What is Competency-Based Medical Education?

A model to prepare physicians for practice that is:
• oriented to outcomes desired in physician;
• based on patient needs;
• based on the needs of the learner, with more accountability and flexibility; and
• focused on achieving skills and performance, instead of time-spent in training.

Traditional model

Curriculum

Educational objectives

Assessment

Competency-based education model

Health needs
Health systems

Competencies
Outcomes

Curriculum

Assessment

• Focus on outcomes:
  - Patient needs drive curriculum
  - Assessment for learning, assessment for progression

• Focus on outcomes (not process)
  - Allows innovation within programs
  - Flexibility for learner

• Time as a resource, not a standard
The achievement model
A model to prepare physicians for practice that is:

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Core Components of CBME

• Competencies are clearly articulated

• Competencies are arranged progressively

• Learning experiences facilitate the progressive development of competencies

• Teaching practices promote the progressive development of competencies

• Assessment practices support and document the progressive development of competencies

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A day in the life.............
<table>
<thead>
<tr>
<th>WARD</th>
<th>59F: line sepsis from Hawkesbury</th>
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<tbody>
<tr>
<td>ER</td>
<td>TTS 54M: HD recent exit site infec, catheter change, fever NYD? Line infection</td>
</tr>
<tr>
<td>7510</td>
<td>PD 80M: PCKD, needs to start RRT, PD, from HGH ER, NPO at midnight for cath Sx tues</td>
</tr>
<tr>
<td>7510</td>
<td>82M: PRI pt buried PD catheter, CHF – HGH, now better</td>
</tr>
<tr>
<td>7510</td>
<td>81M: Cr 700, high psa, R hydro-mildly better on sat U/S, ceftriaxone, rehab vs conval</td>
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<tr>
<td>7511</td>
<td>ALC TTS 79F: QCH HD, hypotension, cholecystitis, new pneumonia</td>
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<tr>
<td>7511</td>
<td>Tx 35F: pyeloneph</td>
</tr>
<tr>
<td>7511</td>
<td>ALC TTS 54F: A/CKD, DN, osteomyelitis, pericarditis, leukocytosis NYD, better on Ancef and Flagyl to SCO wed</td>
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<tr>
<td>7513</td>
<td>MWF 66F: CHF and pum, HTN, weakness falls post D/C, will need rehab, CCH when bed ready</td>
</tr>
<tr>
<td>7514</td>
<td>PD 75M: PD cath exteriorization tues, ?D/C wednesday</td>
</tr>
<tr>
<td>7515</td>
<td>TTS 59M: fever post PD cath removal</td>
</tr>
<tr>
<td>7515</td>
<td>59M: AKI, bx Mon, pred 50, Cr better</td>
</tr>
<tr>
<td>7520</td>
<td>78M: NH, dementia, afib, AKI, hyperk, eosinophilia, IVIG for ITP, AIN from ciproflox, C diff</td>
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<tr>
<td>7521</td>
<td>MWF 86F: CKD, dementia, severe RV (1+ HD Nov; ICU from Nov-Feb &amp; Mar 11-22 resp failure PEG 20/4, fever 22/4</td>
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<tr>
<td>7532</td>
<td>ALC MWF 88F: cardiorenal syndrome from QCH, now on HD, CHF vs pneumonia, refused GAU, HD Sat</td>
</tr>
<tr>
<td>7533</td>
<td>Tx 67F: urosepsis ESBL, Klebsiella, hyp, PMHx CHF, LGIB (ASA/warfarin), C-scope cancelled, home wed</td>
</tr>
<tr>
<td>ICU</td>
<td>SLED 61F, leukemia, MSOF, pneumonia</td>
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<tr>
<td>8</td>
<td>MWF 90M pneumosepsis</td>
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<tr>
<td>12</td>
<td>MWF 53 M NET, pancreas, isch bowel, AKI, open abdo wound, HD May 12, 13, 14</td>
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<tr>
<td>13</td>
<td>Med Tx ’72 65F: Infection, Cr 53, pred/Imuran</td>
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<tr>
<td>24</td>
<td>HD 82F: AKI from Winchester, lactic acidosis, metformin, ?sepsis, HD May 13, 14, 15</td>
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<tr>
<td>27</td>
<td>SLED 40F: DM1, Tx ’07; shock, ?adrenal insuff, recur fever NYD; NSTEMI 20/4, PTLD, CHOP, ritux 16/5</td>
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<tr>
<td>32</td>
<td>Hem MWF 60F: sepsis – E Coli-empyema, aHUS, PLTs low, pyelo, trach, recur asp, no SLED Sat/Sun, HD Mon ?line fxn</td>
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<td>CONS-A</td>
<td>Med 46F: ?active TB</td>
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<tr>
<td>ER</td>
<td>Med PD 75M: Stroke</td>
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<td>5401</td>
<td>Med TTS OCDC pt, pneumonia</td>
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<tr>
<td>5405</td>
<td>Med TTS weakness</td>
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<tr>
<td>5514</td>
<td>Med TTS 84F: Septic shock, ascending cholangitis, AKI; was on SLED; IHD #1 11/04</td>
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<tr>
<td>5526</td>
<td>Med TTS 72M: AKI on CKD central cord syndrome, RRT since Jan 2016, MRSA bacteremia, new line Apr 29</td>
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<tr>
<td>6103</td>
<td>PD Transferred to STR</td>
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<tr>
<td>6227</td>
<td>Onc 62M: ARF, hyperCa node bx pending, lymphoma vs sarcoid, May need increase in CS</td>
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</tbody>
</table>
• What are they there to do?

• What are they there to learn?

• How is that different for PGY1, PGY3, PGY5?

• What is my role as their teacher/supervisor?
Core Components of CBME

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How does CBME help teaching and learning?
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• Competencies required for practice are articulated based on a profile of professional practice

• Specification of learning outcomes promotes focus and accountability

  • Social Accountability
  • Outcome-based Learning
  • Backwards Design
• Competencies are organized in a way that leads to a smooth transition to practice.

• A sequential path supports the development of expertise

• Novice to Expert
• Surface & deep approaches to learning
### Sunsational Swim Skills Chart

#### 1. Tadpole Skills
- Blow bubbles with mouth on surface
- Wet face and head without submersion
- Monkey Crawl along wall
- Hold on to wall and pull for help
- Climb out of the pool
- Face in water & hold breath
- Float on back with support
- Float on front with support
- Kick feet on front with instructor support (2 meters)
- Assisted jump in water from sitting position, turn, grab wall

#### 2. Starfish Skills
- Submerge head
- Blow bubbles with nose
- Kickboard or noodle front kick
- Streamline float on front
- Float on back
- Kick on front
- Kick on back with support
- Show an understanding of pool safety
- Open eyes and retrieve object on step
- Roll front to back with assistance
- Assisted jump in water from standing, turn, grab wall

#### 3. Goldfish Skills
- Kick on back with noodle
- Streamline kick on front
- Tread from front to back
- Independent jump in & kick back to wall
- Kick on back & roll to back with assistance
- Kick on front with paddle arms (face under)
- Swim, float, swim kick
- Answer 2 questions on poolside safety
- Float for 30 seconds on back
- Pick up object from surface with assistance

#### 4. Jellyfish Skills
- Swim, float, swim kick & paddle
- Kick on back with arms paddling
- Swim 2 m. turn, swim back to deepwall
- Perform underwater skills with nose exhalation
- Swim with hand on wall, hold breath
- Pick up object from shallow surface
- Jump into deep water, kick on back to wall
- Big arms on front
- Kick on back
- Float on back, roll over & find nearest wall

#### 5. Seahorse Skills
- Tread water 5 seconds
- Swim on front, turn, kick on back
- Pick up object from deeper surface
- Freestyle stroke
- Side breathing with assistance
- Elementary backstroke
- Skull head first
- Swim Backstroke
- Breaststroke 2 lap
- Dolphin Kick

#### 6. Dolphin Skills
- Breaststroke legs
- Jump into pool, tread water 10s, return to side
- Swim Freestyle with side breathing
- Tread water 20 seconds
- Forward somersault
- Skull head first
- Swim Breaststroke
- Backstroke 2 laps
- Dolphin Kick

#### 7. Seal Skills
- Swim 2 laps backstroke
- Swim 2 laps freestyle
- Tread water 30 seconds + 1 lap swim
- Retrieve underwater object in deep end
- Head first, surface dive in deep end
- Flip turn
- Butterfly

sunsationalswimschool.com
Core Components

• Assess pts with renal dysfunction and identify who is high risk for progression

• Manage patients with stable CKD
  • Secondary prevention

• Document outpatient consultations
Appropriate for PGY2?
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Learning experiences

- Learning takes place in settings that model practice, is flexible enough to accommodate variation in individual learner needs & is self-directed.

- Learning through real life experiences facilitates membership into the practice community & development of competencies.

- Situated learning
- Deliberate practice
- Self-regulated learning
- Professional identity development
Break
Apply CBME as an educator

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Small group work

- Pick one level of learner
  - Hint: early or junior

- Pick one
  - Learning environment
  - Challenge in program
    - Gap in skills
    - Rotation that underperforms
  - Offservice frustration

- What’s the desired outcome? What do you want them to do?
  - Articulate the competency/task
  - Where does it fit in the progression?
  - What’s the right learning experience?
• Which learner?
• What’s the desired outcome?
• What’s the right learning experience?
  • How sequenced?
• Teaching is individualized to the learner, based on what is required to progress to the next stage.

• Development of competence is stimulated when students are supported to learn at their own pace and stage.

• Zone of proximal dev’t & scaffolding
• Constructive friction
• Learner-centered teaching
• Cognitive apprenticeship
What are the benefits of cues?

- who dunnit video
- https://www.youtube.com/watch?v=ubNF9QNEQLA
Evolution vs Revolution
Evolution for the teacher

- Objectives
- Know
- Teach
- Supervise

→

- Task
- Do
- Coach
- Supervise
• Explicit articulation of competencies
  • Based on desired societal outcomes

• Deliberate progression

• Selection of learning experiences to facilitate progression
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<td>Adolescent Med</td>
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