Making Milestone Mountains into Molehills

Data management

And

The ACGME Milestones
Overview and Objectives

• Objectives:
  – Understand the “volume” of data with milestone assessment
  – Review successes/failures with Milestone data management experience
  – Assess methods to increase efficient presentation of milestone data to your CCC
Into the milestones

- In the beginning
- There were 12....
- Just 12.
- Very simple (said the Radiology RRC)
Or is it…

- Doing the math
- 12 Milestone sections
- 6 rotations
- At least 6 evaluators
- Compound this by
  - 32 residents

Mountain of Milestone Data
Managing the “Milestone” data

• Challenges for all Program Directors:
  – Lots of data
  – Not much time
  – CCC members
    • Volunteers
    • Incentives (or lack thereof)
So, where to start

• Residency data management system

• Data
  – Storage
  – Management
  – Clearinghouse
Diving into New Innovations

I set out to find... the EFFICIENT MILESTONE EVALUATION...
My initial solution

Simplify, simplify.

Thoreau

MONTHLY EVALS = MILESTONES
Subcompetency function in Questionnaire Builder

- Effectively – turning the “milestones” into evaluation questions
The plan: It was perfect in my mind

1. Implement Monthly - MILESTONE EVALUATION
2. Educate the faculty
The expected result...

• Efficient
  – Faculty evaluations

• Easy
  – Data Extraction
  – Evaluations matched to the “Milestones
The reality...

- Faculty fell into old habits:
  - The “beginner” to “expert” concept was not uniformly embraced
  - “N/A” response was far too frequent
  - Feedback was not positive
Milestone evaluations, 2.0

• Reviewed results with to the CCC

• Updated evaluations with milestone-ish questions
  – Applicable
  – More like prior form
New Innovations & Milestones 2.0

• Evaluation “reports”

• Milestone “mapping”
Evaluation Reports in NI

- Evaluation reports
- Text display of evaluation reports
Evaluation reports

• Using evaluation reports to distill data

• Summary of rotation evaluation results
Evaluation reports

<table>
<thead>
<tr>
<th>Questionnaire Name/Title</th>
<th>Category/Question</th>
<th>PRG 4 Average</th>
<th>Average</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIDENT (4/30/2014)</td>
<td>PATIENT CARE AND TECHNICAL SKILLS</td>
<td>3.78</td>
<td>4.00</td>
<td>3.00</td>
<td>5.00</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>CONSULTANT:&lt;br&gt;Rate the resident's ability to independently recommend appropriate management for common conditions encountered during this rotation.</td>
<td>3.78</td>
<td>4.00</td>
<td>3.00</td>
<td>5.00</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>PATIENT CARE AND TECHNICAL SKILLS&lt;br&gt;Select the statement that best describes the resident performance as a CONSULTANT during this rotation.</td>
<td>3.87</td>
<td>4.09</td>
<td>3.00</td>
<td>5.00</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>PROCEDURAL SKILLS:&lt;br&gt;Rate the resident competence in performing image guided procedures during this rotation.</td>
<td>3.78</td>
<td>4.00</td>
<td>3.00</td>
<td>5.00</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>MEDICAL KNOWLEDGE:&lt;br&gt;Overall assessment of resident clinical knowledge.</td>
<td>3.71</td>
<td>4.00</td>
<td>3.00</td>
<td>5.00</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>MEDICAL KNOWLEDGE&lt;br&gt;INTERPRETATION OF IMAGES:&lt;br&gt;Select the statement that best describes image interpretation by the resident during this rotation.</td>
<td>3.77</td>
<td>4.09</td>
<td>3.00</td>
<td>5.00</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>INTERPERSONAL AND COMMUNICATION SKILLS&lt;br&gt;REPORTING:&lt;br&gt;Select the statement that best describes the resident's reports during this rotation.</td>
<td>3.83</td>
<td>4.09</td>
<td>3.00</td>
<td>5.00</td>
<td>0.54</td>
</tr>
</tbody>
</table>
Pros and Cons of Evaluation reports

**Pros**
- Very easy to use
- No set up
- Easy to understand

**Cons**
- No “trend” data
- Printouts usually required
What is “Milestone” mapping

• Evaluation questionnaire function
  – Matches or “maps”
  – Evaluation questions to milestone summary data
Graph of the evaluation scores for the resident

Interface for recording the milestone score
Question mapping in NI

**PROS**
- “Built in” to new innovations
- Graph display of rotation scores
  - Some basic trend data
- Comments displayed

**CONS**
- “Click” heavy
- Lacking some efficiency
- Missing
  - Logs
  - Research
So what is your goal

- Efficient data display and distribution

- Getting the data to the CCC
  - Organized
  - Trend evaluation
  - Identification of outliers
Aspirational goals

• Maximizing efficiency

• Getting the Milestone data into “one page”
Dashboards

• What is a Dashboard

• “an easy to read, often single page, real time user interface showing the graphical presentation of key performance indicators”
Basic concept in dashboard design

• Convert data to a graph

• Put the most important data on one page
Pros and Cons of “dashboarding”

**Pros**
- Efficient review of key data
- One page
- Flexibility to fit your needs

**Cons**
- Set up is tedious
- Finding the right display method is tough
How to build a dashboard

- You will need:
  - Excel
  - Google forms/charts
Where to start?

• Take your CCC notes/charts/papers
• Determine Key performance measures
Milestone: Rotation evaluation indicators

PCTS: 1 Consultant

PCTS: 1 Procedures

MK1: Protocling

MK2: Interpret

PROF1: Professionalism

ICS1: Pt Communication

ICS2: Team Communication

Milestone: Project/Module completion

PBL2: Self Learning

SBP2: HC Economics

PBL2: QI

PBL2: Patient Safety

Case log

- Body CT
- Body MR
- Mammo
- CTA/MRA
- Abd US
- PET/CT
- MR limb
- Biopsy
- MR spine
- MR brain
- CXR

Actual vs Min

Project log
Dashboard help

- Good Book
  - Information Dashboard Design
    - Stephen Few
    - Dashboard design optimization
Summary

• NAS milestone management
  – Still a learning process at this point

• Tools are available to make the data
  – Manageable
  – Interpretable
  – Customizable for your CCC needs