Session – B41 CTYPD

Assessing Resident Transitions of Care Competency Using Standardized Patient Encounters

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15 May 2015
Disclosure

• No conflicts of interest to report.

• The views expressed are those of the authors and do not reflect the official policy of the Department of the Army, the Department of Defense or the U.S. Government.
Session Objectives

• Describe the basic design, organization, and use of a standardized patient encounter to assess transitions of care competency.

• Demonstrate the use of a validated evaluation form to assess a videotaped patient handoff.

• Apply this assessment tool to your training program to evaluate trainee attainment of milestone-based, transitions of care competency.
Competent?

Video
Group Questions

• Is this physician competent?
• Does he meet educational milestones?
• What is his Dreyfus level?
• How would you assess if he is competent?
Agenda

• IOM report and beyond
• Transitions of care (TOC) defined
• Best practices – patient handoffs
• TOC and the ACGME
• Milestone analogy
• TOC milestones
• Madigan TOC policies, training, and assessment
• Resident evaluation
• Take home points and resources
IOM Report

- In 1997 at least 44,000 Americans die as a result of preventable medical errors
- May be as high as 98,000
- Lower estimate greater than 8th overall leading cause of death
- Failure of communication identified as a type of error

## Most Frequently Identified Root Causes of Sentinel Events Reviewed by The Joint Commission by Year

<table>
<thead>
<tr>
<th></th>
<th>2012 (N=901)</th>
<th>2013 (N=887)</th>
<th>Jan to Jun 2014 (N=394)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Factors</td>
<td>614</td>
<td>635</td>
<td>290</td>
</tr>
<tr>
<td>Leadership</td>
<td>557</td>
<td>563</td>
<td>269</td>
</tr>
<tr>
<td>Communication</td>
<td>532</td>
<td>547</td>
<td>248</td>
</tr>
<tr>
<td>Assessment</td>
<td>482</td>
<td>505</td>
<td>208</td>
</tr>
<tr>
<td>Information Management</td>
<td>203</td>
<td>155</td>
<td>53</td>
</tr>
<tr>
<td>Physical Environment</td>
<td>150</td>
<td>138</td>
<td>38</td>
</tr>
<tr>
<td>Continuum of Care</td>
<td>95</td>
<td>103</td>
<td>36</td>
</tr>
<tr>
<td>Operative Care</td>
<td>93</td>
<td>97</td>
<td>33</td>
</tr>
<tr>
<td>Medication Use</td>
<td>91</td>
<td>77</td>
<td>29</td>
</tr>
<tr>
<td>Care Planning</td>
<td>81</td>
<td>76</td>
<td>27</td>
</tr>
</tbody>
</table>

Communication Failures

• Implicated in up to 70% of sentinel events

• Associated with about 28% of surgical adverse events

Transitions of Care Defined
Transitions of Care

“Set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location”

Transitions of Care

• Representative Locations:
  – Hospitals
  – Subacute and postacute nursing facilities
  – Patient’s home
  – Primary and specialty care offices
  – Assisted living and long-term care facilities

Transitions of Care (ToC) Portal

Welcome to the Transitions of Care Portal. The content on the portal has been expanded and updated. This portal is a valuable source of information from The Joint Commission enterprise and other healthcare organizations, related to the topic of transitions of care (the movement of patients between various healthcare settings.) We hope you find the information helpful!

Examples of Joint Commission Programs with ToC

- Advanced Certification - Comprehensive Stroke Certification Program
- Advanced Certification - Heart Failure
- Behavioral Health Care
- Hand-off Communications
- Facts about the Hand-off Communications Project
- Hand-off Communications Solutions

Podcasts

- Take 5 with The Joint Commission: Reducing falls
  By Joint Commission
- Take 5 with The Joint Commission: Understanding transitions of care

Available at: http://www.jointcommission.org/toc.aspx
Communication Failures

• Since 2006, the Joint Commission requires standardized handoff procedures in hospitals

• Defined as a National Patient Safety Goal

• Transitions of care specifically addressed in the ACGME Common Program Requirements

Patient Handoff

- Transfer of patient care responsibility between participants
- Ensure continuity of care and high-quality, safe care decisions
- More than a passive transfer of information
- Complex and multifaceted events

Current Practices

- 55% IM residency programs do not require both written and oral sign-out
- 34% left sign-out to interns alone
- 60% do not provide lectures or workshops on sign-out skills
- Due to resident work-hour limitations, care transitions increase by a mean of 11%

Best Practices – Patient Handoffs
Categories

- Environment
- Standardization
- Technological solutions
- Improving communication skills
- Training, education, and evaluation

Environment

- Face-to-face
- Fixed and adequate time/place
- Minimal interruptions
- HIPAA compliant

Standardization

• Process

• Content/pneumonic

• Template

• Order

Technological Solutions

• Digital handoff template

• Linked to hospital information system

• Relevant, updated data

• Available

Improved Communication

• Identify each patient
• Closed-loop communication
• Read-backs
• Interactive questioning
• Shared mental model
  – SBAR
• Written and verbal communication

Training and Education

• Didactic and hands-on instruction
• Assessment of handoffs
  – Simulated clinical exercises
  – Real-time direct faculty/senior resident observation
  – Peer
• Senior resident/faculty development

Training and Education

• Evaluation of the process
  – Root cause analysis of handoff errors
  – Interviews of post-transfer providers to assess quality of handoffs
  – Quality audits (verbal and written)

Recognize that a transfer of responsibility/accountability has occurred

Transfers of Care and the ACGME
• VI.B. Transitions of Care
  – VI.B.1. Programs must design clinical assignments to **minimize the number of transitions in patient care**. (Core)
  – VI.B.2. Sponsoring institutions and programs must **ensure** and **monitor effective, structured hand-over processes** to facilitate both continuity of care and patient safety. (Core)
Common Program Requirements

• VI.B. Transitions of Care
  – VI.B.3. Programs must ensure that residents are **competent in communicating** with team members **in the hand-over process**. (Outcome)
  – VI.B.4. The sponsoring institution must ensure the availability of schedules that inform all members of the health care team of attending physicians and residents currently responsible for each patient’s care. (Detail)

Institutional Requirements

• III.B.3. Transitions of care: The Sponsoring Institution must:
  
  – III.B.3.a) **facilitate professional development** for core faculty members and residents/fellows regarding effective transitions of care; and, (Core)
  
  – III.B.3.b) ensure that participating sites engage residents/fellows in **standardized transitions** of care consistent with the setting and type of patient care. (Core)

Milestones

• Educational Milestones
  – “Developmentally based, specialty specific achievements that residents are expected to demonstrate at established intervals as they progress through training.”
  – “Programs in the NAS will submit composite milestone data on their residents every 6 months synchronized with residents’ semiannual evaluations.”

Milestone Analogy
Milestone
Ambulate without assistance

The 5 Dreyfus Levels

Dreyfus SE, Dreyfus HL. A five-stage model of the mental activities involved in directed skill acquisitions. February 1980
# Milestone Example

**SBP1: Coordinates patient care within various health care delivery settings**

<table>
<thead>
<tr>
<th>Dreyfus Level 1 Novice</th>
<th>Dreyfus Level 2 Advanced Beginner</th>
<th>Dreyfus Level 3 Competent</th>
<th>Dreyfus Level 4 Proficient</th>
<th>Dreyfus Level 5 Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understands the importance of transitions in the continuum of care</td>
<td>Transmits relevant information during transitions of care</td>
<td>Facilitates safe and effective transitions of care</td>
<td>Works effectively in various health care delivery settings and systems, coordinating care relevant to the clinical specialty</td>
<td>Leads efforts to better coordinate patient care within the health care system</td>
</tr>
</tbody>
</table>

- **After medical school**
- **Half way through TY year**
- **TY graduate**
- **Resident graduate**
- **Practicing physician**
Milestones
Milestone committees define levels

Novice
Medical school graduate

End of PGY-1 Year
Advanced Beginner

End of PGY-2 Year
Competent

End of PGY-3 Graduation
Proficient

Practicing Physician
Expert

The 5 Dreyfus Levels

Dreyfus SE, Dreyfus HL. A five-stage model of the mental activities involved in directed skill acquisitions. February 1980
Transitions of Care Milestones
### Transitional Year

**SBP1. Coordinates patient care within various health care delivery settings**

<table>
<thead>
<tr>
<th>Has not Achieved Level 1</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledges and understands that different systems and levels of care are required to provide comprehensive patient care</td>
<td>Understands the need for an interdisciplinary approach to effectively coordinate care</td>
<td>Understands coordination of care between different systems</td>
<td>Works effectively in various health care delivery settings and systems, coordinating care relevant to the clinical specialty</td>
<td>Leads efforts to better coordinate patient care within the health care system</td>
<td></td>
</tr>
<tr>
<td><strong>Understands the importance of transitions in the continuum of care</strong></td>
<td><strong>Transmits relevant information during transitions of care</strong></td>
<td><strong>Facilitates safe and effective transitions of care</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:
## Transitional Year

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledges and understands that different systems and levels of care are required to provide comprehensive patient care</td>
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<td><strong>Transmits relevant information during transitions of care</strong></td>
<td><strong>Facilitates safe and effective transitions of care</strong></td>
</tr>
</tbody>
</table>

# Internal Medicine

**11. Transitions patients effectively within and across health delivery systems. (SBP4)**

<table>
<thead>
<tr>
<th>Critical Deficiencies</th>
<th>Ready for unsupervised practice</th>
<th>Aspirational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disregards need for communication at time of transition</td>
<td>Recognizes the importance of communication during times of transition</td>
<td>Coordinates care within and across health delivery systems to optimize patient safety, increase efficiency and ensure high quality patient outcomes</td>
</tr>
<tr>
<td>Does not respond to requests of caregivers in other delivery systems</td>
<td>Communication with future caregivers is present but with lapses in pertinent or timely information</td>
<td>Proactively communicates with past and future care givers to ensure continuity of care</td>
</tr>
<tr>
<td>Inconsistently utilizes available resources to coordinate and ensure safe and effective patient care within and across delivery systems</td>
<td>Appropriately utilizes available resources to coordinate care and ensures safe and effective patient care within and across delivery systems</td>
<td></td>
</tr>
<tr>
<td>Written and verbal care plans during times of transition are incomplete or absent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inefficient transitions of care lead to unnecessary expense or risk to a patient (e.g. duplication of tests re-admission)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

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**Systems-based Practice**

The resident is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in training. He/she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient and equitable care.

___ Yes ___ No ___ Conditional on Improvement

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*The Internal Medicine Milestone Project. ACGME and ABIM 2014. Available from http://www.acgme.org/acgmeweb/Portals/0/PDFs/Milestones/InternalMedicineMilestones.pdf*
Madigan Transitions of Care
Madigan TOC Policies

- Institutional policy – minimum criteria and expectations
- Program level policies – institutional oversight at an Annual Program Review
- Specialty-specific templates and evaluation forms
- Clinical Handoff and Rounding Tool (CHART)
Madigan TOC Training

- Intern orientation – lecture and role play

- Specialty-specific sustainment training and assessment during the year

- **OSCE in October**

- Reassessment near the end of the academic year
Transitions of Care OSCE
Characteristics of a Good Assessment Tool

- Systematic, Dependable, Comprehensive, Congruent, and Practical
- Makes professional practice more transparent
- Deconstructs the role of a physician
- Clarifies level of expertise by distinguishing functional levels
- Measures actual performance
- Identifies areas for improvement
- Satisfies reasonable requests for accountability

Slide content from: Stoll DA, Implementing the ACGME outcome project: questions, answers, tips, and traps. ACGME
TOC OSCE

Goals

• Use existing understanding of milestones
• Create a framework for a good assessment tool
• Assess transitions of care
• Establish criteria for each Dreyfus level
• Validate the assessment tool
• Provide template for other specialties
TOC OSCE
Selecting experiences to evaluate

• Choose scenarios that:
  – Are pertinent to the desired specialty
  – Have a high incidence and prevalence
  – Are associated with significant morbidity or mortality
  – Require ongoing care following a handoff
  – Can improve patient care through improved education and assessment

Slides adapted from: Stoll DA, Implementing the ACGME outcome project: questions, answers, tips, and traps. ACGME
## Chart Review

### 24 Hour Vitals

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
<th>Recent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tmp</td>
<td>100.8</td>
<td>100.3</td>
<td>100.3</td>
</tr>
<tr>
<td>Hr</td>
<td>98</td>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td>RR</td>
<td>26</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>SpO2</td>
<td>94%</td>
<td>86%</td>
<td>86%</td>
</tr>
<tr>
<td>BP</td>
<td>137/74</td>
<td>132/79</td>
<td>132/79</td>
</tr>
<tr>
<td>Painscore</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
<td>84</td>
</tr>
</tbody>
</table>

### Med Orders

<table>
<thead>
<tr>
<th>Med Name</th>
<th>Dose</th>
<th>Frequency</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROCHLOROTHIAZIDE</td>
<td>25 MG</td>
<td>DAILY</td>
<td>PO</td>
</tr>
<tr>
<td>METOPROLOL XL</td>
<td>25 MG</td>
<td>DAILY</td>
<td>PO</td>
</tr>
<tr>
<td>SIMVASTATIN</td>
<td>20 MG</td>
<td>DAILY</td>
<td>PO</td>
</tr>
<tr>
<td>WARFARIN</td>
<td>3 MG</td>
<td>DAILY</td>
<td>PO</td>
</tr>
<tr>
<td>ALBUTEROL/IPRATROPIUM NEB</td>
<td>1 INH</td>
<td>Q4 HRS</td>
<td>INH</td>
</tr>
<tr>
<td>ALBUTEROL/IPRATROPIUM NEB</td>
<td>1 INH</td>
<td>Q2 HRS PRN INH</td>
<td></td>
</tr>
<tr>
<td>LEVOFLOXACIN</td>
<td>750 MG</td>
<td>DAILY</td>
<td>IV</td>
</tr>
<tr>
<td>METHYLPHREDNIOSOLONE</td>
<td>60 MG</td>
<td>Q8 HRS</td>
<td>IV</td>
</tr>
</tbody>
</table>

### Labs

- BMP: 137/4.1 99/29 12/0.8<96
- Ca/Mg/Phos: 9.9/2.1/3.3
- CBC: 13.1>14.5/46.4<220
- PT/INR: 21/2.3

### I/O

<table>
<thead>
<tr>
<th></th>
<th>Yesterday</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Out</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>
TOC OSCE

Structure

• Three standardized patient encounters

1. **Acute pancreatitis** with a history of peptic ulcer disease who has a dark stool

2. **COPD exacerbation** who complains of persistent cough and dyspnea

3. **Syncopal episode** with intermittent right-sided chest pain since admission
TOC OSCE
Structure

• Sign-out to an oncoming provider – 15 min
TOC OSCE

Participants

• Academic year 2013-14:
  – Incoming and outgoing PGY-1s
• 17 Transitional year
• 8 Internal medicine
TOC OSCE

Participants

• Academic year 2014-15:
  – Oct, prior to milestone reporting
  • 11 Transitional year
  • 9 Internal medicine
TOC OSCE

Milestones Evaluated

- **SBP1**: Coordinates patient care within various health care delivery settings

- Competency milestones for first 3 levels
  - Level 1: Novice
  - Level 2: Advanced beginner
  - Level 3: Competent
Example: SBP1, Dreyfus 1 milestone

**SBP1:** Coordinates patient care within various health care delivery settings

<table>
<thead>
<tr>
<th>Level 1: Novice</th>
<th><strong>Milestone:</strong> Understands the importance of transitions in the continuum of care</th>
<th>Utilizes the provided sign-out tool for this exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incorporates sign-out information in an organized fashion</td>
<td>Uses appropriate medical terminology during the handoff</td>
</tr>
</tbody>
</table>
**Example: SBP1, Dreyfus 2 milestone**

**SBP1**: Coordinates patient care within various health care delivery settings

<table>
<thead>
<tr>
<th>Level 2: Advanced Beginner</th>
<th>Milestone: Transmits relevant information during transitions of care</th>
<th><strong>Signout for Robert Smith (COPD)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Identifies the patient by name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correctly lists the patient's code status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correctly lists the patient's allergies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentions the name of the patient's attending or team</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brief summary of the reason for admission and current status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentions or notes the patient's inpatient medication list (provided)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentions the patient's INR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentions the patient's elevated white blood cell count</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentions the patient's ER chest x-ray</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Problem list includes pneumonia and atrial fibrillation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delineates one contingency plan for the patient overnight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To Do list includes verifying that the patient receives a nebulizer treatment</td>
</tr>
</tbody>
</table>
**Example: SBP1, Dreyfus 3 milestone**

<table>
<thead>
<tr>
<th><strong>Level 3: Competent</strong></th>
<th><strong>Milestone:</strong> Facilitates safe and effective transitions of care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At least 10 of 12 on all 3 of the patients above in the &quot;Advanced Beginner&quot; section</td>
</tr>
<tr>
<td></td>
<td>More than one contingency plan for each patient</td>
</tr>
<tr>
<td></td>
<td>Contingency plans are in an &quot;if/then&quot; format</td>
</tr>
<tr>
<td></td>
<td>To Do list includes a rationale and plan for any abnormal results/findings</td>
</tr>
</tbody>
</table>
TOC OSCE Results
Resident Dreyfus Level for Competency Milestones
2013-14 INCOMING TY Data, TOC OSCE
Resident Dreyfus Level for Competency Milestones
2013-14 OUTGOING TY Data, TOC OSCE
Resident Dreyfus Level for Competency Milestones
2014 MILESTONE TY Data, TOC OSCE

1 9 9

Pre-Novice Novice Advanced Beginner Competent
- Direct Observation
- Case Logs
- Structured Case Discussions
- Oral Exams
- Video Assessments
- Simulation

- In-Training Examination
- Structured Case Discussions
- Rotation Examinations
- Oral Examinations
- Video Assessments
- Simulation

- Direct Observation
- Case Logs
- Structured Case Discussions
- Oral Exams
- Video Assessments
- Simulation
- Review of Drug Prescribing

- Direct Observation
- Multi-Source Assessment
- Chart Review
- Structured Case Discussions
- Video Assessments

- Direct Observation
- Multi-Source Assessment
- Patient Survey
- Video Assessments
- Simulation
Sources of Validity

• **Content**
  – Well written checklist, qualifications of OSCE creators

• **Response process**
  – Rater training and thought process, OSCE scoring

• **Relations to other variables**
  – Correlation of OSCE scores with other assessments

• **Consequences**
  – Comparisons between groups
  – Methods used to determine if milestones met

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Cook DA, Beckman TJ. *Current concepts in validity and reliability for psychometric instruments: theory and application*. Am J of Med. 2006 Feb;119(2)
Sources of Validity

• **Internal structure**
  – Inter-rater reliability between OSCE evaluators
  – OSCE October 2014
    • Fleiss Kappa (κ) 0.71 (95% CI 0.69-0.74)
    • Percent agreement 86.6%
    • Cronbach’s alpha 0.74

Refining the Madigan TOC OSCE

• Educators can identify novice versus expert, but objectifying categories is hard
• Struggles with categorizing trainees within the Dreyfus models and whether a milestone was met
• Cannot assume that trainees start at the “Novice” level
• When does program intervene for deficiencies
• When should the OSCE re-assessment occur
• Video-taped encounters allow redesigning checklist
Take Home Points

• Good handoffs are important for continuity of care and patient safety
• Milestone evaluation includes assessing transitions of care
• A well-developed OSCE can be a valuable tool to assess milestone progress
• Validation and sharing of OSCEs can provide standardization among specialty programs
Useful Publications

• Lee JD, Erickson JC, Short MW, Roth BJ. Education research: evaluating acute altered mental status: are incoming interns prepared? Neurology. 2008 Oct 28;71(18):e50-3
Speaker Information

• Jason Sapp – jason.e.sapp2.mil@mail.mil
• Matthew Short – matthew.w.short.mil@mail.mil

• Printed Resources:
  – TOC OSCE scenarios, evaluation forms and additional information from this presentation are available for download and use at http://home.comcast.net/~residentosce
Questions?