Multidisciplinary Clinical Orientation:
Using Simulation to Usher in July 1st

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Stephanie Rowe, Coordinator
Allison Watts, Education Assistant
Arna Banerjee, MD, Assistant Professor in Anesthesia and Surgery
Disclosures

- No financial disclosures
- Other programs have similar initiatives
- Ours is not perfect... but it gets better
Objectives

- Discuss the need for standardizing clinical education for incoming interns
- Discuss basic required skills that are common to various specialties
- Demonstrate one model for curriculum development and initiation
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How Does This Relate to Coordinators?

- Educator
- Bridge to the faculty
- Administrator
- Integral to patient care

“Den Parent”
- Pressure
- Anxiety
- Expectations
- Responsibilities
Our Opportunity

- **GME shift** (DIO Don Brady)

- 2 full days of departmental orientation
  - In addition to institutional orientation
  - Worked together to shorten departmental orientation
Our Objectives

- Establish *clinical* orientation
- Prepare the Residents
- **Give them initial tools**-- basics
“Seeing the planes”

(No longer focusing on the routine)

ACCRUE EXPERIENCE:
operative decision-making
Hidden Objectives

- Break down the silos

- Pilot:
  - surgery (35) and anesthesia (15) residents

- Integration
  - residents
  - faculty
Discuss the need for standardizing clinical education for incoming interns

Discuss basic required skills that are common to various specialties

Demonstrate one model for curriculum development and initiation
PATIENT SAFETY
National Patient Safety Goals

- Identify patients correctly
- Improve staff communication
- Use medicines safely
- Prevent infection
- Check patient medicines
- Identify patient safety risk
- Prevent mistakes in surgery

(2011 JCAHO)
How to Standardize

“Bundles”
- Interventions that are “bundled” together to increase patient safety, decrease infection

Examples throughout the literature
- Miller et al. J Trauma 2010
- Venkatram et al J Crit Care 2009
- Galpern et al Surgery 2008

Standardization and Protocols HELP.
How to Standardize

- Institution publications
- Webinars
- Educational venues
  - Orientation
  - Conferences
Objectives

- Discuss the need for standardizing clinical education for incoming interns
- Discuss basic required skills that are common to various specialties
- Demonstrate one model for curriculum development and initiation
PATIENT SAFETY + SKILLS
The Entering Product

- Ideal Medical School Preparation:
  - Mental
  - Emotional
  - Clinical
  - Skills
  - Temporally Relevant
Experiences vary.
  - Simulation
  - Patient contact
  - Skills

Timing varies.
  - MSIV spring… often spent at the beach
Opportunity of Orientation

- Emotion influences learning.
- Emotion at orientation? (Gordon et al 1986)
  - Orientation: Tension-anxiety scores **higher**
  - Orientation: Fatigue-inertia scores **lower**
  - December: Anger-hostility scores **higher**
- Our Learners at Orientation: Activated
Objectives

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Orientation of Today...
Typical Orientation

- DIO
- Dean of Education
- Housestaff Advisory Comm
- Physician Support Services
- Benefits
- Residents as Teachers and Learners
- Student Financial Services
- OSHA
- Infection Control
- EMR training
- Respiration Fitting
- Fire Safety Training
- Medical/Legal
- Computer Systems
- Immigration/Tax
- TB test
- Linen Services
- ID badge
- Coats Payroll
- Parking
- ACLS/BLS/PAS
- VA training
- VA fingerprinting
- Occupational Health
- Departmental Orientation
Typical Orientation

- NOTHING clinical.

- What causes them anxiety?
One Approach
Curriculum Development

Six-Step Approach to Curriculum Development:

1) Problem Identification/ General Needs Assessment
2) Needs Assessment of Targeted Learners
3) Goals and Objectives
4) Educational Strategies
5) Implementation
6) Evaluation and Feedback

Kern et al., 1998, *Curriculum Development for Medical Education*
1) Problem Identification
1) Problem Identification

- Personal experience
- Informal discussions
- Institutional Needs
- Literature
“Intern Orientation”

- 25 results

- Pediatric residents (Gaies et al. 2009)
  - Bag-mask, venipuncture, PIVs, LPs

- Surgery Interns (Lee et al 2003)
  - Use of trauma simulator vs. moulage
“Resident Orientation”

- **Central line simulation (Eastern VA)**
  - Britt et al 2007, in *Am Surg*
  - “education to proficiency” using CentralLineMan “by all interns during orientation”
  - Useful to the trainees (not objective by performance)

- **Perspective from U Missouri-Columbia**
  - Schulz, *JSE* 2007
  - Detailed model for streamlining orientation
  - ATLS as clinical orientation
“Resident Orientation”

- “Clinical Skills Orientation”- OB/Gyn
  - stations including OB/Gyn related skills
  - IUD insertion, infertility evaluation, pelvic exam, ultrasound scanning, L & D triage

- Communication Assessment and Skill-Building Exercise (CASE)
  - Roth et al., *Acad Med*, 2002
  - Internal medicine residents, 4 stations with SPs
  - Learning and interactions with new faculty
“Resident Orientation”

- **Simulated nurse-to-resident calls**
  - 3 days, 15 scenarios
  - Incoming surgery interns
  - Increased confidence, high educational value
“Boot Camp”

- **Surgical “Boot Camps”** (Vergara et al, 2009)
- **Multi-institutional-- PCC** (Nishisaki et al, 2009)
- **OB/Gyn** (Pliego et al, 2008)
- **Senior medical students** (Esterl et al, 2006)
- **Computer boot camp** (Langford et al, 2000)
- **Boot camp for the elderly** (various sources)
- **Daddy Boot Camp** (Lee-St John, 2008)
ACGME Conf 2010

- Chen et al.
  - Simulation in Handoff Communication
- Smith et al.
  - Resident Orientation: A Baseline Assessment
- Colton et al.
  - IM Residency Orientation: Classroom to Simulation
  - Line placement, PIV, ABG, pelvic, monitoring
- Lister et al.
  - Neurosurgery Boot Camp (with OSCE for neuro exam)
2) Needs Assessment
2) Needs Assessment

- Surgery interns (35)
- Anesthesia interns (15)

- What skills do they need on July 1?
- What other needs might they have?
2) Needs Assessment

- **UNSTABLE PATIENT**
  - Airway
  - ACLS
  - EKGs
  - Pressors

- **STABLE PATIENT**
  - Access
  - Tubes
  - Knots

- **SKILLS**
  - Common calls
  - Fluids
  - Handoffs
3) Goals and Objectives
3) Goals and Objectives:

Institutional Goals:
- Central line insertion (goal: reduce BSIs)
- Acute airway management
- Team training
- Patient handovers

Other Goals:
- Integrate disciplines
- Introduce resources
- Dissipate Anxiety
3) Goals and Objectives

- REALISM (2 days or less)

- Key Concepts:
  - Teamwork
  - Sterile technique
  - Handoffs
  - *Initial* airway
  - First Steps...
4) Educational Strategies
4) Educational Strategies

- Simulation Based Training
- Partial Task Trainers (PTT)
- Problem-based Learning (PBLD)
5) Implementation
5) Implementation

- Resources:
  - Space
  - Equipment
  - Faculty
  - Time
  - Support
Space
Equipment

- CELA materials
  - Partial task trainers
  - Simulations

- Ultrasounds

- Central Line Kits
Faculty

- Anesthesia Critical Care
- Surgical Critical Care
- Anesthesia
- Pulmonary Critical Care
- Emergency Medicine
Support

- **DIO (time)**
- **Program Directors/Coordinators**
  - Surgery
  - Anesthesia
  - Medicine, Pediatrics, EM
- **Institution**
  - Safety Committees
  - Interventional Radiology
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<td>“Day in the Life” (Surgery)</td>
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a) ACLS Refresher

- Scenarios with SimMan
  - Unstable tachycardia
  - Vfib/Vtach
  - PEA secondary to respiratory arrest

- Instructor present—teaching

- Debriefing (as an educational tool)

- Chaos/Teamwork
b) Common Calls

- Nurse-resident simulated pages
- Phone discussion
- Assessment of patient
- Review of case
c) Vascular Access/Chest Tubes

- Didactic
- Focus on ultrasound principles
- Partial task trainers and ultrasounds
- Models to complete procedure
d) Knots and Sutures

- Senior surgeon
- Knot-tying board
- Suture on pigs feet in 2008
- Knots enough in 2009
e) Airway

- Didactic session
- Partial Task Trainers
- Reinforced in ACLS refreshers
f) Fluids/Pressors

- Problem Based Learning Discussion
- Calculations of Maintenance
- Electrolytes
- Pressors
g) EKGs

- PBL based
- Critical care trained physicians
h) Team Training

- Colourblind
- Team Building
- Business/Management
6) Evaluation and Feedback
6) Evaluation and Feedback

- 2008: Likert scale, 1-7
  - Global questions
  - Individual session questions, instructor and session

- GLOBAL:
  - Lectures and activities relevant:
    - 6.25 (SD=0.61) of 7
  - Anticipate using knowledge and skills:
    - 6.35 (SD=0.78) of 7
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Learner changes:

- **Eliminated certain sessions**
  - Chest tubes
  - Colourblind
  - Sutting
- **Restructured sessions**
  - Fluids/pressors
  - ACLS/SBAR
- **Added sessions**
  - Vent principles
Team-training/SBAR

- Eliminated Colourblind
- ACLS

- Handovers (SBAR)
  - Situation
  - Background
  - Assessment
  - Recommendations
Vascular Access

- Major Changes
  - Institutional Safety Committee
    - Interventional Radiology (Peter Bream)
  - **Ultrasound** Focus (M&M)
  - **Procedure** Focus (BSI focus)
BEFORE

“Seeing the planes”

(No longer focusing on the routine)

ACCRUE EXPERIENCE: operative decision-making
Additional Interest

- Internal Medicine (50)

- Needs Assessment (back to #1):

  - Answer: central lines, airways, codes
Resources:
- One afternoon (5 hours)
- Pulmonary Critical Care
- Anesthesia instructors for airway
- Space: Must expand to additional area
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MEDICINE
## Evaluations: 2009

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## Evaluations: 2009

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Emergency Medicine (12)
  - Needs assessment
  - Resources

Added: Consents
  - Standardized patients
  - Check-off
Departmental Orientation

“Day in the Life” (Surgery)
Dept Orientation (Anesthesia)

June 29
8:00 - MEDICINE
1:00 - EMERGENCY MEDICINE

June 30
8:00 - MEDICINE

## Evaluations 2010

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Tips

- **Buy-in**
- **Start small**
- **Faculty Instructors**
- **Educate the Educators:**
  - Simulation
  - Objectives
Be flexible
- Not all programs need every session
- Meet the needs of the departments (buy-in)

Be resourceful
- Training sessions

Be realistic
Coordinators?

- **Emotional buy-in**
- Resident Support
- Educators

- Organizers
  - Rooms
  - Equipment
  - Faculty
  - Coordinating with the remainder of orientation
Future Directions

- Identifying problem residents early
  - Skills
  - Interactions
This is the START.

Must be reinforced throughout the year.

Focus on education, not on service.
Acknowledgments

- Julia Shelton, MD
- Don Brady, MD
- John Tarpley, MD
- John Algren, MD
- John Sergent, MD
- Ray Booker
- Andrew Cross
- Dan Maxwell
- Instructors…