

# Orienting the New Learner

Debra Boyer, MD, MHPE  
Michelle Gist, BSN

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## Plan

- How it is currently done?
  - MD
  - Nursing
- What is in the literature?
- Thinking about your own program

## Group brainstorming

- What is important for a new practitioner to learn before they start working?

## Nursing Orientation: Overview

- Nursing orientation is 8-12 weeks
- New graduate nursing orientation is 12-24 weeks
- Central class days
- Unit based class days
- One on one with preceptor at the bedside
- Support post orientation

## Nursing Orientation: Central

- Hospital Nursing orientation class day
- Competency manual
- Central Nursing classes
- The new graduate nurse

## Nursing Orientation: Unit Based

Unit based orientation classes

- Pre-class work-utilizing Openpeds.org
- Lectures
- Skills
- Case-studies
- Simulation

## Nursing Orientation: Preceptors

- Preceptors
- Expectations and Guidelines
  - Week 1-4: Single patient or manageable double - full support from preceptor
  - Week 4-8: Stable intubated patients, double patient assignment-Q2 hour check ins from preceptor
  - Week 8-12: Double assignments or single with pressors-full responsibility of assignment-Q4 hour check ins from preceptor.

## Nursing orientation: Post Support

- Encouraged to ask questions
- Utilize resources
- Educator, CNS or charge-daily check in
- Mentor

## Nurse practitioner vs. Hospitalist

- Nurse practitioner (NP)  
8-12 weeks with another  
NP
- New graduate NP 6  
months

- Hospitalist 0-1 day

How does MD  
orientation differ?

## How does MD orientation differ?

- Rotating through multiple environments
- Different roles over the course of training
- Still a learner?
- Constantly supervised?

## Fellowships I

Program	Orientation	Extras
Pathology	1 day	
Neurology	2-3 days	Some simulation
Dermatology	1 day	
Dentistry	3 days	Some observation
ORL	1 day	
Developmental Med	2 days	Some observation, summer boot camp series of talks
Endocrinology	2 days	
Gastroenterology	2 days	Some hands-on training. Also, 2 <sup>nd</sup> and 3 <sup>rd</sup> year orientations
Sports Med	2 days	Month of lectures/demos
Ortho	1 day	

## Fellowships II

Program	Orientation	Extras
Immunology	Week of lectures	2 weeks of shadowing
Palliative Care	Week of orientation	Month long talks
Rheumatology	1 day	3-4 days of shadowing
Adolescent	4 days	Multiple shadowing times over first 3 months (interdisciplinary)
Emergency Med	6 days	Some workshops, Have additional 2 <sup>nd</sup> and 3 <sup>rd</sup> yr orientations
Surg Crit Care	7 days	Large Simulation part
Peds Crit Care	7 days	Large Simulation part, shadowing rounds
Pulmonary	7 days	Includes sim and shadowing
Cardiology	30 days	Lectures, Simulation, Bootcamp passport

## Highlights of fellow orientations

- Many didactics
- Short orientation periods
- Some simulation and hands on experiences
- Occasional shadowing
- 2<sup>nd</sup> and 3<sup>rd</sup> year orientations
- Cardiology passport

## ELECTROPHYSIOLOGY

By the end of bootcamp fellows will be able to:

- Establish organized approach to ECG analysis
- Analyze/ write a report for a normal 24-hour Holter monitor.
- Understand basic pacemaker timing cycles; be able to program a bedside pacemaker.
- Provide differential diagnosis for narrow and wide complex arrhythmia.
- Consent a patient for a standard EP study and ablation, understanding the risk and benefits of performing the procedure.
- Consent a patient for a pacemaker or defibrillator procedure, understanding the risk and benefits of performing the procedure.
- Use and review the 8e/ 8S telemetry machines

### CHECKLIST

- ☐ Complete the ECG packet
- ☐ Read 15 ECGs in EKG reader
- ☐ Read 2 Holters
- ☐ Observe 1 EP consent
- ☐ Set up temporary pacemaker for:
  - o AA, VVI, and DDD pacing
  - o perform capture threshold
  - o perform sensing threshold

## ECHOCARDIOGRAPHY

By the end of bootcamp fellows will be able to:

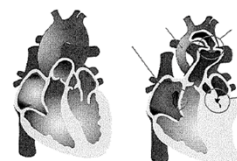
- Understand basic ultrasound physics: transducer technology, imaging physics, spectral and color Doppler, nyquist limit and the importance of frame rate to imaging
- Understand the concepts of systolic and diastolic function and the difference between them
- Recognize basic ultrasound views
- Understand how to use the modified Bernoulli equation during Doppler evaluation to estimate intracardiac gradients
- Understand the environmental factors that affect echocardiographic and MRI effectiveness

### CHECKLIST

- ☐ Participate in normal anatomy review/intro to Simulator
- ☐ Complete 2 hours independent work on Simulator
- ☐ Read intro chapters on ventricular function and basic echo (to be handed out at first lecture)
- ☐ Demonstrate full cardiac sweeps from all 4 standard imaging windows
- ☐ Demonstrate recognition of basic normal anatomy
- ☐ Demonstrate calculation of gradients from Doppler velocity measurements

## Boston Children's Hospital Pediatric Cardiology Bootcamp Passport

July 2017



## CARDIAC ICU

By the end of bootcamp fellows will be able to:

- Describe factors that influence systemic perfusion in infants with single ventricle physiology
- Describe the relationship between pulmonary and cardiovascular function under normal conditions
- Observe the signout process for new admissions from the OR/Cath lab
- Explain the effects of positive and negative pressure ventilation on cardiovascular physiology
- Describe common modes of routine bedside monitoring in the CICU

### CHECKLIST

- ☐ Demonstrate aseptic technique, identification of appropriate landmarks, and use of Seldinger technique during central line placement.
- ☐ Demonstrate effective bag mask ventilation
- ☐ Demonstrate correct size and placement of oral airway
- ☐ Discuss hemodynamic considerations during intubation of patient with myocardial dysfunction
- ☐ Participate in 3 CRM scenarios and debriefing

## CATHETERIZATION

By the end of bootcamp fellows will be able to:

- Understand normal intracardiac pressures and identify normal pressure tracings
- Recognize normal saturation data and where obtained
- Understand the relevant variables and be able to calculate basic catheterization-derived indices (cardiac index, Qp:Qs, systemic and pulmonary vascular resistance)
- Recognize normal angiograms of the cardiac chambers and thoracic vasculature
- Identify the common equipment used in a pediatric catheterization

### CHECKLIST

- ☐ Observe 1 cath consent
- ☐ Perform 1 supervised cath consent
- ☐ Second scrub on 2 cath cases if able
- ☐ Co-write report on 1 cath
- ☐ Participate in patient sign-out/transfer to 8E/8S on 1 cath
- ☐ Observe 2 equipment set-ups
- ☐ Perform 1 equipment set-up
- ☐ Demonstrate ability to move cameras

## EXERCISE PHYSIOLOGY

By the end of bootcamp fellows will be able to:

- Understand different modalities used in exercise lab, including advantages and disadvantages,
- Interpret exercise test, including understanding factors that limit patient's exercise capacity
- Understand how patient's exercise performance compares to normal subjects and those with similar diagnosis

### CHECKLIST

- ☐ Observe and interpret at least 1 exercise test including reviewing findings with faculty member

## RESEARCH

By the end of bootcamp fellows will be able to:

- Understand the requirements for scholarly research during fellowship
- Recognize the resources available to support fellow research

### CHECKLIST

- ☐ Meet with Faculty Advisor
- ☐ Identify 3 faculty members to meet with to discuss possible research projects



## Peds Residency Orientation

- Two weeks
- Didactics, simulations, logistics, social events
- 2 days of Boot Camp<sup>1</sup>

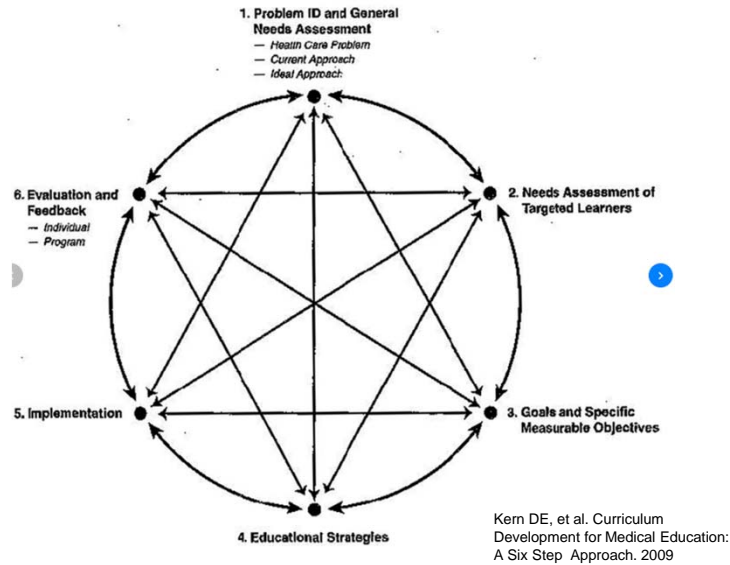
<sup>1</sup>Winn et al. Academic Pediatrics  
2018

## Peds Residency Orientation- ICOR

- Intensive Clinical Orientation for Residents
- Used Kern's 6 steps of curriculum development to create the program

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## Kern's Six-Step Approach



## Peds Residency Orientation-ICOR

- Intensive Clinical Orientation for Residents
- Used Kern's 6 steps of curriculum development
- Needs assessment- focused on 9 EPAs
  - Provide an oral presentation of a clinical encounter
  - Document a clinical encounter in the EMR
  - Give or receive a patient handover to transition care

<sup>1</sup>Winn et al. Academic Pediatrics  
2018

## Peds Residency Orientation- ICOR

- Hands-on clinical component
- Classroom-based component

<sup>1</sup>Winn et al. Academic Pediatrics  
2018

## Peds Residency Orientation- ICOR

- Hands-on clinical component
  - 2-3 days working in the clinical environment
  - Decreased patient volume and increased supervision
  - Intensive feedback
- Classroom-based component

<sup>1</sup>Winn et al. Academic Pediatrics  
2018

## Peds Residency Orientation- ICOR

- Hands-on clinical component
- Classroom-based component
  - Twice daily interactive workshops
  - Lectures, small-group discussions, role-play and PBL

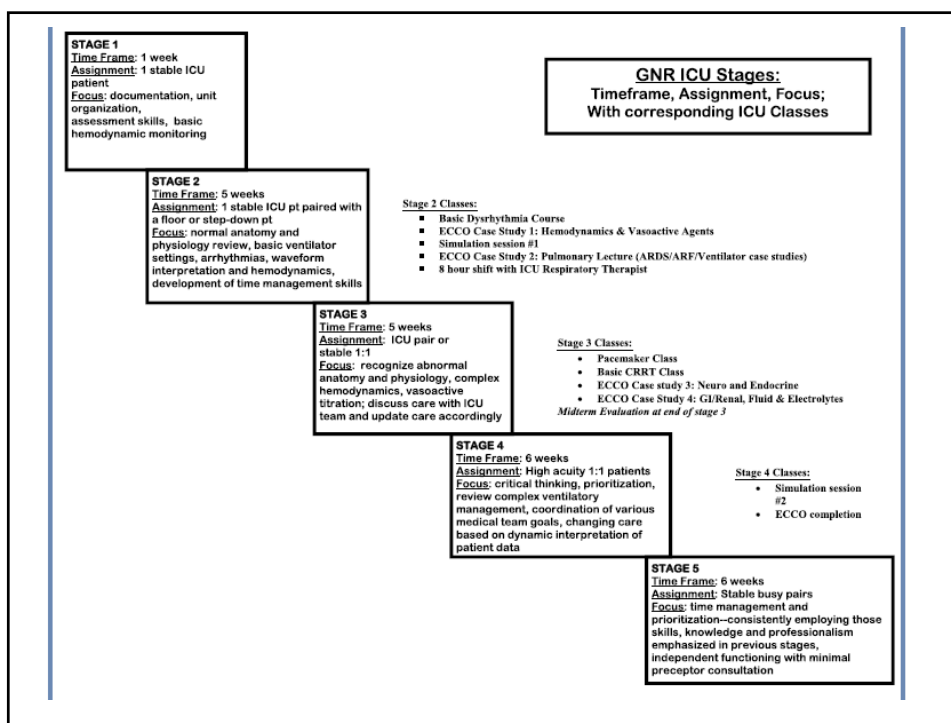
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## Graduate Nursing Orientation

- Builds upon a stages of skill and knowledge acquisition
- Clinical components, patient assignments and preceptor focus dependent on stage
- Ex. Stage 3- must demonstrate ability to IV pump before can discuss vasoactive therapy
- Staging checklist

Bortoloto SJ J for Nurses in Professional Develop 2015

ICU Stage 3: Staging Checklist	Information Reviewed by Preceptor	Knowledge Verification Score
<b>Demonstrate Alaris® IV pump set up for drips within guardrails:</b>		
<b>Vasoactives: State class of drug and effect on hemodynamics to include: MAP, SVR, CO/CI/SV, PVR, Afterload, Preload, Contractility, Heart rate</b>		
*Vasopressin		
*Levophed		
*Epinephrine		
*Dobutamine		
*Dopamine		
*Nipride		
*Nitroglycerine		
*Phenylephrine		
*Milrinone		
*Metoprolol		
*Digoxin		
*Nifedipine		
*Diltiazem		
*Amiodarone		
<b>Assist/demonstrate/describe RN role: aseptic insertion of central line / PA catheter</b>		
Enters Height and Weight at set up (note appropriate equipment)		
Calibrate SVO2 and ScVO2: In vitro/In vivo		
<b>State rationale for and management of chest tubes</b>		
*What does an air leak indicate?		
Review nurse's role in setting up pleurovac or discontinuing a chest tube		
<b>Verbalize plans/goals to preceptor at the beginning of shift and every 4 hrs</b>		
<b>Demonstrate: admission room set up</b>		
<b>Time management:</b>		
Discuss documentation prioritization		
Discuss the "stay ahead" philosophy		
<b>Call MDs independently (notify preceptor)</b>		
<b>*Actively participate in ICU rounds</b>		
<b>Delegate effectively to:</b>		
Preceptor, charge RN, CNA/ACP, PSC, Physician		
<b>Manage POE independently</b>		
<i>*Critical Components requiring Independent knowledge or skill performance</i>		
<b>Knowledge Verification Scoring:</b> 1=Independent knowledge or skill performance 2=Needs 1 cue to verbalize knowledge or perform skill 3=Needs additional cues to verbalize knowledge or perform skill 4=Unable to verify knowledge or skill		
Orienteer Signature:		
Preceptor Signature:		
Knowledge verified by:		
Original 2007, updates: 2010, 2011, 2013, 2014 via ICU CNS/ICNE team		



## Graduate Nursing Orientation

- Builds upon a stages of skill and knowledge acquisition
- Clinical components, patient assignments and preceptor focus dependent on stage
- Ex. Stage 3- must demonstrate ability to IV pump before can discuss vasoactive therapy
- Staging checklist
- **Preceptor professional development is key**

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## Orientation in the literature

- Devon et al. (2018) Pediatric Pre intern boot camp
  - Evolved from focus on medical knowledge to confidence and self-efficacy
- Cohen et al. (2013) IM Simulation-based Intern Boot Camp
  - Post testing on a clinical skills examination
- Gillen et al. (2015) all interns at institution
  - 4 hrs of case based discussions during intern orientation

## Orientation in the Literature

- Thompson Bastin et al. (2017)
  - 3 days of simulation during pharmacy resident orientation
- Barrie et al. (2018)
  - Emergency Medicine intern orientation
  - Flipped classroom, 6 weeks (21 hrs total)
  - small group, case-based discussions
- Will et al. (2016) Interprofessional orientation for health professionals
  - IPE didactics, simulation and debriefing
  - Communication, collaboration and interprofessional roles

## Orientation in your programs

## Worksheet activity

- 5 min      Fill out worksheet individually
- 5 min      Discuss worksheet with partner
- 10 min     Group sharing of ideas

## Discussion

- Why are nursing and MD orientations so different?
- How to teach learners to ask when they don't know things?
- Who is best to do orientation?
  - Near peer or more seasoned individual
- Balance of didactics and pt care training



Questions?