Orienting the New Learner
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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

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

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

- Many didactics
- Short orientation periods
- Some simulation and hands on experiences
- Occasional shadowing
- 2nd and 3rd year orientations
- Cardiology passport
**ELECTROPHYSIOLOGY**
By the end of bootcamp fellows will be able to:
- Establish an organized approach to ECG analysis
- Analyze and write a report for a normal 24-hour Holter monitor.
- Understand basic pacemaker timing cycles and be able to program a biventricular pacemaker.
- Provide differential diagnosis for narrow and wide complex tachydysrhythmias.
- Consent a patient for a standard EP study and ablation, understanding the risks and benefits of performing the procedure.
- Consent a patient for a pacemaker or defibrillator procedure, understanding the risks and benefits of performing the procedure.
- Use and review the Bed 85 telemetry machines

**CHECKLIST**
- Complete the ECG packet
- Read 15 ECGs in OSIS reader
- Read 2 Holters
- Observe 1 EP case
- Set up temporary pacemaker for:
  - AAI, VVI, and BDD pacing
  - Perform capture threshold
  - 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, and the importance of frame rate to imaging
- Understand the concepts of systolic and diastolic function and the differences between them
- Recognize basic atrial 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 of independent work on Simulator
- Read intro chapters on left 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

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**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 cardiac output function under normal conditions
- Observe the signon process for new admissions from the NICU/CCU
- Explore the effects of positive and negative pressure ventilation on cardiovascular physiology
- Describe common modes of routine bedside monitoring in the ICU

**CHECKLIST**
- Demonstrate basic technique, identification of appropriate balloons, and use of Seldinger technique during central line placement
- Demonstrate effective bag mask ventilation
- Demonstrate correct size and placement of oral intubation
- Discuss hemodynamic considerations during limitation of patient with myocardial dysfunction
- Participate in 3 CRN scenarios and deteriorating

**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, Vp, 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 control
- Perform 1 supervised cath control
- Second scrub on 2 cath cases if able
- Co-write report on 1 cath
- Participate in patient signout/transfer to ICU/ICU on 1 cath
- Observe 2 equipment set-ups
- Perform 1 equipment set-up
- Demonstrate ability to move cameras

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**EXERCISE PHYSIOLOGY**
By the end of bootcamp fellows will be able to:
- Understand different modalities used in stress labs, 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 diagnoses

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

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**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

Peds Residency Orientation-ICOR

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

1Winn et al. Academic Pediatrics 2018
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

1Winn et al. Academic Pediatrics 2018
Peds Residency Orientation-ICOR

• Hands-on clinical component
• Classroom-based component

1Winn 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

1Winn 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

Graduate Nursing Orientation

- Builds upon 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

Winn et al. Academic Pediatrics 2018

Bortoloto SJ J for Nurses in Professional Develop 2015
ICU Stage 3: Staging Checklist

**Demonstration: State of drug and effect on hemodynamics to include: RAP, SVR, CO/CVP, SVR, Afterload, Preload, Contractility, Heart rate**

- Vasopressin
- Levophed
- Phenylephrine
- Nitroglycerine
- Dopamine
- Norepinephrine
- Nitroglycerin
- Ephedrine
- Nitroglycerine
- Phentolamine
- Nitroprusside
- Atropine
- Dopamine
- Noradrenaline
-Nitroglycerin

**Assist/demonstrate/describe IN route: aseptic insertion of central line / PICC catheter**

- Enterse Height and Weight at set up (note appropriate equipment)
- Calibrate O2 and SPO2: In vivo to vivo

**State rationale for and management of chest tubes**

- What does an iatrogenic tamponade look like?
- Review nurses role in setting up, powering, or discontinuing a chest tube
- Evaluate plans/goals to preceptor at the beginning of shift and every 4 hrs

**Time management:**

- Discuss documentation prioritization
- Discuss the “think ahead” philosophy
- Call MDs independently (notify preceptor)
- Actively participate in ICU rounds

**Delegate effectively to:**

- Preceptor, charge RN, CNA/ACU, PSC, Physician

**Manage PIV independently**

**Critical Components requiring independent knowledge or skill performance**

**Knowledge Verification Scoring:**

- Independent knowledge or skill performance
- 20/20 needs to verbalize knowledge or perform skill without additional cues to verbalize knowledge or perform skill independently to verify knowledge or ASB

**Peer review:**

**Preceptor Signature:**

**Knowledge verified by:**

**Original IUCD:** author: 2019, 2021, 2024 via ICU ENRICH train.

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**STAGE 1**

**Time Frame:** 6 weeks

**Assignment:** 5 weeks ICU patient

- Focused documentation and organization
- Management skills: basic
- Hemodynamic monitoring

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**STAGE 2**

**Time Frame:** 5 weeks

**Assignment:** 5 weeks ICU patient

- Focused observation and prioritization: basic
- Focused: normal anatomy and physiology, normal vascular settings, arrhythmias, workstations interpretation, and hemodynamics, development of time management skills

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**STAGE 3**

**Time Frame:** 3 weeks

**Assignment:** ICU pair or 4 weeks

- Focused observation: abnormal anatomy and physiology, complex vascular settings, arrhythmias, workstations, interpretation and hemodynamics, development of time management skills

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**STAGE 4**

**Time Frame:** 4 weeks

**Assignment:** High acuity: 1 patients

- Focused: critical thinking, prioritization, venous complex vascular settings, management, coordination of various medical team goals, changing care plan, and accurate interpretation of patient data

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**STAGE 5**

**Time Frame:** 2 weeks

**Assignment:** Statics: busy pairs

- Focused: team management and situational awareness

**General:** Identifying and managing those high acuity, knowledge, and professional observation in previous stages, independent functioning with minimal preceptor involvement

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**GNR ICU Stages:**

**Timeframe, Assignment, Focus:**

- With corresponding ICU Classes

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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
- Preceptor professional development is key

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?