Interfacing with Electronic Health Records (EHRs)
Lessons Learned

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TeleICU – Proactive/Reactive Intensivist Support

Shift Change
Checkout
Proactive or Reactive
Rounds
Remote Intensivist
ICU Nurse
Respiratory Therapist
New Admissions
RRT / Code
Discharge
Shift Change
Checkout

Time

Intensive Care Unit
Hospital Floor to ICU Workflow with RP

1. **Patient deteriorates on floor**
   - Nurse notifies on call physician, RRT, or code blue called

2. **Emergent care or code blue begins** - additional venous access, intubation, meds, CPR, imaging
   - Physician reacts to code. MP used to pull in additional RRT or code team members, specialty physician
   - Non nurse team members involved - RT, Lab, Unit Sec, Radiology, Pharmacy, Social work, Specialist/Intensivist/Hospitalist

3. **Physician determines disposition, level of care.**
   - Needs ICU admit? (Decision node)
     - **Yes**
       - ICU admit notification processes begin - Bed Control/House Supervisor, ICU Charge Nurse, Resident, RT, Pharmacy
         - Handoff/Transition of Care begins - Report from floor nurse to ICU nurse
         - Patient transferred to ICU - possible escorts are RN, RT, Med Tech, physician depending on acuity
         - ICU nurse receives bedside report from floor nurse via VITA**
         - Physician (or ICU CN**) accompanies unstable pt to ICU via VITA if appropriate
     - **No**
       - Patient stabilized - manage on floor

**Internal efficiency model only**
ICU Workflow with examples of RP

Admission notification: Unit Secretary receives call from House Sup, Bed Control, ED Nurse, or MD

ICU nurse receives telephone report from ED or floor nurse

Patient transported from ED, floor, or other ICU with escort - RN, RT, MD, Tech

ICU Admission: Monitors, record hemodynamics, weight, assessment, place on vent, complete history, confirm resuscitation status, family communication, emergent bedside procedures

ICU charge nurse assigns bed and staff

Responder Therapy notified - Ventilator or other to BS as indicated

Bedside staff nurse retrieves available patient data from EMR

Non nurse team members involved - RT, Lab, Unit Sec, Radiology, Pharmacy, Social work, Specialty Consult

Nurse reviews/implements orders: Notifies ancillary depts of orders, creates/verifies care plan

Physician and/or mid level rounds routinely/proactively - patient assessment, delivers orders, vent/med management, family interaction, teach nursing staff. Multidisciplinary rounds

Physician mentors mid levels or residents through bedside procedures

Routine and Emergent care process: Non nurse team members involved - RT, Lab, Unit Sec, Radiology, Pharmacy, Social work, Specialist/Intensivist, PT, OT

Physician reacts to urgent/emergent call to assess patient

MP used to pull in additional RRT members, code team, specialty physician

Physician provides end of life care or additional counseling if not physically present

ROUTINE ICU CARE

Report
Morning rounds - multi disciplinary assessment - VS, physical exam
Hemodynamic management
Resp management
Scheduled tests
Disposition plan - transfer to floor/SNU
Medication Administration
Activities of Daily Living
Receiving/implementing new orders
Post procedure care
Bedside procedures
Documentation
Family conference/education

URGENT/EMERGENT ICU CARE

Patient deteriorates
Nurse alerted by monitors, family, other staff, or pt found

Emergent care begins and/or Code Blue called

Patient Stabilized - routine care resumes in ICU

Patient Disposition if leaves ICU - OR, specialty ICU, morgue

Family care
All documentation in the EMR
VCU Health Anywhere

Integration with EMR is Key
- Scheduling
- Registration
- Realtime Eligibility
- Revenue Cycle
- Coding and Billing
- IT security
- Patient Portal
- Medical Record

Integration approach
Phase 1 (From VCU System to the Platform)
Phase 2 (Bi-directional)

Prepare for the Worse

Patient Rating of Provider (213) 5/5 ★★★★★
Patient Rating of Online Care (213) 4.9/5 ★★★★★
Provider Rating of Online Care (200) 4.8/5 ★★★★★

“Visit done. So smooth and amazing. Mom was able to call in from work as well and be part of visit with dad and patient as well which was awesome. This really is wonderful!!!! The future of medicine is here!!!!”