Family Virtual ICU Rounds (FaVIR)

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Background (Telemedicine)

● Definition: The remote delivery of healthcare services and clinical information using telecommunications technology.

● Benefits (why it’s important):
  o Improved Access
  o Cost Efficiencies
  o Improved Quality
  o Patient Demand
ICU Rounding

- Daily rounding of patients in the ICU by an attending surgeon with a team of other health care professionals such as RNs, NPs, medical students, residents, fellows, and others.
  - Discuss updates and the status of each patient.
  - Make decisions about the care of each patient during rounds.
  - Plan of action is written on the board of each patient.
  - Attending will also sometimes check up on the patient during rounds.
  - Opportunity to teach med students and residents.
- Highly informative.
Family Participation is Key

- Less than 5% of critically ill patients are able to make decisions for themselves. The family members must serve as proxies.
- Family participation in rounds is important because the update of the status of the patient and the plan of action occurs then.
- There are sometimes lots of barriers:
  1. Work
  2. School
  3. Family
  4. Other sick family members
- Some form of communication between families and ICU providers is critical.
1. Families want to be present.
   • According to a study in 2013 85%-100% of family members would prefer to be present on rounds.

2. Improved FS-ICU scores

WHY?

WHY NOT?

1. Family Perspective
   • Opportunity costs
   • Financial costs

2. Provider Perspective
   • May Delays rounds
   • May Inhibit communication
   • May Decrease teaching
Does Family Participation Improve Outcomes?

- **Mortality**
  - Probably not
- **Morbidity**
  - Unlikely
- **Cost/Resource Utilization**
  - Possibly
    1. Clearer communication of goals of care.
    2. Better decision making.
    3. Let time delays in decision making.
Endorsements

1. Society of Critical Care Medicine
2. American College of Critical Care
3. American Academy of Pediatrics
Objectives and Goals

- Using telemedicine to integrate families into ICU rounds.
- To see if using a telemedical platform (VSee) helps increase family participation in rounds.
- Allowing patients’ family members who cannot be there physically to participate in rounds.
- Future improvement and incorporation of telemedical platforms into the ICU.
Study Details

- Randomized control trial
  - Arm 1 - Standard group
  - Arm 2 - Standardized + Virtual group
- Duration of patient enrollment in the study: As long as patient is in the ICU or after 7 days of the study.
- Sample size: Approximately 90 enrolled patients
- Location: Rhoads 5 SICU
- Eligibility
  - Must be in the ICU for 72 hours or more from the day of screening.
  - Must have family members present/involved in the care
  - Patient cannot be fully competent and able to speak for themselves.
  - Must be 18 years of age or older
  - Must be fluent in English
Methods

● Daily screening and enrollment
  o Logging patient arrivals and assessing whether they meet all the eligibility requirements.

● Participation agreement
  o If all requirements are met, the patient’s family member (proxy) was asked if he/she would like to participate in the study.
  o If so, he/she will be asked to sign a consent form, fill out demographic information, and complete an FS-ICU enrollment survey.
Methods (continued)

- Randomization
  - We proceed to randomize the enrolled patient/proxy into one arm via Redcap (either Standard or Standard + Virtual arm) and inform them which arm they are in.
    - If in standard arm, we observe rounding process but do not allow virtual participation in the rounding process.
    - If in standard + virtual arm, Proxy is able to participate in the rounds virtually or physically. We will observe the rounding process, as well as perform a video call to allow participation in rounds if they are not physically here.
Results

- Improved satisfaction from FS-ICU surveys.
- Increased family participation in ICU rounding for those in the virtual arm.
- Feedback from patients and patients’ family members
  - Very good idea to allow for more communication between family members and doctors/hospital personnel.
  - Most family members live out of town and found it very useful to be able to virtually participate in rounding.
### Record Status Dashboard (all records)

Displayed below is a table listing all existing records/responses and their status for every data collection instrument (and if longitudinal, for every event). You may click any of the colored buttons in the table to open a new tab/window in your browser to view that record on that particular data collection instrument. Please note that if your form-level user privileges are restricted for certain data collection instruments, you will only be able to view those instruments, and if you belong to a Data Access Group, you will only be able to view records that belong to your group.

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<th>Record ID</th>
<th>Screening/Enrollment Log</th>
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Displaying record "1" through "9" of 184 records

#### Legend for status icons:
- Incomplete
- Unverified
- Complete
- Partial Survey Response
- Completed Survey Response
Where Do We Go From Here?

• Obtain reactions from Physicians and trauma team about the effectiveness of the virtual participation.

• Expand this study to hospitals around the nation.
  o Small sample size
  o Single center study

• Modify to include multiple family members.

• Across states (hospital to hospital care).

• Apply telemedicine to other parts of health care.
Other Projects

- Dr. Joshua Marks - Prehospital Transition of Trauma Care: Evaluation the IMIST-AMBO Handover Protocol
  - **Goal**: Assess the prevalence and adherence to the IMIST-AMBO prehospital handover protocol for trauma care and to then enhance the exchange of crucial information at the bedside.
  - **Issues**:
    - No prescribed timing or location of handoff
    - Verbal only
    - Lack of prehospital training in handoff communication
    - No universal formula
  - What is IMIST-AMBO, what does it stand for?
iMIST AMBO Record Status Dashboard

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My Contributions

- **FaVIR**
  - Helped create and input data into RedCap databases
    - Screening/Enrollment Log
    - Technology Survey
  - Script for approaching and enrolling family members
  - Constructed packets of study materials and information for FaVIR
    - Informed Consent Form
    - Basic Demography Form
    - Enrollment FS-ICU Survey
    - Virtual Rounding Process Information Sheet
    - Downloading and Installation Guide for VSee (for computers and mobile devices)

- **iMIST AMBO**
  - Reviewed Trauma Bay videos
  - Helped create and input data into RedCap database
Other Opportunities

• Shadowed Dr. Holena & other trauma surgeons.
  • Trauma Bay Resuscitations
  • Surgeries
  • Consultations
• Attended morning meetings for team on duty.
• Shadowed ICU rounds.
• Attended Grand Rounds.
What did I learn?

• IRB Protocol
• RedCap Database
• Data Entry
• Patient and Family Interaction
• Medical Information & Lingo
• Trauma Teams Daily Routine
• Rhoads 5 ICU Daily Routine
Acknowledgments

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