MNA position statement on Tele-E-ICU Nursing Practice

Developed and revised by the MNA Division of Nursing (2013)

Telemedicine or e-ICU is defined as the use of medical information using both video and audio exchanges from one site to multiple sites via electronic communication. The Tele-ICU model has existed for over 25 years in the United States and has been used mainly in hospital systems in the Midwest and the South with satellite facilities. Only 15% of hospitals in the US currently have 24- hour intensivists. Proponents of the e-ICU believe that the program provides a second set of eyes and improved emergency response for the ICU nurse/medical staff in hospitals with or without intensivist staff. The e-ICU system was designed to help hospitals and health systems deliver care when specialist resources are limited. The e-ICU system incorporates staff and the equipment of telemedicine that provides remote care at the bedside using two-way audiovisual and electronic monitoring for critically ill patients by e-linking them to medical staff and critical care nurses. The e-ICU staff may use the system to assess and monitor hundreds of patients in multiple sites often over significant distance.

The rationale for implementing an e-ICU system is stated as follows:

1. The bedside nurse may find an experienced colleague with whom to collaborate, providing a second set of eyes and ears with which to observe the patient.
2. The e-ICU system may provide additional surveillance and support and may deliver timely interventions such as immediate interpretation of laboratory tests.
3. The e-ICU nurse makes rounds on assigned patients via camera, assessing patients according to documented acuity.
4. The e-ICU nurse may be assigned to monitor 30-50 patients.
5. Monitoring can be continuous for the most critically ill patients.
6. The e-ICU may provide a layer of safety using remote data from the patient's record.

An e-ICU system can monitor several hundred patients with staff ratios of 1 nurse to 30- 40 patients. The largest vendor of electronic monitoring equipment recommends one physician to 51-100 patients; however it has been reported that physician ratios can be much larger, with one physician intensivist for up to 302 patients.

But all is not perfect in the e-ICU monitoring system for the direct care nurse. Barriers that may affect implementation of e-ICU systems include the following:

1. Implementation of the e-ICU system without extensive introduction and dialogue with anticipated users.
2. Lack of orientation for nursing and physician staff at both the bedside and at the remote site in the e-monitoring system/equipment.

Have a question regarding E-ICU?

Call the MNA Division of Nursing at 781-830-5714 or 781-830-5719.

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"Statement on Tele-E-ICU Nursing Practice" continued...

3. Undefined roles and responsibilities of the e-ICU staff, i.e. communication and documentation.
4. Clarity of purpose of the e-ICU staff.
5. Lack of standardized forum for engagement of staff in periodic evaluation of the system and identification of areas for improvement.
6. No measurement of clinical outcomes. Currently there are no national standards for e-ICU practice
7. The threat of reduction in staff of expert clinicians at the bedside.

Successful implementation of the e-ICU system is dependent upon meeting the following minimum criteria:

1. Clear communication between the e-ICU nurse with the patient and bedside nurse when camera assessment is being initiated. This would avoid the issue of the bedside nurse and patient being unaware of E-ICU monitoring.
2. Reassurance to the bedside nurse that e-ICU monitoring is not taking the place of the nurse's knowledge, judgment, and competence but is there to monitor data and trends.
3. Adjustment of e-ICU monitoring during crisis situations when necessary personnel are responding to a patient event. This adjustment would help protect patient safety and confidentiality.
4. Use of a visually coded system (red, yellow, green) to identify acuity and frequency of rounding. Observation of the patient during conversations with family or the direct caregivers, or during procedures, may need to be adjusted.
5. E-monitoring staff should be available to request an urgent consult when a situation demands immediate attention.
6. Extensive orientation of both e-ICU monitoring staff and direct care providers to criteria that protect patient safety and confidentiality.

While we recognize the potential benefits of e-ICU monitoring, this system should not be used to replace bedside staff. ∎

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Visit to Steward e-monitoring site in Westwood, Mass 2012

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