Editorial

The Need for Quality in the ICU!

In current times, an increasing number of patients requires admission to the intensive care units (ICU) due to the availability of life-sustaining technologies as well as therapies which require careful monitoring. Care of critically ill patients demands resources and forms a major portion of the hospital budget. These patients are most susceptible to adverse events and catastrophes if health care is suboptimal.[1] Impact of quality improvement in critical care has been well established. A review by Curtis et al. outlined the practical approach to develop, evaluate, and sustain the quality improvement program in the ICU setup.[2] Quality improvement is a structured process, and established models are available.[3] Clinicians should work on the aspects which they are able to improve.

The first component is a structure which includes the size of ICU, its integration with healthcare system, open or closed units, availability of technology, ICU staff (number, roles, and responsibilities) and infrastructure. Current literature and understanding the effect of structure on patient outcome are still premature.

The second component, process, represents what we do or fail to do for the patients or their families. To improve quality of care, a large number of both clinical (such as intervention focused of particular pathology) and non-clinical processes (such as organizational management) has to be developed. The processes should be measurable and modifiable.[4] The third component, outcomes, represents the results that are achieved after the intervention. Outcome measures are routinely monitored and are important targets for the clinicians.The limitations of measuring outcomes are that these are less responsive to improvement measures and more amenable to bias than the process component. The study conducted by Siddharth et al. has comprehensively studied the outcome parameters and emphasized that the inappropriate institution of strategies (process) does not improve outcome in a predictive manner.[5] To implement these quality indicators into clinical practice, there is a need of considerable contribution from clinicians and their willingness to change. This work is therefore only the first step in a performance improvement process. The next step will be to use these sets of measure in clinical practice and to test the hypothesis that their use is associated with a high level of quality of care and can result in improved patient outcomes and satisfaction when adhered to.

Task Force on Safety and Quality of the European Society of Intensive Care Medicine (ESICM) has defined the indicators to improvethe safety and quality of care for critically ill patients.[6] The author reported that an indicator should be important, reliable, responsive, feasible, valid, interpretable, and steady.[2] Clinicians should focus more on the process component of care than merely on outcomes. Recently, there has been a considerable increase in the interest in developing bundles, checklists, guidelines, and protocols to improve the of care in the ICU. The use of an indicator or list of indicators is an important step towards improving the outcome, but these indicators should be uncontroversial, achievable and measurable. The created set of quality indicators should then be used to bring into clinical practice or change practices with unpredictable outcomes. This work is the first step for improving the process with relevance in resource-limited settings. With the next step, these measures will be used in clinical practice to test the hypothesis that their use improves the quality of care and patient outcomes and family satisfaction.

For quality improvement, critical care clinicians should adopt and enforce the structure–process–outcome model. Working on the structural component is most challenging, and clinicians may focus on processes or outcomes. There are many factors in the healthcare systems that may affect outcomes, but all of these factors are not modifiable. A comprehensive quality improvement program in the ICU usually addresses all of the three categories.

REFERENCES

1. Berenholtz SM, Pustavoitau A, Schwartz SJ, Pronovost PJ. How safe is my intensive care unit? Methods for monitoring and measurement. Current opinion in critical care. 2007 Dec 1;13(6):703-708.
2. Curtis JR, Cook DJ, Wall RJ, Angus DC, Bion J, Kacmarek R, Kane-Gill SL, Kirchhoff KT, Levy M, Mitchell PH, Moreno R. Intensive care unit quality improvement: A "how-to" guide for the interdisciplinary team. Critical care medicine. 2006 Jan 1;34(1):211-218.
3. Donabedian A. Continuity and change in the quest for quality. Clinical performance and quality healthcare. 1993;1(1):9-16.
4. Brook RH, McGlynn EA, Cleary PD. Measuring Quality of Care. New England Journal of Medicine [Internet]. New England Journal of Medicine (NEJM/MMS); 1996 Sep 26;335(13):966-970.
5. Siddharth V, Gupta SK, Satpathy S. Quality of care in medicine intensive care unit: A study in an apex tertiary care teaching hospital of Northern India. Journal of Postgraduate Medicine, Education and Research, 2018 Oct-Dec;52(4):171-176.
6. Rhodes A, Moreno RP, Azoulay E, Capuzzo M, Chiche JD, Eddleston J, Endacott R, Ferdinande P, Flaatten H, Guidet B, Kuhlen R. Task Force on Safety and Quality of European Society of Intensive Care Medicine (ESICM). Prospectively defined indicators to improve the safety and quality of care for critically ill patients: a report from the Task Force on Safety and Quality of the European Society of Intensive Care Medicine (ESICM). Intensive Care Med. 2012 Apr;38(4):598-605.

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