Editor's Corner

A Call for Competence-Driven Healthcare Technology:
The Right to Repair and Clinical Engineering Competency

The debate surrounding "Right-to-repair" has reached clinical engineering, sparking a crucial discussion about technical expertise and patient safety. On one hand, healthcare providers question why they cannot choose service providers for their medical equipment, obtain replacement parts, and manuals given their investment in acquiring and maintaining its performance. On the other hand, the industry raises concerns about the specialized training and qualifications necessary for safe and effective maintenance of sophisticated devices..

This debate hinges on the concept of competency: the ability to perform a task effectively. In healthcare, where lives hang in the balance, ensuring competency should be paramount. Unlike a simple household appliance, medical equipment demands intricate knowledge, experience, specialized tools, and a deep understanding of its intricacies. Therefore, simply owning the device should not grant automatic repair rights. As you can see on the cover page of this issue, we encourage further understandings of professional stewardship characteristics especially as it refers here to engineering competency. The foundation of competency lies in education, discipline boundary, skills sustainability, and compliance with professional credentialing. From the wisdom of the book of Proverbs, the biblical anthology of saying and instructions, ("Discretion will watch over you, understanding will guard you...") to the Latin root "competere", which is a combination of "com" ("together" or "with") and "petere" ("to seek" or "go towards"). Therefore, the literal meaning is seeking or suitable to go together, having competence. Over time, the term evolved generally to represent the ability, capacity, or fitness to perform tasks or function effectively. It is commonly used now to describe a set of skills, knowledge, and attributes that make an individual a capable and qualified practician in a particular field, role, or task. In healthcare, ensuring patient safety necessitates demonstrable competent stewardship, including from the professionals who ensure that patient care medical technology is safe and effective.

As healthcare grows ever more technology-intensive and its reliance on that technology increases, the Clinical Engineering profession competency becomes ever so more vital. Patient who enters the healthcare system for the treatment of their disease or abnormal condition may be unable to understand and to make decisions about the technology that is about to be used during the treatment or management of their condition. Further- more, patients may be unable to fend for him/herself due to receiving medications or anesthetic drugs that render them unconscious, unable to make decisions.

In such situations patients are appropriately expect that members of the healthcare team will ensure that the technology used on them is safe and effective. The care team includes clinical engineering practitioners. While physicians are taking the historical Oath of Ethics known as "Hippocratic oath", engineers are also bound by the "First do no harm" (in Latin Primum non nocere) and by the engineer's creed contained in Professional Engineer ethical oath.[1]

Assessing and maintaining competency requires a multi-pronged approach:

- **Technical knowledge:** Examining expertise in relevant systems, protocols, and troubleshooting.
- **Risk management:** Evaluating the ability to identify and mitigate potential risks associated with equipment operations and maintenance.
- **Problem-solving skills:** Assessing the capacity to diagnose and resolve technical issues effectively.
- **Communication skills:** Ensuring clear and concise communication with stakeholders, including healthcare professionals and patients.

- **Project management:** Evaluating the ability to manage equipment maintenance projects efficiently and effectively.

- **Ethics and professionalism:** Assessing adherence to ethical principles and professional standards.

- **Continuous learning:** Evaluating commitment to ongoing learning and knowledge acquisition.

The methods for measuring competency range from performance assessments and technical examinations to peer reviews and self-assessments. Ideally, the approach should be tailored to the specific context and goals of the organization and the engineering discipline. However, a global baseline of competency is essential to ensure safe patient outcomes.

The debate around "Right-to-repair" ultimately boils down to who should determine competency: the industry or the healthcare provider? We, as clinical engineers, must advocate for competency-based access, demonstrating our value through education, professional credentialing, and ethical practice. This will pave the way for a future where clinical engineering is recognized as a "free" profession[2], empowered to make decisions based on expertise and not external constraints.

Join the conversation! Share your thoughts on the "Right-to-repair" debate and how we can achieve competency-driven healthcare technology management programs. If you're not yet accredited, let us know how we can help you on your journey towards professional recognition. Global Clinical Engineering Alliance and the Global Clinical Engineering Journal will look forward to your response.

We can ensure that patient safety remains the cornerstone of our discipline, and that means, that together we can make it better.

REFERENCES

1. The Professional Clinical Engineer, Y. David, Journal of Clinical Engineering, Sept/Oct 1988.

2. Is Clinical Engineering an Occupation or Profession?, Y. David et al, Global Clinical Engineering Journal, Vol. 4, Issue 2, 2021.

Have a wonderful and productive 2024!

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