USA

This contribution is based on input gathered from interviewing Ilir Kullolli, Tobey Clark and Yadin David.

1. **State of Clinical Engineering (CE) - Health Technology Management (HTM) – Body of Practice (BOP)**

   Clinical Engineering profession is a mature field in the US—Coined in mid 1960s by Cesar Caceres, MD, while the individual practitioner was further defined by ACCE in the early 90s. Health Technology management is a much younger term and provides mostly for none engineering trained practitioner to become member of Clinical Engineering. This adds to the confusion as to who is a Clinical Engineer in the US. Accordingly, the Body of Practice is expanding as well ranging from Medical Product Development to Application, Use and Performance Assurance Program throughout the lifecycle of the technology. Few examples, recently, have also suggested that Clinical Engineers are becoming professional Consultants and Entrepreneurs.

2. **How would you suggest to show the Value of and from having CE-HTM program**

   By reaching consensus about ‘who are we’ and ‘what is the scope of the BoP’, which is the responsibility of qualified members of our profession. There will be better recognition for the value we bring to the table, by publishing through periodicals like the Global Clinical Engineering Journal.

3. **Example of success stories where CE supported patient outcomes**

   a. CE-IT collaboration and integration of medical devices and EMR leading to better management of the care of the patient.
   b. Improve patient safety and reduction in adverse events due to better technology lifecycle management.
   c. Better efficiency through matching technology to clinical needs by performing technology evaluation processes.
   d. Bringing cost control for equipment management by assessing service options between in house program, OEM and third party ISO.

4. **CE Education program available (levels and content) – Body of Knowledge (BOK)**

   CE Education program is limited in the US to very small number where there are no undergraduate CE programs. There is one CE Master Level and one CE Management. It is of interest to note that all the CE Master level graduate are easily placed in the market upon graduation.

www.ced.ifmbe.org
BoK is not well defined in the US where majority of the skills are spent on conventional hospital-based technology lifecycle management tasks and smaller percentage of practitioners are focused on same task but relating to imaging system. Three areas are particularly weak: 1) IT integration, 2) Lifecycle finance 3) Weak use of professional publication for promoting best practices and 4) Forensic Engineering.

5. **CE Association/Society and Credentialing/Certification program if available**

There are several professional Associations that have Clinical Engineers as members in the US. ACCE is the only association that seek trained engineers as members while AAMI present more of a trade association and IEEE/EMBS present more of the Academia affiliated Biomedical Engineers. A small group of Clinical Engineers are also maintaining membership within AHA/ASHE. Credentialing of CE’s is offered by the Healthcare Technology Certification Commission. It is an active program that is optional and not mandatory.

6. **CE major challenges (think of 3 subjects)**

1) A unified terminology for the profession and agreement for the minimum level required to be qualified CE.
2) A stronger link between academic programs and practicing CE.
3) Buy-in from CE for the importance of publications in strengthening of the profession.

7. **What is the most important action you will support to increase CE recognition**

Participate in International task force that will present position statement and action plan to address the 3 issues identified in number 6 above.