# 6th ICEHTMC Congress
**October 17-19, 2025**

# Topic Descriptions

**Abstracts submitted to this Congress should present innovations, current professional experiences, latest knowledge, lessons learned and/or best practices related to Clinical Engineering (CE) disciple, application of Health Technology Management (HTM), and research in topics described below.**

### 1. Capacity Building in C.E.

This priority area for the global CE community is focused on developing a framework for measuring capacity building plans, and a strategy for improving CE-HTM services in a country and or region. The framework includes the CE-HTM Knowledge, Investment and Competencies needed by qualified CE practitioners, and the strategy is highlighted by using the Body of Knowledge and Body of Practice survey results to communicate with health leaders how qualified CEs have helped address national health priorities. This topic invites front-line experiences, solutions applied, lessons learned and/or best practices in various aspects of Capacity Building.

### 2. Digital Health, Artificial Intelligence, Cybersecurity, and Connected Devices

CEs are increasingly involved with the development and management of various Digital Health tools that can improve health outcomes, such as: (1) robotics; (2) 3D imaging & printing; (3) telemedicine & remote monitoring; (4) micro- and nano- technologies; (5) personalized medicine (including genomics); (6) connected, systems-of-systems, and cloud-based solutions (including IoMT & wireless); (7) clinical decision support (CDS) & expert systems; (8) artificial intelligence (AI) & machine learning (ML); (9) augmented reality (AR); and (10) Cybersecurity. In an era where technology is reshaping every aspect of healthcare, we stand at a critical crossroads—one that presents immense opportunities while also posing unprecedented challenges. This conference brings together experts, thought leaders, and innovators to explore the intersection of these critical fields. We will discuss how AI is advancing healthcare, the cybersecurity risks that come with digital transformation, and the ethical and regulatory considerations we must address to ensure a safe and responsible future.

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### 3. Impact Measurement

This priority area for the global CE community is focused on the Theory of Change model and how short-term CE-HTM practitioner activities have longer-term measurable impact on clinical outcomes, in areas defined by WHO such as Access, Quality, Safety, Coverage, and Efficiency. This topic invites front-line experiences, solutions applied, lessons learned and/or best practices in various aspects of performance and Impact Measurement.

### 4. Credentialing and Accreditation

Professional Credentialing and Accreditation, another priority area for the evolving global CE community, typically means that CE professionals can demonstrate competencies ensuring minimum qualifications, expressed through registration and/or certification programs. Content that encourages existing credentialing programs or those that can assist implementation of new Country/Regional Certifying structures are encouraged. These include identifying norms for different types of CE practitioners and Body of Knowledge & Practice differences, creating and administering continuous professional development offerings, and processes aligned

appropriately with other certifying bodies. This year, we expanded the debate into the accreditation of CE programs performance in addition to individual practitioners. This expanded topic invites front-line experiences, program directors, successful implementations, lessons learned and/or best practices in various aspects of Credentialing.

## 5. Policy & Regulation

To be involved in creating in national Health Technology (HT) Policy, CEs must show value to Ministries of Health at national level. CEs must educate healthcare decision-makers, as well as demonstrate to both public and private healthcare leaders our value in assisting in this process. This topic invites front-line experiences, lessons learned and/or best practices in various aspects of Policy development and implementation, e.g., for national priority setting for technology management, Telehealth, and other health technology related national needs. This topic also addresses CE involvement in HT Regulation at country and global levels.

## 6. Health Technology Management

HTM ensures access to appropriate medical devices, proper management of medical equipment including medical imaging over its lifecycle must be well planned, beginning with understanding of the local needs of a country, community or facility and ending with the last phase of decommissioning. In between, the process includes identification of priority devices (i.e. WHO MeDevIS), appropriate nomenclature, good procurement practices, appropriate donation solicitation/provision, logistics of delivery and installation, inventory management (CMMS), maintenance, repair, safe use and training, and measurement of clinical effectiveness. Topics on relationship between HTM, HTA are included. This topic invites front-line experiences, lessons learned and/or best practices in various aspects of Health Technology Management (HTM).

## 7. Health Technology Innovation & Assessment

Health Technology Assessment (HTA) - a systematic evaluation of properties, effects, and/or impacts of health technology that includes medical, social, ethical, and economic dimensions. Its main purpose is to inform decision-making in the health area, thus, to improve the uptake of cost-effective new technologies and prevent technologies having evidence of negative cost-to-benefit value from entering the health system when alternative is available. Innovative technologies serve to fill gaps in the availability of health technologies through the provision of new solutions to health problems, the adaptation of existing technologies to a particular setting or for a new use, and the combination of technologies to address several health issues at once. This topic invites front-line experiences, lessons learned and/or best practices in various aspects of HTA and HT Innovation.

## 8. Alternative (Home) Care Technology

Technology is currently a critical tool in the non-conventional setting such as home health care, alongside primary care. Advances in home health technologies - such as telemedicine and remote patient monitoring - have the potential not only to facilitate the role of home health care within the overall health care system but also to help foster community-based independence for individuals. This topic invites front-line experiences, lessons learned and/or best practices in various aspects of Home Care Technologies.

## 9. Quality & Risk Management

Quality, safety, and risk management in health technology are essential topics in healthcare, since these issues drive emerging trends of healthcare outcomes, including reducing patient adverse events, improving device surveillance, demonstrating improved quality with better design of existing and new health technologies while reducing risk and cost. HT regulatory and performance compliance topics included. These issues can directly influence both clinical outcomes and staff performance. This topic invites front-line experiences, lessons learned and/or best practices in various aspects of Quality and Risk Management.

## 10. Women in Clinical Engineering

Advancing gender diversity in C.E. and specifically in management require understanding of the obstacles and accomplishments of collaborative initiatives aimed at recruitment and retention of leaders. This topic aims to show the women CEs' participation, value creation, lessons learned, and/or knowledge acquired from academic training reinforced by their experience in the hospital and other healthcare settings. Challenges and career opportunities of being a female clinical engineer are welcome.

## 11. National and Regional CE Societies

National Clinical Engineering Societies are the engine that help drive change and growth for CE-HTM practitioners in a country. We invite society leaders to share how your society has enabled any of the prior 11 topics for your country's public and private health systems, such as the creation or further development of national HT policy, national HT regulation, a national CE certification process, various strategies to improve capacity and or facilitate greater impact on national health priorities. Description of barriers to create national CE association and unmet needs are welcomed.

## 12. Disaster Preparedness and Emergency Technology Deployment

This timely topic will highlight Clinical Engineering's role in healthcare crisis response (pandemics, natural disasters, conflict zones). Rapid deployment of emergency medical technologies and field hospitals planning. Ensuring medical devices and systems (communications, medical gases, vacuum, etc.) functionality in extreme conditions. Lessons from COVID-19: Strengthening healthcare resilience through better technology management will be welcomed.