Australia

Adrian Richards – International collaborator for Australia
- discussing international certification programs for CE –
Melvin Mazid (currently on holiday) – head of National Committee on Clinical Engineering within EA
- global CE day – live streaming of what we are doing (21st of October)
- what is going in on the industry, what has been achieved

Clinical Engineering – defining as Health Technology Management HTM
- having global academic programs
- having the clinical focus for engineering in a healthcare setting
- ie, Japan, heavily involved in using and running the equipment
- formal qualifications
  - Biomedical Engineering can vary in Universities, from electronic to mechanical, materials or rehab based academically – no specific focus on HTM
  - medical devices are not focused on in university courses, we have very general courses that are versatile for getting jobs in a variety of industries
  - an Associates degree exists in SA that is very focused on Clinical Engineering
  - Biomedical Engineering and Clinical Engineering are interchangeable in Australia in the hospital setting. BME has many more dimensions outside of the hospital.

registration
- state based at this stage, Queensland has requirement for professional engineers
- there is no appetite from the government or Ministry for Health regarding certification for Clinical Engineers in Australia
- it is possible to become a chartered or registered engineer with Engineers Australia using CPD but it is a very generic process – regarding the base of the engineering course that was studied (mechanical, chemical, electrical, electronic). There is no dedicated process to become a chartered Biomedical or Clinical Engineer per-say

BOK
- the custodians of the BOK are the Biomedical College, a specialist group within Engineers Australia
- this specialist group are unique in that it is a touchpoint for the entire country and they are able to have a grasp of what is happening within Clinical Engineering nationally

Demonstrating the value of Clinical Engineering
- the value of the health of the nation and how CE fits into this
- equipment investigations, replacing and procuring equipment to best suit to health providers needs
- maintaining equipment

www.ced.ifmbe.org
We have an annual conference ABEC where new innovations, changes to standards and the industry are presented and discussed.

Societies and Associations
- Engineers Australia across the country and SMBE individualised per state
- These societies allow conferences to happen once a year, which is a helpful networking opportunity

Challenges
- Benchmarking staff across Australia – in Victoria each public hospital is run separately but in Queensland, SA, NSW it is grouped either in large regions or as a statewide service. There is no validation of service provision in Australia currently, no BOP. We follow the Australian Standards for Management Programs of Medical Equipment AS NZS 3551:2012, this is not a BOP document but a very descriptive guideline. Most organisations have their own BOP documents or something similar for their Clinical Engineering Department
- Regional servicing – Australia has large distances to travel, supporting rural and community healthcare services can be challenging.
- Justification of internship/cadetship programs for CE across Australia
- specific programs for professional development of Clinical Engineers – there is no validation or regulation around this at the moment
- leadership and professional development programs – it is difficult to progress in Australia with experience being the only way to increase possibility of promotion and not often within the same organisation.

Support within CE
- development workshops via EA and conference committees that are designed to enhance skills and improve metering ability within the industry
- Australia would be happy to bring onboard an international mentor who may be interested to see how it is done to run something similar in their country
- leadership programs – most public health organisations provide this opportunity to their managers but it would be helpful if EA had a program for Clinical Engineers that are registered and if this was recognised across Australia

Positive stories about clinical engineering and improving patient safety in Australia:
- investigations into issues with equipment regarding coroners reports to help identify if equipment is involved or not. Partaking in discussions regarding improvements that can be made so that the issues do not happen again
- standardisation of equipment during the procurement process to help with decreasing human error with less models of equipment to have to educate about and hold parts and consumables for
- regular preventative maintenance decreasing the downtime of equipment
- technical staff who have relationships with clinical staff and an understanding of the urgency of treatment of patients. Also, an understanding of how medical devices are used and the knowledge and tools to have the devices up and running quickly
- communications with medical staff and executive regarding obsolescence and replacement of medical devices with improved technologies
- providing support while medical devices are used (Peter Mac, Cancer Centre) and helping to develop new ideas for improved technologies
- AS NZS 3551:2012 is a helpful tool for benchmarking asset management of health technologies and standardising test, commissioning and decommissioning sheets. Most Clinical Engineering departments in Australia use these standards to help develop their Health Technology Management plan - from Commissioning to Disposal - this makes it easy for Clinical Engineers to move hospitals and states.