Overview of present & future CE in Japan

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1. History & Current Status of CE in Japan
2. Definition & Duties of CE in Japan
3. Situation of CE in Japan
4. Current issues of CE’s Activities in Japan
5. Existing Challenges of CE in Japan
6. Future of CE in Japan
1. **History & Current Status of CE in Japan**

- Improvement of Medical & Engineering Technologies (Technology) (ex. Rapid growing of medical support by artificial organs)
- Substantial increase of ESRD patients in hemodialysis (HD) field
  - Safe and appropriate operation/application of HD machine
  - Need of more HD specialists and CEs operating artificial heart & lung
- Strict requirements for safe & appropriate operation of all medical equipments
  - Need of more specialists

- Requests for specialists from medical field

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Establishment of CE
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Growing need & number of CE
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1987  “Clinical Engineering Law” was promulgated by MHLW (Ministry of Health, Labour and Welfare)

1990  Professional organization JACET was founded (Japan Association of Clinical Engineering Technologists)

2002  JACET was certified by MHLW as a public utilities corporation
2. Definition & Duties of CE in Japan

Clinical Engineer:  
- Licensed by the Government (MHLW)  
- Under “the Clinical Engineering Law”

Main Duties: Operation of life-support medical equipments

- Check & maintenance work
- Direct medical actions to patients
- Care to patients
  - Blood & drug injection to patients
  - Blood sampling of patients
  - Electronic care to patients

Cooperation with doctors, nurses and other medical stuff to take team approach
Definition

**Life-Support Equipments:**
Biogenic functional support of respiratory, circulation and metabolism with life-support equipments and others

**Check & Maintenance Work:**
including clean-up, adjustment, change of consumables, inspection before & after the use of equipments
3. **Situation of CE in Japan**

No. of Licensed CE:

20,054 (as of March 2005)

(1,343 were newly licensed in March 2005)

Actually working CE:

approximately 12,000

Member of JACET:

approximately 7,000 (as of March 2005)
CE at Work

Age

CE Breakdown by Job

Blood Purification
Respirator
Heart Related
Operation Room
ICU
Hyperbarac
Maintenance
Others
4. Current Issues of CE Activities in Japan

- Jobs not clearly defined by Law
- No public remuneration guaranteed
- **Duties** including sanction of phlegm and blood drawing are not legally admitted
- Insufficient education period
- Lack of understanding of CE’ jobs in medical institutions
5. Existing Challenges of CE in Japan

—For Safer Medical Equipments Operation—

- Longer & continuous education/training
- Clear legal definitions
- Enhance CE’s position in LSS at medical institutions
- Improve skill by Certification System
- More central ME control centers at medical institutions
- Cooperation with industries in the development of safer & advanced LSS
- Others
6. Future of CE in Japan

- Continuous efforts towards safe operation of LSS
- Legal enhancement of CE’s duties
- Authoritative specialists to LSS at medical institutions