HISTORICAL PERSPECTIVE OF INTENSIVE CARE

Dr. Rubina Aman
Module 1  MCCM
10/09/09  PIMS
• 1854 Crimean war
• Mortality rate 40%
• Nightingale & 38 volunteers
  Joined field of Scurati.
• Practiced “critical care protocol”
• Mortality rate fell 2%
• First step to Intensive Care Medicine

School of Nursing at St. Thomas
Dandy era

Walter Edward Dandy

- Worked in the Johns Hopkins College 1914 -1946.
- Introduced air method in ventriculography,
- The technique successful for identifying brain injuries.
- Pioneer in operations the glossopharyngeal Meniere's syndrome,
- Dandy created the first ICU in the world, 03 beds, Boston, 1926
Ibsen era

- Bjorn Aage Ibsen (1915-2007), Copenhagen
- 1952 poliomyelitis outbreak in Denmark,
- 2722 patients developed the illness in a 6 month period, 316 suffering respiratory or airway paralysis.
- Treatment had involved the use of the few negative pressure respirators available,
- these devices were limited, did not protect against aspiration of secretions.
- Ibsen, instituting protracted positive pressure ventilation by intubation into the trachea,
- enlisting 200 medical students to manually pump oxygen and air into the lungs
The Polio epidemic 1952   Denmark.
Carl-Gunnar Engström developed positive pressure volume controlled ventilators, it replaced the medical students.

Mortality declined from 90% to around 25%.

Patients were managed in 3 special 35 bed areas which aided charting and other management.

1953 Ibsen set up world's first Medical/Surgical ICU in Copenhagen

Provided accounts of the management of tetanus with muscle relaxants and controlled ventilation.

1958 authored the first known account of ICU management principles in Nordisk Medicin,

‘Arbejdet på en Anæsthesiologisk Observationsafdeling’ (‘The Work in an Anaesthesiologic Observation Unit’)

Ibsen died in 2007.
Safar era

- Peter Safar, the first Intensivist in USA
- Born in Austria & migrated to the United States in 1949.
- 1950s he started the "Urgency & Emergency" room setup (later as an ICU)
- ABC (Airway, Breathing, and Circulation) protocols were formed,
- Artificial ventilation and cardiopulmonary resuscitation became popular
- The first surgical ICU established in Baltimore,
- 1962, University of Pittsburgh, first Critical Care Residency established.
- In 1970 the SCCM was formed.
EVOLUTION OF CRITICAL CARE IN DEVELOPED COUNTRIES
INTENSIVE CARE UNIT:

“A hospital area in which an increased concentration of specially trained staff and monitoring equipment allow more detailed and frequent monitoring and more frequent intervention in seriously ill patients.”

INTENSIVIST:

“One who provides the most efficient primary care for the critically ill, bringing some aspects of all specialties to the bedside and allowing titration of resources in a patient specific fashion; a primary generalist.”

ORGANIZATION OF ICUs

‘Open' -care is carried out by the primary team in consultation with the 'intensivist'

‘Closed' -the 'intensivist' becomes the primary care physician.
SPECIALITY

Group of doctors interested in a particular patient group, who provide educational training and clinical standards.

- Award certification qualifications
- Recognized by other specialities as having an area of major expertise.
- Share of the medical undergraduate curriculum.
“With the establishment of the speciality and the outcome data available patients should no longer be denied the services of specialist/intensivists.”

Jean Louis Vincent

• Place in undergraduate curriculum

• Define the core (minimum) competencies

• Active ongoing research focus

• Appropriateness and distributive justice
“Leapfrog Group's recently announced ICU patient safety standards call for full-time Intensivist staffing as a way to save greater than 50,000 patient lives annually, nationwide.”

VISICU Enables Hospitals to Meet Leapfrog ICU Standards; VISICU Patent-pending Approach Supports Fortune 500 Group
Intensive care medicine comes of age
And offers a multidisciplinary model
for future emerging specialties

Neil Soni, consultant anaesthetist Chelsea and Westminster Hospital, London SW10 9NHDuncan Wyncoll, consultant in intensive care medicine Guy’s and St Thomas’s Hospital Trust, London SE1 9RT

BMJ. 1999 July 31; 319(7205): 271–272
Conclusion "Using consensus techniques we have generated core competencies which are internationally applicable but still able to accommodate local requirements. This provides the foundation upon which an international competency based training programme for intensive care medicine can be built."
CCM in developed countries
EVOLUTION OF CRITICAL CARE IN DEVELOPING COUNTRIES
CHALLENGES FOR CCM

• High prevalence of critically ill patients
• Young with reversible pathologies.
• Competition between primary and preventive health.
• Poor supporting services
• Paucity of human resource.
“Developing a new speciality, which crosses the boundaries of pre-existing primary specialties, requires a special sort of determination as well as diplomatic skills. Developing countries have even greater problems in justifying the expenditure of large sums of money to save the life of one person when those resources could be used in other health sectors for the benefit of many.”

(Mustafa I, Hwee YT. 'Critical Care in East Asia, Little Dragons and Sleeping Giants' Critical Care Clinics 1997:)}
There are other factors that represent major obstacles in the development of intensive care medicine in developing countries:

- Tertiary care versus primary care
- No academic career
- No financial reward
- Perceived only as application of technology and machines
- High cost and lack of insurance system
- Shortage of physicians and qualified nurses

(Hillman K. 'Intensive care in developing countries' Intensive Care World 2:34, 1995)
• Significant improvement over past 20 – 30 yrs.

• The western Pacific Association of Critical Care Medicine (1980)

• Indonesian society of critical care (1979)
• Educational ties between ISCCM & ANZICS (1985)

• Formal association b/w ISCCN and ANZICS (1993)

• The first joint workshop was organized in the Harapan Kita Hospital, Jakarta, in January 1995
• Sub-specialization program in Intensive Care in 1995 by the Indonesian Society of Anesthesiologists.

• Indonesian Society of Critical Care Nurses, (1996)

• Regular exchange of doctors & nurses from Australia and Indonesia for capacity building

• Respiratory care units in India 1970s

• Decreased mortality of tetanus, highlighted critical care services.

• Certificate course in critical care started 1998 by ISCCM

• Several hospitals offer training modules.

• Post Doctoral Fellowship in Critical Care Medicine conducted by the National Board of Examinations (2002)
• The Indian Journal of Critical Care Medicine

• Annual National Conference in Critical Care, conducted by the ISCCM.

Shirish Prayag

ICUs worldwide: Critical care in India; Crit Care. 2002; 6(6): 479–480
Taiwan: certification & board examination in CCM

Singapore Society of critical care medicine (1996)

Malaysia registers anesthesiologists & intensivists.

Thai medical council: fellowship in CCM (1990)

Intensive Care - The Challenges of Intensive Care
Iqbal Mustafa, past president, Western Pacific Association of Critical Care Medicine
EVOLUTION OF CRITICAL CARE IN PAKISTAN
- Intensive care units in large hospitals (1970s)
- Mixed & open units.
- Management decision: primary physician /surgeon.
- Administrative/respiratory care: Anaesthetist.
• Contribution by Pulmonologists increasing.

• Concept of “Medical”/”Surgical”

• Mushrooming of “ICUs” after 2005 earthquake.

• No standardization in commissioning & organization
ACADEMIC ACTIVITIES

• Mandatory ICU rotations (1-3 months) “post graduate training”

• No orientation in undergraduate teaching.

• Post graduate training program in CCM (AKU)


• First FCCS course JPMC Karachi (2008)
• CPSP: fellowship in CCM (2003)

• Not successful!

• Possible causes:
  – Credentials of supervisors ambiguous.
  – Accreditation of ICUs.
  – Curriculum development.
  – Lack of academic & career incentives after the programme.
Masters in Critical care Medicine (2009)

- Curriculum approved by Quaid-e-Azam University.
- First batch of students inducted in QPGMC.
- Accreditation by PMDC applied for.
- Status of the degree
• FCPS in Critical Care
• As second specialty in the pipeline
CAREER PERSPECTIVES:

• CCM specialty in its own right.

• In public sector.

• Private sector.

• Middle East