Current Status of Critical Care Medicine Practice in Egypt

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Faculty of Medicine
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Egypt
Per capita total expenditure on health

US$ (at average exchange rate)

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>WHO region</th>
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<tbody>
<tr>
<td>1995</td>
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<td>2000</td>
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<td>2005</td>
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<td>2010</td>
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<tr>
<td>2015</td>
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</table>
Healthcare Sectors in Egypt

- Governmental Sector:
  - University Hospitals
  - Health Insurance Organization (HIO) Hospitals
  - Ministry of Health Hospitals
  - Military and Police Hospitals

- Private Sector
Cairo University (1908)
Department of Critical Care Medicine, Kasr El Ainy Hospital
University of Alexandria (1938)
Alexandria Main University Hospital, Alexandria, Egypt
Department of Critical Care Medicine, University of Alexandria
How does it work in University hospitals?

Who Practices Critical Care Medicine?

- Intensivists
- Anesthesiologists
- Pulmonologists
- Cardiologists
- Emergency Physicians; Possibly in the near future
How does it work in Universities?

Training

- Residency in Critical Care Medicine starts after internship

- Residency programs are designed for 3 to 5 years after which candidates are entitled:

  “Specialists in Critical Care Medicine”

- “Doctorate Degree” Program approximately five more years after which candidates are entitled:

  “Consultants in Critical Care Medicine”
How does it work in Universities?

Training

- Training is not standardized from a university hospital to another e.g. Interventional Cardiology e.g. Electrophysiology, Emergency PCIs In Cairo University
- This is not available elsewhere in the country
- Medical- Surgical ICU in Alexandria University
- Graduated candidates are with different training qualities
How does it work in Universities?

Teaching

- Exclusively a postgraduate teaching except for University of Alexandria in which training of undergraduates started one year ago.
- State of the art teaching in Critical Care Medicine.
- Up-to-date knowledge and information provided to students.
How does it work in Universities?

Research

- Research budget is limited
- Depends on individual support and interest in research
- Under recognized by Peer Review Journals except for a few exceptions; depending on individual efforts
- Usually prospective randomized but on limited numbers of patients
How does it work in Universities?

Resource- limited

- Critical Care Team works at “Disadvantage”

Nurse: Patient ratio = 1: 4 - 7
Consultant: Patient ratio: 1: 7-15
How does it work in Universities?

Resource- limited

- Reflected on the infection control program leading to high ratios of HAP and VAP as well as BSIs
Epidemiology of Health Care Associated Infection in Egypt

Distribution of healthcare-associated infection types reported, Egypt, 2011–2012 (np472). Other infection types include bone and joint infection; central nervous system infection; cardiovascular system infection; eye, ear, nose, throat, and mouth infection; and reproductive system infection. BSI, bloodstream infection; GI, gastrointestinal tract infection; LRTI, lower respiratory tract infection; PNEU, pneumonia; SST, skin and soft-tissue infection; UTI, urinary tract infection.

Infect Control Hosp Epidemiol 2013;34(12):1281-1288

Infect Control Hosp Epidemiol 2013;34(12):1281-1288
How does it work in Universities?

Resource limited

Despite all of these obstacles, University Hospitals have in common:

- Tertiary Care Hospitals
- Best trained Faculty staff, Intensivists and Nursing staff
- Most advanced available equipment
- All supportive subspecialties are available 24/7
- ICU mortality rates range from 15-35 %
Health Insurance Organization Hospitals
Health Insurance Organization Hospitals

- Available for all insured employees of the country according to the National Health Insurance Program
- Not Involved in Teaching or Training of physicians or nursing staff
- Limited participation in Research
- Limited number of beds and resources
- Contracting with private and university hospitals (with a very limited budget) for taking care of ICU patients when HIO hospitals ICU beds are fully occupied
Ministry of Health Hospitals

- Patient Care for the majority of unemployed citizens who cannot afford to pay for private sector hospitals
- Lack of resources (physicians, nursing staff, equipment etc.)
- Lack teaching and training
- ICUs lack other supportive subspecialties e.g. neurosurgeons, orthopedic surgeons etc.; do not accept all types of patients
- Ongoing Ministry of Health Intensivists training program in cooperation with different Universities all over the country
Military and Police Hospitals

Mostafa Kamel Military Hospital

Alexandria Police Hospital
Military and Police Hospitals

- Serve Military and Security staff; including Officers, Soldiers employees with their families in both ministries.

- Best designs for ICUs (In governmental hospitals in Egypt)

- While these hospitals are well equipped, still the manpower requires further training.

- Admit ICU patients on a private basis when beds are available and during national crises.
Private Hospitals

- Majority of Hospitals; available for those who can afford
- Different types of ICUs “Open vs. Closed”
- “Evidence vs. Eminence- Based” Medicine
- Lack applications of guidelines in many of them
- Decision making is affected by cost paid by the patient
Insights for Improvement and Closing the Gap

- Improving Education and Training
  - Training in another specialty prior to CCM e.g. IM, Anesthesia, Surgery
  - Multidisciplinary Team e.g. Nurses, Clinical Pharmacists, Nutritionists
  - Standardizing performance by creating practice management guidelines
  - Practical Research with fund raising to allow a reasonable budget
  - Paving the road for publications in Peer Review Journals
Insights for Improvement and Closing the Gap

- Improving the Process of Patient Care
  - Attachment to an International Accredited Organization e.g. JCI
  - Improvement of ICU design to meet the following:
    1. Patient Privacy
    2. Patient Safety
    3. Quality Improvement e.g. Morbidity and Mortality meetings
    4. Infection Prevention and Control
  - Development of incentive-based, performance-related methods of reimbursement
  - Increasing public awareness and understanding of Intensive Care
Thank You
<table>
<thead>
<tr>
<th>Indicators</th>
<th>Statistics</th>
<th>Year</th>
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<tbody>
<tr>
<td>Population (thousands)</td>
<td>82056</td>
<td>2013</td>
</tr>
<tr>
<td>Population aged under 15 (%)</td>
<td>31</td>
<td>2013</td>
</tr>
<tr>
<td>Population aged over 60 (%)</td>
<td>9</td>
<td>2013</td>
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<tr>
<td>Median age (years)</td>
<td>25</td>
<td>2013</td>
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<tr>
<td>Population living in urban areas (%)</td>
<td>43</td>
<td>2013</td>
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<tr>
<td>Total fertility rate (per woman)</td>
<td>2.8</td>
<td>2013</td>
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<tr>
<td>Number of live births (thousands)</td>
<td>1901.5</td>
<td>2013</td>
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<tr>
<td>Number of deaths (thousands)</td>
<td>527.4</td>
<td>2013</td>
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<tr>
<td>Birth registration coverage (%)</td>
<td>&gt;90</td>
<td>2013</td>
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<tr>
<td>Cause-of-death registration coverage (%)</td>
<td>95</td>
<td>2009-2011</td>
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<tr>
<td>Gross national income per capita (PPP int $)</td>
<td>10850</td>
<td>2013</td>
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<tr>
<td>WHO region</td>
<td>Eastern Mediterranean</td>
<td>2013</td>
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<tr>
<td>World Bank income classification</td>
<td>Lower middle</td>
<td>2013</td>
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</table>
“Because we work together, we have to learn together”

Every discipline in the ICU is looking forward to achieve his/her own goal(s). We should not seek different individualized goals. Instead, we have to learn how to look for a common goal which is “the patient”

In other words, set a common goal and teach every discipline (while being together) his/her specific role to achieve this common goal

Sameh Eltaybani, Assistant Lecturer, Faculty of Nursing
Top 10 causes of death

Ischaemic heart disease was the leading cause of death, killing 107.2 thousand people in 2012

<table>
<thead>
<tr>
<th>No of deaths (000s) 2012</th>
<th>Crude death rate 2000-2012</th>
<th>Change in rank 2000-2012</th>
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<tbody>
<tr>
<td>Ischaemic heart disease (20.5%)</td>
<td>107.2</td>
<td>▲</td>
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<tr>
<td>Stroke (13.3%)</td>
<td>69.8</td>
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<tr>
<td>Cirrhosis of the liver (7.9%)</td>
<td>41.4</td>
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<tr>
<td>Hypertensive heart disease (4.1%)</td>
<td>21.3</td>
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<tr>
<td>Cardiomyopathy, myocarditis (3.3%)</td>
<td>17.5</td>
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<tr>
<td>Liver cancer (3.2%)</td>
<td>16.8</td>
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<tr>
<td>Kidney diseases (3%)</td>
<td>15.8</td>
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<tr>
<td>Chronic obstructive pulmonary disease (2.8%)</td>
<td>14.9</td>
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<tr>
<td>Lower respiratory infections (2.7%)</td>
<td>14.1</td>
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<tr>
<td>Endocrine, blood, immune disorders (2.4%)</td>
<td>12.4</td>
<td>▲</td>
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<table>
<thead>
<tr>
<th>Rank</th>
<th>decreased</th>
<th>increased</th>
<th>no change</th>
</tr>
</thead>
</table>

- decreased
- increased
- no change