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### Intensive Care Medicine in Turkey

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Intensive care medicine (ICM) is a relatively new speciality in Turkey. In 1959, the first reanimation service was established in Istanbul University Hospital. For several years anaesthesiologists covered this area and special patient care in addition to their primary work in the OR. In 2001, however, the distribution of hospital intensive care medicine (ICM) is a relatively new specialty in Turkey. In 1959, the first reanimation service was established in Istanbul University Hospital. For several years anaesthesiologists covered this area and special patient care in addition to their primary work in the OR. In 1978, they established the first national association – the Turkish Society of Intensive Care Medicine. The members of this society, (including the recent executive committee), are almost all anaesthesiologists.

Starting in the 1980s some institutions (mainly university hospitals), established medical Intensive Care Units (ICU) under their Departments of Internal Medicine and Pulmonary Medicine. In addition, several departments of General Surgery started to take care of their own critically ill patients in 2001. However, the distribution of hospital intensive care medicine (ICM) is a relatively new specialty in Turkey. In 1959, the first reanimation service was established in Istanbul University Hospital. For several years anaesthesiologists covered this area and special patient care in addition to their primary work in the OR. In Surgical Intensive Care Units. And more recently, neuro-intensive care units are being established. As a result, a more multidisciplinary society – the Turkish Society of Paediatric Emergency and Intensive Care Medicine and the Turkish Society of Intensive Care Nurses. These four societies related with Intensive Care Medicine (ICM) that are active in the country: the Turkish Society of Paediatric Emergency and Intensive Care Medicine and the Turkish Society of Intensive Care Nurses. These four societies conduct several national meetings.

#### Background:

##### Healthcare System in Turkey

The Healthcare system is mainly regulated by the Turkish Ministry of Health (MoH). In addition, the MoH is the largest health service provider in Turkey, and employs about 200,000 staff itself. In 2001, however, the distribution of hospital intensive care medicine (ICM) is a relatively new specialty in Turkey. In 1959, the first reanimation service was established in Istanbul University Hospital. For several years anaesthesiologists covered this area and special patient care in addition to their primary work in the OR. In 2003, the MoH began a programme called “transformation of health”, the main purpose of which was to organise and provide general health services to every citizen in a cost-effective and equal manner. Starting in 2004, family physicians started to provide primary care.

Secondary and tertiary healthcare is provided by the following:

- The MoH;
- Ministry of Defense (which has its own hospitals);
- Universities (which are mostly public, with a few private); and
- The private sector.

In theory, a patient should first apply to a primary care centre and referred to secondary and tertiary healthcare centres when needed. However, this referral chain is unfortunately not followed in practice, and therefore, even tertiary care hospitals are usually heavily overpopulated by outpatients.

#### There are Three Main Types of Hospitals:

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University, state hospitals (hospitals run by the MoH; some of which are tertiary centres), and private hospitals. In 2007, the total number of hospitals was 1276 (56 university, 849 state, 365 private) with 184,983 beds (29,700 university, 135,240 state, 17,995 private). Number of hospital beds per 10,000 people in Turkey was 26 beds in 2001. However, the distribution of hospitals adopted the policy of "payment for diagnosis". But, since the prices are very low, hospital beds across the country is not homogeneous, and the range of beds varies from 3 to 60 beds per 10,000 people. A MoH appointed head medical doctor and an assisting hospital administrator run each MoH hospital. Universities are not absolutely autonomous, as they are regulated by the Higher Education Council which is a government based institution.

In 2006, the total number of physician was 114,583: 57,882 specialists and 56,701 practitioners (including family physicians) and there were 87,327 nurses. However, ratio of medical personnel to population varies greatly among regions. The MoH tries to recruit staff for those underserved areas. There is also obligatory public service for physicians both after graduation from the medical school and after becoming a specialist. adopted the policy of "payment for diagnosis". But, since the prices are very low,

Many specialist doctors have dual employment; they work part time in public hospitals and have their own private practice. Recently the government is trying to put a law in place for full time employment. There is shortage of medical personnel, especially nurses, in addition to nationwide maldistribution.

#### **Cost of Healthcare in Turkey**

Social Security Institution, which is the main source of payment for hospitals, has adopted the policy of payment for diagnosis. But, since the prices are very low, adopted the policy of "payment for diagnosis". But, since the prices are very low, hospitals have difficulty in maintaining the resources especially in high cost areas such as ICM. Intensive care patients are divided into third levels according to their severity of disease, the 3rd level being the sickest patients who have multi-organ failure. Payment is done according to these level but payments do not cover the whole expenses in especially high technology equipped university hospitals.

A majority of the hospitals are public hospitals and in 84 percent of healthcare costs are paid by the government. Only 3 percent of the population has private insurance. The remaining 13 percent of the population do not have a health insurance at all.

The MoH has recently established a "payment for performance" system, which has recently been adapted for costs of healthcare personnel and it has its own limitations.

#### **FACTS: Medical Education**

- There are 76 medical faculties in Turkey.
- Medical education in Turkey is six years.
- Less than 10 percent of the graduates can become specialists. The graduates have to pass a central exam to become a specialist.
- Residency training typically lasts for 4-5 years.
- Sub- or supra-specialty training usually last three years.
- Several medical specialty societies perform their own board exams.
- There are few national accreditation programmes only in very few specialties.
- Continuous medical and in-service education programmes are becoming more common.

Both patient care and medical education is not standardised and harmonised in the country.

#### **Education and Training in Intensive Care Medicine**

Education in ICM is also regulated by the MoH. ICM was first recognised as a separate supra-specialty in 2002. However, there are two main problems which have yet to be solved: 1) Which main specialties should ICM supra-specialty training follow? and 2) Which staff should be categorised as intensivists (physicians currently working in ICUs as directors, attending physicians or other staff and/or educators) and what criteria should be used?

The MoH and the four intensive care societies are currently working to resolve these issues. And so far in this country the main intensivists are anaesthesiologists, internists, pulmonologists and general surgeons. However, cardiologists, cardiac surgeons, neurologists and neurosurgeons do run their own specialised ICUs. The ICM education in graduate training is not well organised. This education is not structured and it is given during 3rd and 4th grade only as few theoretical lectures. For post-graduate supra-specialty training we have decided to accept the "Cobatrice" as our main curriculum and we have translated the syllabus so far. Post-graduate training has not been standardised yet. There are not national board exams, national accreditation programmes and certification. However, Division of Medical Intensive Care of Hacettepe University Hospital in Ankara has been accredited by the European Board of Intensive Care Medicine in 2007 (Picture) and trainees are encouraged to obtain the European Diploma of Intensive Care though not obligatory.

There are several national meetings, continuous medical education programmes about ICM for physicians, nurses and other personnel in

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Turkey.

#### **Organisation of ICUs in Turkey**

Organisation of ICUs are also regulated by the MoH. Classically, ICUs are established either as general units or specialised units like medical, surgical, pulmonary, neuroICUs depending on the necessities. ICUs are in close contact with the emergency medical systems. A new system has started to be applied in each city of Turkey, where emergency medical systems coordination center tracks the available intensive care beds in public hospitals and carries the patients according to the availability of beds. This system has not been finalised yet and it needs improvement.

The ICUs are classified as first, second and third levels according to patient/nurse ratio, physical and patient properties. A team of intensivists authorised by the MoH has recently started hospital visits for accreditation which has not completed yet. This accreditation takes into account only the staffing and physical properties and it is used only for the purpose of health payments so far.

There are about 10,000 intensive care beds one third of which are 3rd level beds in Turkey. The MoH is planning to increase the bed numbers in their hospitals by about 8,000. There are only about 900 paediatric intensive care beds one third of which are 3rd level beds in Turkey and The MoH is planning to increase the bed numbers in their hospitals by about 1,200. In cities where the adult population is greater than 800,000, three intensive care beds per 10,000 adult population, for other cities two beds for 10,000 population and in general one bed for 20,000 paediatric population are planned.

There has to be at least 2000 certified intensivists in Turkey. The shortage of nurses is very marked. Even in 3rd level ICUs, there is one nurse for three patients. There are very few physiotherapists and clinical pharmacist very few (intensive care beds comprising < 5% of hospital beds).

#### **The Weaknesses and Threats in ICM**

- There is shortage of intensivists, nurses and other personnel such as physiotherapists and clinical pharmacists.
- The number of ICUs in Turkey is very few (intensive care beds comprising <5%of hospital beds). The MoH is planning to increase the number, since the population is high and there are very important problems in Turkey such as earthquake and traffic accidents.
- Societies and the MoH have not reached a definite consensus about establishing a new specialty, curriculum, etc., yet.
- Uncertainties about the specialty status, increased workload and relatively low income make the specialty unappealing.
- There is no national board exam, accreditation programme and certification yet.
- Nursing homes, home care, etc. In addition, “do not resuscitate” very few (intensive care beds comprising < 5% of hospital beds). The orders, “withholding or withdrawing of life support” are not legal nor adapted in Turkey. Therefore, patients stay in the ICU for prolonged periods.
- Due to insufficient payment of Social Security Institution to hospitals for intensive care service, hospitals can not and do not want to invest for ICUs for increased personnel, better physical properties and technology.

In conclusion, although there are uncertainties and insufficiencies in especially the specialty status of ICM, manpower and ICU very few (intensive care beds comprising < 5% of hospital beds). The beds, there are dedicated physicians, nurses and active national societies seeking to solve these problems in Turkey.



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