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## ICU Volume 9 - Issue 3 - Autumn 2009 - Interview

### The Mexican Healthcare System:

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The United Mexican States, better known as Mexico, is conformed by 32 states and the capital city is Mexico City. Mexico has a total population of 103 million people ([www.inegi.gob.mx](http://www.inegi.gob.mx)). Every Mexican has the right to receive health protection stated in the 4th article of the "Constitución Política de los Estados Unidos Mexicanos". Despite this constitutional right, the Mexican Healthcare System is complex and unequally distributed. According to the Organisation for Economic Co-operation and Development ([www.oecd.org](http://www.oecd.org)), Mexico is placed on the tail of countries with lowest investment in health from the Gross National Income (GNI) with 6.4%. Medical attention is mainly offered according to social level, 46.9 % of Mexicans have social security insurance, but nearly 50% of the population don't have any kind of insurance to cover medical expenses and these expenses must be paid directly from the consumers' pocket.

Intensive Care Units (ICUs) in Mexico Although critical care medicine has been practiced for nearly 40 years in Mexico ([www.ammcti.org.mx](http://www.ammcti.org.mx)) there are not clear rules about its' practice within either the public (Social Security) or private system. There is a norm utilised in the basic design of an ICU, but it does not include specifications for equipment and supplies or specify who should lead the unit (intensivist or any other physician). Critical care practice is traditionally divided into critical care medicine for adults, children, and neonates, with the latter two attended by paediatricians and neonatologists. Mainly cardiologists attend specific cardiac ICUs or those with coronary units. Recently, the Health Secretary integrated a multitask force to develop the official Mexican norm in ICUs.

Social Security is available for the Labour class (~66.6% of population), the Federation workers (~14.0% of population), the Armed Forces, and employees of parastatal companies like the Mexican oil company PEMEX (~2.2% of population), and other governmental workers from the Mexican states (~6.1%). Recently a new programme called "Seguro Popular" was introduced and is managed by the Health Secretary ([www.salud.gob.mx](http://www.salud.gob.mx)). This broader programme covers an additional ~11.1% of Mexico's population.

Public hospitals are classified according to the level of attention that is given. First Level includes primary care; Second Level hospitals mainly include hospitals with four specialties: Surgery, Internal Medicine, Paediatrics and Gynaecology/Obstetrics and Third Level Hospitals include most other subspecialties and are mainly referred to as "Medical Units of High Care". There is close interaction between first and second levels, as well as second and third levels. Intensive Care Units are placed in second and third level hospitals.

In the public system, ICUs are mainly closed, while in contrast, units in the private system are mainly open. Unfortunately, there is a shortage of intensivists in Mexico and as a result, ICUs are mainly attended by specialists from other fields like internal medicine, surgery, anaesthesiology and nephrology among others. There are highly specialised ICUs like trauma, gynaecology and obstetrics, neurointensive care mainly in the public system from important cities (Mexico City and capitals of each state). Three suburban hospitals (60 beds each) have recently started working with telepresence in their ICUs. Using robots (RP7i) is being increasingly accepted as a new and practical way of solving the shortage of intensivists in hospitals where there are not specialists available 24/7.

The State of Mexico is leading this new practice in Mexico offering high care specialists to ICUs localised in distant cities. This "robotic programme" is focussed on protecting and serving those people without social security or "Seguro Popular" who are situated in suburban cities.

#### Specialisation in Critical Care Medicine in Mexico

Several universities around Mexico offer a specialisation in Critical Care Medicine, which is taken at third level or high care affiliated hospitals. The critical care medicine programme for adults involves a minimum of four years of training. The physicians should have at least two years of a basic specialty (internal medicine, anaesthesiology, surgery, gynaecology and obstetrics) and complete another two for Critical Care. However, it is preferred and physicians are encouraged to have already completed a first specialty before entering critical care medicine.

After training, physicians receive a diploma from the affiliate hospital and the university where he or she finished the specialisation course. Thereafter, specialists must take an examination given by the Mexican Council of Critical Care Medicine in order to receive approval to practice in critical care and be certified by the National Academy of Medicine of Mexico. Today there are 1039 certified specialists in critical care medicine in Mexico and nearly 40% are located in Mexico City ([www.conacem.anmm.org.mx](http://www.conacem.anmm.org.mx)). Finally, doctors have to receive a registered license of specialist, which is given by the Public Education Secretary; this is the most important document to the practice of critical care medicine.

#### Job Opportunities

In Mexico, after finishing their training, intensivists can work either in the public system (which is the most important employer of specialists), in the private system, at universities or within all three. Salaries are fixed ~\$ 25 000 US dollars per year, which compared with incomes in other countries in North America, Asia or Europe is relatively low. This is seen as one of the major flaws in the system as it forces intensivists to seek a second or even third job in addition to their primary full time position.

There are other options available within the private system: One possibility is to work along with a multidisciplinary team; another is to work directly for a hospital and be on the payroll (although the salary is more or less the same as in public hospitals) and a third option is to practice on their own as specialist (internal medicine, surgery, anaesthesiology). Universities often offer jobs to intensivists who are interested in following an academic career in teaching and/or research.

#### **Continual Education for Intensivists**

The AMMCTI (Asociación Mexicana De Medicina Critica y Terapia Intensiva), founded in 1972, is the most important association for intensivists in Mexico and is the organisation, which looks after continual education. Every year a national congress is held in a major city in Mexico, where more than a thousand doctors and nurses unite and discuss important topics in critical care along with highly recognised speakers from around the world. Also, there are monthly nation-wide sessions transmitted by internet ([www.ammcti.org.mx](http://www.ammcti.org.mx)). AMMCTI has nineteen branches located in cities all around Mexico and it is divided into three regions: Central, North and South. Additionally, AMMCTI has a peerreviewed journal in Spanish, indexed to Latin American indices, with printed and web versions. There are representative chairs in critical care medicine at the most important Academies in Mexico, the National Academy of Medicine of Mexico ([www.anmm.org.mx](http://www.anmm.org.mx)), Mexican Academy of Sciences ([www.amc.unam.mx](http://www.amc.unam.mx)) and the Mexican Academy of Surgery ([www.amc.org.mx](http://www.amc.org.mx)).

#### **Research**

Research in critical care in Mexico is still undeveloped. This is due to the federal government investing more in social care and medical assistance than in research, only 0.33% of the GNI ([www.amc.unam.mx](http://www.amc.unam.mx)). Despite that, there are several groups that publish their experiences in Spanish publications and contribute to local journals. Additionally, groups of intensivists have participated in international multicentre trials (i.e. the EPIC II study, and others sponsored by the pharmaceutical industry).

#### **The ICU Team**

It is worth mentioning that there could not be a viable ICU team without critical care nurses and respiratory care technicians- who are important caregivers for the critically ill patient. The ratio of care nurses to patients is 1 to 2 in most public and private ICUs. In Mexico, nursing is a professional career that requires five years of university. To obtain a specialisation in intensive care, nurses have to take another year of training. With a professional career, nurses can work towards a master's degree and/or doctorate in the same manner as physicians. Also, they should have a registered license from the Public Education Secretary ([www.sep.gob.mx](http://www.sep.gob.mx)). In Mexico, nurses have their Mexican Nurses Association in Intensive Care Medicine (AMMENCTI, from their meaning in Spanish) and hold their annual congress along with the AMMCTI at the same days and places. The respiratory care technicians have a three years course recognised by the Public Education Secretary and a registered license for practicing respiratory care ([www.conalep.edu.mx](http://www.conalep.edu.mx)).

#### **The Future**

New opportunities are emerging for intensivists to practice: echocardiography, telepresence with robots in remote ICUs, sub specialisations in obstetrics, neurological critical care and recently, the practice of rapid response teams, as well as pursuit of further master's degrees and doctorates. There are opportunities for improvement in quality of care and safety in the future in ICUs in Mexico, and there are figures excluded from our system, which point to the inclusion of a pharmacist and a specialist in rehabilitation within the ICU. Every day we work to promote our specialty as well as to increase the standard of safety and care to international levels.

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