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Essay

Anesthesia – Resuscitation in the academic training of the family doctor☆

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ABSTRACT

The comprehensive education that a family doctor needs should be underpinned by his/her state-of-the-art ethical, social and scientific-technical knowledge. These demands of primary care make it necessary for the academies to introduce curricular changes to make sure that family doctors develop the necessary skills, and hence accomplish an efficient and effective background. As a healthcare professional, the family doctor should be able to respond to any health challenges facing the population.

La Anestesiología-Reanimación en la formación académica del médico de familia

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RESUMEN

La formación integral que necesita un Médico de Familia, debe estar fortalecida en su preparación ética, social y científico-técnica de avanzada. Estas necesidades y exigencias creadas en la atención primaria, llevan a las academias la necesidad de implementar cambios curriculares que garanticen que los futuros médicos de familia adquieran habilidades, permitiéndoles de esta manera, alcanzar una preparación eficaz y eficiente para lograr la formación de un profesional en salud que pueda dar respuesta a los problemas de salud que se presentan en la población.

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Family medicine "is a specialty that does not drill down into the knowledge of a limited field, but rather takes some pieces from every discipline to apply them in a unique and comprehensive approach to the individual, the family and the community."[1] It is a specialty that shares many things in common with other clinical disciplines, combining all of that knowledge and using it specifically to administer primary care.[1]

Similarly, Anesthesiology – Resuscitation is a "specialty that uses techniques and methods for making the patient painless and protect him/her from any aggression before, during, and after surgery, trauma, and diagnostic procedures. It also provides pain therapy regardless of the etiology and administers resuscitation whenever needed."[2]

The all-encompassing training of a family doctor shall be strengthened by the ethical, social, and technical/scientific background. Study programs have been governed by a scientific dimension and the selection of contents has been based on a scientific approach; the primary criterion for the selection of the curricula has been basically based on the traditional and current topics of a particular science, partially disregarding the relationship with other disciplines, frequently giving rise to contradictory approaches to specific situations, and hence requiring the development of multi, inter and trans-disciplinary coordination, team work and a scientific-methodological community that guarantees the expected quality level of the graduate.

Alma-Ata evidenced that "society is increasingly demanding improved quality of the services rendered by various professionals. As such, there is a growing demand for universal access to health care and comprehensive, continuous and effective services for specific populations."[3]

These needs and demands in primary care require the academies to introduce curricular changes that help future family doctors to become effective and efficient health care professionals with a strong ethical and social foundation, in addition to state-of-the-art technical-scientific preparation, to be able to face the challenges.

Family medicine and anesthesiology-resuscitation share some common features, including pain treatment, palliative care, cardiopulmonary resuscitation and training in the techniques and drugs used for local anesthesia that is so often required in the rural environment or in primary care. These factors shall all be considered when developing the family doctor competencies.

Pain is one of the most frequent reasons for primary care visits affecting a high proportion of people at some point in their lives. The prevalence of non-cancer chronic pain ranges from to 2 to 40% of the adult population. In terms of cancer pain, its prevalence at the time of diagnosis is estimated at 37% of patients and up to 67% in advanced stages of the disease.[4]

Since ancient times, the family doctor has treated pain because most patients can be effectively relieved with simple measures any doctor can administer. Pain clinics today are comprised by interdisciplinary teams, including family doctors with their bio-psyco-social approach, and more specialized practitioners. In addition to analgesics, it is critical that pain therapy treats both the symptoms and the emotional and social aspects involved.

Several studies have indicated that "there are multiple psychological and physical factors that influence the perception of pain, whether amplifying of reducing the sensitivity to pain; i.e., personality, the time or situation in life when pain is experienced, relationship with other people, gender, age, intellectual level, any pain experienced in the past and lessons learned from previous experiences."[4,5] All of these factors shall be considered not just by family doctors, anesthesiologists, and other team members who are key actors for pain care centers, providing proper diagnosis and treatment for improved quality of life of patients.

When evaluating how much people know about the WHO pain scale, a large number of family doctors are not acquainted with it. The World Health Organization states: "There are patients with cancer and other chronic conditions that do not receive adequate treatment for analgesia, either because of improper use of analgesics or because major opioids are underutilized. According to the WHO, the use of morphine is a good indicator of cancer associated pain control in the various countries."[6]

This organization believes that "only a small minority of the over one million people who die every week around the world, receives palliative treatment to relief their suffering.[7] In addition to the low utilization rates, morphine is misused because of a lack of training and education of professionals."[7,5] Being knowledgeable about the different drug types is an absolute requirement to use them appropriately and at the right time.

An analysis of the family physicians training in cardiopulmonary resuscitation highlights the deficiencies that have to be overcome in terms of education, since during the last few years, discoveries have been made about cardiovascular, respiratory and cerebral pathophysiology, applied to life support and maintaining life under critical situations."[8] It is then indispensable to strengthen these abilities in order to accomplish one of the most desirable goals of medical professors worldwide: integrating basic and clinical sciences.

The poor training observed to respond to cardiorespiratory arrest is extremely concerning, not just because it is a frequent occurrence in Primary Care, but basically because providing the right initial treatment and prompt action are critical to preserve the life of the patient and successful outcomes in secondary care, ensuring not only the patient's survival, but his/her functional recovery and social reinsertion that ensure a satisfactory quality of life following a critical event.

It is also critical to assess the psychological effects of the cardiopulmonary resuscitation maneuvers on health care staff. Even the best of hospitals with the best available system, four out every five resuscitation efforts fail and may lead to severe physical and emotional symptoms in the staff that participated in the unsuccessful cardiopulmonary resuscitation. The death of young people and accidents resulting in severe trauma are the most difficult situations to confront.

Using simulators for medical education, particularly to teach cardiopulmonary resuscitation is critical; this type of training is not intended to replace the personal contact of the resident with the patient, but rather to properly prepare the resident to respond to real life situations, with greater confidence and improved skills to perform clinical procedures in future patients Some of the benefits from the practice of simulation in medicine are: training under difficult or rare

conditions; practicing in an environment where mistakes are allowed and you can learn from those mistakes; identical situations may occur as many times as needed and at low cost, avoiding any harm to the patient or complications from lack of experience.

It has been said as well that doctors and other healthcare team members that participate in resuscitation maneuvers fail to receive proper training; this is an issue that must be solved by acquiring the necessary skills via a multi or interdisciplinary approach.

Technical training and knowledge about the drugs used for local anesthesia in the rural or primary care environment as a whole, is another aspect to consider in the process of education of the family medicine resident. There are simple surgical procedures performed by the family doctor that require using local anesthesia. If the collaboration of patient is required, he/she should be psychologically prepared to accept the procedure suggested and for this reason the primary care physician should be well prepared and knowledgeable because the primary care doctor usually develops closer ties with the patient. Knowledge about the precise dosing regime that may be used and any potential side effects is an absolute requirement, in addition to being able to share the necessary information to ensure patient confidence and safety.

One of the most popular drugs is lidocaine that is often used together with epinephrine that reduces the local blood flow and delays the absorption of the local anesthetic agent, extending its effect. Care should be exercised since overuse may result in ischemic necrosis. This anesthetic agent is frequently used primary care so the family doctor must be familiar with the use, dosing and contraindications of lidocaine – unfortunately, the latter are frequently ignored. In this regard, the anesthesiologist plays a key role in the resident's training.

One point that needs to be highlighted and where anesthesia-resuscitation practitioners play an important role as educators for family doctors is in the use of ultrasound for early diagnosis of complications in the multiple trauma patients. The period of time to do an ultrasound examination in a patient who experienced an accident is very short because the life of the patient is at stake. Usually the family doctor is the first one to assist a patient involved in an accident and death resulting from poor management should be prevented. There are several ultrasound machines that can be adequately used to make an early diagnosis and prescribe proper treatment outside the hospital environment, establishing not just care priorities but also properly stabilizing the patient before being transferred to the appropriate healthcare center.

The changes experienced in primary care after the implementation of new services and technologies, demand better technical training and preparation to deal with special circumstances that call for a combined multi and inter-disciplinary approach train the family doctor graduate. This can be achieved through early exposure to community practice and the development of skills to be able to manage the every situation as needed.

Based on the particular areas of activity, the new family doctor shall then develop specific knowledge and skills to perform as a primary care practitioner. This can only be achieved through interdisciplinary coordination and consistent methodologies that focus on the relevant development of the resident through the coordinated participation of the various disciplines.

It is not a question of simply adding a new discipline to the family medicine curriculum, but rather of strengthening cooperation and joining efforts from all disciplines, with greater practical exposure, new approaches to teaching with increasing participation, in more productive and controversial environments that more closely mimic real life experiences. Internships at institutions of various levels of care that encourage the development of the skills required and emphasize the resident's responsibility in his/her own accomplishments can be implemented via a structured curricular strategy.

There has been a paradigm shift in medical education, including the various medical specialties, in the last few years.[9] "This transformation is an invitation to rethink sound strategies to maintain a methodology for medical education that develops relevant competencies. The pathophysiological and risk considerations should be prioritized to determine the characteristics of the patient's environment that may impact the prognosis; preventive medicine should underpin primary healthcare".[10]

"Anesthesiology – Resuscitation is a medical specialty that encompasses a set of scientific knowledge and techniques."[2] The medical practice today demands the participation of many professionals that should be perfectly aligned; this includes the family doctor who takes care of patients at all levels of care. Training of the family doctor is crucial since the GP is often the first one to contact the patient.[3] Empowering family doctors to practice and to assess their patients based on their knowledge and skills and using their own criteria is the responsibility of every one of the specialists that participate in the family doctor training, including the anesthesiologist. Doctors should be trained to be able to manage their patients comprehensively whichever the circumstances, with full responsibility in the practice of their medical profession.

"Primary care is expected to respond to most of the health issues of the population and hence, primary care doctors are required to develop a broad expertise and be the foundation of the healthcare system."[11]

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