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Collective Global Action in Critical Care: An Interview with Dr. Edgar Jimenez

As President of the World Federation of Societies of Intensive and Critical Care Medicine (WFSICCM), as well as Head of the Corporate Division of Critical Care Medicine at Orlando Health Physicians Group, Dr. Edgar Jimenez is an expert in intensive care on many levels. In this interview, Dr. Jimenez tells us about the most significant developments he has led in the global intensive care field, and what is still to be done to help in improving quality of care worldwide.

You Recently Completed an Exciting Research Project on Lung Injury and Acute Respiratory Distress Syndrome (ARDS). Please Could You Tell Us About Your Most Significant Findings? What Does this Signify for the Future of Critical Care for ARDS Patients?

The proper adjustment of mechanical ventilation, particularly the positive end-expiratory pressure (PEEP), has been a quest for many research groups. In our translational research lab, we have found that adjusting PEEP using transpulmonary pressures not only improves oxygenation and compliance, as described by Danny Talmor and colleagues (Talmor et al. 2008), but also decreases the extravascular lung water, the inflammatory response (by cytokines), and improves the histological analysis (at 24 hours) when compared to traditional low-volume lung ventilation.

We hope that simple methodologies, like the measurement of transpulmonary pressures using a small oesophageal balloon, can help us in individualising adjustments of the ventilator, thus better adapting to the patient's physiology and decreasing ventilator-induced lung injury.

Of Course, New Advancements, Innovative Technology and Changing Processes Translate to Costs for Intensive Care Units, Which Can Often be Too High for Hospitals in Developing Countries to Implement. Can You Tell Me Which Advancements for ARDS Could be Most Easily and Cheaply Adopted by Developing Nations and Their Hospitals?

The ARDS Network has done a fantastic job in providing us with evidence that the settings of the ventilator can significantly alter the patient's outcome. The low volume ventilation strategy (tidal volume of 6 ml/kg of predicted body weight) is aimed at avoiding inspiratory plateau pressures greater than 30 cm H2O, and is an easy and accessible approach that can be implemented with even the most rudimentary of ventilators, and should be applied across the board to decrease further lung injury. As clinicians increase their resources, which enable them to measure other parameters (compliance, transpulmonary pressures, volumetric capnography, axial tomography, and so on), ventilator strategies could be individualised.

What Research Projects do You Currently have Underway?

In the translational lab we are working on several projects; one of the more interesting protocols involves the utilisation of greater than zero end-expiratory transpulmonary pressures as a prophylactic intervention for ARDS. The pilot results have been outstanding.

What Critical Care Management Issues do You Think Warrant the Most Consideration and Research on a Global Scale?

Of all the initiatives that WFSICCM is involved in, the most relevant one is that which focuses on the awareness, early recognition and treatment of sepsis. We had the privilege of working with the Merinoff Foundation and the Sepsis Alliance, as well as other major groups —World Federation of Pediatric Intensive and Critical Care Societies, World Federation of Critical Care Nurses and the International Sepsis Forum —in founding the Global Sepsis Alliance. This group has been networking with organisations like WHO, and celebrated its first world-wide Global Sepsis Awareness Day on 13 September, 2012, with an aim of increasing awareness and recognition of sepsis as a major matter, responsible for the vast majority of admissions and mortalities in ICUs around the world. If we could teach people how to prevent sepsis, how to recognise it early and treat it in an expedited (emergency) fashion, many lives would be saved around the world. It has been estimated that one person around the world dies from this condition every two seconds.

What are the Most Pressing Clinical Concerns in the Developing World?

Specifically addressing critical care delivery, two things are striking: the lack of basic knowledge and the lack of resources. We (at WFSICCM)

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are supportive of the delivery and availability of courses such as the Fundamental Critical Care Support (FCCS) course from the Society of Critical Care Medicine in the US, as well as the Basic Assessment and Support in Intensive Care (BASIC) course, which was developed in Southeast Asia and is endorsed by the European Society of Intensive Care Medicine (ESICM).

The fundamental theme of the next world congress in August 2013, in South Africa, is "Critical Care for All". We are planning a meeting with Health Ministers from many countries that have limited resources, to establish priorities regarding the availability of basic resources for the management of critically ill patients; we expect to have a declaration document signed at this meeting.

## Can You Tell Me How WFSICCM is Helping to Develop and Support Critical Care in the Areas of the World that Need it Most?

We are committed to supporting intensivists within these countries in organising and forming societies that will allow them to develop administrative structures and raise professional recognition and legislative support for their respective country or region, thus helping it to exist and thrive. During the past three years, we have been able to develop over twenty societies in the Middle East, Central America and the Caribbean, Mongolia, Bangladesh, Pakistan and Eastern Europe, among others.

WFSICCM was instrumental to the formation of the Global Sepsis Alliance and International Forum for Acute Care Trialists (INFACT). INFACT is coordinating with WHO and other organisations to become a network for syndromic surveillance for early detection of potential pandemic outbreaks around the globe (like that of AH1N1 in 2009). Additionally, this group is structured to coordinate Fluid Accumulation Status Trials (FAST trials) to determine best treatment strategies and make recommendations to the public health authorities within a very short period of time from detection.

## What Significant Developments and Agreements Were Made in the Federation's Recent Meeting in Peru?

We concentrated our efforts on finalising the draft, so that we can bring a proposal to our General Assembly in South Africa that will allow us to modernise WFSICCM. As the federation was founded in 1978, some of the statutes are outdated and need revision. We have a vision for the federation to become a more active entity globally; thus, we are considering cutting the four-year cycle between worldwide congresses to two years, and aim to assure proportionate regional composition of the WFSICCM Council, with continued utilisation of web based meeting tools, so that council sessions can be held more frequently. This would allow a better response to the needs of our member societies.

A Conservative Culture Among Physicians has Been Partly Blamed for Resistance to Change, Reluctance to Adopt New Management Methods, and Lacking Multidisciplinary Cooperation. Do You Think This is True and, if So, How Could the Culture Slowly Be Altered?

Physicians, as scientists, may be more reluctant than most to accept change, unless they have compelling evidence that the change will positively impact their patients' outcomes. WFSICCM is committed to providing a forum (web-based) that will allow members to share their educational, therapeutic and innovative experiences on a global scale. We expect this availability of exchanges of information to evolve toward best practices as resources become regionally available. Groups with large resources can mentor initiating ones as they mature in their environment.

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