

# Quality healthcare, evidence-based medicine and translational research

Advances in medical care ensure that with the passage of time we are increasingly able to effectively tackle diverse medical problems. These advances, however, do come at a cost and the benefits derived need to be assessed on a regular basis. The ability to increase longevity and hold disease progression at bay needs to be balanced against the ensuing quality of life of the subject, the long term demands on the individual, and on the healthcare system. The financial implications for the individual and the state as well as the ultimate well being of the individual and of society need to be included in the increasingly complex equation that constitutes healthcare provision.

Health care providers and professionals therefore need to refer to a solid evidence base to aid in decision making, factoring in the different variables prevalent in individual instances and the safety and efficacy (both short term and long term) of the proposed interventions. There is also a need to translate research and knowledge in the basic sciences to the clinical arena. *In vitro* and *in vivo* animal models facilitate the study of the pathophysiology of disease and the identification of targets for the prevention and treatment of disease. However, these findings have to be translated into a human context and the need for this translational research rises with the pursuit of increasingly innovative treatment modalities targeting the genome and cellular and molecular pathways and processes in medicine.

It thus behoves institutions involved in training healthcare professionals to provide their students with the necessary research skills and the competences to enable them provide safe and effective evidence-based patient-centred medical care. A number of questions immediately beg to be addressed. What are the core research competences one can reasonably expect of under- and post-graduate students? Furthermore, should these skills be tied to the acquisition of higher degrees such as doctoral degrees? To what extent should a practicing healthcare professional be expected to be involved in research? What resources can be provided by institutions given the current global financial crises and its ramifications in individual countries? A survey carried out by the Medical Education in Europe Network ([www.MEDINE.com](http://www.MEDINE.com)) in 2008-9 revealed an enormous degree of heterogeneity across medical schools in Europe with regard to the research component integrated into the undergraduate medical curriculum and the supporting infrastructure across the EU. Given the principle of harmonization advocated by the Bologna Process, mobility of healthcare professionals

and scientists in the EU and the need to standardize medical education programs, it becomes apparent that there is a dearth of research dealing with the above mentioned issues. This has led the European Union to fund MEDINE for a second round ([www.MEDINE2.com](http://www.MEDINE2.com)) in order to tackle the above issues.

Adherence to the Bologna Process itself varies amongst the myriad institutions within the member states of the European Union. Furthermore, the award of research related degrees is influenced by the content of medical curricula with institutions that have a strong research programme providing medical students with more exposure than those traditionally providing training in the clinical sciences. The former also provide students with the opportunity to participate actively in research programmes with the ultimate aim of obtaining a research or science degree in addition to a professional medical qualification. Adherence to the Bologna process could potentially facilitate the integration of a research component into the medical curriculum leading to an additional science degree. A significant number of one cycle medical courses generally with a track record of developing excellent clinicians are prevalent within the European Area. The question as to whether medical schools should primarily aim at this or at enabling individual students to develop their full potential to practice as clinicians AND as clinical investigators or scientists in itself triggers much debate in academic and medical circles.

From an educational point of view, ideally curricula will aim to provide students with a stepwise increment in the exposure to and the acquisition of research skills. The mechanisms that need to be in place to facilitate this will vary depending on the individual medical institution and curriculum. Given the heterogeneity of programmes, there should be a common aim targeting core competences that will enable students to critically appraise the literature and practice evidence-based medicine. Those students with an aptitude for research can then be encouraged further develop their research skills and to embark on research programs in the course of their medical studies. This requires a certain degree of flexibility in educational systems.

Ultimately a balance needs to be achieved which ensures, on the one hand, the provision of excellent clinicians capable of dealing with the challenges inherent to medical practice in a diverse and everchanging environment. On the other hand, the development of clinical investigators and scientists capable of participating in research (basic, clinical and translational), competing for research funding and ultimately serving to

promote Research and Development within the EU Research Area has to be established as an important outcome for those individuals with the potential to follow such career pathways.

Gradually over the next decade or two medical education should develop to encompass the education of healthcare professions in the broadest sense for the good of the patient, the individual doctor and ultimately society.

Josanne Vassallo  
Editor, Malta Medical Journal

## The Rudolph Boldizar Prize for the best performing MD 4<sup>th</sup> Year Student in the Anaesthesia Examination 2011



Rudolph Boldizar was a dedicated and devoted member of the Department of Anaesthesia which he joined in 1995. During the 15 years he spent in Malta, he was highly respected both as a colleague as well as a teacher. His vast experience saw him deal with difficult cases and he was assigned as acting Consultant in Gozo. He was a keen sportsman who enjoyed a good game of squash and was also a particularly skilled diver.

He died unexpectedly just 14 days prior to his retirement, when he was planning to return to his native Slovakia to spend time with his family.

The Rudolph Boldizar Prize, which was set up Dr Joseph Zarb Adami, Chairman of the Department of Anaesthesia at Mater Dei Hospital and member of the academic staff of the University Department of Surgery to commemorate a colleague's outstanding contribution to the Anaesthesia service, is supported by Associated Equipment.

Ms Annalisa Montebello was the first recipient of this prize as the best performing student in this year's MD 4<sup>th</sup> Year Anaesthesia examinations.