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## ICU Volume 10 - Issue 1 - Spring 2010 - Editorial

### Technology



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Aside from the usual highlights of the International Symposium of Intensive Care and Emergency Medicine, this 30th anniversary meeting provides us with a rare opportunity to look back and consider the evolution of the field and to take stock of what we have accomplished over the last three decades.

It is interesting, for instance to note, that while technology has asserted a dominant role in our daily workflow, there have been no "quantum leaps" in the field- no intervention or drug that we can say has been developed as a silver bullet for treatment. Although I value the use of agents such as activated Protein C, some people challenge the use of the drug based on its benefit/risk profile. Certainly, we have made some progress with research into biomarkers, but we cannot yet point to one marker or another to definitively work in treatment of specific patient groups.

While it is difficult to measure the true impact that technology has had on intensive care as a field over time, or the influence it may have for our profession and our patient's lives in the years to come, I can certainly attest to the impact it has had on the organisation of our meetings. When I started planning the first symposium, back in 1980, there were no computers or even word processing programmes. I recall taking out my typewriter and personally typing up some letters to invite a few friends to join the faculty of this new meeting. The advent of computers, the Internet and instant messaging has opened the floodgates of global communications and helped us grow as a meeting exponentially – it is nearly impossible now to imagine how it could have happened without these efficient tools!

Within our units, the presence of technology is also continuously felt and heard. Ventilators, cardiac monitors and infusion pumps are all staples of a modern intensive care unit. But outside of these life-supporting devices, increasingly, technology is also bridging the gap in terms of the administrative requirements and diagnostic decisions we intensivists make on a daily basis.

In this edition of ICU Management centred on Technology, we begin with an overview of e-health and safety, which discusses how to utilise technology to reduce risks to patients and improve efficiency in our ICUs. Next we look at a programme called the "Patient Admissions Prediction Tool" that aims to assist with the allocation of inpatient beds to alleviate overcrowding and staffing issues in the emergency department. As antimicrobial resistance and antibiotic use continue to be timely topics, we learn about an easy-to-use computer surveillance system that has reportedly improved outcomes in a Belgian ICU. To round out this cover story, we have included an article describing a successful telepresence program in Mexico that combines robotics and telecommunications.

In the Matrix, we keep to the theme with a focus on automated hand hygiene monitoring as a technology-based response to the problem of hospital-acquired infections, and we wrap up our series on early mobility with an overview of the resources required – both equipment and staff, to implement a mobility programme in your ICU. We look further into the cost effectiveness of all of this medical technology on offer in our Management section, and we take a brief look at Switzerland in our Country Focus.

Intensive care medicine is a continuum and I am sure that we will continue to make progress. What we have seen is that our patient populations are getting older and older- the majority were in their 40s thirty years ago, and now they are mainly in their 60s (63-64 as a mean value in Europe and in other continents as well). Additionally patients with similar severity these days have much lower mortality rates with sepsis and other diseases, so clearly progress has been made that cannot be attributed to any well-defined step-ups in our therapies. Hopefully with further advances in technology, our continued efforts perfecting interventions and treatment strategies as well as continuing pharmaceutical research and multi-centred studies, silver bullet and quantum leaps aside, we will continue to improve mortality rates and quality of care for our patients.

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