

PLENARY

**PL001**  
**WHAT IS 'SURGICAL TRAINING'?**

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Preparation for a career in surgery and its continuation beyond the Fellowship examination involves a combination of education and training during which the establishment of appropriate learning skills and set of values and behaviours has life-long consequences.

Education is a learning process which deals with unknown or unpredictable outcomes whilst training deals with known consequences and repetitive skills. If the practice of surgery required only training in which trainees are instructed in uniform procedures to be applied on a production line basis then they become no more than competent technicians replaceable by less expensive health practitioners. Surgical practice must, however, deal with the whole person and with complexities and uncertainties where judgement and decision making accompanied by ethical principles are paramount and thus enable surgery to identify itself as a profession.

The challenge facing the College and its educators – the Fellows – is how best to transfer the knowledge and 'know how' which underpin these competencies to our trainees. A cascade of changes have altered the environment within which surgical education and training now takes place and calls for a shift from the apprenticeship model in which trainees learn incidentally from their trainers whilst essentially delivering service, to a more learner-centered and programme-based approach.

Commencing with the interests of patients and focusing on societal needs, such a programme must cover all of the competencies required to practise as a surgeon. Greater attention to the non-technical competencies is necessary and the demonstration of professional behaviour has become a requirement for graduation from medical school and Specialist College programmes as well as for ongoing clinical practice.

A possible framework which will enable this to be achieved in a safe and expeditious fashion which values the contribution of surgical teachers is now being explored.

**PL002**  
**SHOCK MANAGEMENT – CHANGING OUR FOCUS**

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Whilst clinical evaluation of the shocked state is notoriously unreliable particularly in sepsis, it has been difficult to demonstrate that invasive hemodynamic monitoring improves outcome. One problem has been the use of

cardiac filling pressures as a measure of "cardiac preload" and the realisation that central venous pressure and pulmonary artery occlusion pressure can be misleading in the assessment of the adequacy of fluid resuscitation. Nowadays, more emphasis is placed on the direct measurement of cardiac volume (obtained from echocardiography or trans-pulmonary thermodilution) as the optimal guide to 'cardiac preload'. Similarly, central venous saturation (obtained from intermittent sampling of a central venous catheter) can be used as a guide to the adequacy of tissue oxygenation particularly in the setting of hypovolaemic and cardiogenic shock. Since end-organ function is all important as the endpoint of resuscitation from shock, other measures beyond blood pressure, urine output and systemic acid-base balance have been sought as useful prognostic markers. Serial blood lactate levels have stood the test of time and a rapidly falling blood lactate during resuscitation gives rise to cautious optimism. More recently, efforts to identify the adequacy of splanchnic perfusion have centred on the use of gastric CO<sub>2</sub> tonometry (to provide a measure of gastric mucosal perfusion) and the non-invasive measurement of indocyanine green clearance. Finally, methods of imaging the microcirculation have confirmed the marked heterogeneity of capillary blood flow in severe sepsis that most likely accounts for the tissue injury and subsequent organ failure that occurs in some cases.

**PL003**  
**FLODDEN, FLANDERS, FLOREY AND FALLUJAH**

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**Subtitle:** An Anatomy of Affliction and the Pathology of Power 1900–2006

The 21st Century has already been challenged and scarred by global epidemics of new diseases, localised wars and others with wider resonance, terrorism, clashes between cultures and civilisations, simmering nuclear tensions, horrific natural disasters claiming many lives and climate changes of uncertain yet worrying potential.

In spite of marvellous scientific, medical and technological advances, there are concerning signs of social discord, lack of vision and a general unease about the future.

There has been great emancipation and advancement of women in some countries, greater educational opportunities in many countries but also demographic decline in the West and in sections of the East. Widespread poverty, avoidable disease, famine, violence and poor governance afflicts much of the planet.

Archibald Watson's long life also extended over turbulent times and his career was broad in its endeavours and achievements.

This memorial lecture aims to better understand the afflictions and advances of the 20th Century, and our responses to them, to better prepare for the 21st Century.

It will take much greater understanding, intellectual wit, political will and cooperative effort in this Century to avoid, or at least minimise, the calamities of the last and confront challenges which have never, in human history, existed before.