

Editorial

This special edition of *Update in Anaesthesia* focuses exclusively on basic science topics. A proportion of these topics have been covered in previous editions of *Update*, reflecting that a sound knowledge of basic science is the cornerstone of safe and appropriate practice as an anaesthetist. We must, for example, be able to identify the risks of electrical injury or explosions in theatre, avoid inadvertent light anaesthesia or dangerous overdose when using vapours, and understand normal physiology so that we can recognise and treat the physiological abnormalities of critically ill or injured patients, when we are confronted by them. Where resources are stretched, there is a clear need for an anaesthetist to be able to understand, and provide some maintenance for his or her equipment, particularly if the facilities for more formal engineering support are absent or at some distance.

The importance of basic science to our speciality is demonstrated by the prominence of basic science in the curricula produced by anaesthetic training schools around the world; the new year one/two curriculum for the Royal College of Anaesthetists' e-Learning in Anaesthesia program has over one third of its nine hundred learning sessions dedicated to basic science topics. This is reflected in the make up of the college's examinations - in the UK the two Primary FRCA vivas, aimed at assessing an anaesthetists basic anaesthetic training, comprise fifty per cent basic science.

In drawing up a 'wish-list' of core text books appropriate for use by anaesthetists in developing countries, the International Relations Committee of the Association of Anaesthetists of Great Britain and Ireland (AAGBI) identified that no available basic science text dealt specifically with the needs of anaesthetists in developing countries. It was the suggestion of that committee that led to the conception of this Special Edition, which has been jointly funded by the World Federation of Societies of Anaesthesiologists and the Overseas Anaesthesia Fund of the AAGBI Foundation.

Within the available resources, it is not possible for this edition to be a comprehensive guide to the basic science relevant to anaesthesia. Where possible we have used previously published *Update*

articles or articles published as part of the WFSA's *Anaesthesia Tutorial of the Week* series. Each of these articles has been rigorously edited and adapted to ensure that they are both contemporary and relevant to anaesthetists working in conditions of limited resources. Above all we have tried to emphasise the practical applications of basic science to daily practice as an anaesthetist. Over a quarter of the forty articles within this edition are newly commissioned. The priority to cover as many of the core subjects within physiology, pharmacology and physics as possible, has led to the omission of other topics, such as anatomy and biochemistry which unfortunately remain poorly covered. I will be very pleased to receive requests for topics that have not been represented within this edition, which will be commissioned and appear in subsequent issues. Please contact me at Bruce.McCormick@rdefn.nhs.uk.

I am greatly indebted to the editorial board of *Update in Anaesthesia* for their hard work and also the editors of *Anaesthesia Tutorial of the Week*, particularly Carl Gwinnutt, who is section editor for Basic Sciences, and a major contributor to this edition. I also thank a large team of local colleagues who have given up their time to help with this project and Dave Wilkinson for his tireless efforts producing figures for many of these articles.

Update in Anaesthesia will soon be available as a free download, as whole editions or individual articles, from the WFSA's website, www.anaesthesiologists.org. The same educational resources section of this website hosts *Anaesthesia Tutorial of the Week*, which continues to build as a freely-available educational library for anaesthetists in all countries of the world.

I hope that this edition proves to be a useful and reliable aid for both qualified and trainee anaesthetists. If you wish to receive the printed version of subsequent editions of *Update* please email Carol Wilson at worldanaesthesia@mac.com. Further copies of this edition are available via TALC (Teaching-aids at Low Cost) at www.talcuk.org

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