Clinicians everywhere are keen to include recent, high-quality research evidence in their daily practice. However, keeping up to date is not easy because of the large amount of research literature and the many different clinical problems that those working in anaesthesiology and related specialties encounter. The process of practising evidence-based medicine can be summarised in four steps. First, the clinical problem must be formulated into an answerable question. Second, the best evidence to answer the question must be located. Third, the evidence must be appraised for validity, relevance and applicability. Fourth, the results must be implemented in practice. Clinical guidelines are a useful tool for putting research evidence into practice, as their production includes all these steps for a specific clinical question or set of questions. Different types of question require different types of study; for instance, although the randomised controlled trial is the least biased study design for questions about interventions, other questions may need soundly conducted prospective observational trials or analyses of clinical databases.

Guidelines are defined by the World Health Organisation as ‘systematically developed evidence-based statements which assist providers, recipients and other stakeholders to make informed decisions about appropriate health interventions’. Here we would make a distinction between ‘scientific’ guidelines as defined above, and standards of practice. Standard of practice recommendations tend to be more general in nature and perhaps more ‘political’ in intent and can include, for example, standards of clinical care, education and training. These are more in line with documents produced by the European Board of Anaesthesiology and Section of Anaesthesiology of the Union Européenne des Médecins Spécialistes (UEMS). From a public health and policymaker’s perspective, guidelines offer a number of benefits. They can reduce variations in practice, discourage outdated and inefficient practice and improve the efficiency of healthcare delivery, thereby freeing valuable resources. For clinicians, guidelines can raise awareness of a subject and may also be a source of practical advice; good guidelines play a key role in daily clinical activity. Finally, protocols can be developed that act to standardise clinical management within departments, countries or even continents.

There are, of course, also disadvantages associated with the use of guidelines. It may be difficult to apply a guideline to an individual patient. Local circumstances may not allow implementation of the guideline – often because of political concerns or lack of resources – and guidelines may appear to limit professional judgement because of political concerns or lack of resources – and guidelines may appear to limit professional judgement if they are too prescriptive. One critical view of recent British guidelines for the fluid management of surgical patients suggested that we live in an era ‘infatuated with guidelines which are used as a substitute for real evidence’. Conflicts of interest brought about by commercial pressures may also affect the production of guidelines. Individuals may have received funding or other benefits that might bias their view of the evidence. At an organisational level, guidelines are expensive to produce and societies may feel obliged to accept money to help with the costs of production. Finally, an important point for the field of anaesthesiology is that the research evidence itself is often lacking or of relatively poor quality. For instance, as Pronovost et al. observed, the body of literature relating to anaesthesiology is dispersed among multiple journals, both clinical (general medicine and subspecialties, critical care and surgery) and basic science (cell biology, shock and circulation). Furthermore, surveys of published articles in major anaesthesiology journals have revealed both deficiencies in study design and a low proportion of clinically relevant material. Nevertheless, a systematic review of the effectiveness of guidelines in healthcare in general concluded that ‘explicit guidelines do improve clinical practice, when introduced in the context of rigorous evaluations’. However, the review’s authors went on to note that the magnitude of the improvements in performance attributable to guidelines varied considerably.

More recent work has identified the characteristics of ‘successful’ guidelines. Guidelines with a sound and explicit evidence base, compatibility of recommendations with existing values and no requirement for extra resources, skills or knowledge are more likely to be implemented. Evidence-based, robust guidelines that are transparent to critical appraisal are more likely to be used and are a valuable tool for evidence-based practice.
As shown in Figure 1, the key change components for guidelines to succeed are as follows:

1. high-quality research studies;
2. the right framework in the organisation — skills, vision, incentives, resources and action plans;
3. the production of collaborative, simple and transparent guidelines;
4. implementation and monitoring in clinical practice.

All of these components are essential for success. A lack of vision will create confusion, a lack of skills will lead to anxiety, a lack of incentives will hinder change, a lack of resources will bring frustration and finally if an action plan is missing, it will lead to a false start.

The European Society of Anaesthesiology (ESA) started to concentrate on guidelines after the ESA Council meeting in Munich in 2007, where a focus group of Council members recommended that the ESA should further its aims of improving the practice of anaesthesia and related fields throughout Europe by becoming involved in the production of evidence-based guidelines. The group’s suggestion that a permanent committee be formed within the ESA to oversee these activities was approved by the ESA Board and the ESA Guidelines Committee met for the first time in Copenhagen in June 2008. The Committee’s roles are to:

1. define the processes for producing ESA guidelines;
2. select topics for guidelines;
3. select people and experts for each guideline;
4. collect and evaluate currently available documents in Europe;
5. establish relationships with necessary societies and groups; and
6. define how to implement guidelines.

Our aim is to make European guidelines available as a service to individual ESA members, but they can also be adopted, with any desired modifications, by individual National Societies of Anaesthesiology for their own use, if they so wish. The ESA Board hopes that the guidelines will help to harmonise the clinical management in anaesthesiology, that is, anaesthesia, perioperative medicine, intensive care, emergency medicine and pain management, throughout Europe, and this may also help to improve standards. It should be noted that ESA guidelines are not externally funded.

Our vision for the ESA’s guidelines has three elements, summed up in the acronym CoSiTra.

1. The first is collaboration, both with national and specialist societies within European anaesthesiology but also working with other European bodies with close relationships to us. As an example, a number of ESA members were involved in the production of the European Society of Cardiology’s guidelines on preoperative cardiovascular evaluation. This not only enables the ESA to endorse these guidelines easily, but also potentially reduces duplication of effort by adapting relevant material for our own guidelines instead of producing an unnecessary and possibly confusing alternative.

2. The second element is simplicity. We have all seen guidelines that linger unused on shelves or on websites because they are simply too long, or not...
sufficiently accessible, to be of practical use. We aim to produce short summaries for quick and user-friendly guidance on wards and in operating theatres, while making a full version, together with all the supporting evidence, available for reference if required in the European Journal of Anaesthesiology and on the ESA website.

(3) The third element is transparency. Production of a guideline needs evidence, but may also require expert opinion to set the research evidence into its clinical context and produce an authoritative recommendation. Both evidence and opinion have their place, but we believe that it should be possible to distinguish between them in the finished guideline. In addition, if experts disagree (as is likely when the evidence is lacking), then this should also be made explicit. Another important point is that all those involved in the production process should declare their interests. It is almost inevitable that those who are well known in their field will have made a substantial personal investment in their academic career and many will also have some industrial connection. These should be declared.

So far, the ESA Guidelines Committee has commissioned three guidelines. An earlier guideline, on the management of regional anaesthesia in the presence of anticoagulants and antithrombotic agents, predates the formation of the ESA Guidelines Committee and is already published.21 The newer guidelines will relate to preoperative evaluation and preparation of the adult undergoing non-cardiac surgery, preoperative fasting and the management of severe bleeding. These topics were approved by the ESA Guidelines Committee and the ESA Board after a consultation process within the subcommittees of the ESA Scientific Committee. The task forces are made up of anaesthesiologists nominated by the subcommittee chairs to include expertise from the necessary scientific fields. These individuals are complemented by others with particular interest and enthusiasm. For the preoperative evaluation guideline, we are fortunate to have the involvement of members of the Cochrane Anaesthesia Review Group (CARG), the international experts in evidence-based anaesthesia,22 to perform the literature searches, appraise papers and provide advice on methodology. We have chosen to employ the evidence and recommendation grading system used by the Scottish Intercollegiate Guidelines Network (SIGN) [www.sgn.ac.uk (Accessed 24 September 2010)] and are using the appraisal tool provided by the Appraisal of Guidelines for Research and Evaluation (AGREE) collaboration [www.agree.org (Accessed 24 September 2010)] as a checklist for the process.

When the final drafts are available, they will be posted on the ESA website for a consultation period, during which members will be able to comment. The drafts will also be reviewed by other content experts and shared with other European medical organisations as appropriate. This wide-ranging and (in the case of the open web-based review) innovative process will not only help us to produce an independently scrutinised final product but will also be one step in the important process of dissemination and implementation of the guideline into clinical practice.23 The production of high-quality, evidence-based guidelines inevitably takes some time but we hope that the preoperative fasting guidelines will be completed in the first half of 2011, ready for publication in the European Journal of Anaesthesiology and launching at the Euroanaesthesia meeting in Amsterdam.

Of course, nothing in life is perfect. The specialty’s long-term aim of generating high-quality research results is also being addressed by the ESA’s initiative to run large, multicentre observational and prospective studies through its ESA Clinical Trial Network. In the meantime, we know that there are many gaps in evidence even in the common clinical topics that we have chosen for our first few guidelines. Where there is doubt, we will not pretend to provide unanimity.24 Where there are conflicts of interest, we will try to make these explicit. Above all, we hope to produce practical advice founded on the best evidence and well-argued judgement to help anaesthesiologists and their patients throughout Europe.

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