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''I would have everie man write what he knowes and no more.''—Montaigne

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Editorial I

The national strategy for academic anaesthesia. A personal view on its implications for our specialty[†]

In December 2005 The Royal College of Anaesthetists (RCA) published *A National Strategy for Academic Anaesthesia*[1] (referred to here as the *Strategy Report* or just *Report*). This makes 20 specific recommendations designed to improve the state of academic anaesthesia. As the Strategy Officer co-ordinating the work that led to this comprehensive document, I highlight in this editorial my personal view on the three issues that I think will have particular impact on the way the specialty develops in the near future: the creation of an Academic Institute; engaging with the Walport Report;[2] and the future role for anaesthetic organizations and specialist societies in academic strategy. I refer below to the relevant sections of the *Report* in square brackets for cross-reference with the full *Report* on the RCA website at www.rcoa.ac.uk.[1]

The Academic Institute

Normally, 'strategy reports' are about how a pre-existing organizational structure might become more efficient. Unfortunately, one important finding of our *Report* was that the structures underpinning academic anaesthesia were virtually non-existent. The *Report* therefore recommends the creation of an Academic Institute to lend such structure [Sections 4 and 14].[1] I offer two stark examples of the situation I first encountered.

Early in the review, I needed full contact details for Heads of Academic Department and/or UK professors of anaesthesia (as I had easily obtained for Regional Advisers). However, this information did not exist within either the College or the Association of Professors of Anaesthesia. This imposed severe limitations on our ability to communicate rapidly and effectively with all academic heads. Second, when the RAE invited responses to its 2002–2003 consultation, no anaesthetic organization responded.[3] However, bodies like the Association of Hispanists, the Standing Council of Drama Departments, and the Association of Tourism and Leisure (not to mention many other Royal Colleges) registered detailed responses. A dispassionate commentator might conclude that Hispanists, dramatists and tourists (and other specialties) form important academic groups—anaesthetists do not. Observations such as these indicated that fundamental deficiencies in our corporate structure were preventing the achievements (or concerns) of academic anaesthetists from being effectively communicated to the outside world.

While an Academic Institute is designed to address this, some departments may see this as a threat. Previously, 'strategy' in academic anaesthesia was determined *post hoc*; passively by the collective actions of individuals or individual departments. An active Academic Institute may turn this on its head, with strategy developed from the centre, and academic departments the mere tools for delivery. Departments may feel a loss of 'power'. It is for others to consider whether the concept of 'power' in a terminally weak specialty is misplaced, but certainly neither a future Institute nor the College will ever be able to execute any strategy without full co-operation of all academic departments. Each department will have to decide for itself whether increasing the strength of the specialty as a whole through a co-ordinated strategy will increase or reduce its own influence.

It is appropriate to clarify what we mean by a 'department' and why this is a concept in some danger of modification or even extinction [Section 6].[1] Because of funding pressures, universities no longer think or plan in terms of traditional subject-based 'departments'. The need for financial efficiencies has led to mergers into divisions, sub-divisions, sections, directorates, etc. Funding agencies also find themselves supporting research groupings based around collaborative research, rather than funding traditional departments and if the funding is sufficiently large, a university might view the infrastructure of this grouping as more durable than any of the original constituent departments. There is concern

[†]*Declaration of interest*. J. J. P. was Academic Strategy Officer of The Royal College of Anaesthetists and in this role co-ordinated the project that led to the writing of the *Strategy Report.* The opinions expressed in this article are his own views and do not reflect any official views or policy of the Royal College or of any other organization.

whenever traditional departments close or merge, as this is assumed to indicate weakness of (and further to weaken) the affected specialty.[4] A distinct department certainly contributes to a sense of professional identity, especially in a craft like anaesthesia, but the *Strategy Report* acknowledges our limitations in trying to persuade universities to reverse these trends. As a countermeasure, it instead strongly recommends that even if a department has closed or merged and academic anaesthetists find themselves widely dispersed, they should nonetheless continue to meet, discuss and plan strategy as if they were a 'virtual department' (and this will be recognized by the Academic Institute) [Section 6, Recommendation 3].[1] We should not view a distinct department as essential to achieve our academic goals. We are better served by focusing on creating a corporate identity based on our natural desire to collaborate and work together, regardless of the label of a 'department'. Extending the 'membership' of such academic units or meetings to research-active and teaching-active NHS consultants and others, as recommended by the *Report*, also adds strength [Recommendations 13–18].[1]

Academic career training: the Walport Report

The Walport Report[2] has the most profound implications for all specialties. Because it requires a nationally co-ordinated approach to academic training, it lies at the core of our *Report* [Section 8 and Appendix E].[1] The dedicated training pathway that it introduces seems to me a fantastic opportunity for any trainee interested in pursuing a clinical academic career.

In embracing the Walport Report, we have used the following logic. For academic anaesthesia to flourish, a properly trained cadre of academic anaesthetists is essential. The pathways defined by the Walport Report will be virtually the only reliable paths to a clinical academic career—because only these offer trainees a funded, 2-yr 'run-in' period to prepare a higher research degree proposal, giving them an edge over any competing proposals.[2] Adopting this new model must become an absolute priority for the specialty, and much of the *Strategy Report* is about how to achieve the necessary changes in internal structure and funding.[1] If we reject this logic then there is no doubt in my mind that academic anaesthesia will soon perish. But, even in accepting the logic there are important challenges. Here, I will highlight just two (the *Report* discusses some others[1]): the impact of early career choices and the possible adverse consequences for clinical (as opposed to academic) training.

Early career choices

Traditionally, academic training in anaesthesia has generally occurred after the acquisition of the Fellowship of The Royal College of Anaesthetists (FRCA), at a relatively senior level after considerable clinical experience. This is also true for some other specialties, but the Walport Report changes this. Trainees will be expected to choose an academic pathway ideally in their second foundation (F2) year. The Walport Report contains flexibility for more senior trainees (e.g. specialist registrar SpR 2 or 3) to move across to an academic path (or *vice versa*), but this is not envisaged to be the primary pathway.[2]

It is very important for the specialty to understand the status of the Walport Report. It has the full support of all four UK health departments, NHS Research and Development Office (NHS R&D), the Postgraduate Medical Education and Training Board (PMETB), Wellcome Trust, Medical Research Council (MRC) and the British Medical Association. It is not a consultation document that we can modify; it is instead the definitive description of what academic training will be like. We are not being asked if we think it is a good idea. We are being asked to re-map our training pathways in line with its recommendations.

We are free to conclude that the Walport Report does not suit our specialty (and therefore we must also reject the *Strategy Report*). However, we must understand the consequences of such rejection. It will become increasingly difficult for our academic trainees to obtain research funding from the MRC or Wellcome Trust (because these agencies are re-aligning fellowships primarily to support 'Walport trainees'). Any alternative model we adopt will therefore require us independently to fund our academic trainees outside the Walport scheme which, given the scale of the task, is very difficult (if not impossible).

The Walport Report is designed to train the clinician-scientists of the future.[2] In the past, we have perhaps been more concerned with the question: 'How can we mould clinical anaesthetists into scientists?'. The challenge now thrown at us is very different: 'Can anaesthesia use—or does it need—scientists who also work as anaesthetists?'. The *Strategy Report*'s answer to this is of course a very enthusiastic 'yes', but this in turn raises two further questions: 'How can anaesthesia recruit potential academics at F2 level when they have done so little anaesthesia?' and—'What sort of clinicians will these future academics be?'

In answer to the first, the *Strategy Report* argues that we can increase our exposure, through teaching, to undergraduate/preclinical medical students [Section 9], and offer academic modules in anaesthesia to F2 trainees [Section 10]. Very soon some F2 trainees will be 'knocking on our office doors' to plan their academic careers. We must not send them away 'to do some anaesthetics first' (as perhaps we did in the past), but instead offer them projects and mentorship. As the *Strategy Report* states, our mantra must become to '*catch them early and treat them well*' [Section 9, Recommendation 11].[1]

In answer to the second question, we need to consider that as future consultants, the 'Walport trainees' may be very different from senior academics of today. They will be trained as scientists first and anaesthetists second (though I personally would not wish ever to draw a distinction between the two). They may undertake a more limited

range of clinical practice than their academic predecessors and probably a smaller clinical workload (though this may also be true of all consultants after the New 2003 Consultant Contract).[5]

Potentially adverse consequences for conventional clinical training pathways

The academic components of the conventional clinical training pathway are already very limited in scope, designed only to produce 'research-aware' rather than 'research-active' NHS consultants.[6] Nevertheless clinical trainees commonly conduct research during short periods attached to an academic department and in the past, the hope has been that these clinical trainees form the substrate for future academic anaesthetists.[7 8] However, with the change in emphasis brought by the Walport Report, increasing the participation of clinical trainees in short-term projects is clearly not the solution (and is indeed almost irrelevant) to the problems of academic anaesthesia [Section 7, Recommendations 4–7].[1] The *Strategy Report* therefore confirms that the proper priority for academic departments must be securing 'Walport trainees' and not further investment in short-term attachments for clinical trainees [Recommendation 4].[1]

One danger of this re-alignment is that participation of clinical trainees in research may be squeezed out, such that the clinical training pathway will in future produce only what might be perceived to be mere technicians. It may not be long before NHS anaesthetic departments, even numbering as many as 30–40 consultants, contain not one who has ever published a paper or submitted an ethics proposal (let alone acquired a higher research degree). Perhaps that has happened already. Of course, I think this scenario should be avoided. Because universities and academic departments now have more clearly defined priorities, I feel it is the NHS that should take the lead in improving the academic components of clinical training (though all parties might best work together to achieve this objective [Section 7, Recommendation 7][1]). Here, perhaps, lies a place for the special skills of research-active NHS consultants [Section 11].[1] Extending the notion of a 'training faculty' as suggested by the Academy of Medical Royal Colleges,[9] the *Strategy Report* recommends that an NHS consultant is formally identified as 'Lead Consultant for Academic Competencies' for clinical trainees [Section 7, Recommendation 5].[1] It is hoped that this role, used effectively and in combination with Recommendation 6 (that PMETB assessments or College visits specifically examine the delivery of academic competencies), will minimize the adverse consequences.

The future role of anaesthetic organizations and specialist societies

There are more than 30 different anaesthetic organizations and specialist societies and they consist of highly motivated and experienced professionals with an interest in developing the specialty or a sub-specialty within the broad remits of anaesthesia, critical care or pain medicine. Academic endeavour—whether this is teaching, clinical research or audit—is an essential part of their mission. Without the skills of their members, these bodies cannot sustain enquiry in their chosen fields: without academic effort the knowledge base becomes static.[10] The potential decline in research training of future NHS consultants, highlighted above, therefore constitutes a direct threat to the well-being of all anaesthetic organizations, and strategies to maintain the ability of their members-in-waiting to advance the field are important. The *Strategy Report* suggests two approaches.

First, societies may use any funds they have (or can raise) to support directly the research projects of 'Walport trainees' in their chosen fields (e.g. a vascular society might fully or partially fund a PhD project in an area related to vascular anaesthesia and so on). The logic here is that supporting projects within the 'Walport model' will best produce individuals with the comprehensive training, who acquire a sub-specialty interest that helps sustain the field in the future [Section 14, paragraphs 14.11–14.20].[1]

Second, societies can become the main platforms for multi-centre studies or audits in their chosen fields and thereby evolve into formal 'networks' (assisted if necessary by the Academic Institute) [Section 13].[1] Such networks, where priorities are identified by expert clinicians themselves, can now attract substantial NHS R&D funding [Appendix G].[1]

My discussions with some anaesthetic organizations, however, revealed two particular areas of concern. Some organizations fear that working more closely with the College or with the proposed Academic Institute may threaten their independence. My own view, in contrast, is that being part of a coherent national academic strategy gives an organization a direct stake in the process and thereby increases its influence and standing. Second, network-based or multi-centre work require close co-operation between members and groups. In contrast, competition for the same limited funds has hitherto been the norm in our specialty, and a consensual approach is perhaps unfamiliar. Other specialties (e.g. in cancer and cardiovascular research) have gained high dividends from networks [Appendix G].[1] A similar shift in attitude is now needed within anaesthesia, including a recognition that many activities—both basic science and applied clinical work or audit—can be integrated to patient benefit and are thereby 'academic'.

The next steps

There are many desirable objectives that did not find their way into the *Strategy Report*. This is because it is a pragmatic document: it highlights only those objectives that are achievable within a timescale of ~5 yr, at little or no extra cost, and within the current regulatory environment. The *Strategy Report* rejects the notion that simply doing the 'right research'—essential as this is—will alone solve our

problems. It emphasizes more the organization and structures needed to foster and sustain academic activity for the future.

My hope is that all anaesthetic organizations will now draw up 'action plans' to implement the recommendations. The RCA and AAGBI should do this as national bodies (ideally in partnership), and individual academic (and NHS) departments should also do this to translate the implementation locally. Each specialist society should also now consider how specifically—and to its own advantage—it can contribute to the strategy.

The *Strategy Report*'s recommendations are explicit. Others outside anaesthesia (who have advised us) will—I think correctly—use this clarity as a reference or benchmark to assess our future progress. If the specialty does not collectively move to implementation, then any future shortcomings in academic anaesthesia may be seen primarily as a result of the specialty's own failure to adapt. I hope instead that the pragmatism encouraged by the *Strategy Report* will supervene.

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References

1 The Royal College of Anaesthetists. A National Strategy for Academic Anaesthesia. 2005. Available from www.rcoa.ac.uk
2 Modernising Medical Careers, UK Clinical Research Collaboration. Medically- and dentally-qualified academic staff—recommendations for training the researchers and educators of the future. The Walport Report, 2005
3 Joint Funding Body. Review of research assessment. Report by Sir Gareth Roberts to the UK funding bodies; issued for consultation, 2003. Available from http://www.ra-review.ac.uk/reports/roberts.asp
4 Jackson RGM, Stamford JA, Strunin L. The canary is dead. *Anaesthesia* 2003; **58**: 911–12
5 Pandit JJ. The new consultant contract and anaesthesia: practical implications of the new terminology. A personal view. *Anaesth News* 2003; **195**: 16–17
6 Wildsmith JAW. Training in anaesthesia: ensuring academic competency. *Bull Roy Coll Anaesth* 2005; **33**: 1657–8
7 Harmer M, Hall JE. Competence in research. *Bull Roy Coll Anaesth* 2004; **27**: 1348–50
8 Menon DK, Wheeler DW, Wilkins IA, *et al*. Integrated approaches to academic anaesthesia—the Cambridge experience. *Anaesthesia* 2004; **59**: 785–92
9 Academy of Medical Royal Colleges, The roles and responsibilities of college tutors. Report of a Working Party, 2004
10 Vandam LD. History of anesthetic practice. In: Miller RD ed. *Anesthesia*, 5th edn. Philadelphia: Churchill Livingstone, 2000; 1–11

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Editorial II

Ultrasound imaging by anaesthetists: training and accreditation issues

The use of ultrasound imaging is increasing in anaesthesia, critical care and pain management. Many departments will have purchased ultrasound devices, either from charitable funds, or from capital funding to comply with NICE Guidance relating to central venous access.[1] However, I suspect that most departments will not have any formalized training programmes, or systems of accreditation. There is little specific guidance from the Royal College of Anaesthetists, or other relevant organizations, regarding the necessary equipment, knowledge base, skills or practical experience that are required before using such technology independently. A notable exception is echocardiography. The Association of Cardiothoracic Anaesthetists, in combination with British Society of Echocardiography, have a published syllabus, stated competencies and a new exam (www.bsecho.org). Other specialties are facing similar issues of ultrasound teaching and accreditation, for example obstetrics and gynaecology, A & E, musculoskeletal services and vascular surgery. There are clinical pressures to use ultrasound to improve diagnostic and interventional procedures. Alternatively there may be financial incentives for clinicians to adopt ultrasound as a fee generating procedure in the private sector. A summary of relevant electronic resources are listed (Table 1).

In the future, procedures such as central venous catheterization, arterial access, diagnosis of pleural collections, echocardiography, regional nerve blocks and other techniques are likely to be performed routinely by anaesthetists using ultrasound (Table 2). Despite the large number of positive publications in the literature and NICE recommendations, the availability of appropriate equipment and personnel skilled in its use remain patchy in anaesthesia and intensive care practice in the UK. Operator inexperience or the use of unsuitable equipment, particularly in the more challenging patient, may increase rather than decrease complications.[2]

As with other computer driven devices, each year ultrasound machines get smaller, cheaper, easier to use and more powerful in terms of image quality. Different clinical applications require varying techniques, ultrasound machines and more specifically probes. Small devices specifically designed for vascular access are generally unsuitable for other applications, for example pleural ultrasonography and drainage. In order to perform vascular access,