2012 Review of the Health Practitioners Competence Assurance Act 2003: Submission from the Australian and New Zealand College of Anaesthetists (ANZCA)

Thank you for the opportunity to comment on the above consultation document.

ANZCA is the professional organisation for around 5000 specialist anaesthetists (Fellows) and 2000 anaesthetists in training (trainees), with 600 Fellows and 280 trainees in New Zealand. ANZCA, which includes a Faculty of Pain Medicine, is one of Australasia’s largest medical specialist colleges. ANZCA is directly responsible for the education, training and continuing professional development of specialist anaesthetists and pain medicine specialists, and for the standards of clinical practice in Australia and New Zealand. The ANZCA Training Program is accredited by the Medical Council of New Zealand and the Australian Medical Council.

ANZCA’s mission statement is: To serve the community by fostering safety and high quality patient care in anaesthesia, perioperative medicine and pain medicine. As an organisation focused on training competent anaesthetists and pain medicine specialists to deliver safe, high quality care, the Health Practitioners Competence Assurance Act 2003 (“the Act”) is directly relevant to the work of our Fellows and trainees.

In this country ANZCA is represented by the New Zealand National Committee (NZNC). I am pleased to present the following submission on behalf of the NZNC.

ANZCA is a member of the Council of Medical Colleges (CMC), and endorses the CMC submission on the HPCA Act review. The following comments are additional to those provided by CMC, or are specific to the anaesthesia scope of practice.

General comments

In places the discussion document provides policy options without a clear description of the nature, size, or severity of a problem. For example, the document suggests that Responsible Authorities (RAs) could provide better healthcare for professionals (page 8), but does not establish that what already exists through employers, colleges or other providers is inadequate.

The discussion document contains a number of assumptions and unreferenced statements. Without references or evidence it is difficult to ensure that we, as respondents, are working with the same assumptions as the Ministry of Health. Examples include paragraph 1 on page 19 which states that the HPCA-type regulation is considered an expensive way to ensure public safety. We would be
interested to know who considers this to be so, and what evidence this is based on. The paragraph goes on to state that there are indirect costs associated with the restrictions imposed by RAs that have an impact on the supply of health professionals. Again, we would be very interested to see the evidence behind this statement.

The document asks whether the Act should be used to address issues such as workforce flexibility, promote teamwork, and address standardisation of codes of ethics and conduct across the sector. The question is whether it is the role of the Act specifically, and legislation in general, to address such issues or whether other non-regulatory measures, or coverage in secondary or delegated legislation may be a more appropriate, effective, and flexible way to respond to a sector that, as the document rightly notes, is rapidly changing.

We note that a number of actions arising from the recommendations of the 2009 Report on the Review of the Health Practitioners Competence Assurance Act have not yet been completed. It would be useful to include a summary of the recommendations with a status report, and an indication of which recommendations will be considered as part of the current review.

Responses to specific questions

The NZNC has responded only to questions where our comments are in addition to the CMC submission, or address questions particularly relevant to anaesthesia.

Future focus

ANZCA’s recent workforce report (executive summary attached) demonstrates that anaesthesia is not a workforce in crisis. The issue in our sector - as in many others - is a mobile workforce and, while overall capacity is sufficient, mal-distribution of anaesthetists is an issue.

International medical graduates (IMGs) provide an important part of the New Zealand anaesthesia workforce. (The workforce report provides more detail.) ANZCA is confident that the level of training and qualifications required for anaesthesia IMGs is appropriate, first and foremost to protect public safety and secondly to maintain workforce capacity.

We have no evidence to suggest that the Act, in its current form, creates inappropriate barriers to recruiting and retaining anaesthetists whose training, qualifications and experience enable them to provide safe, high quality anaesthesia care. If such evidence exists we would be happy to review and discuss it with HWNZ.

2. How can the Act be used to promote a more flexible workforce to meet emerging challenges faced by the healthcare system?

As above, ANZCA is not aware that the Act presents any barriers to a flexible and responsive anaesthesia workforce, though we do recognise that through its implementation and focus on quality and safety, it can have an impact on workforce. ANZCA’s position is that this is entirely appropriate: patient safety should not be compromised in order to improve workforce flexibility.

There are a number of non-regulatory methods that can be used, under suitably enabling legislation, to promote and support workforce flexibility.

Our experience is that issues such as district health board (DHB) contracting processes (for example, flexible arrangements for older anaesthetists to enable them to extend their careers) can be an equally important influence on workforce flexibility and should be explored and dealt with before, or in conjunction with, proposals to amend the Act to address workforce concerns of this kind.
The Act does not preclude flexibility in the workforce. In the anaesthesia team, for example, there is the ability to implement local solutions for local situations. This might mean a different team composition for teaching and non-teaching hospitals, and different scopes of practice for anaesthetic technicians, depending on the range of services provided by a particular facility. Extended scopes of practice for anaesthetic technicians have the potential to further increase flexibility. We would be concerned that more prescriptive legislation might decrease rather than improve flexibility at the local level.

3. How can the Act promote education and training that has a wider focus, such as effective ways of working in teams, improved communication skills and support for consumers’ self-management?

Anaesthesia, by definition, requires a team approach and good communication. ANZCA places a strong emphasis on communication and working practices that effectively enhance the efficiency of the perioperative team and lead to good patient outcomes.

As a college, we are responsible for setting the standards for, and the training of, specialist anaesthetists. Our training and continuing professional development programmes are accredited by the Medical Council of New Zealand and the Australian Medical Council. ANZCA has recently launched its revised curriculum which will be implemented in New Zealand from December 2012 and Australia from January 2013. The framework of the curriculum – the clinical fundamentals and ANZCA roles in practice – clearly shows the range of skills that the ANZCA graduate will have; a solid basis for generalist practice.

The required skills are built around the CanMEDS framework and include the anaesthetist as a communicator, collaborator, a health advocate and a professional. Training in all these areas contributes to anaesthetists who are skilled in teamwork, communication, and patient advocacy and support skills.

Section 118(i) of the Act provides for setting standards of clinical and cultural competence, and ethical conduct. ANZCA’s view is that promotion of such skills is best done through guidelines for doctors, using the resources already in the undergraduate and post-graduate training programmes, and ongoing education through colleges and employers.

Consumer focus

We consider that the consumer involvement and protection mechanisms provided in the Act are appropriate. However, the use and resulting outcomes of these mechanisms should be subject to ongoing evaluation, and be modified as required. As with any legislative amendment or policy change, modifications should be evidence-based, including being informed by sector and consumer consultation.

The Health and Disability Commissioner’s Code of Health and Disability Service Consumers’ Rights should be carefully considered in the review of the Act with regard to both the consumer and safety focus areas. Rights 4 and 6 are particularly relevant in the context of this review.

1 An overview of the curriculum is attached for your information. More information can be found on ANZCA’s website: www.anzca.edu.au/training
Safety focus

The NZNC’s primary point concerning safety and the Act is whether there is any evidence of significant failures of the Act to achieve its primary purpose: the protection of public safety. Defining and describing the problem is a critical first step that appears to be missing from the process at present.

We agree with the statement on page 14 that it would be useful to assess how wider risk management systems contribute to managing the risk of harm to the public for both the regulated and unregulated health and disability workforces. This type of analysis should be central to any consideration of changes proposed to the Act, and to provide an evidence base for the subsequent steps in the review of the Act with regards to protecting public safety. This information would enable us to comment specifically on what the gaps and overlaps might mean for anaesthesia.

Cost effectiveness focus

The primary purpose of the Act is and should remain on protecting public safety, primarily through appropriate and adequate regulation of health professionals. The NZNC strongly endorses CMC’s view that there are occasions where no doctor is better than any doctor: lowering standards or regulatory controls in order to lower costs is inconsistent with the purpose of the Act.

The Act should and does support innovations such as extended scopes of practice (for example anaesthetic technicians), that enable safe, appropriate delegation of some roles. It should not include direct substitution of roles usually and appropriately carried out by registered medical professionals. ANZCA is unequivocal on the point that the prescription and use of anaesthetic drugs is one of these roles.

We note that CMC supports the use of other forms of regulation, such as employer regulation and accreditation, which could reduce the number of professions regulated under primary legislation, and reduce costs and be an accurate reflection of the risks posed by those professions. CMC also notes, and we agree, that the criteria for regulation under the Act, as set out in the Guidelines for Applying for Regulation, are not strictly applied.

Appendix four contains a number of options for regulation of health professionals. This is a useful starting point. However, any consideration of changes to the current regulatory model requires in-depth analysis of the risks, costs and benefits of each option and should consider a model that allows a mix of options. We agree with the CMC view that other models could assist in reducing costs to the healthcare system and to health practitioners, and improving information for consumers; however the first priority of any regulation must be protecting public safety – the primary purpose of the Act.

Specifically, ANZCA supports the regulation of anaesthetic technicians under the Act. There is a need to regulate scopes of practice that include activities that may do harm, and are performed by health professionals who may not work autonomously. Regulation protects the safety of the public, and limits the scope of practice so that anaesthetic technicians are not able to administer anaesthetic drugs. Regulation should be based on a robust scope of practice and for some this should include the requirement to work under supervision or delegation in order to protect the public while enabling safe, appropriate and flexible practice.

Parts 2 and 3 of the Act provide a high-level framework for the regulation of health professionals and in general terms, ANZCA’s view is that the co-regulatory model is appropriate for medical practitioners. It does not, however, allow for regulation to be matched to level of risk posed by other
health professionals. We suggest that HWNZ and the Ministry of Health undertake further detailed analysis of regulatory options for managing different levels of risk, specifically on the outcomes of applying those options in the New Zealand context and in consultation with those groups.

We support the CMC comment that at present, some professions are seeking regulation under the Act as a means of improving the profile and legitimacy of their practice in the public eye. This is inappropriate, misleading to the public, and is not consistent with the purpose of the Act.

We endorse CMC’s view that the Medical Council’s working definition of the risk of harm and serious harm (as set out on page 17 of the discussion document), is appropriate and adequate. It does not need to be included in primary legislation.

Thank you for the opportunity to comment on this initial part of the review of the Act. We look forward to participating in the next steps of this very important work. If you would like further information please contact Brigid Borlase (Policy Officer) on (04) 495 9790, or bborlase@anzca.org.nz

Yours sincerely

Dr Geoff Long
Chair, New Zealand National Committee

Encl:

1. Overview of the ANZCA curriculum revision 2013
2. The Demand for and Supply of Anaesthesia Services in New Zealand 2010-2030: Executive Summary
1. THE REVISED CURRICULUM

The Australian and New Zealand College of Anaesthetists (ANZCA) is revising its training program and will introduce a revised curriculum at the start of the 2013 hospital employment year.

Work on the revised curriculum began in 2008 when ANZCA initiated a review of the existing curriculum and invited more than 100 medical education organisations to provide submissions to the College regarding the education and training of anaesthetists. ANZCA established the Curriculum Redesign Steering Group, under the direction of the Dean of Education, Professor Barry Baker.

Based on the steering group’s recommendations, the College adopted the CanMEDS® roles and a curriculum framework, which consists of seven ANZCA Roles in Practice and seven ANZCA Clinical Fundamentals.

The seven Clinical Fundamentals are:
- General anaesthesia and sedation.
- Airway management.
- Regional and local anaesthesia.
- Perioperative medicine.
- Pain medicine.
- Resuscitation, trauma and crisis management.
- Safety and quality in anaesthetic practice.

The ANZCA Roles in Practice

![Diagram of ANZCA Roles in Practice]

2. KEY COMPONENTS OF THE PROGRAM

Under the revised program, trainees will complete their training over four training periods. These are introductory training (26 weeks), basic training (78 weeks), advanced training (104 weeks) and provisional fellowship training (52 weeks). Progression through each of the four training periods is dependent upon the trainee successfully completing the requirements for each period of training.

During the first six months of training, trainees must successfully complete an initial assessment of anaesthetic competence (AAC) before being eligible to move to basic training. Once progression to basic training has been approved, trainees can complete any of the 12 specialised study units (SSUs) within the curriculum. The 12 specialised study units are:
- Head and neck, ear, nose and throat (ENT) dental surgery and electro-convulsive therapy (ECT).
- Ophthalmic procedures.
- Neurosurgery and neuroanatomy.
- General surgical, urological, gynaecological and endoscopic procedures.
- Thoracic surgery.
- Cardiac surgery and interventional cardiology.
- Obstetric anaesthesia and analgesia.
- Vascular surgery and interventional radiology.
- Orthopaedic surgery.
- Intensive care medicine.
- Paediatric anaesthesia.
- Plastic, reconstructive and burns surgery.

A trainee must complete all specialised study units before they can progress to provisional fellowship training, during which time the trainee may focus on broadening their existing experience and for undertaking scholarly research.

The assessment of trainees is primarily performed through a combination of:
- Workplace-based assessments conducted by assessors working with trainees. The performance of a workplace-based assessment requires assessors to use one of four formative tools: the mini-clinical evaluation exercise, direct observation of procedural skills, case-based discussion, and multi-source feedback.
- Clinical placement reviews conducted by supervisors of training.
- Attendance at an EMAC course.
- A primary examination and final examination during basic training and advanced training respectively.
- A core unit review performed by a supervisor of training at the end of each training period.

In addition to the above assessments, trainees must complete a minimum volume of practice in relation to time, cases and procedures, as well as simulation courses. Teaching is supported by the provision of teaching and learning cases and other resources that assist the trainees to develop their own learning.
3. IMPLEMENTATION

The implementation of the revised curriculum is supported by comprehensive communications and change management strategies. These strategies are designed to ensure that:

- The revised curriculum is widely understood and accepted by Fellows involved in its implementation and trainees subject to its requirements;
- Supervisors of Training (SOTs), and other Fellows supporting the revised curriculum, receive adequate training on how to perform workplace-based assessments and other key activities; and
- SOTs and trainees receive appropriate information and instruction on how the changes to the current curriculum impact their responsibilities and on how to use new technologies that support the operation of the overall training program.

A key feature of the change management strategy is the adoption of a 'train-the-trainer' approach based on a core group of program champions in each region of Australia and in New Zealand.

The diagram below provides an overview of the key elements of the revised program.

Training in anaesthesia can be undertaken in association with training in intensive care and pain medicine. Within the College, the Faculty of Pain Medicine is responsible for training in pain medicine. Training in intensive care medicine is the responsibility of the College of Intensive Care Medicine.

When trainees complete their training they are awarded Fellowship of the Australian and New Zealand College of Anaesthetists and recognition as a specialist anaesthetist.

This brief introduction to the revised curriculum provides an overview of its key components. For additional information on the revised curriculum, please access the College website at www.anzca.edu.au/training.

Overview of ANZCA Training Program

Curriculum Structure

- Introductory training (26 weeks including normal leave)
- Basic training (26 weeks including normal leave)
- Advanced training (104 weeks including normal leave)
- Provisional fellowship training (52 weeks including normal leave)

Learning outcomes from the ANZCA Roles in Practice are embedded in workplace-based assessment forms and are applicable to all Clinical Fundamentals and specialised study units.

Specialised study units

- To learn unique, specific aspects of practice. Each unit focuses on a defined area of practice, related to the type of treatment required for the patient.
- Covers the anaesthetic needs and implications of the various treatments required for patients.
- Variable in size, depending on the area of practice and flexible in timing of completion.
- Workplace-based assessments on specialised study units can be completed from basic training onward.
The demand for and supply of anaesthesia services in New Zealand 2010-2030
An Anaesthesia Workforce Study
by the Australian and New Zealand College of Anaesthetists

Executive Summary

The Australian and New Zealand College of Anaesthetists (ANZCA) has developed a New Zealand anaesthesia workforce study to contribute to the current discussion about the shape of our anaesthesia workforce in the future and how anaesthesia demand should be met.

Using data from a New Zealand anaesthesia workforce survey and anaesthesia service usage in New Zealand public hospitals, the study sought to determine the likely shortfall or surplus in the supply of anaesthesia services in New Zealand over the 20-year period 2010 to 2030.

ANZCA will use the scenarios tested and outcomes obtained as a tool for developing appropriate strategies to support the New Zealand anaesthesia workforce and the standard of services delivered.

The study is also intended to inform policy deliberations with the government on the critical issues of anaesthesia service delivery in the light of a rapidly ageing population. It therefore forms part of an important ongoing dialogue with the government and district health boards on the future of anaesthesia service delivery in New Zealand, the timely delivery of these services, and the maintenance of quality and safety standards within the profession.

Key finding
The workforce study has identified a short-term shortfall in the supply of anaesthesia services with that shortfall increasing until about 2015, after which it will gradually diminish until equilibrium between supply and demand is reached. The time taken to reach that equilibrium can be reduced significantly if more new specialists can be retained in New Zealand and current specialists can be encouraged to work for longer than the age at which they indicate they intend to retire.

About anaesthetists
In addition to its supply and demand analysis, the study details the work of an anaesthetist because, few people – even other medical colleagues – understand just what is involved in administering anaesthesia or the full range of an anaesthetist’s work.

Anaesthetists are doctors who spend at least seven years in post-graduate training after graduating from medical school. This includes two years of pre-vocational experience and five years in specialist anaesthesia training.

In New Zealand, and Australia, that training is provided by ANZCA, which also sets clinical practice standards to ensure world class levels of safety and quality in anaesthesia. ANZCA trains as many anaesthesia trainees as New Zealand’s public hospitals choose to employ (currently about 250 a
year, spread over a five-year training period). It also assists with accrediting overseas-qualified doctors as specialist anaesthetists.

Anaesthetists’ work includes general anaesthesia and sedation, airway management, regional and local anaesthesia, pain medicine, perioperative medicine, resuscitation, trauma and crisis management, and safety and quality in anaesthesia practice. The pre-and post-operative medical services help ensure the effective coordination of a patient’s care during his/her stay in hospital in addition to monitoring the patient’s wellbeing and progress. Non-clinical work includes clinical leadership, administration, teaching, research, continuing medical education (a compulsory requirement), etc.

**Supply of anaesthesia services**

Towards the end of 2009, ANZCA, with support from the New Zealand Society of Anaesthetists, surveyed all ANZCA Fellows (those who have attained ANZCA’s fellowship qualification, FANZCA), other vocationally registered specialist anaesthetists and ANZCA trainees in New Zealand.

As well as demographic details, that survey sought information about qualifications and training, including by:

- country of origin
- expectation of departing New Zealand permanently in the next five years and the main reasons for that
- hours of work and a breakdown of work in terms of clinical and non-clinical work
- preference for working the same number, more or fewer hours
- age expecting to cease working as an anaesthetist
- location of practice and expectation of remaining there
- whether respondent grew up in a rural area
- factors determining choice of current location
- type of practice (public/private/other) and why that preference was favoured.

It also asked respondents to describe the adequacy of the current anaesthesia workforce, to identify any geographic or clinical gaps in meeting demand, what strategies would most likely succeed in addressing those gaps and what factors other than the medical workforce adversely affect the provision of anaesthesia services.

The survey drew a 75% response, producing excellent data about the current and projected supply of anaesthesia services.

The combined work of ANZCA Fellows, other vocationally registered anaesthetists, other doctors providing anaesthesia services under supervision and anaesthesia trainees (who deliver supervised clinical anaesthesia services through the ANZCA Training Program) was used to determine the total available supply of anaesthesia services in New Zealand.

Based on the survey data, on average an anaesthetist spends 47.6 hours each week delivering a mix of clinical services, with 30.6 hours of that spent on in-theatre anaesthesia delivery. The other 17 hours of clinical work includes pre- and post-anaesthesia care, intensive care, pain medicine, after-hours anaesthesia delivery and other medical practice. In addition, on average, another 7.6 hours per week is spent on non-clinical activities such as administration, teaching, research, compulsory
continuing medical education, etc. With these being averages based on survey responses, the work of individual anaesthetists can vary considerably from these figures.

While men account for two-thirds of the current overall anaesthesia workforce, women are training in increasing numbers, with 56% of trainees in 2009 being male and 44% being female. The study assumes that future trainee intakes will have a roughly equal gender split and will result in women accounting for 40% of the workforce by 2030. As female anaesthetists spend less time delivering in-theatre anaesthesia services, this affects the supply side of the model, which is predicated largely on in-theatre work. It should be noted, however, that the total time spent by female anaesthetists on all clinical anaesthesia services does not vary significantly from that of men.

**Demand for anaesthesia services**

ANZCA acquired public hospital data of actual in-theatre usage of anaesthesia services from which to calculate the demand for anaesthesia services. Being usage based, these data do not reflect unmet demand, just the actual demand that was being met.

That in-theatre data was extrapolated to calculate the demand for non-theatre and non-clinical work as well as work in private hospitals, based on ratios derived from answers to the survey as to how much of that work constituted the average anaesthetist’s overall practice.

**The supply/demand gap**

Using in-theatre work as the basis of calculations, the 2009 data revealed a notional shortfall in supply of 24 full-time equivalent anaesthetists (FTEs) – though as the demand data is based on actual usage, clearly that demand was actually being met somehow and the report comments on this.

The FTE gap was calculated by using the data to estimate the total annual number of hours of in-theatre anaesthesia supply (700,224 hours) and the total annual number of hours of in-theatre anaesthesia service usage (727,636). The gap in supply is the difference between the two – 27,412 hours. This was divided by 1,163 – the average number of in-theatre anaesthesia-delivery hours per year for the average anaesthetist – to reach the 24 FTE figure.

The study indicates that this shortfall will increase to about 33 FTEs by about 2014, after which the gap between supply and demand will gradually diminish. The point at which equilibrium is reached varies according to several scenarios that the study examines, but at the latest it would be reached by 2026, after which there would be a small surplus in supply.

While the variable used to assess the gaps in supply and demand in the workforce model has been in-theatre delivery of anaesthesia services, it should be noted that this service is only one component of the range of services that anaesthetists provide (though accounting for approximately 55% of their total workload). Intensive care medicine, pain medicine clinics, after-hour calls and other non-anaesthesia medical practice consume a large part of an anaesthetist’s time, particularly in rural areas where other medical specialists may not be available.

Any workforce calculations also need to allow for non-theatre clinical work and anaesthetists’ professional non-clinical duties, as well as the above in-theatre clinical workload.
While the survey responses indicated that, on average, anaesthetists were spending about 14% of their time on non-clinical duties, ANZCA’s recommended guidelines for specialist anaesthetists in teaching hospitals are that “clinical work should not exceed an average of 0.7 of specialists’ workload”, that is about 30% of time should be reserved for non-clinical duties. These duties include teaching, administration, research, continuing medical education (a compulsory requirement), quality assurance and audit, and others.

**Base case and scenarios**

The supply and demand data were used to develop a base case with assumptions that reflect the current supply and demand environments – average number of in-theatre clinical hours, historical growth in Fellows and overseas-qualified specialists, increase in female participation in the profession, retention of trainees, age at retirement, etc. Under this base case, a balance between supply and demand would be reached by about 2024.

In addition, the study models four other scenarios to quantify the potential effect of specific initiatives on the supply and demand gap.

Scenario 1 adds an extra hour a week of pre- and post-operative care to the average anaesthetist’s workload, thus reducing their availability for in-theatre work but meeting the call for anaesthetists to increasingly take on the wider perioperative role. As any difference between supply and demand in the model is based on in-theatre services, this scenario aggravates the shortfall in supply (to about 56 FTEs by 2014/15), so that it would take longer to reach equilibrium – until 2026.

Scenario 2 suggests that the supply can be increased if anaesthetists can be encouraged to retire at age 65 (or later) rather than at 62, the average age that the survey indicated they intend to retire. Under this scenario, the break-even point would be reached by 2018. However, the study notes that implementing this scenario could be challenging.

Scenario 3 suggests increasing supply by improving the new Fellow retention rate, an initiative that would see the supply/demand equilibrium reached by 2022. Approximately 40 to 45 trainees enter their final year of training each year. Of these, about 60% remain to practise in New Zealand, with the rest heading mainly to Australia, driven by the availability of desirable positions and higher salaries. The study suggests introducing specific incentives to help retain more new Fellows in New Zealand.

Scenario 4 combines scenarios 1, 2 and 3 – that is, while supply is adversely affected by increasing pre- and post-operative care, it is improved by pushing out the retirement age and retaining more new Fellows. Under this scenario, equilibrium would be reached by 2019.

Like all models, the study makes a range of assumptions that seek to mimic the complex pattern of variables that exist within the health services environment in which anaesthesia services are provided.

It takes into account New Zealand’s projected population growth to 2030, noting that the large increase in elderly patients will have a marked effect on the delivery of anaesthesia services (as for all health services), which will need to be considered in future health policy. It also comments on the likely effect of the forecast increase in the incidence of diabetes and obesity.
It does not attempt to take into account variables such as changes in government policy or technological developments, both of which can affect supply of and demand for anaesthesia services.

**Conclusion**

Assuming growth in the training and accreditation of new anaesthetists will follow historical trends, the results indicate a shortage in anaesthesia services over the next decade with equilibrium being achieved between 2018 to 2026, depending on the different scenarios considered.

The maximum size of the projected gaps varies from 33 FTEs in 2014/15 under the base case scenario to 56 FTE anaesthetists in 2014/15 under scenario 1 (where perioperative services are increased). These gaps are of a magnitude that can be readily addressed by adopting one or more of the initiatives outlined in the other scenarios.

This executive summary provides only a very brief guide to the study. A full copy is available on our website at [www.anzca.org.nz](http://www.anzca.org.nz) or on request from ANZCA’s New Zealand National Office (email communications@anzca.org.nz).