

SSC 5c – Finalist Elective Placement

Placement:

Department of Critical Care Medicine (DCCM) and Cardiovascular ICU,
Auckland City Hospital,
Auckland, New Zealand

Objectives:

1. What are the prevalent reasons resulting in ICU admission in New Zealand and how is this different to the UK?
2. How is ICU admission and care structured compared to the UK?
3. Is there much that can be done to reduce the presentation of patients to ICU in terms of early health interventions (including within the hospital)?
4. How has my experience of ICU work shaped my future career intentions?

Elective Report

Objective 1:

On first inspection, the indications for admission to an Intensive Care Unit (ICU) in New Zealand (NZ) and the United Kingdom (UK) seem fairly similar. Both country's have first world economic status and have at their disposal the vast majority of the benefits available in modern medicine. On browsing the literature available online there was not much in the way of comparisons or indeed individual accounts by country of the prevalence of certain diseases or of admissions of certain patient groups to ICUs published in the last 10 years. What little is available tends to focus mostly around the United States. However, of note the one direct comparison found online was between New Zealand and the United States (US), but this did not directly relate to my objective.

In view of the lack of literature available I can only draw on my own comparisons having spent time in both UK and NZ ICUs. Generally when a patient is admitted to ICU the Consultant (aka the Specialist) will weigh up many variables. The best way I have found to think of these variables is by dividing them temporally; what the patient was like before the current admission, what they have been like during the current episode and what their current requirements are, where their treatment is heading, both in the patient's and clinician's eyes and of course how are we going to get to that goal, if at all possible. Many of these variables can seem subjective and can often rely heavily on clinical experience and the patient's pre-morbid state, however one variable seems to play a much more upfront role in the decision on where a patient's care limitations will fall in New Zealand, and that is age. In the UK from my limited ICU experience admission and treatment limitations do involve consideration of the patient's age, but in New Zealand it seems much more overt. The argument over whether or not this should be the case has positives on both sides. On one hand if there is a 90 year old in need of intubation and ventilation then why should he or she endure that when they are at an age when they would tolerate it less well and may end up worse off in the long run. On the flip side if

the patient was a well 90 year old prior to admission with little morbidity then why shouldn't they receive full measures?

In addition to this I also have qualitatively noticed more admissions to ICU in NZ where patients have alcohol-related co-morbidities. This is obviously unquantifiable as it is just an observation over the past 4 weeks but the number of patients with a raised blood ethanol in Auckland ICU does seem higher than in my previous experiences. It is difficult to come to any further conclusions though, as although I have noticed more road trauma come through ICU in NZ, Auckland City Hospital serves a vast population including some Pacific Islands and is a specialist centre for Neurosurgery as well as a transplant centre for heart, lungs, kidneys and livers and so receives a huge workload, a workload which can be spread around the London hospitals I have visited, which perhaps skews my perspective.

Objective 2:

The structure to ICU admissions in New Zealand is very similar to that of the UK, with ICU playing a part in trauma and resuscitation calls in the Emergency Department as well as receiving calls for assistance and ward referrals. One interesting extra that I have noticed in my time at Auckland City Hospital is the use of the Code Red calling system. If certain parameters such as blood pressure or heart rate fall rapidly or unexpectedly or indeed if a patient becomes more drowsy or unresponsive a Code Red call is made and an ICU Registrar will head to the scene rapidly, along with the on call medical registrar and emergency nursing staff, to be of assistance. The similar system in the UK I have observed is a crash call, which can be made for patients who are 'peri-arrest', but this Code Red system seems to cover a broader base of presentations and allows hospital staff to quickly summon specialist help; I would quite like to see a similar system set up in the UK as it can take much longer for senior help to arrive, with the emphasis on Junior help arriving first, and then only when they cannot deal with the situation, calling seniors and then the crash team only if the patient is 'peri-arrest' or has arrested (in NZ an arrest call is a Code Blue or Blue 100 call).

Another area of comparison lies within the Emergency Department (ED). In Auckland City Hospital when a trauma call goes out to staff members the team organises itself in the Resus bay of the ED, which is the same as in the UK. However, the team organised in NZ does not contain an Anaesthetist or and Operating Department Practitioner (ODP) / Anaesthetic Nurse, which are standard in UK trauma teams I have observed. Instead the ICU Registrar is expected to provide the skill-set required for airway management and intubate patients as necessary. It strikes me that at the least the NZ trauma team could utilise an ODP turning up as standard as during the one major trauma I have seen in the ED requiring massive transfusion of blood products and transfer to angiography ultimately an ODP was required to be called in specially. In the meantime the only ED nurse who knew how to operate the rapid transfusion machine had to be tied up with its operation (an ODP could manage this), removing a senior nurse from the rest of her duties. Also when the Registrar intubated the patient there was a plethora of people assisting and this confused the issue; if an ODP was there then they would be able to assist the ICU Registrar in airway management with ease.

Objective 3:

Across New Zealand there many roads which run through beautiful countryside where no people or structures stand for miles around. This of course is one of the key attractions to living in

such a naturally unspoilt country. However, the sparsely placed settlements result in long stretches of potentially unregulated or monitored road through sometimes treacherous areas, and naturally road trauma is prevalent in such conditions. This is presumably why there is a multitude of roadside billboards advising care and attention on the roads, advising on reducing speeds, particularly for tight corners. These signs often indicate a safe maximum speed individually tailored for the each corner with chevrons along the bank. Other signs remind tired drivers to rest frequently as there can be long stretches of road without much more than a few farms present and no illumination making for strenuous drives at night. The signs also restate avoidance of alcohol whilst driving and indeed NZ has particularly strict laws by international standards for drink-driving. It would be interesting to know whether all these efforts to reduce roadside injury and mortality have made a difference, but one would hope so.

Meanwhile, within the hospital, the Critical Care Outreach Team (CCOT) of sorts prowl the wards monitoring patients who have been recently discharged from the Department for Critical Care (DCC) in an effort to head-off any oncoming deteriorations on the wards and stop patient re-admission to ICU, a phenomenon I have yet to see in my time in Critical Care in Auckland City Hospital so they must be performing well! I spent time last year carrying out a research study in the UK at St Bartholomew's ICU and found that up to a quarter of bed-days spent in ICU across the year are filled by re-admissions at that unit, a unit which lacks a CCOT.

Objective 4:

For me, the future is reasonably certain in my mind. In an ideal world I would complete my first two years of the Foundation programme and then move on to the Acute Care Critical Stem (ACCS) pathway under Anaesthetics, undertaking my MRCP during my training with the ultimate goal of attaining a job with a mix of Induction anaesthesia and Intensivist work.

My time in Auckland has affirmed to me that I do enjoy the diagnostic challenge of Intensive Care Medicine, as one of the few generalist specialities remaining in increasingly specialised times. I enjoy the puzzle that patients present with and the technical difficulty in dealing with patients that other clinicians can no longer manage. However, there are clearly downsides. The Intensivists both at home and in NZ seem always to be at work, all day and all hours of the day, even as Consultants. Clearly there is an impact on family life. There are not only inward downsides, but also many of the patients on ICU are critically ill and do not survive to discharge. You might argue that this is simply poor patient selection on admission, but there will always be a proportion of patients you admit in order to shepherd out of this life, and that will be a difficult burden to bear.

I think that I will plan my career as loosely as possible within the auspices I have set above, but certainly my time in ICU in Auckland City Hospital has held my interest and been a useful influence on any future decisions, and I shall always remember the time I spent here.