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CRITICAL CARE

Elective Report: Intensive Care Medicine and Anaesthetics at Broomfield Hospital

1. Describe the pattern of disease/illness of interest in the population with which you have worked and discuss this in the context of global health
2. Describe the pattern of health provision in relation to the country in which you have worked and contrast that with other counties, or the UK

As many of my colleagues are off travelling the world encountering weird and wonderful conditions I have remained at home in the NHS. As such, I have already become familiar with the "typical" conditions that are dealt with in this country. That is to say I have broadly seen as the problems of developed countries and an aging population. In the intensive care unit many of the patients I have seen are elderly with complex medical issues with a significant burden of underlying chronic disease prior to the acute reason of their ICU admission.

A considerable number of the patients that I was involved in the care of in the ICU were admitted following complex laparoscopic surgery for oesophageal cancer. An observation that has remained with me for may years was a statement during a lecture on cancer biology highlighting that cancer is a disease of old age. As such it is more likely to be a significant healthcare issue in countries with greater life expectancies. In the developing world whilst cancer is still an issue it is typically lower down on the burden of disease behind conditions such as malaria and TB. In many of these developing countries, however, the means to provide more than the most basic management of malignancy are scarce. Let alone, the availability of the staff and equipment to perform complex laparoscopic surgery and care for a patient throughout an often-protracted peri-operative period.

Whilst many of the patients I cared for were receiving critical care for a relatively modern condition in cancer, I also had experience in treating one of medicines oldest and universal foes, sepsis. Severe sepsis/septic shock is a major reason for ICU admission globally. Sepsis is a global health concern and it has been suggested that those suffering from TB and HIV/AIDS ultimately die due to sepsis. It is a condition that kills more patients in developed countries than breast, colon and prostate cancer combined and its mortality if oft quoted to be higher in the developing world. Severe sepsis/septic shock demands rapid aggressive management using organ replacement therapies (mechanical ventilation, dialysis, etc) to give the patient a meaningful

chance of survival. These interventions are costly, it is suggested that on average an ICU admission costs approximately £1000-£1500 per patient day. That is a vast financial demand on any healthcare system; we are fortunate that in the UK we have universal healthcare in the form of NHS to provide this. Even here we are not immune to discussions of cost when it comes to the treatment of these patients. In the developing world resources are far scarcer and the likely hood that those suffering from severe sepsis will die is very high indeed.

From anaestheics standpoint I frequently encountered patients receiving medical care for numerous conditions that had to be managed alongside the current surgical issues. Each list seemed to invariably involve factoring in a patients heart disease, hypertension or diabetes in how we needed to manage them. I was also part of the anaesthetic team for several "cosmetic" procedures such as breast reductions. These are typically not the kind of procedures that one would expect to see frequently in some of the more remote parts of the world. One of the anesthetists I worked with was an St6 who had recently returned from a year practicing in relatively primitive conditions in South America. The entire nature of how patients there are managed peri-operatively was different. The means by which I had learned to care for patients under anaesthesia were simply not available to him, from drugs to equipment. It comes across as almost a different specialty to the one that I have started to know.

3. To gain a better understanding of the care of critically ill patients.
4. To improve my practical skills in the care of peri-operative patients

I have been very fortunate in the past year to gain a great deal more exposure to anaesthetics and intensive care medicine than the average medical student. Whilst we would typically get a couple of weeks from the curriculum in these specialties I have been able to supplement this using my SSCs and elective period. This has allowed me to gain a greater understanding of what these parts of medicine are all about and develop several skills that I would no otherwise of had the opportunity too.

As part of the ICU team I attended to the patients on the unit performing the same duties as the juniors e.g. performing daily reviews on the patients, checking bloods and performing procedures. I was fortunate to be taught to insert central venous lines and arterial lines for monitoring and practice this (under supervision) on several occasions. This is something I know few of my peers have ever been in a position to

attempt. Whilst it is highly unlikely that I will use these skills in the next year having this experience makes me more comfortable around patients with these forms of access which is certainly a possibility. Perhaps the most useful ICU experience has been going to assess patients out on the wards that are deteriorating; with their teams requesting critical care input. Assessing sick ward patients is likely a position I will find myself in very early on as an Fy1, and was encouraged to make the first assessment of the patient and formulate my own plan of management. By repeatedly doing this I feel less daunted by the fact that I will have to deal with these situations in a few months time.

In anaesthetics my supervisor has treated me essentially the same as a new novice anaesthestist beginning their core training. At the beginning of each list it has been my duty to go and perform the final anaesthetic assessment prior to surgery. For each case it has been me who has drawn up all the drugs (a basic skill that we typically don't get enough practice of), gain IV access and set up the room for inducution. As the weeks have gone on I have greatly improved my airway management and can bag valve mask ventilate patients almost indefinitely using a one handed technique. This one skill perhaps makes me feel safer than any other. That I now know I can maintain airways and ventilate alone means in emergencies I can at least do something. I have also inserted countless LMA's and performed numerous intubations. Whilst I would never dream of attempting to tube a patient in an emergency, inserting some form of supraglottic airway is a skill that I am competent at and comfortable with.