

ELECTIVE (SSC5b) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

I had four main objectives for this elective. I wanted to see if conditions in Singapore ICUs differed from those in the UK. I wanted to look at how sepsis was managed in Singapore and if there were any cost effective measures that could be implemented in the UK. The next objective was to look at how Singapore combats Post-Intensive Care Syndrome (PICS). I also wanted to get some experience in Singapore hospitals, meet local doctors, and learn some practical things in Anesthesia.

My first objective was to find out if what were common reasons for admission to Singapore ICUs compared with those in the UK, and if demographics were any different. After speaking to doctors and looking at papers, I believe that on the whole, conditions seen in Singapore ICUs closely mirror those of the UK and US, and indeed most typical ICUs. While information about ICU patients in Singapore is scarce, a paper from 1992 (<http://smj.sma.org.sg/3301/3301a1.pdf>) showed that male patients were represented disproportionately. Sepsis was the most common reason for admission, making up 25.3% of admissions, with a pulmonary origin being the most common. Mean duration of time in the ICU was about 7 days for those with sepsis and 5 for other causes for admission. The overall mortality was 37%, and the mortality for sepsis patients was 42.5%. Things have changed since then. A 5-year database report from 2010 to 2015 showed (<https://www.ncbi.nlm.nih.gov/pubmed/26816448>) that males were still overrepresented in the ICU, but overall mortality was 7%. The most common reason for admission to ICU was still sepsis. On the whole, it seems that similar conditions are seen in Singapore and UK ICUs.

In a similar vein, Singapore manages sepsis in much the same way as the UK, as policies and guidelines are generally guided by the Surviving Sepsis campaign. While not captured under a catchy phrase like “Sepsis Six” (Take bloods, measure urinary output, measure lactate, give oxygen, give fluids, give antibiotics), the general management remains the same. When asked how they would manage sepsis, many of the junior doctors I spoke to did not give me a standardised answer, and also listed many other tests or interventions outside of the standard six things we would do. My perception is that Sepsis Six, while empowering all members of the healthcare team to have a good starting point in the management sepsis, might not fully encompass what junior clinicians should be doing to manage sepsis.

Sepsis is a serious condition that is difficult to treat and has a high mortality, so it’s prevention should be discussed. While most ICUs I’ve been to in the UK are shared wards with isolation rooms, in Singapore, each bed in the ICU is kept completely separate, effectively making every bed an isolation room, though only a minority will have negative pressure ventilation. Beds are separated by walls, and one must open a glass door to gain access to each bed, which prevents the spread of airborne pathogens. To further this, all doors are opened using hands-free sensors placed at the entrances, where the action of waving, or close proximity would open the door. These hands-free switches are thoroughly implemented in the ICUs, with some hospitals extending their use to other wards and theatres. Also, all rooms are colour-coded according to what type of infection risk they posed, with different colours for contact, airborne, droplet etc precautions, and the necessary PPE required. This is practised within some hospitals in the UK, but could be extended further. The hospitals also have mask fitting sessions, to further ensure that not only do you put on a mask, but that you pick a mask that fits your face adequately to further prevent transmission of illnesses. This is something I haven’t seen in hospitals back in the UK, and could be cost effective to implement.

Another objective of mine was to look at how Singapore hospitals tackled the increasingly recognised Post-Intensive Care Syndrome (PICS). As more people are admitted and survive their stay in the ICU, so does the number of people who are left with a constellation of physical, neurological, and psychiatric disabilities following discharge. The UK has trialled a number of interventions with varying levels of success. In Singapore, while the syndrome is well recognised, few formal changes have been made yet. One main intervention is early mobilisation with physiotherapists, which has been shown to improve both neuromuscular outcomes as well as decreasing length of stay in the unit. Another intervention is post-ICU followup with certain patients who are viewed as high risk discharges. Speaking with consultants have revealed some other efforts, such as the early involvement from psychiatry to identify and manage PTSD & depression, but on the whole, the management of this emerging area of critical care is still a work in progress. On the side of managing the families of patients, the ICUs have put in small measures that are a step in the right direction. Pictures of equipment in the ICU with labels and functions are made available in order to help families better understand what is happening to their loved ones. Within the rooms are whiteboards with space for family members to write down remarks, so that requests or questions are less likely to be lost between shift changes or the memories of healthcare workers. These are some things that would be cost efficient in the NHS, and lead to less frustration for both clinicians and family members.

Over the course of the elective, an important goal of mine was to get acquainted with the healthcare system in Singapore. To that end I familiarised myself with the national insurance schemes in Singapore. I also met doctors and gained their perspectives on both specialist and generalist tracks, and got up to date on the recent changes to Singapore’s residency program. I’ve also met many wonderful doctors who were very willing to teach and accommodate me as I struggled to insert LMAs and intubate patients. Spending a bit of time in three different hospitals also allowed me to appreciate the different set of challenges that are faced in the more busy ones, while also getting a feel for hospitals closer to where I live. This has given me more insight into where I should do my future postings.

While not included in my objectives, I also wanted to see how ethics differed between the two countries, given that Singapore is a more conservative country. Gillick competence was not unheard of, though in discussions with both senior and junior doctors, it seems that the application of the principles are not quite as concrete as they are back in the UK. For example, while we are given considerable guidance with regard to the prescription of contraception to those below the age of 16, in Singapore it seems very much up for discussion. An interesting analogy was brought up me independently by two different clinicians who I had posed questions about patient competence. Singaporean males have to serve in the army when they turn 18. So, while not being 21, they are assumed to be competent by Gillick competence because if you were able to use a gun, you can make decisions as a competent adult. I wasn't able to find any literature on this, but that seems to be the general consensus. For the record, a doctor of mine asked his O&G partner about contraception, and apparently in Singapore do give contraception even to those under 16, if similar requirements to the UK are met. The main difference is that it is not something that is made clear to a clinician if they are not expected to deal with these situations on a regular basis.