V. SERGHEEVA

Elective Report – ICU at Liverpool Hospital

***Objective 1:** Describe the types of patients presenting to the ICU at Liverpool hospital, and the health provisions available, contrasting this to that of London and the UK:*

Liverpool hospital, located in the South Western Sydney area of the state of New South Wales is the largest hospital serving the state. Liverpool hospital is not only a large tertiary centre providing many specialist services which frequently require intensive care support, but also is a major trauma and emergency centre, providing care for >800,000 residents. As the largest and most specialist intensive care centre in South Western Sydney, it not only accepts patents from within the hospital, but also accepts transfers from neighbouring hospitals within the district. The intensive care department is a state of the art facility opened in 2010, currently consisting of 3 wards with around 30 funded beds (although has a total capacity for 4 wards and 60 beds), mixed between intensive care and high dependency, with multiple teams to care for the individual wards, as well as the medical emergency and trauma teams. [1]

Comparing Liverpool to the Royal London, both hospitals are large tertiary centres with major trauma and emergency departments; however the Royal London serves a larger population (up to 2.5 million when including the whole North East London area covered by Barts Health trust). Given the difference in the serving population size between the two hospitals, the Royal London critical care department (ICU and HDU) has a maximum of 44 beds between 2 wards. My ICU placement during my final year was at Newham General Hospital, a district general hospital within Barts Health trust. As a small DGH, the ICU at Newham had only 8 beds (split between ICU and HDU, with a separate coronary care unit), being cared for by one medical team lead by a single consultant per shift [2]. The types of patients seen were usually post operative, or with medical problems such as sepsis; as any patients with more specialist care needs were transferred to the Royal London hospital for ongoing care, for example for dialysis. Additionally, as a much older and smaller unit, there are noticeable differences with the working environment, for example the space available around patients was much tighter.

Within Liverpool the intensive care team also make up part of the Medical Emergency Team (MET), with a doctor and nurse on each shift being available to assist in medical emergencies. The MET-team is called upon to assess and treat patients around the hospital when the patient falls within certain criteria; including patient observations outside acceptable ranges noted under a MEWS score, certain significant medical symptoms, or when there is any other reason to be acutely concerned about a patient. This MET system was actually first designed and used at Liverpool Hospital in 1990. This system is similar to that of the 'on call' and 'crash' teams which I have experienced within my training, however, there are certain differences I have noticed between the Australian and British system. Whereas with the Australian MET system, an ICU doctor and nurse will attend all MET calls, in the UK, it is the medical or surgical team on call who will attend to a patient flagged up by an abnormal MEWS or symptoms; and only if the patient is in a peri-arrest or arrest situation will the intensive care team attend under a crash call.

 ©Barts and the London School of Medicine & Dentistry 2013

The South Western Sydney area has a higher population of native aboriginal Australians and migrants when compared to the central Sydney district. It is a much recognised fact that the Aboriginal and Torres Strait Islander people have a lower life expectancy and a higher burden of disease compared to the non-indigenous Australians. There are many factors for this difference in health between the two populations, such as high rates of obesity and diabetes, poor nutrition and high levels of alcohol and drug consumption, and smoking. The levels of diabetes and CHD is up to 3 times higher in the Aboriginal populations when compared to non-indigenous populations. Indeed while on the placement in Liverpool, I have noticed that there has been many indigenous patients presenting with major health conditions, such as significant myocardial infarcts and strokes/intra-cerebral bleeds at relatively young ages. In fact, Indigenous Australians have life expectancies much lower than non-indigenous Australians; ~11.5 years lower for males, and 9.7 years lower for women [3]. This pattern of early onset of disease and morbidity, with a lower than average life expectancy is similar to that seen in the migrant populations of East London.

Objective 2: *Compare the Australian health care system to that of the UK:*

The Australian health care system is often quoted as being one of the best in the world, with the average life expectancy from birth being 83 years in 2013, making it within the top 10 worldwide according to the WHO. The UK lags behind by 2 years, with the average life expectancy reaching 81 years [4]. The Australian health care compromises of predominantly Commonwealth Government funded services, under the scheme Medicare; with additional funding from private health insurance. Much like the NHS provides free health care in the public hospitals for the residents in the UK, Medicare ensures the residents of Australia are able to access free medical treatment in public hospitals; excluding certain specialist services or consultations, and allied health services which are part funded by Medicare. The 'gap' amount in the payment for these specialist or allied services is paid for either out of pocket by the patient, or more commonly through private health care insurance which Australian residents are encouraged to obtain. Medicare is part funded through income tax, with residents earning over the threshold paying between 1.5-2.5% of income, depending on their total earnings. Those individuals with incomes above the threshold who chose not obtain private health insurance are penalised an extra surcharge of approximately 1% [5]. In 2011-2012, healthcare accounted for 9.5% of the total GDP expenditure, amounting to around $140 billion (in current currency conversion, ~£77 billion), supporting a population of around 21.5 million [6]. Comparing this to the NHS in the UK, the budget for 2012 amounted to around £104 billion, accounting for around 9% of GDP [7], supporting a population of around 63.2 million people [8].

Emergency and critical care is entirely funded by Medicare, therefore the patients I will have seen in the ICU will not have to worry about being charge for the services, unless they require ongoing specialist care or input from allied health professionals, such as physiotherapy, after discharge. One thing that caught me by surprise is that although emergency care in hospital is entirely covered by Medicare, the ambulance fees are in fact not. Therefore, unless you qualify for an exemption health card, or have private insurance to cover these ambulance transfer bills, you as a patient will be billed for the ambulance call out and transfer fee.

©Barts and the London School of Medicine & Dentistry 2013

v Jeremiah.

Objective 3: To gain as much experience of intensive care medicine, and reflect on whether I can consider this as a future career, and to experience working in a hospital in Australia and compare that to working in the British Hospitals:

Intensive care is a speciality that has stuck out to me as one I can possibly see myself specialising in the future. I enjoy that it does not focus on one single organ, but is based on multi-organ function and applying basic physiology to keep all these organs functioning as close to normal as possible to keep your patient alive. I like the fact that even as a junior it is rather hands on and there are many opportunities to perform minor procedures, such as placement of monitoring lines. Having had this placement at Liverpool Hospital ICU, it has further added to my interest in the speciality. Throughout the placement I have attempted to get involved with the daily activities, such as examining patients on ward rounds, writing in the notes, helping in patient care where possible, observing during MET calls and patient transfers, and attending teaching sessions. This placement has increased my confidence for foundation year jobs, especially as I have an ICU rotation through the year.

With regards to a possibility of continuing my training in Australia in the future, I feel that it is an experience I will greatly consider. From talking to the other British trainees, I feel a job in Australia will greatly benefit my future learning. It seems there is much more support available to junior trainees here in Australia, although I cannot comment for other hospitals, but at least within the ICU in Liverpool, there are always multiple seniors around and being such a large department, there are always many interesting patients to learn from.

References:

[1] Liverpool Hospital website, ICU page - http://www.swslhd.nsw.gov.au/liverpool/ICU/default.html
[2] Barts Health Trust website - http://www.bartshealth.nhs.uk/
[3] Vos, T *et al (2009).* Burden of disease and injury in Aboriginal and Torres Strait Islander Peoples: the Indigenous health gap. *International Journal of Epidemiology 2009;38:470–477*
[4] WHO: Global Health Observatory Data.
[5]The Australian Health System: how it works - http://www.mydr.com.au/first-aid-self-care/australian-health-system-how-it-works
[6] Australian office for statistics
[7] Harker, R (2012) NHS Funding and expenditure. House of Commons Library
[8]Office for National Statistics: 2011 census.

©Barts and the London School of Medicine & Dentistry 2013