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INFECTIOUS DISEASES

Harbor UCLA Elective report

1) What are the prevalent infectious diseases in LA and how do they differ from the UK?

In an 'urban underserved' population such as at Harbor UCLA, infectious diseases commonly affect patients much more severely before they seek medical advice. As a result, during my time in Infectious Diseases/ HIV at Harbor UCLA, I have been able to see a large variety of cases. Some of the common infections seen are similar to the UK but there are also some specific to California. It is also important to note that a large proportion of patients seen at Harbor are of South American origin and so conditions common to South America are also seen with increased frequency at this hospital. Some common problems seen by the infectious diseases team include bone infections, sepsis, wound and abdominal infections, diabetic foot infections, endocarditis, fever of unknown origin and meningitis. Common conditions in the HIV positive patients included Tuberculosis (TB), non TB mycobacterium and Pneumocystis jirovecii pneumonia.

When comparing this list to diseases treated by the infectious diseases (ID) team in the UK, it is clear that the speciality covers a much broader range of infections in America. For example during my infectious diseases student selected component in the UK, I mostly saw patients with HIV and pulmonary TB, whereas for the most part I saw patients who were not HIV positive at Harbor, and the HIV team worked quite separately to the rest of the ID team. In the UK, Microbiology take on much of the role of the ID team, in recommending antibiotics to the patient's primary team to treat complex infections.

2) How are infectious diseases services organized and delivered? How does it differ from the UK?

ID services:

In LA, patients can be referred to ID by the primary care team at any point during hospitalization, usually requesting assessment and recommendations for appropriate antibiotic therapy for complex infections. The team also follow all patients with MSSA/MRSA and the HIV team follow all the HIV positive patients that are admitted. The ID team follow the patient's progress and liase with the primary team in the patient's best interests. They also document progress notes daily to ensure all professionals involved in the patient's care are aware of their plans and reasoning. The ID team rotate through HIV, ID and transplant service. The workload is split between inpatient consults and clinic.

In comparison the Infectious Diseases team in the UK tend to have primarily HIV/AIDS patients under their care, where they will act as the primary team on a dedicated ID ward. ID Physicians instead specialize in HIV, GUM (genitourinary medicine) or immunology for the most part. There is also often more clinic work than inpatient work due to the different spread of patient problems seen by ID in the UK.

US healthcare system:

In the US, the healthcare system is quite different to the UK. Healthcare in the US is for the most part privately funded and most healthcare facilities are owned and operated by the private sector. There are also county hospitals such as Harbor UCLA which are subsidised by the government so the county absorbs the cost of care for uninsured or underinsured patients. VA hospitals provide free care for those over 65 who have served in the military for the most part.

Most of the population under 65yrs is insured by an employer or the government, some buy health insurance, and the rest are uninsured. A proportion of working people's salary goes towards health insurance co-payment schemes such as MediCare. This means roughly half the cost of treatment is covered, but the patient should cover the rest. Many patients are Harbor are underinsured, meaning that they have insurance, but it is not sufficient to cover treatment of all their current health problems. Other programs include MedicAid, the Children's Health Insurance Program and the Veterans Health Program. This system can mean that insured patients have more tests/treatment than is really necessary, while uninsured patients struggle to afford healthcare, and often present late with severe disease as a result.

A national social insurance program by the US government guarrantees health insurance to Americans aged over 65yrs, people with disabilities or End Stage Renal Disease. However, the pool of people with private insurance is decreasing and more people are reliant on public insurance programs designed to cover vulnerable people with more healthcare needs. Many of the reforms in the Affordable Care Act of 2010 were designed to extend healthcare coverage to those without it.

In comparison, the National Health Service (NHS) in the UK provides free healthcare for all patients, which means that people from all backgrounds should receive equal care, and patients who choose to buy insurance can still be treated at private facilities. For example, in the UK all patients can access antiretroviral treatment for free. In California, access to antiretrovirals is actually among the best in the US, as government funding means that even the very poor can be treated. An interesting problem however, is that it is the patients who are not extremely poor, but do not have health insurance, struggle to afford treatment.

Regarding inpatient care, a lack of funding for the NHS often means treatment/tests cannot be performed due to cost restrictions. At private hospitals in the US this is not a problem, however I have found that working at a county hospital such as Harbor-UCLA has some similar issues to the NHS; for example when discussing at grand rounds whether it would be feasible to purchase new equipment for clostridium difficile testing, obtaining funding was the main issue.

3) Gain an understanding of diagnosis and management of conditions/diseases not commonly seen in the UK.

During this placement I have really appreciated the opportunity to clerk, examine, present and follow up patients with a wide variety of conditions, many of which I had not encountered before, especially not in such severity.

I now have a better understanding of the management of neutropaenic patients with suspected infections, MSSA/MRSA bacteraemia, diabetic foot infections, lymphogranuloma venereum and osteomyelitis. I found it very interesting to learn about coccidioidomycosis which is specific to this area and usually self limiting but can potentially cause extremely severe disease. Following the team's management of extremely sick patients with multiple active problems and comorbidities, for example with severe stages of necrotizing fasciitis and sepsis has also been an invaluable learning opportunity.

The HIV positive patients that I encountered at Harbor also had more severe disease than those I had met in the UK, giving me an opportunity to learn about the diagnostic challenges of for example PML (progressive multifocal leucoencephalopathy) versus HIV encephalopathy and malignancies associated with HIV versus HIV associated weight loss/ wasting. It has been very interesting to follow the management of patients presenting with very low CD4 counts and multiple comorbidities.

4) Explore infectious diseases as a career.

Infectious Diseases as a specialty seems to vary in its specific roles in different countries, however this placement was still extremely useful for me to explore ID as a career. I enjoyed the fact that the team cared for patients from all different specialities, and had to work with many different teams to coordinate patient care. It was also rewarding to see patients improve following treatment by the ID team. However I also found it frustrating to deal with the fact that in many cases, the ID team were consulted at a point when the patient had already deteriorated significantly, often requiring Intensive Care Unit admission. In this 'urban underserved' population especially, patients tend to present late and with many co-morbidites, making the challenges of care even greater. I imagine caring for such sick patients in the long term could become quite difficult to cope with. However, the variety of cases and the problem solving aspect of the specialty certainly attracts me to ID as a career.

I found working in the American healthcare system less of a culture shock than I had expected, perhaps because Harbor is a county hospital and many patients are uninsured so insurance is not a strong focus for the medical teams. The hospital also faces many of the same funding issues as NHS hospitals. However I do still find it disconcerting that for example, if an uninsured trauma patient is taken to an emergency department at a private hospital, they will probably only receive immediately necessary care before being transferred to a county hospital. Transferring a potentially unstable patient seems to me, far from in the patient's best interests. However, the advantages of decreased waiting times and far fewer restrictions on tests/treatments at private hospitals is clearly an advantage for those who can afford it.

During this placement, both the ID and HIV doctors really went out of their way to make sure that I gained as much as possible from the rotation. The opportunity to play an active role in patient care by consulting and following up my own patients under supervision, in combination with teaching and discussions about the cases, has made this an excellent learning experience. I hope I will be able to apply some of the key points regarding the care of patients with suspected infectious diseases to my own practice, as well as avoid some of the oversights that general medical teams have made here.