



Barts and The London
School of Medicine and Dentistry

Julian SIAH

CRITICAL
CARE



SS5C: MBBS Elective

Elective Appointment:
**University Professorial Surgery Unit
South Colombo Teaching Hospital
University of Sri Jayewardenepura
Sri Lanka
04/04/2012 to 09/05/2012**

Supervisor:
**Professor Aloka Pathirana
Head of the Department of Surgery**

Student:
**Julian Wei Ren Siah
Ha08218@qmul.ac.uk**



Introduction

Sri Lanka is a unique developing country with a diverse population who in recent history has been on the road of recovery following the devastation of the 2004 Indian Ocean tsunami and following the end of the Civil War in 2009. This critical point in the history of Sri Lanka offers one the unique opportunity to gain firsthand experience of a developing health care system that mirrors the National Health Service (NHS) and Private Health Service in the United Kingdom (UK). For this reason I decided on undertaking my medical elective in Sri Lanka. This essay will address the objectives of my elective that are based on comparing the Sri Lankan health care services with that of the UKs, as table 1 and 2 summaries.

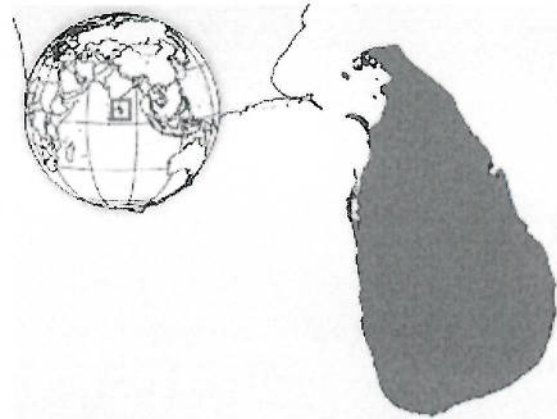


Table 1: Sri Lanka (WHO, 2012)	
Total population	20,238,000
Gross national income per capita (PPP international \$)	4,460
Life expectancy at birth m/f (years)	65/76
Probability of dying under five (per 1 000 live births)	16
Probability of dying between 15 and 60 years m/f (per 1 000 population)	275/82
Total expenditure on health per capita (Intl \$, 2009)	193
Total expenditure on health as % of GDP (2009)	4.0

Table 2: United Kingdom (WHO, 2012)	
Total population	61,565,000
Gross national income per capita (PPP international \$)	36,240
Life expectancy at birth m/f (years)	78/82
Probability of dying under five (per 1 000 live births)	5
Probability of dying between 15 and 60 years m/f (per 1 000 population)	95/58
Total expenditure on health per capita (Intl \$, 2009)	3,399
Total expenditure on health as % of GDP (2009)	9.3



Objectives

1. Describe how the health services are organised and delivered in Sri Lanka and how they differ from the United Kingdom.

General

In 1858, the creation of the Civil Medical Department marked the beginning of the health service in Sri Lanka. Since then the health service has grown into a developing free government health care system with a coexisting private health care system that reflects the system in the UK. However, there is a larger emphasis on resource sharing between private and public sectors in Sri Lanka with developing schemes to utilize private health care services for state sector patients via purchasing of services from different private health care services (WHO, 2012).

State sector

Like the UK, the government health service is composed of primary, secondary and tertiary care services. With the later composed of teaching and district general hospitals. However, the vast majority of hospitals in Sri Lanka are rural hospitals due to the geographical and developmental differences between the counties (WHO, 2012).

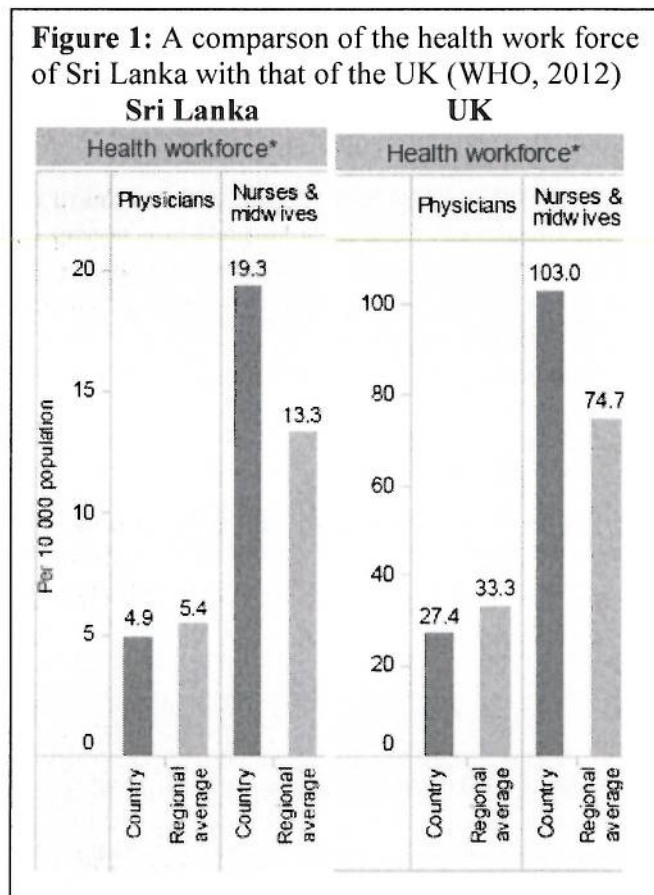
Private sector

Together with 'western' medicine, private alternative medical services, such as Ayurvedic therapy, Homeopathy and Acupuncture, form a larger proportion of the health care services in Sri Lanka compared to the UK (WHO, 2012).

Referral system

Although there is a referral system similar to that in the UK, the care pathway of primary to secondary care is not strictly adhered to. The primary care institutions are under-utilised and many bypassing them with the end result of overcrowding in the secondary and tertiary care centers. Unfortunately the system fails due to the lack of clearly defined geographical area for hospitals in the country and the centralisation of the main hospitals in the cities of Sri Lanka. Moreover, the primary health care system is largely privately run with over 750 registered General

Figure 1: A comparison of the health work force of Sri Lanka with that of the UK (WHO, 2012)





Practitioners, and thus the poorer majority of the population cannot afford access to their services (WHO, 2012).

Secondary and Tertiary care

Within the hospital, the organisation and delivery of services is very similar to the UK. However, there is far less government funding and less infrastructure throughout Sri Lankan health care system compared to the UK. Thus although the Sri Lankan population is a third of the size of the UK's there are only 4.9 physicians per 10,000 population compared to 27.4 physicians per 10,000 population in the UK, as shown in figure 1. For this reason, health care professionals have learnt to become more self-reliant and economically efficient with more careful rationing of resources, a lesson that UK hospitals could gain from (WHO, 2012).

Conclusion

Overall, the health care services are organised and delivered in Sri Lanka in a similar way to that of the UK with the only differences due to deficiencies in the funding and infrastructure.



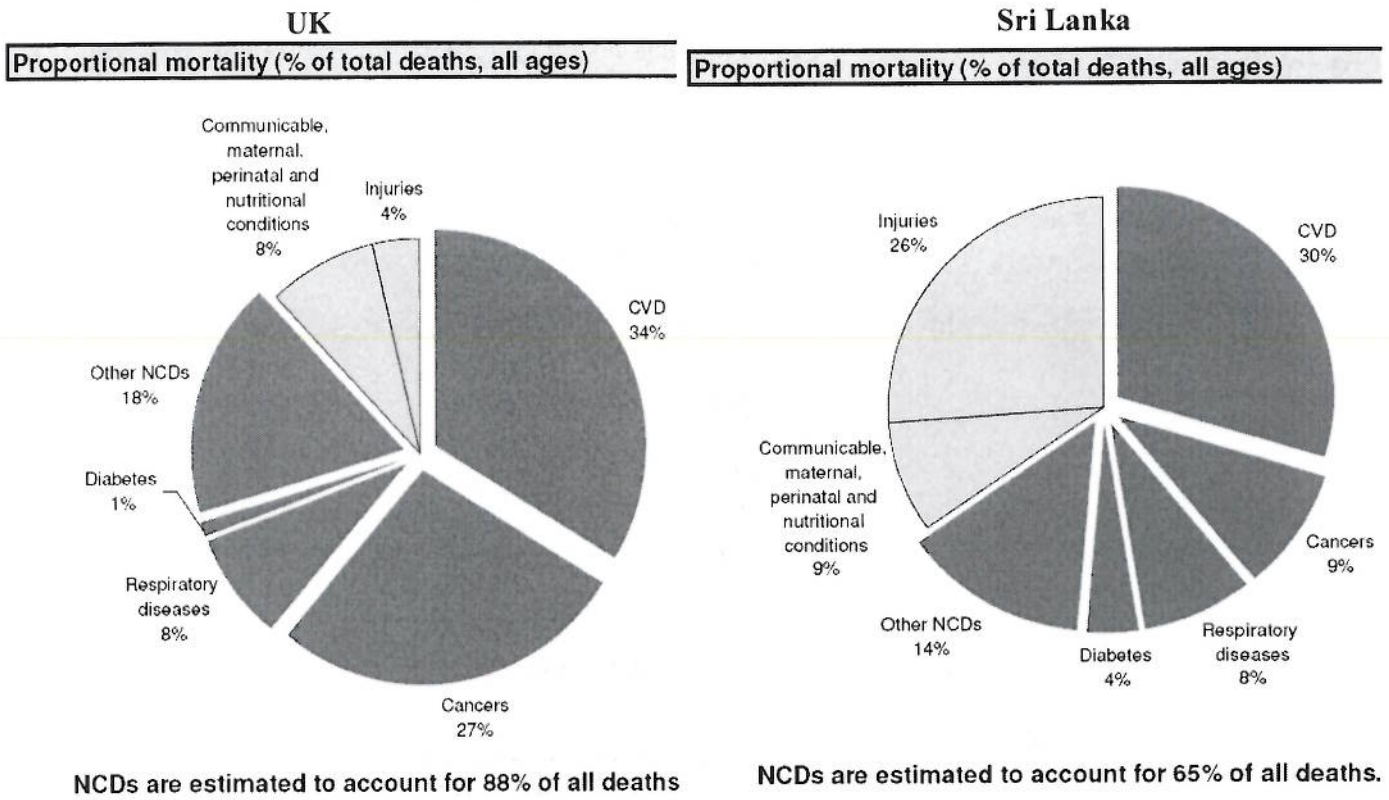
2. Describe the prevalent conditions in Sri Lanka and how they differ from the United Kingdom.

Non-communicable diseases

The common non-communicable diseases in Sri Lanka are the same as those that are common place in the UK as table 3 and figure 2 show (WHO, 2012).

	Sri Lanka (2008)	UK (2008)
All NCD	746.2/460.9	440.6/309.3
Cancer	90/77.8	154.8/114.5
Chronic respiratory disease	101.5/57.5	38.7/26.5
Cardiovascular disease and diabetes	384.9/240.8	165.7/101.7

Figure 2: A comparison of the aetiology of mortality in Sri Lanka with that of the UK in 2008 (WHO, 2012)





As Table 3 shows, the incidence of death from all NCD is greater in the Sri Lankan population compared to the UK population. This is most likely due to the higher incidence of deaths from chronic respiratory disease and cardiovascular disease and diabetes within the Sri Lankan population. However, as table 4 shows, the risk factors for these conditions are less in Sri Lanka compared to UK. The fact that there is a high incidence of death associated with a lower prevalence of risk factors in Sri Lanka, may reflect differences in health seeking behavior with patients presenting later with complications in Sri Lanka compared to the UK and hence primary and secondary preventive measures are started later or not at all, resulting in a greater proportion of those with risk factors in Sri Lanka presenting with a fatal cardiac event or respiratory failure compared to those in the UK. This phenomenon may also be explained in part by the lack of facilities and resources to manage such patients appropriately, for example during my elective Colombo South Teaching Hospital was donated its first Bilevel positive airway pressure (BiPAP) machine, a vital piece of equipment to save the life of a patient with type II respiratory failure, which is common place in UK hospitals (WHO, 2012).

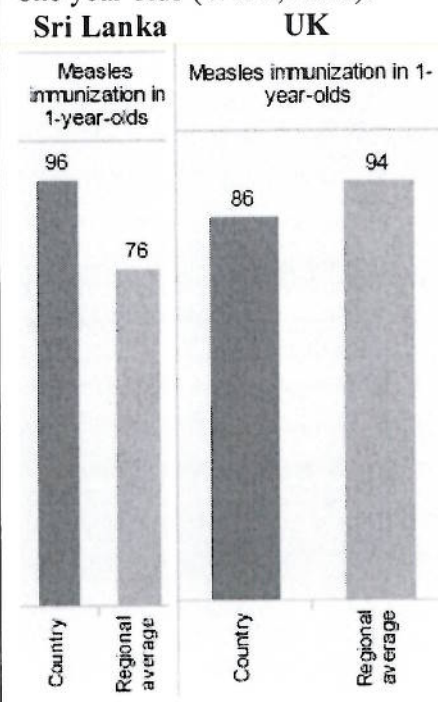
Table 4: Comparison of the prevalence of Risk Factors for Respiratory disease and CVD between Sri Lanka and the UK (m/f - estimated prevalence %) - (WHO, 2012).

	Sri Lanka (2008)	UK (2008)
Current daily smoking	21.4/0.3 (total 10.6)	18.5/16.2 (total 17.3)
Physical inactivity	18.4/33.3 (total 26)	61.1/71.6 (total 66.5)
Hypertension	41.4/37.1 (total 39.2)	46.4/40.8 (total 43.5)
Diabetes	9.1/8.5 (total 8.8)	9.2/7.6 (total 8.3)
Overweight	16.7/26.8 (total 21.9)	67.7/60.8 (total 64.2)
Obesity	2.6/7.4 (total 5.1)	26/27.7 (total 26.9)

However, as shown in figure 2, NCDs account for only 65% of all deaths in Sri Lanka, whereas they account for 88% of all deaths in the UK due to death secondary to communicable diseases and injury accounting of a greater proportion of all deaths in Sri Lanka compared to the UK (WHO, 2012).

There is a higher incidence of deaths from cancer in the UK compared to Sri Lanka, as shown in Table 3. This is most likely due to the fact that the UK population has an average greater life expectancy, as table 1 and 2 show, with a greater proportion of the population that does not die from other NCDs, surviving into old age and collecting along the way enough mutations in their DNA to predispose them to an eventual fatal cancer (WHO, 2012).

Figure 3: Comparison of the immunization coverage among one year olds (WHO, 2012):





Common communicable diseases that both Sri Lanka and UK face are summaries in table 5. The incidence of all communicable diseases is higher in Sri Lanka compared to the UK. This is mainly due to the high prevalence of tropical infections that are not seen in the UK, in particular malaria and dengue which has seen a three-fold increase in the number of cases in Sri Lanka in 2012 possibly owing to the decrease funding of initiatives to decrease the number of mosquitoes and the early heavy monsoon rain (WHO, 2012).

However the incidences of Measles and Mumps are higher in the UK compared to Sri Lanka due to the immunization coverage among one year olds being 96% in Sri Lanka compared to only 86% in the UK, as shown in figure 3, which reflects the damage that Wakefield's fraudulent article linking the MMR vaccine and autism in 1998 has made to public opinion in the UK. Also there is a higher incidence of pertussis in the UK compared to Sri Lanka, which again may reflect the higher immunization coverage in Sri Lanka compared to the UK (WHO, 2012, Wakefield, 1998, and Godlee, 2011).

Table 5: Communicable diseases (WHO, 2012)

	Sri Lanka (2010)	UK (2010)
All communicable diseases (age-standardized mortality rate by cause per 100 000 population)	79 (2008)	36 (2008)
Prevalence of TB (per 100 000 population)	101	15
Prevalence of HIV (per 1000 adults aged 15-59 years)	1 (2009)	2 (2009)
Measles (reported cases)	79	443
Mumps (reported cases)	897	4527
Rubella (reported cases)	68	31
Malaria (reported cases)	684	0
Dengue fever (reported cases)	1200 (2012)	0
Japanese encephalitis (reported cases)	27	0
Pertussis (reported cases)	2	518
Leprosy (reported cases)	2027	2

Injuries

As depicted in figure 2, in 2008 injuries accounted for 26% of all deaths in Sri Lanka compared to only 4% of all deaths in the UK. This is in part due to Sri Lanka's high rates of suicide (approximately 6000 per year) and road traffic accidents (RTAs) with approximately 2334 deaths in 2007, which is possible due to the lack of seat belt laws and child restraint laws in the past that are still not strictly adhered to (WHO, 2012).

Conclusion

In conclusion, prevalent conditions in Sri Lanka and the UK are similar, except for tropical communicable diseases, differing only in the proportional mortality of the different conditions.



3. Understand public health issues related to common conditions in Sri Lanka and how they differ from United Kingdom.

General

Regardless of the condition, there are many general public health issues in Sri Lanka. Like in the UK, there are regional disparities in disease burden and access to health care, such as the main hospitals being centralised in the cities of Sri Lanka, which needs to be addressed. In a more general sense, the literacy rate of 90.6% in 2008 slightly hinders public health initiatives (WHO, 2012).

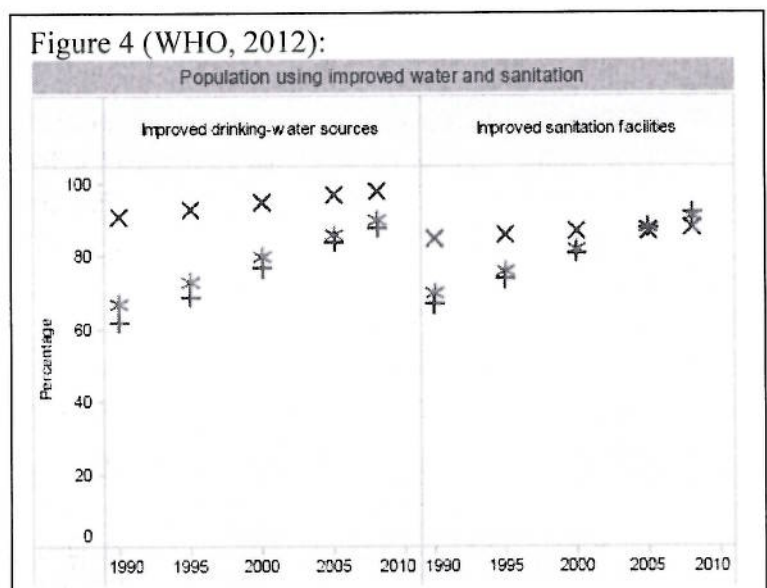
Non-communicable diseases

Like the UK, Sri Lanka has a high incidence of NCDs which require primary and secondary intervention through public health promotion of a healthy life style, such as promotion of a healthy diet and regular exercise. Also to combat NCDs Sri Lanka needs nationwide screening programmes to detect those at high risk of NCDs, such as the modified Framingham risk score used in the UK to screen for those at high risk of CVD and cancer screening programs, together with a surveillance, monitoring and evaluation services for those at high risk of NCDs. However, at present there is no funding for neither: NCD prevention and health promotion nor NCD surveillance, monitoring and evaluation services (WHO, 2012).

Communicable diseases

The main public health issues that Sri Lanka faces which differ from those in the UK are the prevention and control of locally communicable endemic diseases. Here the main public health issues are environmental with inadequate environmental interventions due to lack of funding. For example recently funding of interventions to decrease mosquito numbers has been cut worldwide which puts countries like Sri Lanka at risk of a rise in the number of people suffering from malaria and dengue fever.

Also diarrhoeal illnesses remain a major public health problem accounting for the sixth leading cause of hospital admissions with an increase to 857.3 from 742.8 per 100,000 population from 2000 to 2001. This is possibly due to clean drinking water sources and sanitation facilities still not meeting the WHO's 100% target, as figure 4 shows. This is mainly due to a significant proportion of the population living below the national poverty line (approximately 25% in 2002) (WHO, 2012).





Nutrition

Unlike in the UK, malnutrition is prevalent in the poor communities within the Sri Lankan population and hence remains a major public health issue (WHO, 2012).

Injuries

With the large textile industry in Sri Lanka a common problem seen is textile machine related injuries, for example during my time in the surgical accident and emergency (A&E) unit in the South Colombo Teaching Hospital, I witnessed on average five sewing machine injuries to patient's fingers per day. This clearly suggests that there are some work related public health issues in Sri Lanka.

Conclusion

Overall, the main public health issues that Sri Lanka faces are due to lack of funding for public health initiatives, and poor socio-economic conditions and poor nutritional status in the poor communities in Sri Lanka.



4. Improve clinical knowledge and practical skills in helping patients from different cultural backgrounds and reflect on these experiences with the view to improve one's professional practice.

Throughout my clinical placement I experienced firsthand a language and cultural barrier between myself and the patients. Without being able to take a detailed clinical history, the experience was daunting at first, but this allowed me to focus more on my clinical skills at examining and my professional skills in interacting with non-verbal patients. This experience has taught me to trust my clinical intuition more and focus more on the patient and not just the clinical signs, strengthening my professional practice in a way that benefits my patients. I hope to emulate and consolidate my lessons learnt here throughout my career as a doctor to ensure that I practice a more effective, efficient and holistic patient centered approach.

During my time in surgical accident and emergency (A&E) unit I was given the opportunity to practice administering local anesthetic prior to suturing simple lacerations and more complex laceration of digits where I learnt to perform a ring block. Here, I was also allowed to practice my suturing, a practical skill that student in the UK never get the chance to practice on real patients. Thus this gave me the unique opportunity to learn firsthand suturing and performing surgical ties. The first patient I sutured was a middle aged laborer who spoke little English, so again I had to first overcome the language barrier to gain consent. In the surgical A&E unit, to save money suturing needles are reused, so unfortunately the needle I used was blunt and together with the patient's hardened keratinized skin from working in the sun for many years made suturing technically difficult. Hence, I had to use more force than normal to pierce the patient's skin because of this I was concerned that I may cause the patient to experience pain, so I paid close attention to the patient's facial expressions and body language to gauge his response to the procedure. This experience has taught me that regardless of language barriers if one pays close attention to the patient as well as the job at hand one can deliver a more patient centered care that sets the patient at ease making one feel more confident in one's abilities. On reflection, I plan to carry on performing this good medical practice of treating the patient and not the disease to ensure the best clinical outcome for my patients in the future.

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