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ACCIDENT  
+ EMERGENCY

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## Background

Bermuda is a British territory in the North Atlantic Ocean around 650 miles off the east coast of America with a current population of around 65,000 [1]. It is served by two hospitals, the King Edward the VII for the majority of medical conditions and The Mid Atlantic Wellness Institute for rehabilitation, mental health services etc. [2]. London Boroughs of Newham and Tower Hamlets by comparison have a population of 240,000 and 237,000 [3].

Demographically Bermuda is an ethnically diverse, high-income island with an ageing population. The population is predominately black (54%) but with a white population of 31% that is made up of both British descendants and Portuguese who emigrated from the Azores [1]. A further 15 % of the population is Asian and mixed race. Almost a third of the workforce on the island is made up of non-Bermudians and so the healthcare system also provides for a large number of ex-patriates mainly from the UK, South Africa and the USA [1]. Average life expectancy is 79.37 years [4], 13 years higher than the current world average of 66 years [5].

## Healthcare provision in Bermuda

The provision of healthcare in Bermuda is managed unlike anywhere else in the world [6]. The hospital buildings and operating costs are funded through taxpayers monies as in the UK but the use of the services are charged for on an individual basis and it is mandatory by law for all employers to provide a basic health insurance for their employees to cover some of this cost [6]. It is a system, which should in essence have no lack of resource and the figures suggests that at 8.2% of the GDP, it has the highest expenditures per person in the world. However, finances unfortunately do not prevent disease and so like the rest of the world, Bermuda faces its own health issues and problems.

During my time at King Edward VII I spent the majority working within the emergency department with a little time spent with the island's resident oncologist. As well as using the time to continue my medical education I also tried to establish how the health system in Bermuda compares to the UK. Interestingly around 50% of the total population of Bermuda visit the emergency department annually however; the average patient volume per annum in the UK is approximately 10-12% of each hospitals catchment area. In the UK we are aware that a large number of cases dealt with by the emergency services are not emergencies and often patients present with social rather than medical problems. In Bermuda this is also apparent but many patients would come to the ER as it can be a cheaper alternative than paying to see your community doctor for a prescription.

I would say the standard of care was similar to that of the UK but the biggest difference was the waiting times for treatment. Generally patients here are seen by a doctor in under two hours and imaging, bloods and procedures were all done pretty much as soon as the patient had been clerked by the physician. Using an electronic system to place orders for everything meant that the nurses were able to manage much of the patient care giving doctors more time to see other patients.

A health system where patients pay at the point of service runs into a danger of patients demanding more investigations than clinically necessary if they can afford them and for those that can't afford full insurance coverage will go without. In Bermuda, 95% of the population have adequate insurance [6] and so within the ER at least there was little evidence of patients refusing treatment due to cost. However within the Oncology department there was a patient who was unable to have treatment because their employer's insurance was not prepared to cover the costs.

## Patterns of patient presentations in Bermuda

Within the emergency department patients presented with common conditions such as asthma exacerbations, chest pain, shortness of breath and headache but there were also a large number of traffic accidents. Bermuda is a high risk area for collisions [7] due to the narrow winding roads around the island and the large number of mopeds, bikes and scooters used for transport and has one of the highest rates of road fatalities compared to 29 other affluent countries [7]. Car rental is not permitted and so the

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majority of tourists and ex-pats on the island will use two wheels to get around. Thankfully the majority of injuries were superficial and occasionally required a few sutures, dressings and x-rays to rule out any fractures.

However, the leading cause of death in Bermuda, like the rest of the developed world, is cardiovascular disease [6] and the daily deluge of patients with central chest pain highlighted this. This is contributed to by obesity (25%), hypertension (25%), hypercholesterolemia (34%) and diabetes (13%). Certainly the majority of patients seen in the ER with a cardiac presentation had at least one of these risk factors if not several of them. Obesity in particular affects nearly two thirds of the population and was described by the Ministry of Health in Bermuda as the number one leading health problem to be addressed [6]. This was apparent immediately in the ER. Many patients presented with chest pain, joint pains and shortness of breath all of which were exacerbated due to the patient's size and fitness levels. The numbers as in many areas of the world continue to rise due to poor diet and sedentary lifestyles. This in itself has also contributed to the overall increase in diabetes and Bermuda is thought to have the highest rate of diabetes per capita than anywhere else in the world [6].

Asthma and COPD complications are also a daily occurrence. The humid climate and damp conditions on the island contribute to Bermuda having one of the highest rates of the condition worldwide, effecting 1 in 10 adults [9]. Exacerbations are in part due to poor inhaler compliance – through both on-going cost of inhalers and lack of education on their use. During my time in the ER I was fortunate to meet the asthma clinic lead and she was currently trying to implement better referral of recurrent asthma patients from the ER to the clinic. Their aim is to re-educate patients on how to use their inhalers effectively and understand better their condition to try and minimise admissions.

#### Health screening

The approach to screening and educating the population of Bermuda compared to the UK is influenced by both the British and American public health strategies. The Bermuda Cancer and Health centre recommends a screening protocol but it <sup>(Gym 2)</sup> ~~down~~ to individual GPs as to how it is implemented. Generally people have annual medicals from the age of 20 where thorough investigation of the patients overall health is measured.

Screening for cervical cancer is done annually by Pap smear from the age of 21, mammograms or prostate exams annually from 40 years and colonoscopies are recommended from the age of 50 along with faecal occult bloods [8]. I do not know what percentage of the population have these screenings regularly but many of the patients I saw had been <sup>A</sup> for an annual medical.

Overall you are screened far more often than in the UK and from an earlier age. This has the advantage of detecting disease earlier but also runs a risk of picking up a number of false positives. However, the high life expectancy, would suggest that this early detection of disease is of benefit.

#### References

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