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What are the demographics within Waltham Forest and how does this reflect on the health of the residents?

I completed my medical elective in the Acute Medical Assessment Unit at Whipps Cross Hospital, in Waltham Forest, an outer London borough in North-East London.

Barts Health Trust was established on the 1 April 2012, and consists of six hospitals (Mile End Hospital, London Chest Hospital, The Royal London Hospital, Newham University Hospital, St Bartholomew's Hospital and Whipps Cross Hospital) with the vision of changing lives of the East London population and beyond.

Upon reviewing the *Census 2011* it is evident that the average age of the population of Waltham Forest is younger than that nationally. Waltham Forest has a larger number of 0-15 year olds when compared to the rest of the United Kingdom. With an average population that is growing younger the prevalence of self-reported health and disability has reduced over recent years. Waltham Forest's rapidly growing population has also become increasingly ethnically diverse, with Polish, Urdu and Romanian being the top three languages spoken other than English.

What are the prevalent diseases/illnesses in Waltham Forest leading to mortality? How is this different to the rest of the United Kingdom?

One of the key modifiable risk factors for preventable ill health and premature mortality in Waltham Forest is smoking. Effects of smoking are directly associated with cancer, heart and respiratory disease. In Waltham Forest 19.3% of over 18 year olds smoke and this has resulted in the number of deaths attributed to smoking (229.6 per 100,000 over 35 years old) being higher in comparison to the rest of the population in England.

Average life expectancy in Waltham Forest is lower than that of England. Waltham Forest Council states that the local residents have seven years reduced life expectancy when compared to those from West London; and they state that the difference between the two boroughs is predominantly due to variation in income and education.

According to the *Health Survey for England 2006/08*, there is 3% higher adult obesity rate in Waltham Forest when compared to the rest of London. The reduced life expectancy can also be explained by this. Obesity itself is a risk factor for hypertension, diabetes, cardiovascular disease and some cancers, all of which were common conditions that I was exposed to during my elective placement. Most commonly during my time at Whipps Cross I was exposed to

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patients presenting with acute chest pain and diabetic complications including several patients who had presented with diabetic foot ulcers.

Cardiovascular disease, cancer and respiratory disease are the main causes of mortality in Waltham Forest. The leading cause is cardiovascular disease accounting for 33% of all deaths and it is also the leading cause of death nationally. Risk factors for cardiovascular disease that is prevalent in Waltham Forest includes hypertension, hypercholesterolaemia, diabetes, obesity and high alcohol intake. During my time at Whipps Cross patients presented with many co-morbidities some of which were poorly controlled like hypertension and blood glucose levels.

A quarter of all deaths in Waltham Forest are due to cancer, the most common is lung, colorectal, breast and stomach.

The third most likely cause of death in Waltham Forest is respiratory disease which includes: chronic obstructive pulmonary disease, asthma and pneumonia, all of which are conditions that are more prevalent in Waltham Forest in comparison to the rest of London's boroughs.

What are the common presentations of disease/illness to the Accident and Emergency department in Whipps Cross Hospital? How is this different to the rest of the United Kingdom?

According to *Health and Social Care Information Centre* the most common national presenting complaint to Accident and Emergency during 2012-13 was categorised into the following groups: Non-classifiable conditions, dislocation/fracture/joint injury, sprains, gastrointestinal symptoms, laceration, soft tissue inflammation, respiratory disease, contusion/abrasion and cardiac conditions.

Patients requiring further investigations after initially being assessed in the accident and emergency department are referred to the Acute Assessment Unit for up to a maximum of 48 hours before being discharged or transferred to the most appropriate area for their care. During my time at the hospital, cases I was commonly exposed to were chest pain, diabetic complications, gastrointestinal and neurological symptoms.

How is Acute Coronary Syndrome with ST Elevation managed in Accident and Emergency Department in Whipps Cross? Is the management different to that of other hospitals?

ST elevation myocardial infarction is a medical emergency and requires prompt treatment. The aim of percutaneous coronary intervention or fibrinolysis is to reduce reocclusion, improve left ventricular function and to reduce mortality.

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Paramedics are trained to interpret ST electrocardiogram changes, as Whipps Cross Hospital does not have a cardiac catheterisation laboratory these patients are taken to other hospitals within the Barts Health Trust such as The London Chest Hospital that can provide primary percutaneous coronary intervention. If a patient presenting with ST changes is taken to Whipps Cross Hospital and is unstable and therefore, not safe to transfer to another hospital they are instead offered fibrinolysis. Fibrinolytic drugs are associated with an increase risk of bleeding and therefore at Whipps Cross the following exclusion criteria for streptokinase treatment applies:

1. Severe heart failure
2. Active peptic ulceration
3. Known severe defect in haemostasis or coagulation
4. Known severe liver disease
5. Blood pressure on admission exceeding 180/100 mmHg
6. Major surgery within the past 6 days
7. Major trauma within the past 4 days
8. Cardiopulmonary resuscitation or central venous cannulation prior to institution of treatment
9. Pregnancy
- *10. Cardiogenic shock
- * 11. Recent peptic ulceration or receiving treatment for peptic ulceration or other site or suspected site of gastrointestinal bleeding
- * 12. Trauma within past 4 weeks including limb or skull fractures
- * 13. Unstable bradyarrhythmia likely to need pacemaker
- * 14. Stroke within the last 3 months
- * 15. Other life-threatening illness or prognosis for life of 3 months or less

* Marks specific exclusion criteria for those 75 and over only.