

Elective Objectives

1. Describe the pattern of disease/illness in the population with which you will be working.

The Indices of Deprivation 2010¹ lists Tower Hamlets as the seventh most deprived local authority district in England. According to this report, the borough fares worst on measures that relate to housing and income deprivation, especially income deprivation affecting children and older people. The report also states higher levels of overcrowding and significant levels of housing classified as 'non decent' compared to the rest of the country. The Tower Hamlets Annual Public Health Report 2010² demonstrates a strong relationship between such deprivation and mortality with the mortality rates in four of the Tower Hamlet Wards close to twice the national average. Indeed, the borough is reported as having the highest or second highest mortality rates in London for the major long term conditions: coronary heart disease, stroke and COPD. Furthermore, Diabetes prevalence is higher in Tower Hamlets than the rest of London and this is particularly linked with the high proportions of Bangladeshis in the population. Similarly, prevalence rates for tuberculosis have been rising slowly over the past few years and reached 65.3 per 100 000 population in 2009, significantly higher than the London average of 45.1.

The report also focuses on health protection issues stating, for example, that 27% of adults in Tower Hamlets smoke compared to 21% nationally, 90% adults eat less than five portions of fruit and vegetables a day and that a lower proportion of adults participate in sport and active recreation (15.5% compared to 21.2% nationally).

Therefore, the combination of socio-economic deprivation and health protection issues has resulted in significant health inequalities between Tower Hamlets and the rest of the country.

2. Describe the pattern of health provision

Primary care in Tower Hamlets is divided into eight Local Area Partnerships (LAPs), based around local wards. This system was instigated in order to drive more integrated service planning, partnership working and community development³. The Annual Residents Survey 2010⁴ states that 65% of

¹The English Indices of Deprivation 2010
<http://www.communities.gov.uk/documents/statistics/pdf/1871208.pdf>

² NHS Annual Public Health Report 2010
<http://www.towerhamlets.nhs.uk/publications/corporate-publications/?entryid4=23516&q=0%c2%acpublic%c2%ac>

³NHS Annual Public Health Report 2010
<http://www.towerhamlets.nhs.uk/publications/corporate-publications/?entryid4=23516&q=0%c2%acpublic%c2%ac>

residents rated local health services as good or excellent and the Improving Health and Wellbeing consultation 2009 suggest that residents have seen improvements in services over the past three years.

Secondary care in the borough is provided via a number of centres including the Royal London Hospital and The London Chest Hospital. The Annual Public Health Report 2010 states Tower Hamlets has amongst the highest emergency admission rates in London (particularly heart attacks, stroke, falls, accidents and fracture neck of femur) whilst elective admission rates are among some of the lowest.

To effectively address public health issues in Tower Hamlets, a range of 'community intelligence' exercises have been undertaken⁵. These allow residents to express their views on which issues should be prioritized and where services should be targeted. The information is then used to inform service planning and commissioning strategies within both the local authority and NHS Primary Care Trust.

3. Describe the approach to conducting research in an ITU Environment

The study in which I was involved was led by the Critical Care research team at the Royal London and the primary objectives of the study were three-fold; to determine the incidence of major peri-operative vascular events, to assess the proportion of patients with peri-operative myocardial infarctions that go undetected and to determine the relationship between post-operative troponin and one year vascular death⁶. The majority of patients were in fact located on surgical wards with only the minority who experienced post-operative complications admitted to critical care wards. Therefore, contrary to what I anticipated prior to starting the elective, I actually had very little exposure to conducting research in an "ITU environment". However, I was able to appreciate the ethical issues that must be considered when enrolling very unwell patients into the study and the issues surrounding consent when the patient has reduced capacity. For example, patients were often consented into the study prior to emergency surgery when they were perhaps not fully aware due to high levels of pain and anxiety. This meant that post-operatively they often had no recollection of consenting and when the details of the study were explained to them once more they decided that they did not want to take part. This highlighted the importance of appreciating that consent must be reassessed as capacity in very unwell patients can fluctuate.

4. Personal/Professional Goal and Reflection on Experience.

⁴ Tower Hamlets Annual Residents Survey 2010
www.towerhamlets.gov.uk/idoc.ashx?docid=66681eb5-5058

⁵ NHS Annual Public Health Report 2010
<http://www.towerhamlets.nhs.uk/publications/corporate-publications/?entryid4=23516&q=0%ac2%acpublic%ac2%ac>

⁶ Pearse et al, VISION-UK Protocol version 1.1, 2010

In terms of personal development goals I was keen to gain an understanding of how large research studies were implemented, in part so that I could determine whether it might be an area that may interest me in terms of my future career but also so that I could develop my skills in the interpretation of research papers. I was placed with the Critical Care Research Team at the Royal London Hospital in Whitechapel who are currently undertaking two studies, VISION and OPTIMISE. My role as part of the VISION team involved the completion of Case Report Forms (CRFs), blood taking from patients and data entry. As such, I felt I gained a good insight of the process from the (observed) consenting of patients into the study, the information gathering and the collation of the data. It was particularly interesting to be involved in the day-to-day activities of the study as I was able to appreciate the limitations that exist in ensuring the accuracy of such large amounts of clinical data. For example, the forms requested information regarding the estimated blood loss for each surgical procedure but this was rarely specified by the surgeon which meant the information supplied in the CRF was not always accurate. Furthermore, the data collected was often dependant on the quality of the entries in the patient's notes or observation charts which is clearly prone to human error. Being able to appreciate these factors first hand should enhance my ability to critique research papers in the future. I was also given the opportunity to collect daily blood samples as part of the study which I found greatly improved my blood taking skills.

My responsibilities also included entering data into the VISION-UK portal, the UK arm of the international study and it is hoped that I can use a proportion of the data to compare post-operative days 3, 7 and 30 complications against mortality in order to produce a poster.

In order to take part in the study it was a requirement that I undertake the Good Clinical Practice e-course provided by the National Institute for Health Research. I found this very useful in helping me understand what is required in order for a research study to be approved and in ensuring the study conforms to the guidelines, for example the process that must be followed if any changes to the protocol are implemented.

I very much enjoyed my elective experience and it has certainly made me consider the possibility of undertaking research as part of my career. I now feel I have a greater understanding of the ethical and legal requirements in implementing a large research study, the processes involved in the day to day execution and the difficulties and limitations that may exist, particularly in a large cohort study such as this one.