

## **ELECTIVE (SSC5c) REPORT (1200 words)**

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

**Elective Report: San Ignacio Community Hospital, Belize**

**Elective Title: Medical Materials in use in Belize**

**Objective 1: To understand prevalence of complications of pregnancy and how this compares to other countries around the world.**

Belize is a country in central America, it is the only English speaking country in the region and has a population of 330,000 people. As in line with the other countries in the region, the healthcare system is not as developed as those in the western world. San Ignacio hospital is a small hospital in the west of the country. San Ignacio is a community hospital that deals with mostly uncomplicated cases of pregnancy. When more complicated cases arise they usually go to bigger more equipped hospitals in either Belize city or in Belmopan.

Complications of pregnancy seemed more common in Belize than in the United Kingdom. These complications can occur during the pregnancy, for example, eclampsia or during the postnatal phase, such as hemorrhage. Reasons for the increase in complication vary widely. They incorporate the remoteness of not only the hospital, but the distances the patients have to travel to the hospital, as well as the lack of qualified staff available to the hospital compared to that of the western world. Patients who I spoke to while in San Ignacio did not seem as well educated in the way the body changes during pregnancy and patient education could be a possible way to help reduce the risk of complications of pregnancy.

**Objective 2: What materials are available in San Ignacio, Belize to combat the complications of pregnancy? How does this compare with the materials available readily on the NHS?**

The materials available in San Ignacio varies greatly from that in the United Kingdom. The wards themselves are quite basic, especially when compared to the more modern hospitals in the United Kingdom. The hospital facilities used a lot of manual observations, such as using a manual thermometer and manual blood pressure cuffs as opposed to wards in the United Kingdom where electronic monitoring is the standard. The number of beds available in San Ignacio is very small in comparison to the number of beds available in the United Kingdom. They have only one labor bed, which is potentially problematic if there are multiple deliveries at the same time. They also have a lack of qualified doctors, nurses and midwives for the number of patients that they cater for at San Ignacio hospital. This results in the wards being very busy and can also increase the risk of complications during pregnancy. The lack of midwives can result in new mothers having problems postnatally as patients can struggle adjusting to caring for a new baby. One aspect of midwifery in the United Kingdom is to help new mothers come to terms with how to care for the newborns and the lack of this in San Ignacio can cause problems, especially with the lack of trained medical professionals for the mothers to turn to when they have questions.

**Objective 3: What technology is used at antenatal screening appointments, and how does this compare to hospitals that I have seen in the united kingdom?**

The antenatal screening in the united kingdom uses lots of technology to track the growth of the baby during the nine months that the pregnancy lasts. They also give the mother a platform to ask any questions she may be having along with proving blood tests to check the health of both the mother and the baby. There is also regular ultrasound scans available to track the growth and wellbeing of the baby, as well other tests to screen for particular conditions. Urine tests are available to test for pre-eclampsia and blood pressure readings are also taken throughout pregnancy. There is very little in terms of antenatal screening in Belize. They use manual thermometers and blood pressure cuffs unlike that in the united kingdom. They have one ultrasound machine that is used both in surgery and in the ward. The antenatal clinic is by the one doctor on the ward who is responsible for all patients present that day as well as the patients he has booked in, due to the limited amount of time he has available, he tries to see the patients that require closer monitoring more often, and those who are managing ok less. The countries lack of doctors again plays a part in how limited they are in providing medicine in the front line. The lack of hospital funding is limiting the amount of technology that is available for use not just in the antenatal setting, but throughout the entire hospital.

**Objective 4: Building upon my intercalated BSc in clinical materials, and the medical placements I have undertaken in the UK, to gain an appreciation for the different clinical material requirements throughout the world, and how future developments in clinical materials should be tailored to the individual needs of the local population.**

The advancement of medical materials in the western world is fascinating. The technology available has revolutionized medicine as a whole and changes the way that the western world treats its patients. In the developing world, the restraints on funding has caused them to fall behind in what is available for use. The technology that is being used at San Ignacio community hospital, even on a daily ward round basis can be improved in such a way as to allow the doctors to increase the time spent with patients. Cutting edge materials that have been developed are very expensive, due to the process in which they have been created. The testing of these materials and trials which they have to pass is a long and expensive process that is reflected in the cost of the completed product. In an ideal world all persons would be able to access these materials. Future advancements, should be taken with a view to be affordable for all and allow for the major advancements gained in the western world to be shared with countries and patients all over the world. A way in which this could be achieved could be a twinning system between hospitals in the western world and the developing, allowing for the sharing of resources, and increasing the exposure of doctors to all kinds of health problems. This may not always be practical, but I think that this should be an important way of getting the advances of medicine to all the people in the world.