ELECTIVE (SSC5a) REPORT (1200 words)

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

Elective Report

Objective 1: Describe the pattern of paediatric disease in rural north-western Bangladesh and discuss this in the context of global health.

What causes neonatal mortality?

Neonatal mortality was 21.1 per 1000 live births in Bangladesh in 2015 (1), a lot higher than in the UK for the same year, but significantly less than ten years ago (see Table 1, Appendix). A "verbal autopsy" study in a rural area of Bangladesh showed that the major causes of neonatal death were "Birth asphyxia (45%), prematurity/low birthweight (15%), sepsis/meningitis (12%), respiratory distress syndrome (7%), and pneumonia (6%)" (7). This article suggested that "the high proportion of deaths during the early neonatal period and far-higher proportion of neonatal deaths causes by birth asphyxia compared to the global average… indicate the lack of skilled birth attendance and newborn care for the large majority of births that occur in the home in rural Bangladesh." (7).

Prevalence of paediatric disease

Infant and under 5 mortality are also higher for Bangladesh than for the UK but are showing a steady improvement: see Table 1, Appendix.

I was unable to find statistics on NW Bangladesh paediatric disease. Graph 1 (Appendix) shows the ten most common ICD-9 diagnoses given to paediatric inpatients at LAMB from 2010 to 2017, which at least gives an approximation of the most common causes of hospitalisation of children in this area (data obtained from Management Information System, LAMB) although there is likely to be bias in the sample for example if LAMB has a good reputation for certain conditions.

In conclusion, it was difficult to find statistics on the pattern of paediatric disease in NW rural Bangladesh, but the data from LAMB suggest pneumonia and intestinal disease are the two commonest causes for hospitalisation, and in addition, I learnt from my experience of the outpatient clinics that developmental delay, epilepsy, nephrotic syndrome and skin conditions seem to be common. However, the sample of patients at LAMB is a skewed representation of the pattern of paediatric disease because LAMB has a good reputation for certain diseases, particularly developmental delay. Neonatal mortality in rural Bangladesh has been shown to be most commonly due to birth asphyxia.

Objective 2: Describe the pattern of health provision in Bangladesh and contrast this with the UK.

The Government of Bangladesh provides primary, secondary and tertiary health care services to its people. At the primary level, there are Community Clinics in villages, Union Health and Family Welfare Centres at the Union (group of villages) level, and Upazila Health Complexes (6) at the sub-district level (6), which are especially important for providing health care to the rural population (5). For secondary care there are District Hospitals (6) (59 out of 64 districts have secondary level care (6)) and "different types of special care centres such as infectious disease hospitals, tuberculosis hospitals, and leprosy hospitals" (6). Medical College Hospitals provide tertiary/specialist care and cover several districts, and there are in addition super-specialist hospitals. This is similar to the UK in that the Government provides some primary, secondary and tertiary care. However, whereas in the UK the NHS services are "free at the point of delivery", in Bangladesh "patients end up bearing the costs of medicine and laboratory tests, as well as some additional unseen costs" (6) and therefore health care is often inaccessible for the poor. There are also private clinics/hospitals: "according to Health Bulletin 2013 there are 2,983 registered private hospitals and clinics in the country" (6), and there also many unregistered clinics and hospitals (6): as in the UK, private health care is more expensive. A major difference between the UK and Bangladesh is that a much larger proportion of the Total Health Expenditure is from household Out of Pocket spending in Bangladesh: "its share was around 69% in 2001 (BNHA 2003)" (6), whereas in the UK the proportion is much less (2014 data: "government expenditure on healthcare was £142.6 billion", and "the amount of health expenditure funded by consumer out-of-pocket payments was £26.5 billion", (8)): this may be partly due to more use of private care by the rich in Bangladesh, and partly because patients have to pay for aspects of care even in Government hospitals. Finally, in addition to Government and private health care, there are some NGOs which run private hospitals in Bangladesh, such as LAMB hospital, and these provide private health care at affordable prices for the poor.

Objective 3: To learn about the management of sick neonates using low-tech options in a low resource setting.

Neonatal jaundice

The treatment of neonatal jaundice is similar to in the UK to some extent, in that phototherapy is the main treatment. However, at LAMB there are a limited number of 390-470nm wavelength phototherapy beds, so white light may be used if the jaundice is less severe (which obviously contains 390-470nm light as well as other frequencies).

Low birth weight

An essential part of the management of low birth weight babies at LAMB is the use of Kangaroo Mother Care (KMC), in which a mother lies with her baby on her chest, skin to skin, and wraps blankets over the top of the baby. All babies weighing less than 2500g are put into KMC at LAMB. This is a low cost alternative to an incubator. LAMB was the first hospital to use KMC in Bangladesh (4).

Neonatal feeding

Breast feeding is encouraged as it is the best option for feeding a neonate in any country, but particularly in a low resource setting. Babies who are fed other liquids are at greatly increased risk of becoming ill due to infection, and may have poorer nutrition (4).

Formula milk is strictly avoided: "LAMB has "Baby Friendly Status" meaning no formula milk here since 1999 (4). Formula milk is particularly unsuitable in a low resource setting because it is costly so mother may make it up at a lower concentration, and because the water that is used to make up the milk may not be from a clean source. A mother who is struggling to produce enough milk may be offered help by the Oketani method. Occasionally, a neonate may need to be fed something other than its own mother's milk, if for example the mother has died or the neonate is hypoglycaemic. In these circumstances the options are "special milk" which is a modified cow's milk, or donor milk from another mother (although this comes with a risk of infection). (4).

Objective 4: To gain experience of working in a cross-cultural context.

Working in a cross cultural setting presents many challenges. I have realised how important to understand the culture and to be aware of the social etiquette in order to relate well to patients. One example of this is that in Bengali culture, the left hand is seen to be the "dirty" hand (unfortunately I forgot this when I was praying for a baby and the mother had to remind me not to place my left hand on the baby).

One cultural difference which I noticed whilst on placement at LAMB is the different roles of men and women and how this affects family decisions in health care. Male members of the family are in charge of the family's finances so therefore they make decisions of how much to spend of health care. Another major cultural difference is that in Bangladesh, privacy is valued less than in the UK. I particular noticed this aspect of Bangladeshi culture in the paediatric outpatient department: there are up to four patients being seen at one time in two adjacent rooms, which have an open door connecting them and in addition people outside the building may stand at the windows to watch! Therefore lots of people will know why a particular child is going to see the doctor. This surprised me at first, because in the UK health care professionals have a very strict duty to preserve confidentiality, even for paediatric patients. However, I don't think there is anything morally wrong with this lack of privacy; it is just a difference in the culture.

In conclusion, it is important to understand the patient's culture in order to relate well to them and to not cause offence.

Sources

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(3) Khandaker G, Muhit M et al. Infectious Causes of Childhood Disability: Results from a Pilot Study in Rural Bangladesh. Journal ofTropical Pediatrics. 2014; 60(5):363-9. URL: https://academic.oup.com/tropej/article/60/5/363/1658763?searchresult=1 [Accessed 23 April 2018].

(4) Day LT et al. LAMB Hospital Neonatal Guidelines. Version 9, October 2017.

(5) Ahmed S, Siddique AK, Iqbal A, et al. Causes for Hospitalizations at Upazila Health Complexes in Bangladesh. Journal of Health, Population, and Nutrition. 2010;28(4):399-404.

(6) Islam, Anwar & Biswas, Tuhin. Health System in Bangladesh: Challenges and Opportunities. American Journal of Health Research. 2014. 2. 366. 10.11648/j.ajhr.20140206.18.

(7) Chowdhury HR, Thompson S et al. Causes of Neonatal Deaths in a Rural Subdistrict of Bangladesh: Implications for Intervention. J Health, Popul Nutr. 2010 Aug; 28(4):375-382.

(8) Office for National Statistics. Statistical bulletin: UK Health Accounts: 2014. URL: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthcaresystem/bulletins/ukhealthaccounts/2014#out-of-pocket-healthcare-expenditure [Accessed 17 May 2018]