I organized a placement in Bhutan with Health Volunteers Overseas USA as part of my out-of-programme experience for which I received an AAGBI travel grant. Bhutan is a small country located in the Himalayas, east of Nepal. The population is estimated to be between 700,000 to 1.5 million. Nearly 25,000 people live in Thimphu, the capital city of Bhutan where the Jigme Dorji Wangchuck National Referral Hospital (JDWNRH) is located.

HVO is a US organization that aims to improve global health through education. The aim of this project was to improve the quality of patient care by providing continuing education to the anaesthesia providers. After being accepted to the programme, I had discussions with the project co-ordinator, and the outgoing anaesthetist and we decided my aims were to introduce the surgical safety checklist into practice, to teach infection control practices and regional anaesthetic techniques in the JDWNRH anaesthesia programme.

I worked alongside four anaesthetists and 6 nurse anaesthetists. Anaesthesia for all aspects of surgery were provided except cardiac anaesthesia. There were four theatres each dedicated to obstetrics, orthopaedics, emergency and general surgery. I worked alongside the nurse anaesthetists and we discussed cases and management decisions. A Drager anesthetic machine with ventilator was available in each theatre with halothane vaporisers. Spinals were routinely performed with cutting needles and I encouraged the nurse anesthetists to use the Whitacre needle with an introducer. I also encouraged handwashing and requested for sterile towels in the spinal packs.

I encouraged the surgical safety checklist at the start of each case and presented the New England Journal of Medicine article at a teaching session and provided a copy to each anaesthetist. I also did teaching sessions on anaesthesia for MRI, awake fibreoptic intubation, accidental awareness, local anaesthetic toxicity, caudal blocks, TAP blocks and Fascia Iliaca blocks.

I attended the daily ward rounds on ICU. After the ward round, the doctors left to go to theatre or clinics and the nurses were left to manage the patients. When I first arrived, the patients did not have arterial or central venous catheters, noradrenaline was given via peripheral cannulas and fluids requirements were assessed and prescribed over a 24 hour period. The mortality rate was ~80% and I quickly realized that there was an urgent need for education for the nurses on the intensive care unit and I spent the majority of my time based on the 4-bedded intensive care unit. Alcoholic liver disease and gastro-intestinal haemorrhage were the most common problems seen and patients as young as 17 would be admitted with severe hepatic failure. Traumatic brain injury was also common, Bhutan is developing and numerous buildings are being constructed. Hard hats were not worn and the scaffolding was made from bamboo resulting in builders falling from great heights. I took daily teaching sessions on different aspects of intensive care. I gave tutorials in setting the ventilator and ventilation modes, arterial blood gases, lung-protective ventilation, weaning, inotropes, nutrition, fluids, sepsis, resuscitation algorithms, post-resucitation care, management of head injuries and liver failure. I created workshops in setting ventiltors, advanced life support, transducing arterial and CVC lines. The teaching sessions were well received

and the nurses would ask me to either repeat the ones they could not attend and nurses from the paediatric ICU and students also started attending. The changes I made to the unit were to ensure that lung-protective strategies of ventilation were always used and that CVCs were inserted when necessary for inotropes.

I enjoyed my time in Bhutan, I was able to explore the amazing mountains and learn about the rich history embedded in Buddhism. I also enjoyed teaching the nurses in both theatre and ICU about current practices and hopefully they will continue to use the surgical safety checklist in routine practice.