Island Anaesthetics: 2024 Senior Elective on the Shetland Islands

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Objectives:

- To experience the differences between mainland and island medicine and work within a rural team.
- To apply and develop knowledge and skills to the diversity of presentations arising from local island residents and tourists, from neonates to geriatrics.
- To demonstrate an understanding of the initial management of key presentations and the more advanced management strategies available (and who to contact) within the island environment.
- To practice clinical skills and patient assessment in a variety of situations, including cannulation, airway management, and venepuncture.
- To experience rural living and identify and tackle any challenges related to individual living and clinical situations, in addition to enjoying the islands.
- To gain an appreciation of the diversity within the role of a rural anaesthetist including within the variety of theatres lists, pain clinics, emergency medicine, prehospital and retrieval medicine, and primary care.

For four weeks during summer 2024, I underwent my senior medical elective at the Gilbert Bain Hospital, in Lerwick, Shetland. My educational objectives (listed above) aimed to encompass life as a remote and rural anaesthetist. Living and working in this unique environment provided invaluable insight and learning about resilience and healthcare adaptations required for remote and rural life.

It was daunting to take a 14-hour, overnight ferry to spend four weeks on the most northern islands in the United Kingdom on my own. However, after meeting with my supervisor, a consultant anaesthetist on the island, and being introduced to various teams within the hospital, I felt very welcome and reassured. Living in local NHS Shetland accommodation while travelling alone, socialising with staff and students from the hospital and exploring the Shetland islands provided many learning and personal development opportunities.

Elective Overview:

Most of my time was spent in theatres, paired with a consultant anaesthetist. The theatre team was small, welcoming and very supportive during my placement. They consistently encouraged involvement and learning, making me feel like part of the team from the start. Additionally, there were many members of the team who had been living on Shetland for years, or even their whole lives, who were invaluable sources of information, both in relation to healthcare and general living on the island and provided recommendations for exploring.

Each day, there was an elective theatre list (the specialty varied depending on the surgeons present on the island at the time) providing the opportunity to get involved with elective anaesthetics. In addition, there was another theatre which was prepared for any surgical emergencies or pain clinics. When there were limited learning opportunities in theatres, I was encouraged to go elsewhere within the hospital, particularly Accident and Emergency (A&E), pre-operative clinic and high-dependency (two level 2 beds) on the surgical ward.

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Theatre and anaesthetics:
Initially I lacked the confidence to participate in certain tasks in theatre, not wanting to 'get in the way'. With time and encouragement from the theatre team, I gained confidence to make the most of the experience. I had the opportunity to be involved at various points of a surgical patient's journey on Shetland: joining the specialist nurses in pre-operative clinic; carrying out anaesthetic assessments in the surgical day unit; working with the anaesthetic assistant to prepare the patient for their anaesthetic (monitoring, positioning and reassurance); and working with the anaesthetist to cannulate, prepare and administer drugs and manage airways. Over the elective, I developed many of these skills, observing clinicians then carrying tasks out myself, with (and at times, where appropriate, without) supervision. I had lots of practice of airway management, cannulation and monitoring, which will be very helpful in the (near) future. I became a part of the team, contributing to patient care, and while also learning about challenges, considerations and adaptations in remote and rural healthcare settings.

Emergency medicine:
Accident and Emergency (A&E) on Shetland differed in many ways from busier mainland departments, with much lower waiting times, fewer ambulances and more direct involvement of medical and surgical teams. I had the opportunity to work with various doctors, developing history and examination skills and practicing clinical skills (including use of local anaesthetics, nasogastric tube insertion, and more cannulations). There was a wide range of presentations, some of which related to common occupations on Shetland (including fishing and farming). This presented challenges, as the small A&E must be prepared to deal with anything coming through the doors, despite many specialties not being readily available. Staff, including the surgeons and anaesthetists, often described themselves as 'generalists' and were continuously expanding their skills to provide the best possible care to the residents and visitors of the Shetland Islands.

High dependency/level 2 care:
Only a few patients admitted during my time on Shetland required critical care. Run by the anaesthetists, this 2-bedded unit provided the same standard of critical care as the West of Scotland, and with potential to care for a level 3 patient if required. I had the opportunity to learn more about caring for patients on alternative assisted ventilation (including non-invasive ventilation and high flow nasal oxygen (HFNO)) as well as patients with arterial lines and central lines. For these patients, it was particularly important for the anaesthetists to consider and discuss with patients/families treatment escalation plan (TEP) and do not attempt cardiopulmonary resuscitation (DNACPR) forms. With limited island resources, decisions around whether patients should be transferred to mainland Scotland for additional/definitive care must be made and TEP and DNACPR forms greatly influence this. To transfer patients safely, treatment may at times require escalation (for example, from HFNO to endotracheal intubation with a ventilator). The benefits of accessing care on mainland Scotland must be weighed against the risks of transfer. Transfers from Shetland to Aberdeen (the closest mainland Scotland city) are timely, costly and risky for patients, particularly if there are concerns around deterioration during the transfer, and it can be challenging to know the right thing to do.

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Life out-with the hospital:

During evenings and weekends, I socialised, participated in activities and explored Shetland. There were many local activities and often some of the hospital staff would attend these together. In addition, the junior doctors were very inclusive and encouraged socialising and promoted local events (including local agricultural shows and live music in local pubs by talented Shetlanders). As someone who enjoys the outdoors, I was also able to organise a day of sea kayaking and a morning of coasteering with local groups.

A highlight of this elective was being able to travel around the Shetland Islands and explore the many amazing sites of nature that Shetland has to offer, including Sumburgh Head, St Ninian's Isle, Eshaness and Meal Beach. I was also fortunate to spend a weekend on Unst, the most northern inhabited island in the United Kingdom, exploring the many historical sites and Hermaness Nature Reserve (with Muckle Flugga in view). The journey to Unst was eye-opening, providing insight into the travel that patients must undertake to reach any hospital – with a long drive and two ferry crossings! I had been advised during my elective that consideration of patient's home location was essential in remote and rural locations, particularly when an anaesthetist was considering admission/discharge post-surgery, as patients may not readily have access to healthcare. I had not appreciated the importance of this until I had made this long journey myself and now have a better understanding and awareness of wider considerations in admitting patients to hospital. This also highlighted the importance of availability of and close working with partner services, as alternative methods of transport may be required, particularly in emergencies.

With the Shetland Islands encompassing a large mainland with multiple smaller islands accessible by ferries, there are many places to explore, as well as many additional challenges unique to this location.

and rural medicine.

Undertaking my senior elective in anaesthetics on the Shetland Islands was an insightful and rewarding experience. The role of the anaesthetist in this remote and rural location was very varied, contributing to patient care at a range of stages in life, in many specialties and at varying levels of illness. There were many opportunities both within and out-with the Gilbert Bain Hospital in Lerwick to develop, achieve my objectives and enjoy. I had many unforgettable experiences and have learned much to take into future practice. I hope to return (again) to Shetland!

Thank you to my supervisor, the theatre team and all at the Gilbert Bain Hospital on Shetland for welcoming and supporting me during my senior elective during Summer 2024.

Thank you also to WOSAT for your support. This elective has been unique and crucial to my understanding and personal development in anaesthetics and remote and rural medicine.

Take home messages:

- A supportive team and environment are invaluable for individual confidence and development.
- In all healthcare settings, consider various factors contributing to healthcare and wellbeing.
- Work-life balance is essential, particularly in remote and rural settings.

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