Objective 1:
To learn which musculoskeletal diseases are most prevalent in New Zealand, the effect this has on the populations health as a whole, and how to manage these diseases and tackle them with public health initiatives

Objective 2:
To continue to develop my skills in surgery and in the management of pre- and post-op patients, with a particular focus on the management of trauma patients

Objective 3:
To observe and reflect on the pattern of musculoskeletal disease on the south island of New Zealand and to compare this to the UK and rest of the world

Objective 4:
To understand more about the structure of healthcare in NZ, particularly the balance between public and private services, and to compare this to the NHS
(ACC, private and public, prioritisation)

Elective Report 2018
Orthopaedics, Southland Hospital, New Zealand

My medical elective was 6 weeks at Southland Hospital in Invercargill, New Zealand, with Mr. Pierre Navarre and his orthopaedic team. Experiencing the speciality I enjoy the most in such an interesting and beautiful country has been an amazing experience; my time there has reinforced my interest in trauma and orthopaedics and has broadened my personal and career horizons hugely. I set 4 main objectives before beginning my elective, all of which I feel I have achieved, but most importantly my time in NZ has reminded me why I want to be an orthopaedic surgeon, particularly specialising in paediatrics. During my time at medical school I've worked in paediatric orthopaedics and anaesthetics, and I am yet to find another specialty that is so rewarding and which makes such a difference to a child's quality of life, function and movement. In both paediatric and adult orthopaedics the team have been very inclusive; from assisting in theatre in trauma and complex DDH and SUFE cases, to helping run the fracture and baby hip check clinics, I've been able to experience many different aspects of a career in orthopaedics, and I've enjoyed every moment of it.

My first and third objectives both concerned patterns of musculoskeletal disease in NZ, with one focussing on public health initiatives and the other comparing these patterns to the UK and rest of the world. Overall I feel the patterns are similar to those of the UK and most Western countries. OA and RA are similarly prevalent between NZ and the UK with OA affecting about 1 in 6 adults in NZ[1] and 1 in 5 adults in the UK[2]. During my time in clinic I've met many patients at varying stages of having total hip and knee replacements, procedures which seem to be the bread and butter of orthopaedics in NZ in a similar way to the UK. I have noticed that, like in my own country, the increasing rate of obesity is causing a rise in disability and musculoskeletal disease; this in turn is leading to increasing numbers of hip and knee replacements[3], a trend that is not unique to NZ. It is interesting yet disheartening to see that NZ is affected by the same modern health issues that plague the UK, Europe and America. Patterns of paediatric musculoskeletal disease are also similar to those I have seen in the UK, though with a few notable exceptions; Maori and Polynesian children are 5 times more likely to suffer from SUFE[4], though this may be associated with higher levels of obesity amongst that population. Another difference I've noticed are the high rates of work and hobby-related trauma in Invercargill. Many farmers live and work in the area, and a large proportion of fractures and soft tissue injuries referred to my team were due to accidents at work with livestock

or machinery. This is seen much less in the UK, particularly in London. A substantial number of trauma cases were also caused by falls from motorbikes, quadbikes and mountain bikes, all sports which are very popular in this area. It has been very interesting to assist in trauma cases where the person is young and otherwise well, but has sustained potentially life-threatening injuries as a result of a sport or hobby.

As concerns patterns of disease prevalence in NZ, the Maori population suffer from more health inequality and lower life expectancies than non-Maori individuals; in 2013 life expectancy for Maori men was 73 years and women was 77.1 years, compared to 80.3 years and 83.9 years for their non-Maori counterparts respectively[5]. Sadly, but importantly in trauma and orthopaedics, they also have a higher unintentional injury mortality rate, with Maori children aged 0-14 being 3.5 times more likely to die from an unintentional injury than non-Maori children[6]. Having spoken with Maori patients and people in the community I feel that whilst the NZ government has put a lot of resources into supporting the health and wellbeing of the Maori people there is still a long way to go towards reducing stigma and promoting better health.

I have found that NZ has similar public health drives to the UK; the Smoke Free campaign is particularly important in orthopaedics as smoking slows bone healing, complicating fracture management. The NZ government aims to reduce smoking rates to less than 5% by 2025 by creating smoke-free spaces, reducing tobacco advertising and encouraging the population to quit at every opportunity[7]. This campaign is similar to the NHS Smokefree system, and both seem to be having a positive effect in their respective countries. There are also numerous public health initiatives to tackle obesity, including the Childhood Obesity Plan, Healthy Families NZ, and Green Prescriptions; doctors and practice nurses in NZ can supply these prescriptions to refer patients to local nutrition programmes or activities, encouraging weight loss[8].

Addressing my second objective, I have been given plenty of opportunity to practise my surgical skills in both the elective and trauma setting. In theatre I have assisted in many different ORIF's, both upper and lower limb, and I have been involved in complex paediatric cases such as open dislocation and fixation of SUFE and an open reduction for DDH. I have gained skills in suturing and assisting which will help me as I progress in my career. I have also seen very interesting reconstructions of severe intra-articular fractures which have shown me the huge amount of creativity needed in orthopaedics. By working with the house officers and attending the morning ward rounds I've seen how the team manage their patients pre- and post-operatively, with different plans and timeframes depending on the injury or condition. For example, I now have a deeper understanding as to why we aim to fix a fractured NOF within 24 hours, but we fix ankle fractures once enough time has passed for the soft tissue swelling to reduce. I am beginning to understand the principles of a working orthopaedic team, and I think my new knowledge will be very helpful to me in my first house officer placement and the rest of my career.

My fourth objective concerned the structure of healthcare in NZ, which in contrast to the NHS is a mix of public and private healthcare. Interestingly, New Zealanders pay about $50 to see their GP; I personally think this is a brilliant idea for those who can afford it to help fund the service, but it would cause outrage in the UK. One service I've become well acquainted with is ACC (Accident Compensation Corporation), a body with covers the cost of injuries deemed 'accidents' through tax funding. Many of our patients are covered by ACC for sick-leave following fractures. My experience of NZ healthcare has been a positive one; patients seem generally satisfied with it, doctors enjoy working within it, and good healthcare is available to all. The NHS being free at the point of care has defined our health system for 70 years, but I worry that without adapting like the NZ healthcare system the NHS won't be fit for purpose for much longer due to chronic underfunding.

The time I've spent in NZ has made a huge impression on me; having spent time here, I would love to come back later in my career for a surgical fellowship if that is ever an option. NZ is a beautiful place, the people are incredibly friendly and it has been a pleasure to work within the NZ healthcare system for the last 6 weeks. I've learnt an immense amount, and I hope to come back one day.

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