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Introduction:

Finland has been blessed with its share of the media limelight in recent times boasting a high quality of life, a top education system and part of the successful Scandinavian healthcare system. It was with great pleasure that I was fortunately selected as one of the European Travelling Fellows to discover this beautiful country and meet the surgeons at the heart of this dynamic and thriving orthopaedic surgeon community. I was already very aware of the research published from Finland and looked forward to meeting some of the authors in person. This report will focus on the hospitals and centres visited, the orthopaedic surgeons at the forefront of research, and topics discussed over the five days in April 2017. With any luck, my piece will convey the hospitality of the Finns and may convince yourself to visit Finland!

Detailed description of the fellowship:

The Fellowship took place between April 23-28th 2017. The capital city of Helsinki served as the base for our travels as we experienced 4 major hospitals within tram and train distance of central Helsinki. For ease of reading, the report is not in chronological order.

1. Töölö Hospital in central Helsinki,
2. Peijas Hospital in the town of Vantaa, Helsinki city outskirts,
3. Tampere University Hospital, Tampere
4. COXA Hospital for Joint Replacements, Tampere

1. Töölö Hospital in central Helsinki

Mentored by *Dr Tim Sonderland* over 2 days, the structure of Töölö Hospital is a orthopaedic trauma led teaching hospital that provides emergency trauma care to the Helsinki 1.5 million person catchment area. We observed different live trauma surgery spanning over seven theatres ranging from emergency pelvic reconstruction to complicated multiligament knee reconstruction. Although limited by its compact historical structure, audit figures show that over 350 polytrauma patients annually are managed here with Injury severity scores over 15 (ISS>15). Amazingly, they manage to keep a 93% rate of operations performed within 24 hours. The orthopaedic surgeons were excellent lecturers, where we discussed interesting topics such as surgical approaches to the Pelvis and Acetabular, flail chest and management of elbow and knee dislocations. Under the guidance of Dr Lauri Handolin the hospital has been compiling a comprehensive and impressive trauma registry which will continue to provide important demographic data and statistics for quality improvement measures not only in Finland, but also for Europe.

Another noteworthy event we experienced was an 'In-house trauma simulation training', done in 'real time' which involved all levels of staff that transported a trauma patient from the emergency department room through to the operating room. A life-sized computer linked resuscitation mannikin complete with bodily resembling fluids, underwent emergency laparotomy then thoracotomy. The key learning points were emphasis on clear staff handover and clear communication in theatres amidst the mock chaos of a trauma call. Training sessions, such as these are integral for teamwork and also another part of continuing quality assurance markers.

Special thanks to Professor Ilkka Kiviranta for his kind hospitality and evening entertainment on both evenings.



Figure 1. Flying with Finnair from Malta. Trauma simulation at Töölö Hospital

2. Peijas Hospital in the town of Vantaa, Helsinki city outskirts

Mentored by Dr Teemu Helkamaa, we travelled 30 minutes by train outside central Helsinki to Peijas hospital in Vantaa. One of the two largest and busiest elective joint arthroplasty units in Finland, dealing with primary through to revision surgery as well as management of specialized conditions: haemophilia and congenital limb deformity. I was fascinated to discover during the lecture and discussion session with the surgeons how techniques, protocol, prosthesis choice differed between my country, Malta and Finland. The Helsinki research group have been active in publishing their data in particular complication rates in arthroplasty. More importantly, I was impressed at their willingness to discuss their limitations and shortcomings over the past decade which is reflected in their data. I was encouraged by the department's efforts to continue reducing infection rates post arthroplasty. Critical analysis of complications is the backbone to ensuring improve quality of care. Their arthroplasty practice has evolved with evidenced based medicine which was evident from all stages of surgery from antibiotic prophylaxis through to postop fast track discharge planning.

Special thanks to Dr Teemu Helkamaa for the evening meal!



Fig 1: Fellows outside Peijas Hospital

3. Tampere University Hospital and COXA hospital for Joint replacement

We travelled by train for 1.5 hours northwest of Helsinki to the city of Tampere for the following two days of the Fellowship. Under the mentorship of Professor Ville Mattila, Dr Antii Launonen and Dr Miina Laitinen. The focus was on Upper limb trauma management. Professor Mattila and his team of researchers form part of the Nordic Co-operative Clinical Trauma Research Group. They are doing well known research in this field with robust randomized controlled trials both completed and in progress. The emphasis of the day was to empower us as orthopaedic residents to keep up to date with research and use evidence based studies to help guide treatment.

The following day, we were honoured to be joined at COXA hospital for Joint replacements by incoming EFORT president Associate Professor Per Kjaersgaard-Andersen whom welcomed us into the EFORT organization with an inspiring talk and the history of EFORT and it's future direction. COXA being the other large centre in Finland for arthroplasty is also leading the way in Scandinavia for streamlined arthroplasty surgery and care. In particular, lectures about metal on metal complications and surgical strategies was discussed in depth, along with their presenting statistical data and published results. Again, it was evident research was central to quality improvement. It made me recognise that postoperative complication prevention must start by analyzing then instituting pre-operative prevention strategies.

Social Events

Apart from delicious local Finnish cuisine such as Reindeer meats and local seasonal fruits, berries and vegetables, I experienced what travellers really come to Finland for.....the Saunas! Nestled between forest and sea, a traditional wood fueled Sauna was the evening's entertainment in Tampere. Temperatures soared to over 100 degrees celcius inside the log cabin sauna that could house easily 60 people. I could not make a proper head count as the heat was impairing my ability to even think! After enduring only minutes at these temperatures, the local custom is to immediately swim in the icy lake which was situated

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only footsteps away from the saunas down a precarious metal staircase. I braved the 3 degrees celcius water temperature only long enough to ensure I could make it back up the staircase. Admittedly, it was more pain than pleasure, but an memorable and unique experience with photos to prove it!



Fig 2: Fellows with Associate Professor Per Kjaersgaard-Andersen at COXA



Figure 3. Professor Ville Mattila, Dr Miina Laitinen , Dr Antii Launonen at Tampere University Hospital

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Figure 4. Raindeer and Local fish at Restaurant Loyly, Helsinki



Fig 5. Outside the sauna in Tampere. 100 degrees inside, 3 degrees in the lake

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Conclusion:

Finland was a wonderful and memorable place for the travelling fellowship. The Finnish Orthopaedic Association (SOY) were gracious and generous hosts for the week. It was evident from the high quality lectures programme and credible tutors that it took months of tireless planning to ensure a smooth week. The Finnish orthopaedic surgeons were both skilled in operating and highly competent organisers. I felt humbled when they could also enjoy jokes and mix socially with us at our level. I thank all the surgeons and staff whom I did not mention in this report whom played a part in the week. It was not overlooked and much appreciated. Thanks also to my travelling fellows from all around Europe for making a great week and lasting friendships. I hope to keep in close contact with over the coming years.

Last but not least, a huge thanks to the EFORT organisers for giving me the opportunity of this Travelling Fellowship! I hope to one day repay my debts.