



Dental Scholarships and Awards Report Template

Please use typescript or CAPITAL LETTERS when filling out this form

SECTION 1 PERSONAL DETAILS

Title (please circle): Miss [REDACTED]

Surname: Watt

Forename(s): Eileen Nicola

SECTION 2 PROJECT DETAILS

Scholarship(s) Awarded: TC White Travel Grant Amount Awarded: £2,000

Project Name: Kindelan scoring of Alveolar Bone graft radiographs in Colombo, Sri Lanka Project Location: Orthodontic Department, Ridgeway Children’s Hospital , Colombo

Project Aims and Objectives:

- Opportunity to gain further experience in Orthodontics, in a different clinical setting whose patients may also have different treatment needs and outcomes’ to those in the UK.
- Carry out data collection for research into the success of the Alveolar Bone Grafted (ABG) patients at Ridgeway Children’s Hospital, Colombo, Sri Lanka.
- Independently score (following callibration) the post treatment radiographs using the Kindelan scoring system in order to assess the success of the alveolar bone grafting procedure.
- Assess intra- and inter-examiner reliability of the Kindelan scores from the post treatment radiographs
- Develop research skills and career aspirations.

Summary of Visit/Project (including pictures, methodology, results and conclusion if applicable):

I am so glad that I embraced this opportunity to visit Ridgeway Children’s Hospital, Colombo, Sri Lanka. It gave me the chance to learn more about Orthodontics and treatment in a developing country. I spent one week in their Orthodontic Department under the guidance of Dr Sriyani Basnayake, Consultant Orthodontist. I had been liaising with her for a number of months prior to my arrival in Colombo in order to develop the research project I would be involved in. The first challenge that I faced was planning a project in a department that I was unfamiliar with and doing so remotely. Before I went to Sri Lanka I did not know how the department would be set up for carrying out such a project, what

facilities it would have and how it would differ from my previous clinical experience. .

My primary role in this project was to collect data on patients with Cleft Lip and Palate who had undergone an alveolar bone grafting procedure. I was collecting this data for a research project in the department into the success of their alveolar bone grafts. I had to collect data and compile a portfolio of pre and post treatment radiographs to be independently scored by myself and supervising Consultant, Mr Toby Gillgrass, on my return to the Scotland.

Dr Basnayake had a list of the patients who had received ABG's from October 2009 and September 2012 and I had the task of recording the following data:

1. Patient name/details
2. DOB
3. Gender
4. Type of Cleft
5. If they had Pre surgical Orthodontic treatment
6. Type of Orthodontic treatment/appliance
7. Date of alveolar bone graft (ABG)
8. Age at time of ABG
9. Post ABG radiograph including date taken
10. Time lapsed since ABG Surgery

My first task would be to request the notes from Medical Records? Wrong. The Orthodontic treatment is documented in a book kept in the department but some of the records were incomplete. And whilst I did have some of the information, I had to wait until the recalled patients attended their appointment in order to gather the information. This is something I have taken for granted when carrying out previous projects and just presumed the same systems would be in place. On reflection, this was an oversight on my part, but something I will not forget and should make you think twice before complaining about difficulties of requesting notes from Medical Records. A total of ninety-seven patients were included in the study and I was able to gather most of the information required. Any information that remained missing was noted and to be gathered at a future date/clinic.

My other main task was to compile a database of over one hundred postoperative radiographs. This was done by carefully taking anonymised, standardised, photographs of each standard maxillary occlusal radiograph on a viewing light box and transferring the photographs into Microsoft PowerPoint slides for scoring on my return to Glasgow. The Kindelan scoring system is a useful audit tool and is used to assess the amount of bony infill in the cleft site. It uses a four point scale (Table 1) and one of

the main advantages over other scoring systems is that it does not depend on canine eruption which depending on the age of the patient can be a considerable amount of time after the bone graft has been carried out. The postoperative radiograph should be taken and scored 4-6 months after the surgical bone grafting procedure to allow bony integration and calcification.

Table 2

Grade	Bony fill
1	>75%
2	50-75%
3	<50%
4	No complete bony bridge

After calibration, both examiners (Examiner A and B) scored the postoperative radiographs under standardised conditions on two separate occasions. Using the Kindelan scoring system, the postoperative radiographs were scored - grade 1 and 2 were deemed an acceptable outcome of treatment, category 3 was borderline, and 4 was an unacceptable treatment outcome. A Kappa statistic was used to measure intra-examiner and inter-examiner reliability as this was ordered categorical data. Bland Altman system was used to measure the strength of agreement for the kappa coefficient (very good 0.81-1.00; good 0.61-0.90; moderate 0.41-0.60; fair 0.21-0.40 and poor <0.21.) We attained scores ranging from 0.412 - 0.766 which is certainly acceptable. The results were then reported back to Dr Bayansake and are being submitted to a peer review journal.

The clinical attachment allowed me to see health care and specifically Orthodontic/Cleft Lip and Palate treatment being delivered in an unfamiliar and different environment from my previous experience of General Practice and Hospital-based treatment in the United Kingdom. I had the opportunity to see treatments and surgeries that I had not yet encountered in my training at Senior House Officer level. Of note, I was fortunate enough to observe one of the Plastic surgeons carrying out a Soft Tissue Facial Cleft Repair Surgery, which extended from the orbit down across the cheek to the lip. Facial clefts are extremely rare congenital anomalies and this was something I had only ever come across in textbooks and the literature before.

I was aware of the disparities in healthcare in Sri Lanka before I went, but Colombo being the economic capital has an extensive healthcare system in place. I was aware of the differences in resources available in Sri Lanka and the United Kingdom and how resources are used, the patients that were being treated Orthodontically generally had a high treatment need. They used a similar range of fixed and removable appliances. The patients' ages varied from young infants attending due to Cleft Lip and Palate to teenagers attending for fixed Orthodontic appliance treatment. From a personal perspective it was useful and rewarding as I was able to see a number of the patients whose radiographs and

clinical information was included in the data I was collecting. It was interesting to see how keen the patients were for their treatment and this showed in their compliance and also the distance they were prepared to travel for their appointment. This is in comparison to some patients in the United Kingdom who would benefit treatment but either do not want treatment or do not perform adequate oral hygiene or struggle to maintain an orthodontic appliance. I was amazed on leaving the lift to enter the department with the Consultant each morning as all the patients and their parents in the waiting room would stand up. This really just epitomises how much they respected the Consultant and appreciated the treatment they received. This reminded me of my own secondary school education where we did the same when a teacher entered the classroom.

Learning Outcomes (*how aims and objectives were met*):

I was particularly keen to organise this trip as I knew it would give me a great opportunity to develop my interest in Orthodontics and the treatment of patients with Cleft Lip and Palate – an area of Orthodontics I am particularly interested in. This project gave me a real focus of where I want to take my career within the specialty.

The research and data collection component of the project was key. Being part of this project allowed me some experience in planning and implementing a research project. I knew this would be of potential value in the future in helping prepare me for carrying out my own research project as part of my specialist training – something that it is undertaken by all Orthodontic trainees during their Specialty Registrar training. Scoring the radiographs and the background literature review improved my understanding of the different types of scoring system and some experience of using the scoring system. This will prove useful throughout my career in Orthodontics. Liaising with the statistician gave me some experience of the statistics involved in research projects. This is something I had not yet been exposed to in my training and was a wonderful opportunity to improve my knowledge and understanding in this field.

Evaluation (*including description of the impact of the project/award on your clinical and/or NHS practice*):

The timing of the project was ideal, both from a clinical and academic perspective. The added insight into Orthodontics was timely as, only the week before going to Sri Lanka, I had attended interview for my specialist training in Orthodontics. I was able to build on my Orthodontic experience from a previous Senior House Officer post, and it helped to show my commitment and enthusiasm to my chosen specialty. It was a great opportunity to gain experience of Cleft care especially as the treatment

of cleft patients is usually undertaken during post CCST training so it helped solidify my desire to work in this field and certainly encouraged to undertake a similar project in the future.

I have carried out other projects in the past but in departments I have been working in and I have perhaps taken for granted how well I knew the department, the hospital and the systems they had in place. This is something I had perhaps overlooked prior to arriving in Colombo. I was able to appreciate the differences and adapted to the environment I was working in but it did put me outside my comfort zone. However, on reflection, I think it is good to challenge yourself as it was by doing something like this I have learnt a lot and feel more able to cope with challenging or changing circumstances

Breakdown of Expenditures:



Please e-mail the completed report and supporting information to:

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