The third meeting of the 2017/ 2018 session was held in Lecture Theatre, Department of Anatomy, University of Glasgow on Tuesday 5th December 2017 commencing at 7.15pm.

There were 46 members and guests in attendance. Apologies were received from 4 members. The minutes of the previous meeting, published online were approved.

The President, Professor Jeremy Bagg, welcomed the members and guests to the meeting. He intimated the passing of one of the Past Presidents of the Society, Professor Roy McGregor, and asked that the members observe a minute’s silence.

The President introduced the speaker Dr Al Ross and invited him to give his address to the society entitled *“Complexity, reliability and flexibility: the role of Human Factors in Healthcare”.* Dr Ross started by acknowledging the networks and current funders in the Dental School. He explained that he planned top show the audience a film and prior to that would discuss the current theory and research in teaching. He explained that the film would not be factual but that its purpose is to stimulate students and ask questions. It would be about patient safety but no catastrophic events occur within it.

He then explained that Human Factors (ergonomics) is the scientific discipline concerned with the understanding of interactions between humans and other elements of a system. There are three broad areas. Physical ergonomics; cognitive ergonomics (decision making – mindful decisions and the avoidance of errors); organisational ergonomics (e.g. team working, communications). He explained that this is not new and is being incorporated across the NHS. He then described relevant documents.

*‘Human Factors in Healthcare: A Concordat from the National Quality Board*, *2013’.* This concordat represents an agreement between key NHS organisations, regulators and professional bodies to support and embed human factors approaches to patient safety across the NHS. The document lays out the value of human factors to the NHS, details the commitments that are being made by influential NHS organisations, and includes human factors case studies to highlight the importance of this work in patient safety.

NES has been embedding human factors and ergonomics into healthcare education.

The GDC, in the new curriculum *‘Preparing for Practice’* involves communication, professionalism, management and leadership.

He illustrated these principles by discussing what to do if you spot something ‘unsafe’. He described the *Asch experiment*. In the 1950’s Solomon Asch conducted an **e**xperiment to investigate the extent to which social pressure from a majority group could affect a person to conform. This used a lab experiment to study conformity, whereby male students from a College in the USA participated in a 'vision test’ in which they were asked to look at cards with a line drawn on it and to compare that card to one with three lines of different lengths (one the same length, the other two: one clearly longer and one clearly shorter), and say which line the first card matched. All but one of the subjects in each group were actors. The subjects were asked to say out loud which line matched the first card. The subject gave their response last. Initially the actors all nominated the correct line but as the experiment progressed they gave a deliberate wrong answer. Asch then looked at the response of the subjects and found that some changed their answer to fit in with the majority. Dr Ross explained this by explaining that humans are social creatures and conform to the group even if we don’t believe the results.

Speaking up isn’t easy. In this experiment there was no existing relationship within the group this result is even more pronounced if there is a pre-existing relationship. He then discussed how to raise concerns. He explained that like all skills it needs practice. It can be safely practiced in simulated health care setting and is indeed addressed in non-technical skills for surgeons (NTSS).

NTSS can be practical. They are all patient orientated. Decisions don’t take place in an organisational vacuum. He described several studies that he had been involved with and the steps involved in the implementation of interventions and how to embed them with other demands on the clinicians / organisations time. Everyday work involves multiple demands / capacity trade offs – ‘realistic care’. (*Erik Hollnagel* - efficiency- thoroughness trade off). To demonstrate this Dr Ross suggested that the audience try ignoring efficiency for 1 day.

He then discussed *fundamental attribution error* - people attribute things to people rather than systems. Errors are often systematic of latent factors. He then illustrated and described the experiments of *Albert Michotte* and explained thatthe bias to error explanation is inevitable especially retrospectively after bad events. He suggested in Significant Event Analysis that we look at the human factors but also look at them in the context of systems management as well. He then discussed pre-accident investigations which involve learning to avoid accidents without having to undergo the experience.

He then described work that he is about to undertake which will evaluate ‘*childsmile*’. Sodium Fluoride varnish is a safe effective caries prevention treatment but remains underutilised in dental Practice. Why? The problem, Dr Ross suggests, is organisational and not due to the dentist. He is involved in the design of a community toolkit with GDPs who have high rates of fluoride varnish application.

He then introduced the film which took us through a vocational trainee’s day and the factors encountered when planning to place a crown on a patient’s molar tooth. It involved speaking up, NTSS, context/ organisation of work, trade offs, mindful adaptation, starting the ‘no’ conversation

Dr Ross explained that it is hoped this will be used in small group exercises to help students / junior trainees bridge the gap of the very protected environments of Dental School / VT and general practice.

After the showing of the film Dr Ross thanked the audience for their attention and asked for any comments. There was a short discussion with the audience members and Dr Ross about the film.

Dr Ross was happy to answer questions.

The Vote of Thanks was proposed by Professor David Conway who thanked the speaker for his enthusiasm, fresh ideas and excellent talk which defined really clearly the discipline of human factors and its application to patient care. He then asked the audience to thank the speaker in the usual manner. The President then presented the speaker with an Odontological Society paperweight.

Under AOCB the President presented the Glasgow Odontological Society Vocational Trainee Prize to Ms Robyn Whitelaw. This prize of £200 is awarded to the VDP who presented the best case report. This was judged by the prize-winners Vocational Dental Advisors. The Undergraduate Prize winner was unable to attend the December meeting as they are on outreach but plans to attend the January meeting.

He then asked that any member wishing to propose another member for Honorary Membership status contact the Secretary with their nominee.

He informed the audience that booking tickets for the Dinner is now open and your ticket can be booked on the website. It is in the RCPS Glasgow on **Saturday 24/02/18.** The cost of a ticket is £65. There is a proposal for a post Dinner Reception in the Dakota Hotel and a reduced rate for overnight accommodation that evening. Details will be available on the website.

He thanked Dr Marie Watt for standing in for Dr Stuart MacDonald and thanked Dr McDonald, in his absence, for allowing us to hold the Christmas Meeting in the Anatomy Department. He also thanked Katie for the excellent provision of refreshments and then invited everyone to enjoy mince pies, tea and coffee in the museum.

The next meeting is on **Tuesday 16th January 2018** in the **Lecture Theatre 1, Glasgow Dental Hospital & School.** The speaker is Dr Shauna Culshaw and she will give her lecture entitled *“Periodontal disease, inflammation and general health”*.

The meeting was closed at 20.45