Introduction: Telemedicine can be defined as the use of telecommunication and IT in order to provide healthcare at a distance. It helps eliminate distance barriers and can improve access to medical services that would often not be consistently available in distant rural communities. Telehealth and Telemedicine is at the heart of the Scottish Government’s Healthcare 2020 Vision to transform the way healthcare is delivered across Scotland, and the government has pledged an investment of 10 million pounds in Telehealth. Our institute (GJNH) has high requests for clinics from remote islands like Shetland/Orkney/Highland/Western Isles (map in blue). These patients have to travel long distances to come to a normal face-to-face clinic, and this involves a lot to time, expenses and inconvenience to patients and their relatives.

Purpose: Video conferencing (VC) has been used at our institute for following up patients after surgery from remote areas since 2009. We wanted to know if we could use VC for initial consultations and preoperative assessment for foot & ankle pathologies, without compromising on patient-satisfaction or make any changes to our normal practice.

Study design:
Study 1- Prospective pilot study to assess feasibility of the idea
Study 2- Retrospective analysis over a period of 12 months

We designed the study in 2 parts. Study 1 was a prospective pilot study to assess the feasibility of the idea. This was done in-house using two separate rooms; with the patient in one room and the Surgeon in another. Patient was accompanied by a senior physiotherapist and was not aware that the Surgeon was in the same building, and was then asked to rate their experience. Based on the success of our pilot study, we carried out regular VC clinics for initial consultations over the next 12 months. Results of those 12 months were analyzed retrospectively for patient and Surgeon satisfaction, as well as conversion rate to surgery, and compared to normal face-to-face consultations during the same time-period.

Results: There were 51 foot & ankle patients in study 1. All patients were satisfied with the VC consultation and gave feedback like “it was just like having the Surgeon in the room” or “good idea and could save a long journey”. Some patients made suggestions about position and mobility of the camera of the VC unit for improvement. These were taken into consideration in study 2. After 12 months we saw 109 patients using VC and another 634 patients in normal face-to-face consultations. The patient feedback was excellent in the VC consultation (96.3% patients were very happy with the quality of the consultation). 4 patients were not very happy due to the quality of internet connection at the time. The conversion rate to surgery were similar when compared to face-to-face consultation (45.87% for VC, 50% for normal).

Summary: The patient feedback about the VC clinics was excellent. The conversion rate to surgery were similar with VC consultations as compared to normal clinics. One of our initial concerns was that the Surgeon would be more conservative in management of patients seen via VC as not personally examining these patients. However our findings show that with a good clinical history and adequate radiographs (weight-bearing), it is possible to predict certain patterns of presentations in foot & ankle surgery in a majority of cases, and surgical management can be discussed even in the absence of direct physical contact with the patient.

Conclusion: Telemedicine is a a safe and effective way of conducting preoperative assessments just like a normal clinic. It does require some basic infrastructure like a good video-conferencing unit, physical therapist or similar personnel, and facility to perform weight-bearing radiographs; but the advantages in terms of time and cost to travel as well as convenience to patients are huge, specially for patients who need to travel a distance to see a specialist.

References:
1. www.sctt.org.uk. Scottish centre for telehealth and telecare