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The introduction of a fetal ultrasound telemedicine service: Quality outcomes and family costs

Snaith, Vikki J., Lie, Mabel, Marshall, Alison, Bidmead, Elaine, Robson, Stephen C.

**Introduction:** The complexity of fetal medicine (FM) referrals that can be managed in a district general hospital (DGH) is dependent on the availability of specialist ultrasound expertise. Telemedicine can effectively transfer real-time ultrasound images via videoconferencing. We report the successful introduction of a fetal ultrasound telemedicine service.

**Methods:** All women referred for FM consultation from the linked DGH were seen via a weekly telemedicine service, excluding cases where invasive testing was anticipated. Image and audio quality were rated (using a 5 point scale) following each consultation. Women referred for their first appointment were asked to complete a questionnaire following the consultation. Figures presented are median [range].

**Results:** 80 women had a telemedicine consultation between October 2015 and September 2016. 37 cases were new referrals because of fetal anomaly (n = 17), exclusion of abnormal placental invasion (n = 11), small-for-gestational-age (n = 7) and prior history of fetal anomaly (n = 2) and 43 cases were follow-up consultations. Median gestation was 29 [13–36] weeks. Image quality was of sufficient quality to achieve the aims of the consultation in 79 cases with an image score of 4 [3–5] and audio score of 5 [3–5]. Journey to the telemedicine consultation was 20 [4–150] minutes in comparison to an estimated journey time of 238 [120–450] minutes to the FM centre. Estimated family costs for attendance at the FM centre were £95 [20–555].

**Conclusion:** We have demonstrated that a fetal ultrasound telemedicine service can be successfully introduced and used to provide high quality consultations.