Background Fetal Alcohol Syndrome (FAS) comprises a triad of growth impairment, central nervous system dysfunction and characteristic facial features. Diagnosis is complex and often not recognised at an early age. The three facial features: short palpebral fissures, smooth philtrum and thin upper lip, are unique to FAS. Clinical examination is inherently subjective and apart from palpebral fissure length, minimal reference data is available in neonates. Establishing a standardised method and normal range would promote an objective assessment. Earlier diagnosis would enable earlier effective interventions.

Methods Standardised digital facial photographs were taken of normal term Caucasian neonates. Mothers completed anonymous questionnaires about alcohol consumption during pregnancy. Photographs were assessed using Facial Analysis Software to obtain values for palpebral fissure length (PFL) and upper lip circularity (LC). Upper lip thinness and philtrum smoothness were ranked according to 5-point Likert Scale.

Results 29 infants were studied, 17 male: 12 female. Mean gestational age 40.3 weeks (range 37.1–42.3), mean weight 3556g. 23 (79%) had no prenatal alcohol exposure whilst 6 had minimal exposure (1–2 units/week). PFL measurements could be obtained from 21 photographs (72%) with mean of 15.6 mm (range 13.7–18.7 mm). Mean rank scores for palpebral fissure length (PFL) and upper lip circularity (LC). Upper lip thinness and philtrum smoothness were ranked according to 5-point Likert Scale.

Conclusion It has been possible to gain measurements of facial features in just over 75% of neonates studied, showing the feasibility of this technique in this age-group. Further results are needed to establish reference ranges.