Significant increases were measured in total pharyngeal (76% mean increase), nasopharyngeal (277% mean increase), and oropharyngeal (54% mean increase) volume following fronto-facial surgery. Surface area (58.57% mean increase) and cross-sectional area (21.57% mean increase) of airway increased. There was a modest increase in airway patency (5.74% mean increase). Sphericity was slightly decreased (-3.33% mean decrease). However, the differences in sphericity and proportion of airway constriction were not significant.

Aims There is an urgent need to address racism in medicine. Medical images are a crucial resource but there is a lack of diversity in skin tone representation of images and a specific paucity of data on how this impacts on health care professionals and patient outcomes. The aim of this study was to assess the diagnostic knowledge of healthcare professionals using paediatric images of skin conditions in darker skin tones and identify whether this correlates with confidence and training resources used.

Methods Participants self-declared demographic details, training resources used within training, and self-confidence in diagnosing skin conditions. Participants then completed a multiple-choice quiz of 10 images and asked to identify the condition in the picture. The pass mark for the quiz was set at 80%. Descriptive analyses were used to summarise the responses. One-way ANOVA with Bonferroni post hoc comparison were carried out to compare the differences of quiz results between subgroups as appropriate. Correlations between respondents’ experience, self-reported confidence and quiz results were assessed by Spearman’s correlation coefficients. All analyses were performed with IBM SPSS 26.0 for Windows (IBM Corp, Armonk, NY, USA), and p < 0.05 was considered statistically significant.

Results 432 of 600 registered users (72%) participated in the quiz, answering 4320 questions covering 56 diagnoses. Quiz scores followed normal distribution with a mean score of 5.37 (SD 1.75). Approximately 11% (n=47) reached the 80% pass mark.

There was no significant difference in mean scores amongst participants from different continents (p=0.270), ethnic background (p=0.397) or professions (p=0.599). A statistically significant difference was observed by specialty (p=0.01). Scores did not differ significantly by skin tone representation in participant’s training resources (p=0.198). The 21 participants who reported being confident earned a mean score of 5.62 (SD 1.50), followed by those who were sometimes uncertain (mean 5.45 SD 1.74) and generally uncertain (mean 5.24 SD1.78) with no difference across the three groups (p=0.400).

Correlation between experience, self-reported confidence and quiz score showed a weak correlation between experience and self-reported confidence (Spearman’s correlation coefficient ρ=0.286, p<0.01). No correlation was observed between confidence or experience with quiz scores (ρ=0.087 and 0.076, respectively).

With regards to identification of diagnoses, cafe-au-lait macules were the most recognised diagnosis (95%). Of the 56 diagnoses, the study team picked the key diagnoses that were deemed to be the most common paediatric presentations and/ or important to recognise (figure 1).
**Conclusion** This is the first study to our knowledge, assessing the identification of paediatric skin conditions in different skin tones by healthcare professionals internationally. Overall, correct identification, even of common and important paediatric conditions such as eczema and meningococcal rash, was poor suggesting a possible difference in knowledge across different skin tones. There is an urgent need for further prospective study and to improve representation of all skin tones within medical education and in the teaching and training of common dermatological conditions in darker skin conditions to ensure equity in patient care.

### 505 NEONATAL SKINCARE PRACTICES IN SOME CULTURES MAY DISRUPT SKIN BARRIER TO INCREASE ATOPIC DERMATITIS RISK

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**Aims** Atopic dermatitis (AD) affects approximately 20% of children worldwide, and is associated with a substantial impact on quality of life for children and families.1,2 Prevalence varies significantly between countries, but there is limited evidence to explain these differences.3 AD is partially attributed to skin barrier dysfunction, as well as immune dysregulation and allergen sensitization.4 Emollients and soap substitutes are thought to act by improving barrier dysfunction, however little is known regarding their effects on healthy skin and subsequent AD development.1 Early skincare practices vary greatly worldwide and may affect skin barrier in infants. Hence, a study of current literature describing this variation may help us to understand some of the causes underlying this major worldwide variation in AD prevalence.

**Methods** We reviewed the literature regarding variation in neonatal skincare practices between countries and correlated this with information on AD prevalence. Our literature review identified 575 abstracts, of which 10 met inclusion criteria. We are currently preparing to outline our findings in an abstract for potential conference presentation.

**Results** Information was available on neonatal skincare practices in Ethiopia, Nigeria, Tanzania, Uganda, Pakistan, Laos, and Suriname. In Ethiopia, Nigeria, Tanzania, Uganda and Pakistan, early bathing was common, with introduction of emollients in the second week of life in most of these countries.5,9 Reasons included health preservation and cleanliness. In Suriname and Laos, numerous plant species were used in postnatal care and neonatal bathing to promote wellbeing of both mother and baby.10,11

Of note, high prevalence of childhood AD has been reported in Nigeria and Ethiopia - 19.4 and 19.0% respectively in 13-14 year olds.5 Standard practice included early bathing, up to 5 times daily, and emollient application included nut oil, cow butter and petroleum jelly.5

**Conclusion** Skincare practices in some countries may disrupt the skin barrier during infancy and could represent a preventable cause of AD in childhood. There is a need for further research into skincare practices across the world and how these practices relate to AD prevalence.

### 562 ORAL PROPRANOLOL IN THE TREATMENT OF PROLIFERATING INFANTILE HAEMANGIOMAS

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**Aims** Infantile haemangiomas (IH) are the most common vascular tumour of infancy.1 Propranolol is the first-line treatment for complex IH. The Dermatology department at Birmingham Children’s Hospital (BCH) recommend and follow the British Society of Paediatric Dermatology (BSPD) consensus guidelines on the treatment of IH with oral propranolol, published in 2018. The aim of this audit was to establish the current practice for managing IH across the different specialties at BCH and to assess their adherence to the BSPD guidelines.

**Methods** An online survey was distributed to 19 consultants and registrars from the Dermatology, Ophthalmology, ENT, Plastic Surgery and Paediatric departments at BCH. The survey consisted of 14 questions based on the BSPD guidelines. Data were collected anonymously and quantitative data were analysed using descriptive statistics.

**Results** The survey had an 89% response rate. Results showed inconsistent practice amongst specialties when initiating oral propranolol for IH. We found that a variety of specialty guidelines are being followed and that dosing regimens vary with only 47% of respondents initiating patients on the BSPD-recommended starting dose. Only 60% of responders perform a full cardiovascular examination prior to commencing propranolol and 24% of clinicians report feeling confident doing this.

Results were discussed at each department’s audit meeting. The inconsistent practice amongst specialties when initiating oral propranolol for IH was recognised. Furthermore, on discussion with clinicians from each specialty we discovered that several departments are still admitting low risk patients for propranolol initiation who would be eligible for outpatient initiation of treatment. This impacts on both patients and hospital services.

**Conclusion** Results of this audit confirm that not all departments at BCH use the BSPD guidelines when initiating patients on oral propranolol for IH. Differing guidelines, dosing regimens and treatment pathways are currently being followed. This audit supports the need for a single BCH guideline to be used across departments. We are currently liaising with the teams to develop this.

### REFERENCE

1. Oral propranolol in the treatment of proliferating infantile haemangiomas, Solman L et al.