

Duke Pulse Oximetry and Skin Tone Protocol Checklist:

- All assessments were performed on patients admitted to Duke University Hospital.
- Patients were eligible if they consented within 7 days of ABG-pulse oximetry pairs. Study environments were standardized for lighting conditions.
- Exclusion criteria:
 - < 18 years of age
 - Large areas of skin discoloration due to current rash, vitiligo, jaundice, and wounds/bruising at measurement sites
 - Vascular complications (including known peripheral arterial disease)
 - Inability to remove nail polish
- Demographic information:
 - Race (White, Black/African American, Asian, American Indian/Alaskan Native, Native Hawaiian/Other Pacific Islander, More than one race, Other)
 - Ethnicity (Non-Hispanic vs Hispanic)
- Clinical team and study team confirmed pulse oximeter location and brand as well as if patient is under a standard care temperature protocol.
- Additional clinical data, such as vitals and laboratory results, were also extracted from the EHR.
- Skin tone assessments were taken on 16 locations of the body. The body parts assessed are identified by a black dot below. Ventral and dorsal measurements were collected from the earlobe and the left and right fingers, toes, and palms. Additional measurements were taken over the forehead and sternum.
- Assessment tools consisted of:
 - Temperature devices (General-range and Clinical-range)
 - Administered visual scales (Fitzpatrick Skin Type, Monk Skin Tone, and Von Luschan)
 - Colorimetric/spectrophotometric devices
 - Konica Minolta CM700D
 - Delfin SkinColorCatch
 - Spectro Variable
 - Digital photography (Google Pixel 4a and iPhone SE 2020)

