Infants with a history of neonatal chronic respiratory problems may demonstrate hypoxaemia when at in-flight oxygen levels, despite normal sea-level oxygen requirements. The British Thoracic Society recommend these infants have hypoxic challenge testing (HCT) before air travel, $SpO_2 < 85\%$ is recommended as a threshold below which in-flight oxygen is required and ‘paediatrician discretion should be used when $SpO_2$ between 85–90% and, where there is doubt, the doctor should err on the side of caution.’

**Aim** To establish how many infants fell into each of the threshold categories during HCT; $SpO_2 < 85\%, > 90\%, 85–90\%$ and which of these patients were recommended to fly ± supplemental oxygen ($suppO_2$).

**Methods** Our HCT protocol for infants is 20 minutes in 15% FiO$_2$ within a body plethysmograph, $SpO_2$ is monitored throughout and $suppO_2$ administered via nasal cannula if $SpO_2 < 85\%$. If after 20 minutes $SpO_2$ has remained $> 85\%$ but $< 90\%$ then $suppO_2$ is titrated for 5 minutes. We reviewed data collected from infants (aged < 1 year) whom had HCT between March 2017–January 2020.

**Results** Data collected from 65 infants, median age 27.6 weeks (range 5 to 51.6), 37 were male. None were receiving $suppO_2$ in room air prior to testing; all had baseline $SpO_2 \geq 96\%$. In 40 infants, $SpO_2$ did not dip to $< 90\%$. $SpO_2$ dropped to $< 85\%$ in 16 infants, requiring administration of $suppO_2$. 9 infants required extended protocol due to $SpO_2$ of 85–90%. $SuppO_2$ corrected $SpO_2$ in all to baseline levels.

In the 85–90% category, all 9 infants were advised by their clinician to use $suppO_2$ for air travel. The flight times in this subgroup ranged from 90 to 450 minutes.

**Conclusion** Infants with baseline $SpO_2 \geq 96\%$ may still exhibit $SpO_2$ desaturation during HCT. We found all paediatricians recommended in-flight oxygen for infants with HCT $SpO_2 < 90\%$ regardless of flight duration.