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## 124. Paediatric respiratory physiology

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### PA1272

#### Normal lung function in Angolan children

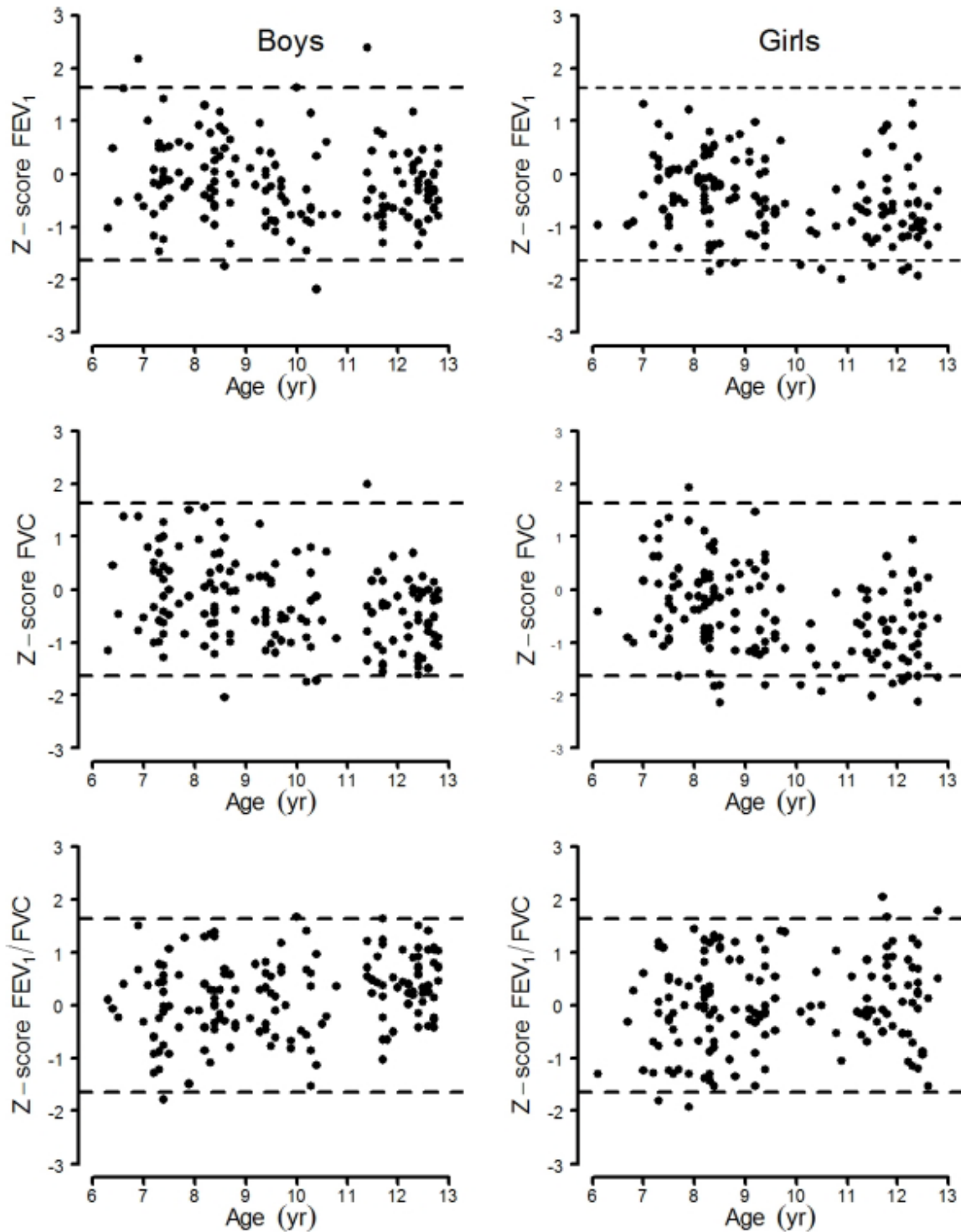
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**BACKGROUND:** There are no data about normal lung function of Angolan children **AIMS:** Evaluate whether the Global Lung Initiative (GLI) prediction equations for black people (Quanjer et al. Eur Respir J 2012;40:1324–1343) fit Angolan children. **METHOD:** FEV<sub>1</sub>, FVC, FEV<sub>1</sub>/FVC of 307 healthy children (50.2% boys) aged 6-12 years from public and private schools in Luanda, Angola, were evaluated. Exclusion criteria: acute or chronic disease, spirometry not repeatable or abnormally shaped flow-volume curves. A portable spirometer (Pony FX©, Cosmed, IT) was used. Height and weight were recorded. Z-scores for spirometric data were derived from GLI equations, BMI z-scores from CDC growth charts. Height was compared to that in African Americans from NHANES III. **RESULTS:** Mean age was 9.8 years (SD 1.9). Z-scores (table) fell within the 90% reference interval for black people (figure); 9.4% of children were underweight (zBMI <-2). Afro American girls from were 3.4%, boys 4.3% taller. Z-scores for FEV<sub>1</sub> and FVC, but not FEV<sub>1</sub>/FVC, were lowest in girls, and correlated positively with zBMI and school type.

#### Mean spirometry z-scores in Angolan children

	Boys (154) mean (SD)	Girls (153) mean (SD)
zFEV <sub>1</sub>	-0.18 (0.74)	-0.47 (0.73)
zFVC	-0.28 (0.77)	-0.48 (0.82)
zFEV <sub>1</sub> /FVC	0.18 (0.71)	0.01 (0.84)
zBMI	-0.73 (0.99)	-0.47 (1.31)



**CONCLUSIONS:** FEV<sub>1</sub> and FVC are proportionally reduced by poor nutritional status. GLI equations appear to fit Angolan children, but should preferably be evaluated in a larger sample of Angolan girls.