

**Supplementary Table 1.** The clinical phenotypes of hospital-admitted patients, defined hierarchically.

<b>Syndrome</b>	<b>HbAA N=16,502</b>	<b>HbAS N=1,791</b>
Neonatal conditions	1,615 (9.8)	224 (12.5)
Bacteremia	709 (4.3)	83 (4.6)
Severe malaria	797 (4.8)	17 (1.0)
Malaria	6,223 (37.7)	348 (19.4)
Severe anemia	380 (2.3)	50 (2.8)
Meningitis/encephalitis	973 (5.9)	140 (7.8)
Severe malnutrition	580 (3.5)	82 (4.6)
Very severe pneumonia	3,401 (20.6)	531 (29.7)
Severe pneumonia	133 (0.8)	20 (1.1)
Gastroenteritis	622 (3.8)	92 (5.1)
Other	1,069 (6.5)	204 (11.4)

**Supplementary Table 2.** Odds ratios for specific hierarchically-defined clinical phenotypes.

<b>Diagnosis</b>	<b>OR (95% CI)*</b>	<b>P</b>	<b>aOR (95% CI)*</b>	<b>P</b>
Neonatal conditions	0.79 (0.67-0.93)	0.005	0.79 (0.67-0.93)	0.005
Bacteremia	0.67 (0.53-0.85)	0.001	0.70 (0.54-0.91)	0.007
Severe malaria	0.12 (0.07-0.20)	<0.0001	0.12 (0.08-0.20)	<0.0001
Malaria	0.32 (0.28-0.37)	<0.0001	0.31 (0.27-0.37)	<0.0001
Severe anemia	0.75 (0.55-0.98)	0.039	0.75 (0.55-1.04)	0.095
Meningitis/encephalitis	0.82 (0.68-0.99)	0.049	0.83 (0.67-1.04)	0.11
Severe malnutrition	0.81 (0.63-1.03)	0.088	0.81 (0.62-1.06)	0.13
Very severe pneumonia	0.89 (0.79-1.01)	0.066	0.92 (0.79-1.07)	0.27
Severe pneumonia	0.86 (0.53-1.38)	0.53	0.87 (0.53-1.43)	0.59
Gastroenteritis	0.85 (0.67-1.06)	0.16	0.86 (0.66-1.11)	0.24
Other	1.06 (0.91-1.24)	0.46	1.16 (0.99-1.36)	0.072

Crude (OR) and adjusted (aOR) odds ratios derived through comparison of allele frequencies in cases versus community controls by logistic regression, without or with adjustment respectively for gender and division of residence. P-values were estimated using logistic regression.