Table 4: Predictive performance of PARC for main analysis and sensitivity analyses in ALSPAC and LRC (definitions of main and sensitivity analyses in table E1)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ALSPAC | n | Cases (%) | Sens. at score 4 | Spec. at score 4 | Sens. at score 5 | Spec. at score 5 | AUC | R2 | Brier score |
|  |  |  |  |  |  |  |  |  |  |  |
| A1 | **Main analysis** | 2690 | 373 (14) | 0.69 | 0.76 | 0.61 | 0.83 | 0.77 | 0.23 | 0.13 |
| A2 | **Altered inclusion criteria** |  |  |  |  |  |  |  |  |  |
| A2.1 | Only children aged 1 year | 3583 | 439 (12) | 0.51 | 0.80 | 0.44 | 0.85 | 0.71 | 0.13 | 0.06 |
| A2.2 | Only children aged 2 years | 2817 | 410 (14) | 0.69 | 0.72 | 0.62 | 0.79 | 0.76 | 0.21 | 0.07 |
| A2.3 | Only children aged 3 years | 2238 | 396 (19) | 0.62 | 0.82 | 0.58 | 0.86 | 0.78 | 0.26 | 0.21 |
| A2.4 | Wheeze past 12 months | 1423 | 326 (23) | 0.81 | 0.46 | 0.74 | 0.59 | 0.73 | 0.18 | 0.08 |
| A2.5 | Cough past 12 months | 6351 | 554 (9) | 0.52 | 0.87 | 0.45 | 0.92 | 0.76 | 0.20 | 0.07 |
| A3 | **Altered scoring variables** |  |  |  |  |  |  |  |  |  |
| A3.1 | Exclude trigger variables | 2690 | 373 (14) | 0.69 | 0.76 | 0.61 | 0.83 | 0.77 | 0.23 | 0.13 |
| A4 | **Altered outcome definition** |  |  |  |  |  |  |  |  |  |
| A4.1 | Severity: Wheeze past 12 months and use  of asthma medication at 3 or more episodes | 2688 | 307 (11) | 0.70 | 0.75 | 0.62 | 0.82 | 0.78 | 0.23 | 0.06 |
|  | **LRC** |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| L1 | **Main analysis** | 1226 | 345 (28) | 0.79 | 0.57 | 0.72 | 0.71 | 0.78 | 0.28 | 0.22 |
| L2 | **Altered inclusion criteria** |  |  |  |  |  |  |  |  |  |
| L2.1 | Wheeze past 12 months | 1033 | 330 (32) | 0.72 | 0.53 | 0.66 | 0.75 | 0.69 | 0.17 | 0.14 |
| L3 | **Altered scoring variables** |  |  |  |  |  |  |  |  |  |
| L3.1 | Exclude trigger variables | 1226 | 345 (28) | 0.74 | 0.63 | 0.66 | 0.76 | 0.77 | 0.28 | 0.22 |
| L3.2 | Exchange wheeze without  colds with current wheeze | 1226 | 345 (28) | 0.82 | 0.53 | 0.74 | 0.64 | 0.77 | 0.28 | 0.21 |
| L4 | **Altered outcome definition** |  |  |  |  |  |  |  |  |  |
| L4.1 | Severity: Wheeze past 12 months more than  4 episodes and use of asthma medication | 1030 | 86 (8) | 0.86 | 0.61 | 0.82 | 0.73 | 0.84 | 0.32 | -0.15\* |

R2: Nagelkerke’s \*The negative scaled Brier score is due to the large difference in the prevalence of the outcome in main analysis and the corresponding sensitivity analysis.