THE LANCET
Respiratory Medicine

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Hay AD, Redmond NM, Turnbull A, et al. Development and internal validation of a clinical rule to improve antibiotic use in children presenting to primary care with acute respiratory tract infection and cough: a prognostic cohort study. *Lancet Respir Med* 2016; published online Sept 1. http://dx.doi.org/10.1016/S2213-2600(16)30223-5.

WEB APPENDIX

Web Figure 1: Baseline Case Report Form

Page 1

CASE REPORT FORM TARGET

ID 999999

Today's date D D / M M / 2 0 Y Y

Informed consent for study obtained ☐$_1$

Background information

DOB D D / M M / Y Y Y Y

Gender ☐ Female$_0$ ☐ Male$_1$

Ethnicity ☐☐ *PTO for codes, if other ethnicity, please describe below* ☐☐☐☐☐☐☐☐☐☐☐☐☐

Mother's age ☐☐

children in home (inc. unwell child) ☐☐

Does the mother smoke? ☐ No$_0$ ☐ Yes$_1$ ☐ Don't know$_{88}$

Mother still breast feeding child at 3 months? ☐ No$_0$ ☐ Yes$_1$ ☐ Don't know$_{88}$

Carer reported symptoms

How unwell does the **parent** consider the child to be? Well 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ Very unwell

Duration of illness ☐☐ days

Has illness got a lot worse recently? ☐ No$_0$ ☐ Yes$_1$

If Yes, how many days ago did it start to get worse? ☐☐ days

Symptoms present	During illness? No$_0$	Yes$_1$	*If yes*	Last 24 hours? No$_0$	Yes$_1$	*If yes*	*Severity in last 24 hours (tick **one**)* Mild$_1$	Moderate$_2$	Severe$_3$
Dry cough	☐	☐	>	☐	☐	>	☐	☐	☐
Productive/ wet cough	☐	☐	>	☐	☐	>	☐	☐	☐
Barking/ croupy cough	☐	☐	>	☐	☐	>	☐	☐	☐
Blocked or runny nose	☐	☐	>	☐	☐	>	☐	☐	☐
Change in cry	☐	☐	>	☐	☐	>	☐	☐	☐
Breathing faster than normal (shortness of breath)	☐	☐	>	☐	☐	>	☐	☐	☐
Wheeze or whistling in the chest	☐	☐	>	☐	☐	>	☐	☐	☐
Fever	☐	☐	>	☐	☐	>	☐	☐	☐
Chills/ shivering	☐	☐	>	☐	☐	>	☐	☐	☐
Diarrhoea	☐	☐	>	☐	☐	>	☐	☐	☐
Vomiting (including after cough)	☐	☐	>	☐	☐	>	☐	☐	☐
Taking fewer fluids/ milk feeds	☐	☐	>	☐	☐	>	☐	☐	☐
Eating less	☐	☐	>	☐	☐	>	☐	☐	☐
Low energy/ fatigue/ lethargy	☐	☐	>	☐	☐	>	☐	☐	☐
Disturbed sleep	☐	☐	>	☐	☐	>	☐	☐	☐
Passing urine less often/ dryer nappies	☐	☐	>	☐	☐	>	☐	☐	☐
Please tick NA if the child is too young/ uncommunicative for the parent to know about the following > NA ☐$_1$									
Chest/ shoulder pain	☐	☐	>	☐	☐	>	☐	☐	☐
Headache	☐	☐	>	☐	☐	>	☐	☐	☐
Muscle aches all over	☐	☐	>	☐	☐	>	☐	☐	☐
Confusion/ disorientation	☐	☐	>	☐	☐	>	☐	☐	☐

Clinician examination and management

	Absent$_0$	Present$_1$
Pallor	☐	☐
Grunting	☐	☐
Nasal flaring	☐	☐
Stridor	☐	☐
Inter/ subcostal recession	☐	☐
Inflamed pharynx/ tonsils	☐	☐

	Absent$_0$	Unilateral$_1$	Bilateral$_2$
Wheeze	☐	☐	☐
Crackles/ crepitations	☐	☐	☐
Bronchial breathing	☐	☐	☐

Temperature ☐☐.☐ °C Pulse ☐☐☐ bpm

Respiratory rate ☐☐ bpm O_2 sat ☐☐☐ % ☐ Unable to take O_2 sat/no equipment

Consciousness level ☐ normal$_0$ ☐ irritable$_1$ ☐ drowsy$_2$

Capillary refill time ☐ 2 seconds or less$_0$ ☐ 3 seconds or more$_1$

How unwell do **you** consider the child to be? Well 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ Very unwell

Throat swab taken? ☐ No$_0$ ☐ Yes$_1$

If **No**, reason:
☐ Child refusal$_1$
☐ Parent refusal$_2$
☐ Other (specify)$_3$
☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐☐☐

Main working respiratory tract diagnosis ☐☐☐☐☐☐☐☐☐☐☐☐☐☐

My gut feeling is 'something is wrong' ☐ No$_0$ ☐ Yes$_1$

Antibiotics prescribed? ☐ No$_0$ ☐ Yes, immediate$_1$ ☐ Yes, delayed$_2$ by ☐☐ days

Referral for acute admission today? ☐ No$_0$ ☐ Yes$_1$

Ethnicity showcard

To which of these ethnic groups do you consider your child belongs? / What is your ethnic group?

White

1 British

2 Irish

3 Any Other White background (please describe to the doctor or nurse)

Mixed

4 White and Black Caribbean

5 White and Black African

6 White and Asian

7 Any Other Mixed background (please describe to the doctor or nurse)

Asian or Asian British

8 Indian

9 Pakistani

10 Bangladeshi

11 Any Other Asian background (please describe to the doctor or nurse)

Black or Black British

12 Caribbean

13 African

14 Any Other Black background (please describe to the doctor or nurse)

Chinese

15 Chinese

Other ethnic group

16 Any Other (please describe to the doctor or nurse)

To the clinician: please record the number corresponding to the patients response in the case report form ethnicity box along with any additional description about their ethnicity the patient may wish to provide

Web Table 1: Final[a] model applied *post hoc* to the 750 children with diagnosis of asthma[b]

Table 2: Multivariable[a] predictors of hospitalisation[c]

Characteristic		Data source	OR[b]	95% CI
Inter/subcostal recession	Present vs absent	Clinician	6.04	2.07-17.62
Age of child (years)	<2 vs ≥2	Parent	4.82	1.57-14.79
Illness duration (days)	<4 vs ≥4	Parent	3.45	1.22-9.71
Vomiting in the last 24 hrs	Mod/severe vs mild/absent	Parent	0.37	0.04-3.17
Wheeze	Present vs absent	Clinician	3.73	1.11-12.59
High temperature or fever in last 24 hours	≥37·8°C or severe fever vs <37·8°C or mild/ moderate fever	Clinician or parent	2.07	0.66-6.45

[a] Asthma variable removed from model since it is an inclusion criterion for analysis
[b] Defined as present if asthma in medical notes problem list and asthma medication issued in the previous 12 months
[c] Model includes 743/8394 (8.9%) of the cohort, of whom 19 were hospitalised.