EEPRIS

Evaluation of Enhanced Paediatric Respiratory Infection Surveillance

Evaluation of Bristol-wide enhanced paediatric respiratory tract infection (RTI) microbiology and symptom surveillance

BACKGROUND

There is a growing burden on primary care clinicians, as well as a growing public health threat of increasing antimicrobial resistance (AMR). Respiratory tract infections (RTIs) are the most common problem managed by primary care with the majority occurring in children and around 50% of patients given antibiotics. It is not clear precisely what proportion of children with RTIs are brought to the attention of primary care, but it is clear that even small changes in consultation rates and clinical management could have a significant impact on primary care resources and AMR.

STUDY OBJECTIVES

The **main objective** is to determine the feasibility of enhanced paediatric RTI microbiology surveillance to inform the design of a full scale cohort study and nested randomised controlled trial (RCT).

Primary outcome = recruitment and retention rates
Defined as number of complete sets of data collected on each study RTI compared with the number of children and families enrolled

The **main secondary objectives** are to:

- Describe the duration of community paediatric RTI symptoms *with a comparison between consulting and non-consulting children*
- Describe the primary and secondary care consultation rates

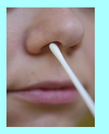
METHODS

Research design: Prospective, feasibility cohort study with data collection over one winter period (December 2015 to May 2016), with nested qualitative studies (parent and clinician interviews)

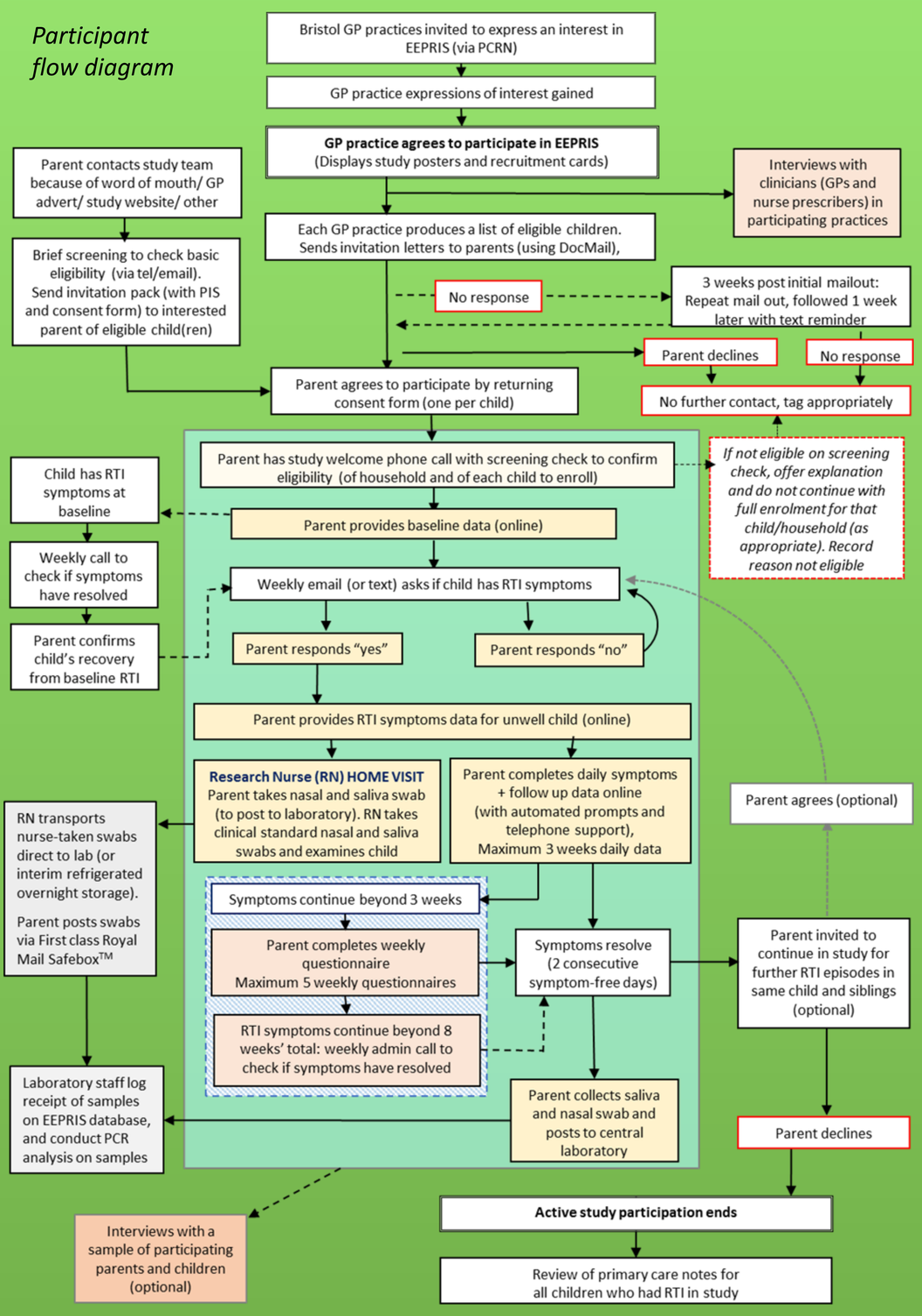
Setting: Primary care, 12 GP practices within 10 miles of Bristol centre

Participants: Approximately 777 immuno-competent children in the community aged 3 months <15 years, recruited via GP surgery postal invitation to parents (approx. 450 parents to be recruited)

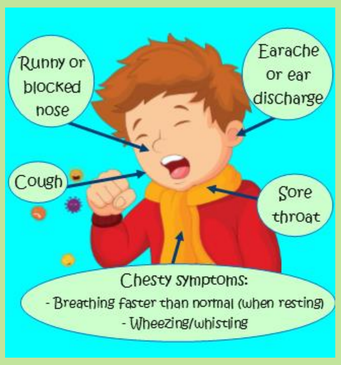
Data collection:
Online questionnaires for parents (baseline and on child incident RTI), supplemented by medical notes review;
Clinical examination by research nurse;
Saliva and nasal swab samples



Participant flow diagram



EEPRIS symptoms to trigger data collection:

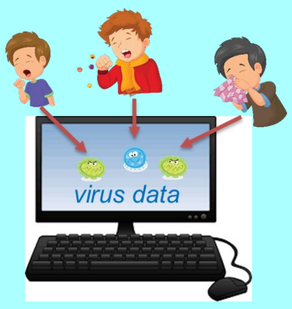


Projected recruitment and retention rates

No. children to identify and invite from initial GP searches assuming average of 1.7 dependent children in any household **15,549**
No. parents to invite assuming 5% enrolment rate **9,146**
No. parents to enrol assuming 20% attrition within study **457**
No. parents needed to remain in study (assuming each contributes RTI data for one child in household) given that 20% children will have no RTI in study period **366**
No. RTI illness events in study **300**

DEVELOPING AN ONLINE INTERVENTION OF REAL-TIME DATA ON CIRCULATING INFECTIONS

EEPRIS will inform the design of an online real-time illness (symptoms and microbiological) information intervention that informs parents and clinicians about circulating infections in the community, to be tested in a future RCT.



The onward intention is to:

- **inform clinician diagnosis, management and prescribing practices**
- **improve antibiotic stewardship**
- **aid parent decision-making regarding RTI management** (which has potential for reducing consultation rates)

Principal Investigator: Professor Alastair Hay;
Study manager: Emma Anderson
Study website: **www.bristol.ac.uk/eepris**

Emma Anderson
Eepris-study@bristol.ac.uk
www.bristol.ac.uk/eepris

The study is funded and supported by the National Institute for Health Research (NIHR) Health Protection Research Unit (HPRU) in Evaluation of Interventions, a partnership between the University of Bristol and Public Health England (PHE)

Funded by NIHR
Public Health England

@capcbristol