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## Title

*Exploring diagnostic strategies for streptococcal throat infection remotely: a feasibility study*

## Priority 1 (Research Category)

Acute respiratory infections

## Presenters

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## Abstract

Context: Acute sore throat is a common presentation in primary care and often results in antibiotic prescription. The Covid pandemic has driven changes in consultation with less face to face visits. Scoring tools are available to target antibiotics and widely used in the UK but it is not clear whether patient self assessment is feasible and sufficiently precise to enable remote use of scoring tools.

Objective: A feasibility study to develop and test remote assessment of acute sore throat.

Design: Observational study

Setting: UK primary care

Population: Adults and children with sore throat were asked to use the online tool and report their clinical findings directly

Intervention: An online tool was developed that could help patients or parents of children with sore throat assess the clinical features that make up clinical prediction rules and to take a photograph of the throat

Results: 221 patients with sore throat were screened and 45 (33 adults and 12 children) were recruited. 44/45 (97.8%) participants were able to complete all elements of the clinical assessment. It was possible

to calculate a FeverPAIN score for 25 (75.8%) adults and 10 (83.3%) children. 35 participants (25 (75.8%) adults and 10 (83.3%) children) provided a throat photograph but many of these were not of sufficient quality to enable assessment of throat pus and inflammation. Poor lighting and focus were the main problems. Photos that were of sufficient quality were available from 13 (39.4%) adults and 5 (41.7%) children. Three GPs independently assessed these photographs to assess for inflammation and pus. Using the clinician assessment as the reference standard, self/parent/carer assessment of inflammation had a sensitivity of 100%, specificity of 46.7%, positive predictive value (PPV) of 27.3% and negative predictive value (NPV) of 100%. The sensitivity, specificity, PPV and NPV for pus were 76.5%, 100%, 71.4%, 42.9% and 100%.

Conclusions:. Self assessment of sore throat was possible. Photographs were of sufficient quality for clinical assessment less than half the time. Patients/parents/carers are very good at ruling out pus and inflammation, but have a tendency to overcall these findings, especially inflammation. Further implications for self assessment and future work will be described