Technoleg Iechyd Cymru
Health Technology Wales

# Topic Exploration Report

Topic explorations are designed to provide a high-level briefing on new topics submitted for consideration by Health Technology Wales. The main objectives of this report are to:

1. Determine the quantity and quality of evidence available for a technology of interest.
2. Identify any gaps in the evidence/ongoing evidence collection.
3. Inform decisions on topics that warrant fuller assessment by Health Technology Wales.

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| **Topic:** | **Rapid antigen detecting tests for group A streptococcal infections in people with a sore throat in the community pharmacy setting** |
| **Topic exploration report number:** | **TER166** |

## Introduction and aims

Most cases of sore throat resolve without the need for antibiotic treatment, but a minority of cases are caused by underlying bacterial infections (most commonly group A streptococcal infections) that may benefit from antibiotics. Rapid antigen detecting tests (RADTs) are point-of-care tests that have been postulated for use in primary care to help diagnose cases of sore throat caused by group A streptococcal infections and guide antibiotic prescribing decisions.

Health Technology Wales researchers searched for evidence on the clinical and cost effectiveness of rapid antigen detecting tests (RADTs) for diagnosing group A streptococcal infections and guiding treatment in people with a sore throat. The setting of interest is community pharmacies. We focussed on this setting but also searched for evidence in other settings that may be transferable.

## Evidence

In November 2018, NICE published Diagnostics Guidance DG38: *Rapid tests for group A streptococcal infections in people with a sore throat*. This makes recommendations based on a full health technology assessment of the use of RADTs across a range of primary and secondary care settings. The Guidance states that rapid tests for group A streptococcal infections are not recommended for routine adoption for people with a sore throat.

The health technology assessment conducted to inform NICE DG38 includes a systematic review of the clinical effectiveness of RADTs, and economic modelling based on the clinical evidence identified. The community pharmacy setting was considered as part of the NICE DG38 appraisal but no evidence specific to the pharmacy setting was identified.

In August 2018, the Scottish Health Technologies Group (SHTG) issued an Advice Statement (011-18) on RADTs for group A Streptococcal infection, based on a rapid evidence review (Evidence Note 83). SHTG's advice based on this evidence was as follows:

"A systematic review of three non-UK cluster randomised controlled trials (RCTs) reported that the use of rapid antigen detection tests (RADTs) reduces rates of antibiotic prescribing. The delayed prescribing strategy recommended as UK standard care may limit the applicability of these findings.

"Based on one UK study in the context of delayed antibiotic prescribing, the use of a RADT for presence of Group A streptococcal bacteria (GAS) in patients with acute sore throat in the general practice setting did not provide additional benefit in terms of symptom resolution or rates of antibiotic use when compared with use of a formal clinical scoring system.

"In this study, use of RADTs was not cost effective."

## Areas of uncertainty

It is uncertain whether any published evidence specific to the setting of interest (community pharmacies) exists, or whether evidence could be extrapolated from other settings. The topic proposer states that unpublished data from Wales exists on the use of RADTs specifically in the community pharmacy setting, but further scrutiny of this data is required.

The topic proposer states that the alternative to RADTs is antibiotic prescribing decisions based on clinical scoring systems. It is unclear whether any evidence exists that allows for direct comparison of the effectiveness of RADTs and clinical scoring systems.

## Conclusions

The use of RADTs to diagnose group A streptococcal infections in people with a sore throat and guide their treatment have been assessed as part of two recent UK health technology assessments. Although these did not include any conclusions specific to the community pharmacy setting, there is potential to adapt the clinical and cost effectiveness evidence evaluated as part of these health technology assessments to produce HTW Guidance specific to this setting. Unpublished Welsh data on the use of RADTs specifically in the pharmacy setting also exists, and could be used to inform an assessment of clinical effectiveness.

## Brief literature search results

| Resource | Results |
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| HTA organisations | |
| Healthcare Improvement Scotland | Scottish Health Technologies Group Advice Statement 011-18 and Evidence Note 83. Rapid antigen detection tests (RADTs) for group A Streptococcal (GAS) infection. August 2018. http://www.healthcareimprovementscotland.org/our_work/technologies_and_medicines/topics_assessed/shtg_011-18.aspx |
| Health Technology Assessment Group | We did not identify any relevant guidance from this source. |
| Health Information and Quality Authority | We did not identify any relevant guidance from this source. |
| UK guidelines and guidance | |
| SIGN | SIGN117: Management of sore throat and indications for tonsillectomy. April 2010. https://www.sign.ac.uk/assets/sign117.pdf<br><br>This Guideline concluded that there was insufficient to make a recommendation on the use of rapid antigen tests in the diagnosis of group A streptococcus infections in people with a sore throat. The Guideline was published in 2010 and does not appear to have been updated. |
| NICE | NICE diagnostics guidance [DG38]. Rapid tests for group A streptococcal infections in people with a sore throat. November 2019. https://www.nice.org.uk/guidance/dg38<br><br>NICE guideline [NG84]. Sore throat (acute): antimicrobial prescribing. January 2018. https://www.nice.org.uk/guidance/ng84<br>This guideline does not make any recommendations about the use of RADTs to guide antibiotic prescribing decisions. |
| Secondary literature and economic evaluations | |
| ECRI | We did not identify any relevant guidance from this source. |
| EUnetHTA | We did not identify any relevant guidance from this source. |
| Cochrane library | Cohen JF, Bertille N, Cohen R, Chalumeau M. Rapid antigen detection test for group A streptococcus in children with pharyngitis. Cochrane Database of Systematic Reviews 2016, Issue 7. Art. No.: CD010502. DOI: 10.1002/14651858.CD010502.pub2. |
| Other | |
| Information provided by topic proposer | Since November 2018, data have been collected for over 3500 sore throat test-and-treat consultations in Wales. These data include use of RADT, antibiotic prescribing, patient satisfaction measures and patient reported subsequent healthcare utilisation. Whilst these have not been published, the topic proposer states that this dataset could be made available to HTW to inform an evidence evaluation. |

| Date of search: | November 2019 |
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| Concepts used: | Sore throat/pharyngitis; streptococcus (and synonyms) |
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