

ECONOMIC BENEFIT OF EMPOWERING COMMUNITY PHARMACISTS IN THE DIAGNOSIS AND TREATMENT OF ACUTE SORE THROAT IN ENGLAND

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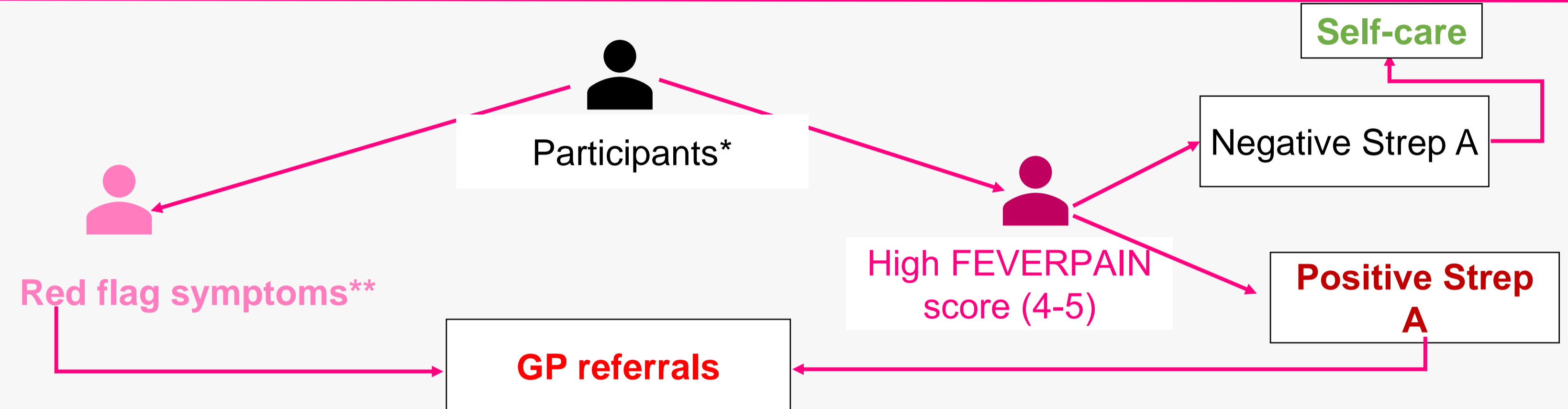
INTRODUCTION

- About 80% of antibiotics are prescribed in England community settings with only minority due to bacterial infection (often Strep A)¹
- Rapid diagnostic test can enhance antimicrobial stewardship and guide treatment decisions¹
- Recent Cochrane review concluded that rapid diagnostic test for sore throat could cut antibiotic prescription by 25%²
- Use of Strep A rapid diagnostic test is a routine clinical practice in countries such as Sweden and Denmark^{3,4}
- However, NICE guidance concluded that the rapid test for Strep A is not cost-effectiveness in GP settings, while acknowledging further research in Pharmacy settings⁵
- In contrast, a clinical and economic analysis carried out by Health Technology Wales found that rapid test for sore throat carried out in pharmacy setting has 100% probability of being cost-effectiveness at a threshold of £20,000/QALY^{6,7}

*QALY: Quality Adjusted Life Year

METHODOLOGY

- Participants aged ≥16 years with sore throat symptoms and FeverPAIN scores 4-5 were tested by pharmacists using OSOM[®] Strep A rapid diagnostic kit.
- Participants were requested to complete a questionnaire on potential treatment choice (A&E, GP visit, pharmacist, self-care). This was used to determine avoided GP visits if diagnostic service was not available
- Potential cost saving was calculated by estimating the monetary value of avoided GP visits for sore throat and extrapolating findings to UK population



RESOURCES AND COSTS ESTIMATE

Cost difference = GP consultation cost – (Cost of Advanced pharmacist practitioner + OSOM[®] Strep A test kit)

Number of GP appointments attended per year between Feb 2018 to Jan 2019 for sore throat symptoms (8-13% of GP consultation)^{8,9}

*Patients without signs of viral infection were excluded
**Red flag symptoms refers to trismus, difficulty breathing, neck swelling, torticollis

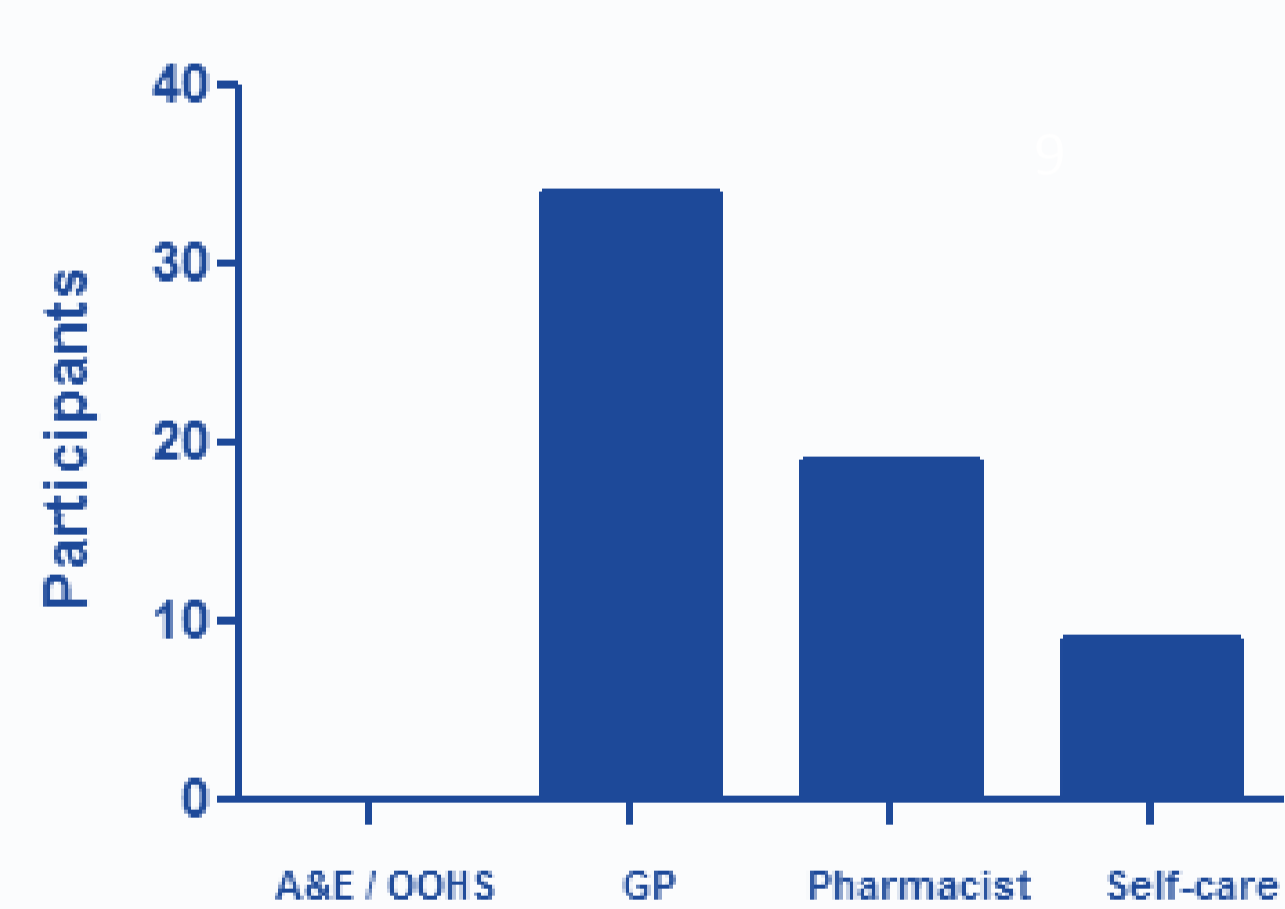
RESULTS

Based on FEVERPAIN score, 36 of the 59 participants were eligible for Strep A rapid swab test and only 12 participants tested positive

- The total cost of the swab test service was **£9.49** which included cost of Strep A swab test kit (£2.16) and 10 mins advanced pharmacist practitioner consultation time (estimated as £7.3) while the cost of GP service was **£31** (with average consultation time of 9.22 mins)

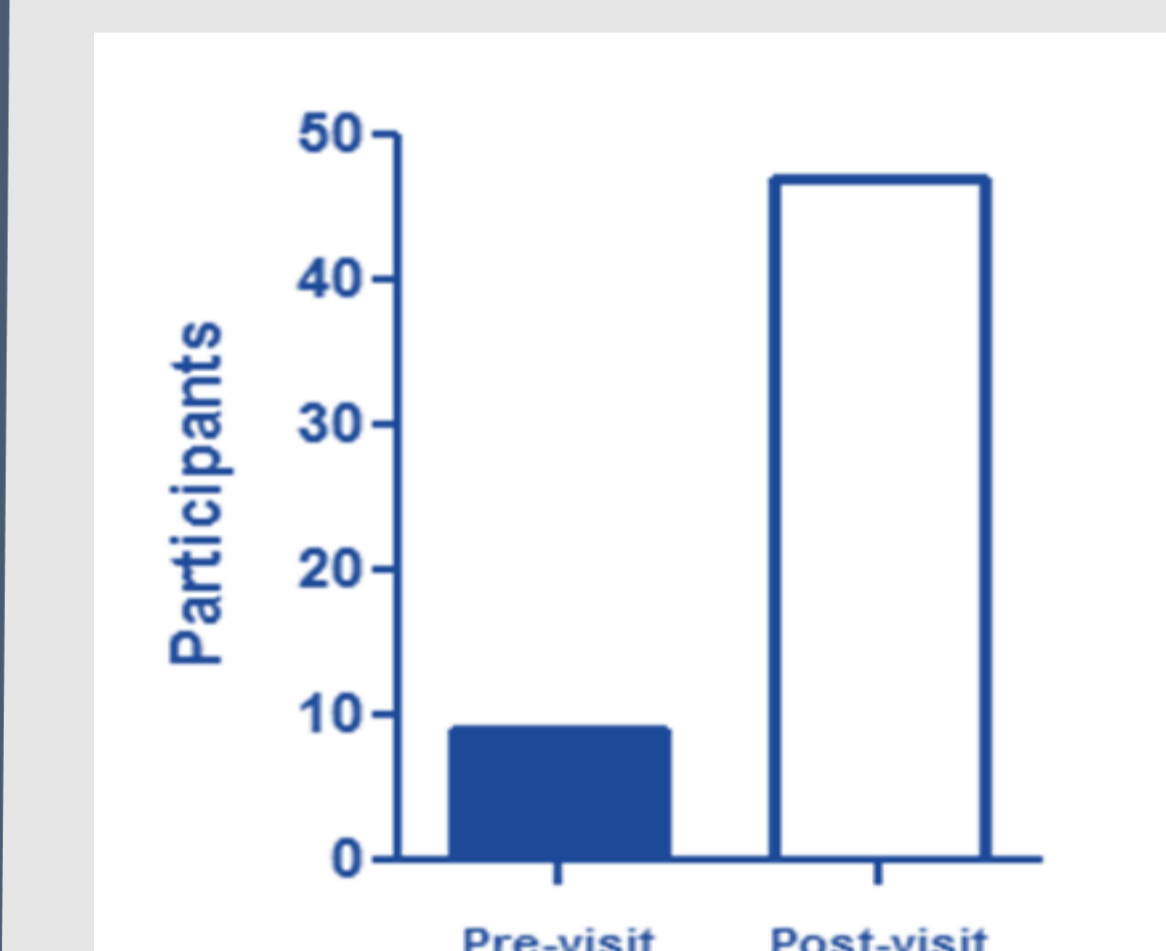
Selected treatment choice pre-study

34 participants selected GP visit, while 19 opted for the pharmacy and 9 participants for OTC self-care.



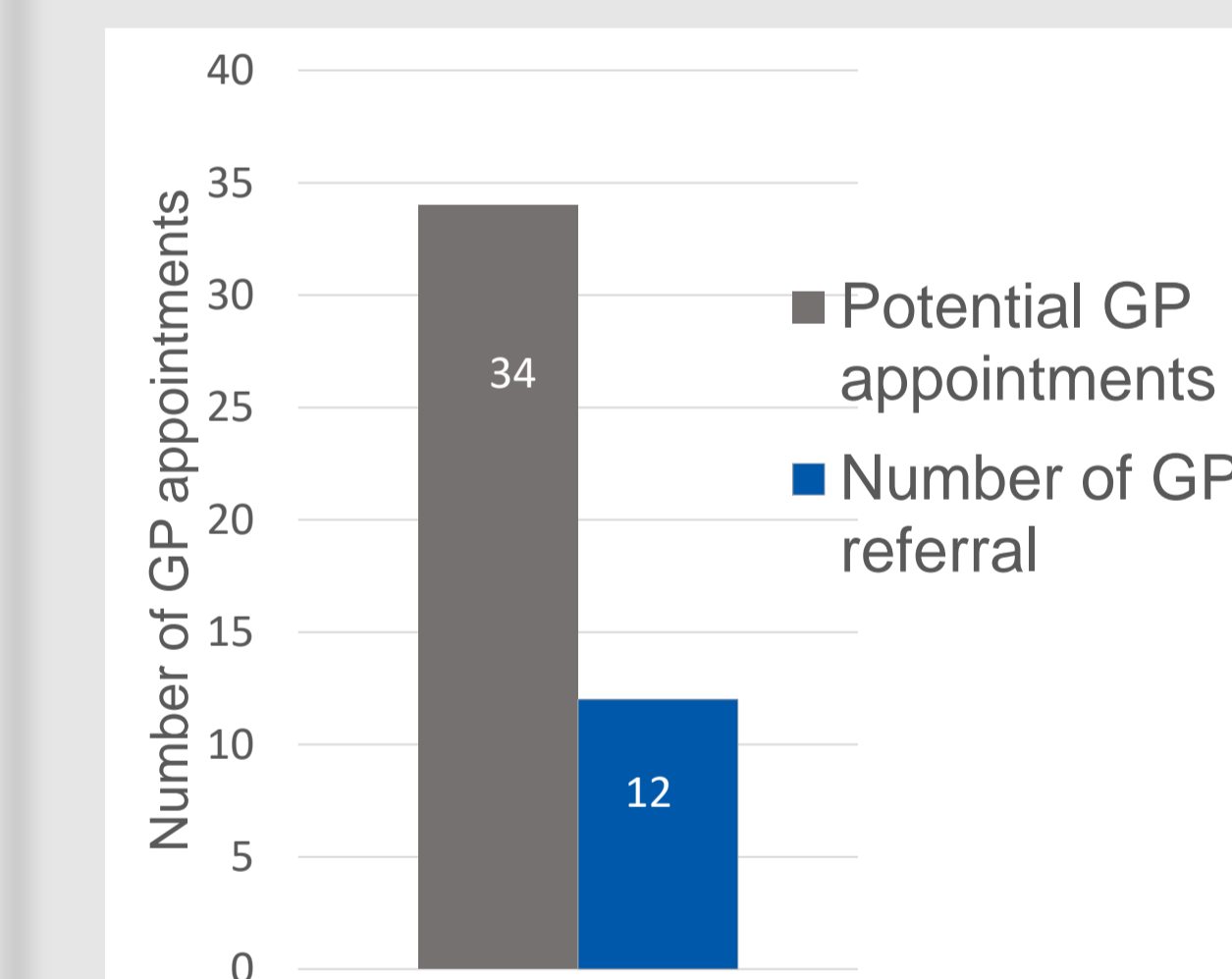
Selected treatment choice post-study

After the swab test study, 45 participants opted for self-care



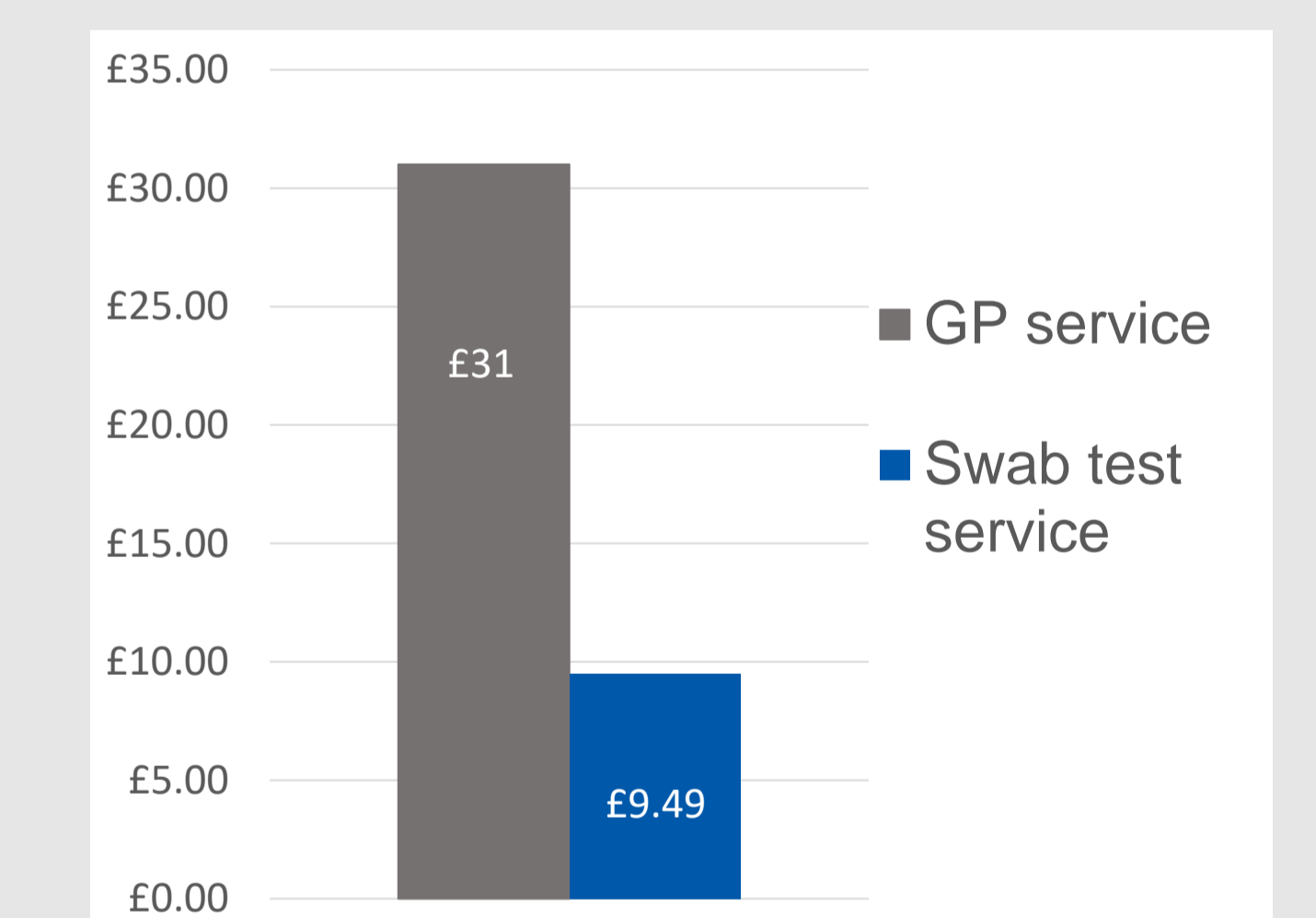
GP appointments saved

Only 12 of the 34 participants who opted for GP visit required referral with 22 potential appointments saved



Cost saving per sore throat patient

About £21 could be saved per patient when the swab test is carried out in a pharmacy setting



About 14 - 23 million NHS GP appointments could be saved per year when sore throat patients are treated in community pharmacy setting

Number of GP appointments attended per year	276,516,000
Number of GP appointments for sore throat per year	22,121,280 – 35,947,080
Estimated total number of GP visits that can be prevented per year (Data from potential appointments saved (65%) was applied to estimate GP visits that can be prevented per year)	14,378,832 – 23,365,603
Cost of replacing a GP visit with Pharmacist consultation per patient for Strep A swab test	£21.51 (2018/2019 GBP)
Total cost savings from avoided GP visits per year for upper and/or respiratory symptoms	Approx £334 – £543 million (2022/2023 GBP)

CONCLUSION

- Approximately £334 million to £543 million per year could be saved by NHS England when rapid test for Strep A is implemented in pharmacy settings
- Similar finding was observed in a study carried out in Canada with a cost-saving of \$1.3 million to \$2.6 million per year across five provinces*
- Rapid diagnostic testing for Strep A in community pharmacies in England could alleviate NHS pressure, save costs and empower pharmacists to treat while preventing antimicrobial misuse and promoting self-care treatment.
- Implementation of rapid test for Strep A would also serve as additional safeguard against antimicrobial misuse, considering the upcoming NHS policy that enables pharmacists to prescribe for minor ailments, including sore throats.

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