Evaluating a Test and Treat Influenza Pathway for the rapid diagnosis and treatment of influenza to alleviate winter pressures and help combat antibiotic resistance

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1 BACKGROUND

This was a collaborative project between Health Innovation Yorkshire & Humber (HIYH), Roche Diagnostics, and Roche Products, delivered for West Yorkshire ICB.

Influenza can cause severe respiratory illness and hospitalisations, contributing to NHS winter pressures. Distinguishing between influenza, COVID-19, and chest infections (or other chest infections) can be challenging without additional testing, and traditional lab results often arrive too late for timely diagnosis and antiviral treatment[1]. Patients waiting for a diagnosis may therefore be prescribed unnecessary antibiotics, fuelling antibiotic resistance[2].

2 AIM

A service evaluation assessed whether introducing community pathways that included a rapid diagnostic test for identifying Flu A/B and SARS-CoV-2 could enhance diagnostic confidence. This supports NHS and UKHSA ambitions for early detection, accurate diagnosis and improved decision-making, to reduce the impact of infectious diseases and antimicrobial resistance.

3 METHODS

A total of 59 patients aged 65+ or clinically 'high-risk' (per UKHSA) were tested in GP practices, care homes and community hospital wards. Data on symptoms, test results, and prescriptions were collected at consultation. Follow-up after 30 days assessed impact on the prescribing decision and any A&E attendance.

ANNUAL CHALLENGE OF INFLUENZA

- **277,000** Bed days [5]
- **46,000** Hospital admissions [5]
- **45,000** A&E visits [4]
- **2,000,000** GP consultations [3]

4 RESULTS

The rapid diagnostic test altered prescribing decisions in 21 cases (35.6%). There was no impact in 8 (13.8%), and influence was unclear in 30 cases (50.8%)[6].

Of the 21 changed cases, 15 patients were not prescribed antibiotics, suggesting the inappropriate use of antibiotics reduced by 25.4% (15/59 cases).

Of 9 flu-positive patients, 6 (66.7%) received antivirals, only 1 (11.1%) received antibiotics and zero attended A&E within 30 days due to flu symptoms.

IMPLEMENTATION RESULTS

- **9/59 (15%)** Positive for flu A/B
- **6/9 (67%)** Prescribed antiviral
- **1/9 (11%)** Prescribed antibiotics

IMPACT

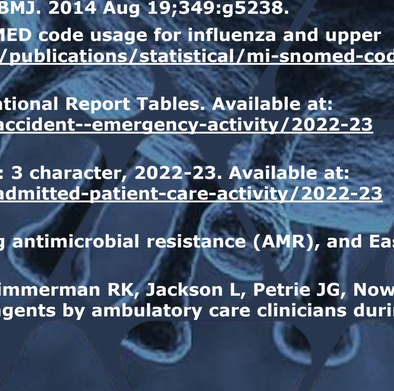
- **0/9** A&E visits
- **0/9** Hospital admission
- **0/9** Deaths

Influenced prescribing

The test and treat pathway influenced prescribing decision-making and thus helped reduce unnecessary antibiotic use and enabled timely antiviral treatment.

66.7% Antivirals given.

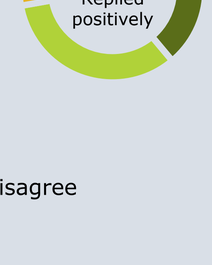
These results suggest an increased number of people received antiviral treatment compared to values previously reported the literature, which can average 19% and rise to 35% of cases when there is access to testing[7].



High satisfaction ratings

Surveyed staff found the test beneficial, it helped guide the prescribing decision and increased the patient's confidence in the decision.

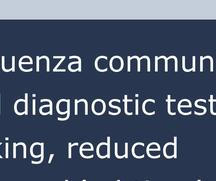
A. How valuable do you think a rapid diagnostic test is?



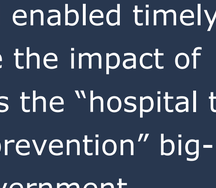
B. How useful do you feel the rapid diagnostic test was?

C. Having a rapid diagnostic test result increased my patient's confidence in the clinical decision.

D. Having a rapid diagnostic test result, helped inform and guide my prescribing decision.



E. Having a 'Negative' diagnostic test result prevented unnecessary patient isolation.



- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree
- No Answer

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5 CONCLUSION

Introducing 'test and treat' influenza community pathways incorporating a rapid diagnostic test enhanced clinical decision-making, reduced unnecessary antibiotic use and enabled timely antiviral treatment to decrease the impact of winter pressures. This supports the "hospital to community" and "sickness to prevention" big-shifts expressed by the UK Government.