



Case study

Community pathway to rapidly test and treat flu

Pathway project evaluation between Innovation Agency, the Academic Health Science Network for the North West Coast (IA), Roche Products Limited and Roche Diagnostics Limited

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Summary

The purpose of the project was pathway service evaluation. We aimed to demonstrate whether using rapid diagnostics to diagnose Flu A/B and SARS-CoV-2 alongside digital reporting in the community could improve patient outcomes, reduce the need for hospitalisations and therefore reduce the burden on secondary care, whilst identifying any further system benefits.

Introduction

The pilot began as a collaboration between Innovation Agency, the Academic Health Science Network for the North West Coast (IA), Roche Products Limited and Roche Diagnostics Limited. A Project Manager from IA and a Market Access Manager from Roche Diagnostics were assigned from the outset to lead the project.

Engagement with NHS stakeholders across the North of England in Spring 2021 involved communication with GPs, infection prevention control nurses, pharmacists, care home managers, public health teams, commissioners, information governance, digital leads, business and finance managers, medicines management, regional academic health science networks and patients. This enabled better understanding of current systems, the ability to identify gaps and changes required, whilst also creating opportunities to gain insight from wider teams.

Three Primary Care Networks (PCN) (Healthier South Wirral x6 GP surgeries; Priory Medical Group York x8 GP surgeries; Valleys Health and Social Care x2 GP surgeries) agreed to participate. Working collaboratively, individualised pathways were designed for each community location in which testing would take place (GP surgeries, care homes, respiratory hubs, home visits).

A digital solution was a priority for sites. HealthCall, an NHS-owned company, was commissioned to build a digital reporting pathway to suit multi-site requirements, streamline processes and capture vital project data. Test results and National Early Warning Score (NEWS2) scores were recorded directly on electronic patient records to support appropriate treatment decisions. Information governance was assured via robust data protection agreements and sharing protocols.

Independent evaluation was commissioned from Unity Insights providing real-world evidence through a mixed methods evaluation. A quantitative analysis of activity data and outcomes demonstrated the cost and health benefits, while a qualitative analysis (patient and staff surveys, as well as semi-structured interviews) provided information on additional benefits. Finally, a budget impact model was developed to help demonstrate the potential impact which could be observed in other areas, should it be taken up more widely.

The project start date of December 2022 was planned to coincide with the annual Chief Medical Officer (CMO) letter outlining approval for the use of flu antivirals in the community. The project ended in March 2023, earlier than expected due to the rapid decline in flu numbers.

“I could be confident knowing whether it was flu or covid”

“I felt glad to have a confirmed diagnosis of why I felt the way I did, it was really helpful”

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Executive overview



Challenges

We originally planned to go live with the pilot in Winter 2021 but due to rising omicron numbers and low flu circulation we decided to postpone until Winter 2022 as we recognised flu was not a priority for our pilot sites at this time – on reflection this gave us more time to implement the digital reporting pathway and support pilot sites further.

It was a challenge to consult stakeholders in each region to gain approvals as this was during a time of significant change and reorganisation within the new integrated care board implementation. We organised an all sites ‘knowledge sharing day’ and used this opportunity to narrow down and identify key stakeholders and support each site in meeting with them all.

A further challenge was bringing together all legal requirements for data processing across all sites and partners. This turned out to be quite a lengthy process and a steep learning curve for us all and involved drafting contracts and detailed data protection impact assessments to cover data usage/ sharing and patient confidentiality. Once this was completed it provided confidence that the project was compliant and the planned go-live date could be met.



Result

In total, 250 at risk patients were tested across all sites, with a 12.4% positivity rate (31 cases) for flu A; 1.2% positivity rate for flu B (3 cases) and 10.4% positivity rate for SARS - CoV 2 (26 cases) using the **cobas® Liat** system.

Of the patients who tested positive for flu, 23 were prescribed antivirals and six were prescribed antibiotics. There were two attendances at Accident & Emergency (A&E) - both patients had tested positive for flu A in primary care. Both patients had received treatment in the community; one required hospital admission via A&E.

“The test was very quick and easy to do. I was informed that my test was clear promptly”

“It was good to know in 20 minutes that I had flu”

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Healthcare Professional feedback

Key feedback themes were identified including timing, project support and communication.

Results from an initial survey which was released to a range of relevant job roles at all three pilot sites indicated that the pathway was easy to understand, and that the test was easy to administer. Quick diagnosis [20 minute test to result time] and appropriate treatment were identified as key clinical and patient benefits.

The support which proved most effective was regular contact with the project leads and working with other teams.

Following analysis of the survey results, semi-structured interviews were arranged with a lead clinician and the person who provided managerial or administrative support at each of the pilot sites to ensure we captured different perspectives and put the results of the survey into context.

When asked about an “ideal” timeframe for planning and launch, the answers varied significantly, but all agreed that planning should start as early as possible.

The main issue identified was the need to launch the pathway once the letter from the CMO was published. This was required as a starting point as the letter authorises use of antivirals for flu management in the community. A key theme from the interviews was that those sites with strong working relationships with pharmacies or who were able to leverage support from their PCN had fewer issues sourcing antivirals following a positive test for flu.

All sites noted that the support provided by the project leads were the key to success, ensuring that information flowed effectively and that any emerging issues were dealt with promptly.

“... We’ve been supported throughout the whole project”

“... Could isolate them [diagnosed residents] and stop flu spreading through the care home”



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“... The benefits we’re talking about in terms of stopping that [care home] outbreak early, you can really make a big impact”

“... Patients do like certainty so still having the message of it’s a virus but it isn’t flu or COVID”

The digital solution for recording test results, sending the data to primary care systems, and sending prompts for follow-up was also covered during the interviews. Two of the three pilot sites used the digital solution and described it as invaluable for embedding the pathway into routine care and ensuring the correct steps were taken. The site which chose not to use the digital solution instead developed their own system in-house. This solution worked well for them but had the original pathway (which would have included community outreach testing) been followed then their solution may have been insufficient. It also requires having the resource and skill to be able to build an in-house solution.

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Patient feedback

All 250 patients in the pilot cohort were sent a feedback questionnaire; 30% of patients responded. Below is a representative sample of feedback quotes.

“As a result of a positive test I was given an antiviral drug and was well very quickly”

“Originally I contacted the GP with a possible chest infection, but was channelled into flu testing”

Adoption and methodologies

A mix of methods, including lean process mapping, design-thinking and scenario planning were used to help primary care sites design a fit for purpose community pathway that could be replicated or adapted to suit different needs. The project also included qualitative interviews and quantitative analysis of the data post pilot to provide evidence and feedback to support further optimisation and scalability in the future.

We approached the project through a service evaluation. Multiple sites were considered for demographic variation and consideration of socio-economic factors.

The project was underpinned by three key features:

- Project management - structure and dedicated resource, accountability and prioritisation.
- Contractual structure – Roche Products Limited and Roche Diagnostics Limited contracted with Innovation Agency, the Academic Health Science Network for the North West Coast (IA). The IA directly contracted with all others involved (Regional academic health science networks, NHS sites, HealthCall and Unity Insights). This developed clear lines of responsibility, managed workload and timescales.
- Collaborative learning and sharing – ensuring that all information was coordinated and communicated rapidly to ensure best practice and continuity of service.



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Outcomes

The project demonstrates that a community flu test and treat pathway, including rapid diagnostics, digital development and connectivity, can be successfully established, implemented and replicated across multiple locations, with the critical factors being cooperation and collaboration from all partners involved. Specifically, the pilot has shown that:

- A community test and treat pathway improves patient care by providing an early diagnosis thus facilitating the prevention of deterioration through appropriate treatment in primary care and potentially reducing the burden on secondary care.
- The pathway is easy to understand and access from a patient perspective; additional information from the GP surgery about early presentation with symptoms may encourage patients to access services within the 48-hours of onset of symptoms.
- The pathway is efficient from a primary care workload perspective, utilising appropriately qualified healthcare professionals in the pathway.
- The pathway is easily adaptable across a range of different community health settings.
- The pathway gives prescribers diagnostic certainty enabling evidence-based conversations with patients about appropriate medication requirements, which may reduce antibiotic requests, improving confidence in both prescribers and patients.

“The very thorough and quick response was excellent. I was asked to go in and see the GP at the surgery. Was thoroughly checked over and the test was done there and then. I returned home and was telephoned by the GP to confirm that I had flu. Medication arranged. Although I got a secondary infection I was relieved I had got the care from my GP's surgery at the outset. Extremely satisfied with the service”



Next steps

- Continue conversations with strategic partners to explore how the pathway may be adopted and scaled across the UK.
- Develop an implementation guide, outlining the key success factors for similar collaborative work across remote sites with multi-disciplinary teams.
- Publish the findings and finalise the budget impact model to support implementation in other sites.



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