

Improving diagnostic stewardship to alleviate the burden of AMR

Lord Darzi says: ... diagnostic stewardship will be the key to alleviating the burden of AMR...

Background

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 word 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.

Methods

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.

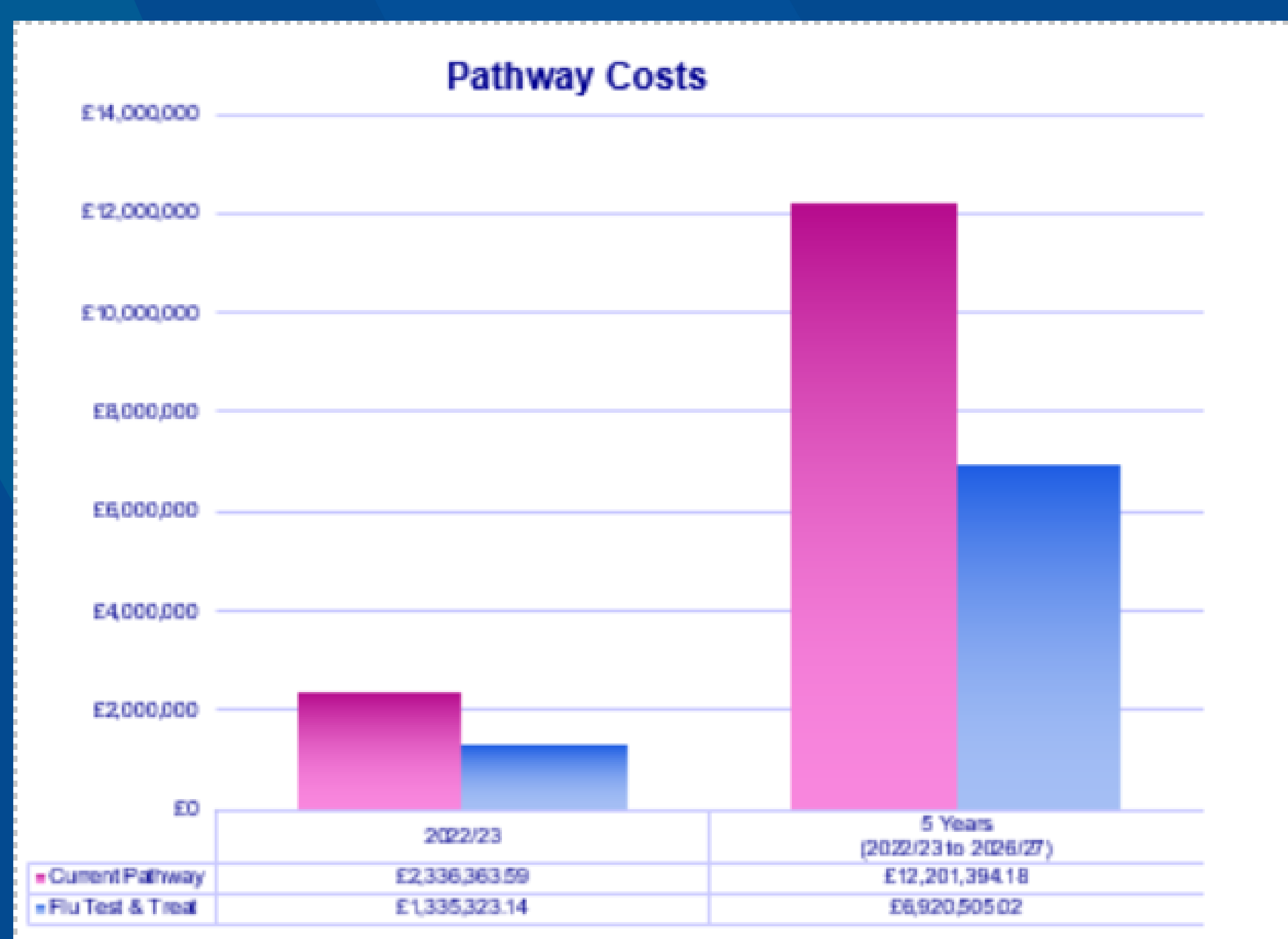
The project was underpinned by three key features:

- 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.

Discussion & Conclusions

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.



Further work to develop the pathway to examine the use of a wider viral panel to create a Community Test and Treat Acute Respiratory Pathway is recommended. Specifically, to continue conversations with strategic partners to explore how the pathway may be adopted and scaled across the UK. This led to the 2023-24 project.

There is a need to develop the budget impact model (draft below) to both test the health economics model and to support wider implementation. The 2023-24 project was designed to thoroughly understand the barriers and enablers using a recognised Implementation Science Framework.