Health Innovation
Oxford & Thames Valley

Office for Life Sciences

NHS

Real-World Evaluation of a Digital application for Severe Asthma Management in the NHS

L. Hudson[1], G. Checketts[1], H. Rupani[2], A. Nanzer[3], D. Pettigrew[4], T. Wilkinson[4], J. Rose[1]

[1]Health Innovation Oxford & Thames Valley - Oxford (United Kingdom), [2]University Hospital Southampton NHS Foundation Trust - Southampton (United Kingdom), [3]Guy's and St Thomas' NHS Foundation Trust - London (United Kingdom), [4]mymhealth - London (United Kingdom)

Background

The digital app (myAsthma Biologic) was designed to support severe asthma self-management and facilitate automated clinical data collection and upload to the National Severe Asthma Registry in from Severe Asthma Centres (SACs) across the UK (Fig 1). A year after its introduction over 3500 patients registered with the app (Fig 2).

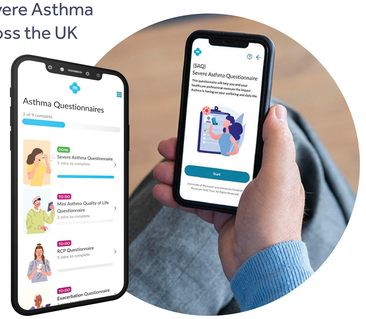


Figure 1: Representation of myAsthma biologic app

22 SACs across the UK
Offered access to my Asthma Biologic

50% of SACs
Are now live with patients registered on the platform

9 services
Have automatic linkage with Severe Asthma Registry

>3,500
patients registered

56%
Of registered patients have activated

>9,000
Education sessions accessed

Figure2: Statistics from NHS national rollout of myAsthma Biologic app

Aim

To conduct a real-world evaluation to assess adoption, usability, and potential clinical benefits while identifying barriers to implementation.

Methods

A mixed-methods real-world evaluation was conducted in collaboration with three NHS trusts (University Hospital Southampton, Guy's and St Thomas', and North Bristol) and digital health provider mymhealth.

The study included:

Stakeholder workshops to identify priority outcomes and requirements.

Qualitative interviews with 11 patients using the myAsthma Biologic app.

Semi-structured interviews with 13 healthcare professionals from three Severe Asthma Centres to explore usability, patient benefit, and administrative impact, supplemented by completion of the System Usability Scale (SUS).

Analysis of implementation processes including staff training, patient onboarding, and ongoing support. Interview data were transcribed and analysed thematically.

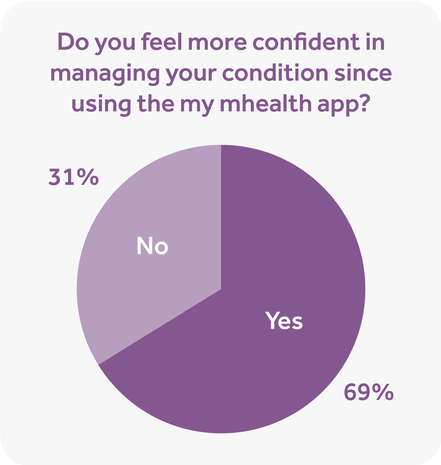


Figure 3: Anonymous Patient survey results (performed by my mhealth and collected nationally)

Preliminary findings indicate broad acceptance and usability. Healthcare professionals noted potential to reduce administrative burden in data entry. Patients found the app intuitive and useful for self-management.

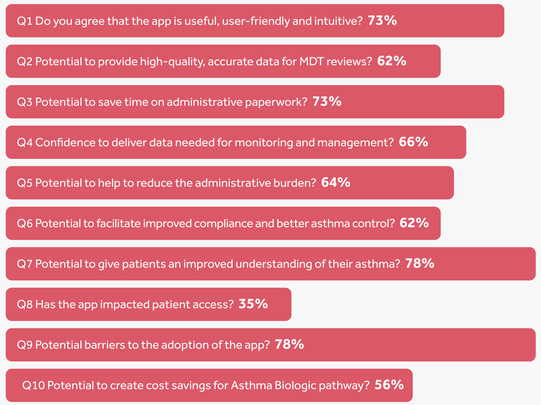
Results

Patient Acceptance: The myAsthma Biologic app was easy to navigate, with peak flow and medication tracking features aiding self-monitoring and asthma management. Patients using the app nationally responded to the my mhealth anonymous feedback questionnaire, of which 69% said they felt more confident in managing their asthma since having the app (Fig 3).

Stakeholder Perspectives: Thirteen clinical stakeholders across three NHS trusts viewed the app as a valuable adjunct for patient self-management, though it is not yet used for decision-making.

Usability and Preferences: The app scored 76 on the System Usability Scale (SUS), indicating acceptable usability. Clinicians noted its potential to reduce administrative burden and improve patient understanding (Fig 4).

Effectiveness as a Monitoring Tool: Full pathway integration into existing workflows requires structured patient onboarding, clinician training, and a process for periodic review of patient data.



Summary of level of agreement for the app in 3 SAC's

Figure 4: Summary of HCP level of agreement. % of HCP who are in agreement with statement.

Conclusion: The app demonstrates potential in enhancing severe asthma care by supporting self-management and improving data collection efficiency.