



Smartphone-powered home urine test improves adherence to ACR testing in patients with type 1 diabetes

Case Study

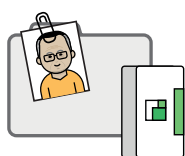
Overview

Healthy.io's ACR 'Adherence as a Service' enables people to test their urine at home using a test kit and accompanying app. The service **improved adherence to ACR testing from 0% to 79%** in consented patients with type 1 diabetes who had been offered the traditional model of care multiple times but did not attend. This helped identify abnormal ACR in 18% of the patients that tested, that might not otherwise have been identified.

An abnormal ACR test is an independent risk factor for both cardiovascular and chronic kidney disease (CKD). ACR testing is one of the worst performing of NICE recommended diabetes care processes, and is more frequently missed in people with type 1 diabetes than people with type 2.

The project was offered in collaboration with Diabetes Care for You, a service at Sussex Community NHS Trust, for patients living with type 1 diabetes across the Brighton and Hove and High Weald Lewes and Havens CCG areas.

ACR Adherence as a Service



1 Patient onboarding

Patients were contacted by Healthy.io's patient onboarding team, who provided information about the service, the importance of annual ACR testing, and supported patients to download the app.



2 Self-testing at home

Patients who consented to take part were sent a kit at home and a link to download an app that talks them through the process of home testing.



3 Results and follow-up

After completing the test, the results were available in SystmOne, the local electronic patient record system, for clinician review. Patient follow-up was initiated based on the ACR results.

Outcomes

Home testing demonstrated increase in adherence to ACR testing in patients with type 1 diabetes while improving patient experience.



Clinical impact:



The service enabled us to identify and prioritise follow-up care for people with early stage CKD that could have otherwise gone undetected"

David Lipscomb, Diabetes Clinical Lead,
Sussex and East Surrey Health & Care Partnership

18% of those tested had an abnormal or high abnormal result, indicating previously unknown albuminuria.

93% of patients contacted agreed to receive a test, of which **79% completed an ACR test at home** (67% of eligible patients)



Patient impact:

97% of patients stated the service was easy to use

89% preferred home testing to attending the clinic



Financial impact¹:

Projected savings are driven by early identification and intervention of CKD, reduced progression to ESRD and prevention of complications. If scaled to all patients with type 1 diabetes with no ACR recorded:

£18,995 in year 1 and
£533,572 in year 5

Projected savings for Brighton and Hove and High Weald Lewes and Havens CCGs

£1,833,571 in year 1 and
£51,504,556 in year 5

Projected savings for NHS England

1. Assuming 86% consent rate and 79% test completion rate. Based on York Health Economics Consortium (YHEC) financial modeling and data from the 2019 National Diabetes Audit.

For more information please visit [healthy.io's website](https://healthy.io)