



# Your smartphone camera is now a medical device

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## How does it work?

Healthy.io is the first company to turn the smartphone camera into a regulatory-approved clinical device. Its first products, Dip.io and ACR, use computer vision and user centric design to turn the smartphone into a urinalysis device.

Built around existing semi-quantitative and qualitative urinalysis dipsticks, our innovation complements established clinical efforts by empowering patients to test themselves at home with no quality compromise, and securely share results with a clinician.

The lay user simply receives a test kit and downloads the app, which provides step-by-step instructions.

Urinalysis is the second most common diagnostic test with 42m annual urine tests undertaken in the NHS. By digitising urinalysis, Healthy.io is opening up an immense opportunity to improve preventative efforts, enable early interventions and reduce costs and workforce pressure in key pathways such as chronic kidney disease (CKD) screening, antenatal care, urinary tract infections (UTI), paediatrics, and outpatient management (e.g. renal, urology).

# Digitising urinalysis

cost-effective solution to improve patient experience and outcomes across clinical pathways

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## Prevention:

### Early detection of CKD in at risk population groups

Healthy.io offers a fully integrated way to provide critical screening to people with diabetes and people with hypertension. Closing the 'last mile' challenge of kidney disease prevention, Healthy.io

brings the test to the patient rather than coming to the clinic. Improving adherence while saving 80% of patients a trip to the doctor to deliver on the preventative agenda locally.

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## Patient safety:

### Increased safety and patient experience in antenatal care

Healthy.io enables pregnant women to reliably and conveniently test at home for proteinuria. Early identification of pre-eclampsia, peace of mind, increased control in between scheduled

visits for high risk patients' pregnancies. Digital home-testing has the potential to reduce 60% of outpatient appointments in the 3rd trimester and reduce antenatal consultation time by 25%.

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## Long term conditions:

### Monitoring and empowering people with LTCs

Shifting urinalysis from the clinic to the home empowers patients to self-manage their health and long term conditions. Self-testing can save

outpatient appointments, reduce consultation time, workforce pressure, waiting lists and admissions (e.g. diabetes, CKD, UTI, MS).

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## Outpatient redesign:

### Digitising outpatient management

Digital urine testing brings the opportunity to reduce outpatient footfall by creating 'virtual clinics' and digitising pre-operative assessments

at scale. For example, early identification of urinary tract infections, urology surgical day case and self-monitoring of renal conditions.



# Dip.io & ACR Smartphone Urinalysis

Home urine testing kit & application

## What is Dip.io?

Semi-quantitative analysis of 10 parameter dipstick indicating: Leukocytes, Nitrites, Glucose, Ketones, Protein, Blood, PH, Urobilinogen, Bilirubin, Specific Gravity.

Analytical sensitivity equivalent to point of care semi-quantitative urinalysis devices.

Mobile App guides the user through the testing process step by step to ensure correct usage.

## What is ACR?

Semi-quantitative analysis of micro albumin (10-150 mg/L), creatinine (10-300 mg/dL) and albumin to creatinine ratio (mg/g).

Interoperability and integration with EHR and clinical systems supporting HL7 and FHIR message types.

Full adherence service provided including delivery to patient's home.



# Commercial partners

## UK Partners



### Modality Partnership

Home ACR testing for people with diabetes is being rolled out with Modality Partnership GP practices covering >500k patients.



### NHS Salford Royal

As a GDE partner, digital urinalysis is being incorporated to 'virtual clinics' for screening post renal transplant patients.



### InHealthcare

Partnering with InHealthcare and using their integration capabilities for primary care deployment.



### NHS Innovation Accelerator (NIA)

Selected onto the NIA, working with AHSNs to nationally accelerate uptake and spread of our innovation.



### Manchester Digital Health Accelerator

Accepted onto the Manchester Digital Health Accelerator for regional scale-up of digitally-enabled solutions.



### Care UK

Rolling out digital urinalysis service for uncomplicated UTI management.

## International Partners



### Geisinger/NKF

The NKF provided Geisinger Health, one of the US's most innovative value focused health systems, with a grant to implement smartphone testing with its hypertensive population.



### Health Holland

Dutch Government grant to implement population smartphone albumin screening. Bringing together public and private sector (KPN Telecom, Kidney Foundation, University of Groningen).



### Johns Hopkins

Conducted 150 women pilot study with overwhelming positive results. 9 in 10 women would prefer testing at home than having to go to the doctor.



### Maccabi

Israel's second largest HMO covering 3 million patients. Initially rolling out Dip.io for 20,000 patients with UTI.



### Meuhedet

1.2 million patient HMO in Israel. Dip.io kits for prenatal screenings in 20k women as part of larger strategy to digitize testing.