**Exploring Implementation of a Home-Based Test for Kidney Disease: A Feasibility Study**

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**Background and Objective**

- The coronavirus pandemic revealed how technology can help remove barriers and bridge care gaps by shifting healthcare to people’s homes.³
- Diabetes and hypertension (HTN) are the leading causes of chronic kidney disease (CKD). Approximately 37 million Americans have CKD but nearly 90% of them are unaware ¹.
- Clinical guidelines for people with type 2 diabetes (T2DM) recommend screening annually for kidney disease using the urine albumin-to-creatinine ratio (uACR).⁴
- Screening is recommended at diagnosis for patients with HTN to establish a baseline for monitoring renal function and to inform dose adjustments for medications that rely on renal excretion.⁴
- An analysis by AMGA of electronic health record (EHR) data from 24 geographically diverse member organizations found only 45% of patients with T2DM and 17% with HTN had uACR measured in the past year.⁵
- Barriers to implementation were assessed according to the Consolidated Framework for Implementation Science.⁶

**Principal Findings**

**Steps in the Minuteful Kidney Implementation Research**

- Patients identified by the provider to receive kit
- uACR kit and letter delivered to patient
- Patient provides informed consent
- Patient downloads app
- Patient engages to complete test
- Results are shown on the app
- Possible to integrate into EHR
- Patients with abnormal results follow up with PCP

**Immunization for Policy and Practice**

- Workflows were designed to improve communication between patients and their care teams to ensure successful screening and follow-up, making the implementation into primary care feasible.
- Home-based testing using tools like Minuteful Kidney may facilitate a population health approach to the identification of CKD resulting in earlier management of the disease.
- Tools like this may serve as a feasible alternative to office-based testing when patients lack transportation or prefer to manage their health from home and may help close the gap on quality measures related to T2DM screening.

**Conclusions**

Nearly half of eligible patients completed the Minuteful Kidney home-based CKD screen

Minuteful Kidney proved to be a useful tool for increasing uACR testing among patients with T2DM and HTN who had not been tested in the past 32 months.

Despite the barriers, many clinicians eventually embraced the use of the test.

Patients found Minuteful Kidney easy to use and reported high satisfaction with a home-based testing tool.

To ensure success, communication in advance between patients and providers is paramount. Patients need to be informed about the test and understand its limitations, while providers need to be informed and support patients using the test.

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**References**