



# PRESS RELEASE

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## NEW APP HELPS PREVENT MEDICATION HARM AND IMPROVE SAFETY IN PATIENTS WITH KIDNEY DISEASE

*App sends patients monthly reminders to review their medications and share changes or problems with clinicians.*

### Highlights

- A one-year trial found that the eKidneyCare smartphone app helped patients with chronic kidney disease take their prescribed medications properly.
- The app may help to prevent adverse drug reactions and other medication errors that can endanger patients.

**Washington, DC (March 18, 2021)** — A newly developed smart phone app may help patients with chronic kidney disease keep up to date on their medications and accurately follow their prescriptions to safeguard their health. The app was tested in a study that will appear in an upcoming issue of *CJASN*.

For individuals with chronic conditions, not taking their prescribed medications properly puts their health at risk. Such “medication discrepancy” may result when patients don’t have all of the information they need to ensure that they’re following their doctors’ advice.

To address this problem, a team led by Alexander G. Logan, MD, FRCP(C) and Stephanie W. Ong, BScPhm, MSc (University Health Network, Mount Sinai Hospital, and University of Toronto) designed and evaluated the effectiveness of an interactive mobile phone-based app that actively engages patients to identify and resolve medication discrepancies and forge a sense of “therapeutic alliance” through better connectivity with health care providers. “We hypothesized that by promoting a sense of self-control and confidence in managing their condition, this would translate into increased patient safety,” said Dr. Logan.

In the investigators’ one-year trial, 182 outpatients with advanced chronic kidney disease were randomly assigned to receive a smartphone pre-loaded with either eKidneyCare or MyMedRec apps. eKidneyCare is synced with pharmacies and includes a medication feature that prompts patients to review medications monthly and report changes, additions, or medication problems to clinicians. MyMedRec is a commercially available

stand-alone app for storing medication and other health information that patients can share with clinicians.

At the end of the study, the eKidneyCare group had fewer total medication discrepancies compared with MyMedRec (median 0.45 vs. 0.67). eKidneyCare use also reduced the severity of clinically relevant medication discrepancies, including those with the potential to cause serious harm. Usage data revealed that 72% patients randomized to eKidneyCare completed 1 or more medication reviews per month, whereas only 30% of patients in the MyMedRec group kept their medication profile on their phone.

“In this one-year study, we demonstrated the sustainability of the intervention and showed that this high level of patient engagement reduced the rate and severity of medication discrepancies, an indirect indicator of improved medication safety,” said Dr. Logan.

An accompanying editorial discusses the study and its clinical implications.

Study co-authors include Sarbjit V. Jassal, MD, FRCP(C); Eveline C. Porter, MN, CNephC; Kyoyoon K. Min, BA, BScN; Akib Uddin, MHSc; Joseph A. Cafazzo, PhD, Peng; Valeria E. Rac, MD, PhD; and George Tomlinson, PhD

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The article, titled “Digital Applications Targeting Medication Safety in Ambulatory High-Risk Chronic Kidney Disease Patients: Randomized Controlled Clinical Trial,” will appear online at <http://cjasn.asnjournals.org/> on March 18, 2021, doi: 10.2215/CJN.15020920.

The editorial, titled “Digital Solutions to Improve Medication Safety in CKD,” will appear online at <http://cjasn.asnjournals.org/> on March 18, 2021, doi: 10.2215/CJN.01680221.

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