

Electronic prescriptions associated with less nonadherence to dermatologic Rx

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Does how a prescription for dermatologic medicine is written - either on paper or electronically—matter when it comes to whether patients will fill it and pick it up?

A new study published online by *JAMA Dermatology* used data from a large, urban county health system to measure primary nonadherence—defined as not filling and picking up all dermatologic [prescriptions](#) within one year of the prescription date—and to study whether electronic prescribing impacted primary nonadherence.

Electronic prescribing has become an important part of improving the quality of care and the patient experience. While electronic prescribing increases the coordination between pharmacists and clinicians, less is known about how electronic prescribing affects the rate at which patients will fill or won't fill new prescriptions. Medication nonadherence is associated with poorer clinical outcomes.

Adewole S. Adamson, M.D., M.P.P., of the University of North Carolina at Chapel Hill, and coauthors conducted a medical records review from January 2011 to December 2013 of a group of new patients who were prescribed dermatologic medication at a single, urban, safety-net hospital outpatient clinic.

A total of 4,318 prescriptions were written for 2,496 patients with 803 patients receiving electronic prescriptions and 1,693 getting written paper prescriptions. Overall, 3,254 prescriptions (75.4 percent) were

filled and picked up.

The patient-level rate of primary nonadherence was 31.6 percent (n=788 patients) because 68.4 percent of patients (n=1,798) filled and picked up all their prescriptions.

The risk of primary nonadherence was 16 percentage points lower among patients given electronic prescriptions (15.2 percent) than patients given paper prescriptions (31.5 percent).

Rates of primary nonadherence decreased after patients turned 30 but increased among patients when they were 70 or older. Hispanic patients had the highest full adherence rates of any racial/ethnic group in the study group, of which nearly half were Hispanic.

Limitations of the study include that it was not designed to explain reasons for patient nonadherence. The results also may be less generalizable because the makeup of the study population may not be representative of other dermatologic clinics.

"In this study, we demonstrated that e-prescribing is associated with reduced rates of primary nonadherence. As the health care system transitions from paper prescriptions to directly routed e-prescriptions, it will be important to understand how that experience affects [patients](#), particularly their likelihood of filling the prescriptions. Primary nonadherence is a common and pervasive problem. Steps should be taken to better understand why primary nonadherence happens and how it can be improved," the study concludes.

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