The Incidence and Determinants of Primary Nonadherence With Prescribed Medication in Primary Care in *Annals of Internal Medicine* Volume 160 Number 7 April 1, 2014


2. Definition—Primary nonadherence—Not filling initial script within 9 months. Varies between 2.4% to 39.7%.

3. Methods—
   Provincial insurance agency in Quebec which provides drug insurance to 50% all residents and health insurance to all residents—private drug insurance to 50% all residents.

   Medical Office of the 21st century—MOXXI—experimental, community based electronic health record—links to data bases and integrates information into electronic health record system.

   MOXXI electronic health record: Prescribed and dispensed drugs. ED visits and hospitalizations in past 12 months. Mandatory treatment indication. Documentation of reason for medication change or withdrawal.

   Prospective cohort study of patients and incident scripts from electronic health record between 2006 and 2009. 15961 patients in network of 131 physicians. Physicians must write minimum of ten scripts per week. New drugs—not prescribed or dispensed in last 12 months. Only patients with public drug insurance and only drugs covered by public plan.

   Definition primary nonadherence—failure to fill a new-incident script within 9 months.

   Script characteristics—Assess new therapy or switch in therapy related to adherence
   Associate pharmacologic class/therapeutic indication with adherence
   Evaluate bond between cost and primary adherence

   Patient characteristics—Age and sex
   Household income estimate
   Comorbid conditions and severity illness—Charlson Comorbidity Index
   and number concurrent medications and hospitalization or ED visit within 6 months of script
   Continuity of care—proportion of visits to prescribing MD w/in year

   Physician characteristics—Sex and years of practice
Statistical analysis—multivariate alternating logistic regression—estimate association among script-patient-MD characteristics and primary nonadherence

4. Results—15961 patients prescribed 37506 new incident scripts with 13.3% switch from one drug to another in same class and 86.7% incident Rx.

Mean age 61.55 and 62.3% female and 25% with household income < 34749. About 30% to ER in past 6 months and 15.3% hospitalized and 5.9% with Charlson Comorbidity Index > 2. Mean number meds 6.25 and 51% all MD visits made to prescribing MDs.

31.3% incident scripts not filled within 9 months with primary nonadherence 11.6% of drugs switched within a class and 34.3% of drugs prescribed as new therapy

Lowest incidence primary nonadherence- diseases GU tract especially UTI
Highest incidence primary nonadherence—headache

Within pharmacologic class—lowest incidence nonadherence antiinfectives and highest incidence nonadherence hormones and synthetics particularly thyroid

Significant dose response relationship between drug cost and nonadherence

Older patients less likely nonadherent.

Higher copay correlated with increased nonadherence.

Use of greater number meds correlated with decreased nonadherence

Increased hospitalizations, ER visits, and positive Charlson Comorbidity Index score correlated with increased odds nonadherence

Increased proportion MD visits with prescribing MD with lower odds nonadherence

Increased odds nonadherence with female physicians.

4. Limitations—Unmeasured patient effects ie attitudes about medications—less likely to participate in research if do not fill scripts.

Need for therapy not assessed ie as needed vs standing basis—eg. skin creams

Consequences of not filling first script unknown—eg. risk of death

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