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APhA2016 abstracts of contributed papers

The following are abstracts of original research presented at APhA2016, March 4–7, 2016, Baltimore, MD. The 2016 abstracts are grouped into the following topics to better facilitate review by specific topic or interest area: Adherence and Persistence; Cardiovascular Care; Collaborative Practice; Communication/Patient Education; Diabetes; Educating the Educators; Emerging Topics; Geriatrics and Long-Term Care; Health Disparities and Cultural Issues; Health Literacy; HIV and Acquired Immunodeficiency Syndrome; Immunizations; Laws and Regulations; Marketing and Management; Maternal, Child, and Women's Health; Medication Reconciliation; Medication Therapy Management; Mental Health; Nuclear Pharmacy; OTC, Self-Care, and CAM; Pain Management; Patient Attitudes and Behavior; Patient Care Services; Personalized Medicine/Pharmacogenomics; Pharmacist Behaviors and Attitudes; Pharmacoeconomics and Outcomes; Professional Development; Public Health; Quality and Safety; Reimbursement; Respiratory Care; Specialty Pharmacy, Substance Abuse and Addictions; Technology; and Workforce and Manpower.

APhA is especially proud to note this year's presented papers from current student pharmacists and pharmacy residents. The experience of presenting at a national meeting will serve these emerging practitioners well as they begin their careers in pharmacy.

Encore presentations—papers presented previously at other meetings—are marked with a special symbol (↺).

Inquiries specific to the research should be directed to the contact author. The contact author e-mail address given. Presenting author is indicated in the abstracts by underlined name.

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Adherence and Persistence

1—ARE DISPARITIES IN USE OF GUIDELINE MEDICATIONS POST–ACUTE MYOCARDIAL INFARCTION DRIVEN BY PATIENT NONADHERENCE?

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Objective: Clinical guidelines recommend statins, beta-blockers, and angiotensin-converting enzyme inhibitors or angiotensin receptor blocking (ACE/ARB) agents as secondary prevention for acute myocardial infarction (AMI) patients. Even so, disparities across age, race, and sex have been documented in the prescribing of and long-term adherence to these medications. However, most studies use administrative claims data and are unable to assess whether the lack of a dispensing record is due to patient nonadherence to physician recommendations for the medications or physician nonadherence to clinical guidelines. The objectives of this study were to: (1) measure guideline medication use post-discharge by age, sex, and race and (2) assess to what degree observed differences were mitigated when initial physician prescribing intent was known.

Methods: In this retrospective study, medical records were abstracted for 1,404 patients, a random sample from a nationally representative claims cohort of Medicare fee-for-service beneficiaries hospitalized with an AMI in 2007–08 (N = 124,695). Physician prescribing intent was obtained from the medical record discharge medication instructions and prescription dispensing information from Part D event data.

Results: Overall, 67.8% of patients were dispensed a beta-blocker, 49.9% an ACE/ARB, and 54.8% a statin. A significant inverse relationship of dispensing rates with advancing age was observed and dispensing rates were lower among blacks than whites. Although prescription dispensing rates differed substantially between age groups and between race categories, the differences in patient adherence to discharge instructions were far less pronounced, and none were statistically significant. Fewer women obtained a statin than men (53.2% vs. 57.0%; $P = 0.037$) but women were more likely to be adherent (77.9% vs. 71.6%; $P = 0.008$). Less than half of the sample (n = 655; 46.7%) were adherent to physician discharge medication instructions.

Conclusions: Differences in medication use between age groups and racial groups is not driven by differences in patient adherence to prescribing instructions. Adherence rates for each of the three medications were low.

2—ABILITY OF ADHERENCE PACKAGING TO IMPACT MEDICATION ADHERENCE IN PATIENTS WITH ALZHEIMER'S DISEASE.

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Objective: The primary objective is to determine how adherence packaging, measured by proportion of days covered

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(PDC), impacts adherence to medications used to treat Alzheimer's disease. Secondary objectives include PDC and number of patients with a PDC of 80% or greater for the following: medications used to treat Alzheimer's disease, medications with a renin-angiotensin system antagonist (RASA) mechanism, and medications with a 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitor mechanism.
Methods: This study will take place at an independent community pharmacy over a period of 6 months. Patients will be included if they have an active prescription for a medication used to treat Alzheimer's disease and have a minimum of 6 months refill history at the pharmacy. Patients will be excluded from the study if they reside in a nursing home or assisted living facility. Eligible patients will be offered enrollment in the adherence packaging service. Patients who decline enrollment will be placed in the control group. PDC will be calculated for both groups at enrollment, 3 months, and 6 months for the following: medications used to treat Alzheimer's disease, medications with a RASA mechanism, and medications with an HMG-CoA reductase mechanism. The PDC data will be analyzed between the study and control groups using an unpaired *t* test. The number of patients with a PDC of 80% or greater for the above medications will be collected and analyzed using a chi-square test or Fisher exact test, as appropriate.
Results: An estimated 50 patients will be eligible for inclusion. This study will contribute to the lack of evidence for the use of adherence packaging in patients with Alzheimer's disease. If successful, this study will reinforce the role of pharmacist involvement in improving medication adherence in this population.

↺ 3—ANALYSIS OF ADHERENCE NOTES FROM A SERVICE-ORIENTED COMMUNITY PHARMACY.

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Original Citation: Witry MJ. et al. Analysis of Adherence Notes From a Service-Oriented Community Pharmacy. International Conference for Communication in Healthcare. October 26, 2015. New Orleans, LA.

4—ANALYZING PATTERNS OF MEDICATION ADHERENCE OF PATIENTS WITH DIABETES IN A CHAIN COMMUNITY PHARMACY.

Berenbrok L, Walker D, University of Pittsburgh, Richardson R, Jordan C, DeJames J, Giant Eagle, Somma McGivney M, Coley K, University of Pittsburgh, E-mail: dwat410@gmail.com

Objective: The objective of the study is to identify patients with diabetes who are likely to become nonadherent to their oral antidiabetic drug (OAD) utilizing predictive modeling. Previous research has linked patient nonadherence to poor therapeutic outcomes as well as to progression of the disease. Limited research has been conducted on effectively targeting patients to receive an intervention before they become nonadherent to improve their medication adherence.
Methods: Patients older than the age of 18 years who receive at least one OAD from predetermined pharmacies of a regional grocery store chain pharmacy will be included. Patients must have filled an OAD prescription within 4 months of the start of this study. The following data will be collected and analyzed for each patient: OAD name and class, OAD purchased using a $4 prescription plan, proportion of days covered (PDC) and adherence patterns prior to data collection, concomitant antipsychotic medication use, concomitant insulin use, and pharmacy store location. Logistic regression will be used to analyze adherence patterns to identify which factors may impact future adherence to OADs.
Results: Results are pending. Data collection and analysis will occur from December 2015 to May 2016. Predicting patient medication adherence can greatly impact how pharmacists identify, screen, and intervene with patients in the community setting. By identifying patients most likely to become nonadherent to their OAD, community pharmacists can effectively and efficiently target patients with a brief intervention to increase medication adherence and Centers for Medicare and Medicaid Services Part D star ratings; such identification may ultimately impact long-term patient health outcomes.

5—APPOINTMENT-BASED MEDICATION SYNCHRONIZATION: A COMPARISON OF THREE MODELS AND IMPACT ON MEDICATION USE.

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Objective: The study objective is to compare three different appointment-based medication synchronization (ABMS) models and determine which patient, pharmacy, and model characteristics impact medication use.
Methods: The benefits of ABMS on adherence, prescription volume, and patient satisfaction have been shown; however, further investigation is needed to determine optimal ABMS model design as well as which patient and pharmacy variables impact medication use. This retrospective pre- and post-observational analysis includes ABMS and control patients from three community pharmacy models. For Model A, a centralized facility is operated by pharmacists, who perform all ABMS model activities via telephone. For Model B, all ABMS activities are performed at the pharmacy either by a technician or pharmacist. For Model C, patient recruitment and appointments are conducted at the pharmacy while enrollment, medication synchronization, and follow-up calls are performed by technicians at a centralized facility. Inclusion criteria are patient age older than 18 years and use of two or more maintenance medications for 6 months or longer. For comparison between models, several Pharmacy Quality Alliance (PQA) performance measures will be analyzed including: proportion of days covered (PDC), adherence to non-warfarin oral anticoagulants, statin use in persons with diabetes, use of high-risk medications in elderly persons, and medication therapy for persons with asthma. Additional variables for comparison include percent change in adherence, number of incremental fills, and vaccines administered. Patient- and pharmacy-level variables that will be evaluated for impact on medication use include age, gender, copay, PDC, number of medications, prescribers, pharmacy visits pre-enrollment, prescription volume, and certain geocode variables by county. The association of PDC, vaccine administration rate, PQA performance measures, and ABMS type will be estimated using multivariate mixed linear or logistic regression analyses.
Results: Research in progress.