

The impact of community pharmacy-delivered medication synchronization on healthcare utilization and costs

Wendy Lantaff, PharmD

Hook Drug Foundation Fellow in Community Practice Research

Purdue University

College of Pharmacy

PURDUE
COLLEGE OF PHARMACY

17th Annual Midwest Social and Administrative
Pharmacy Conference in Ann Arbor - Oct. 2016



Introduction

- **Medication synchronization**
 - Also referred to as the Appointment Based Model (ABM)
 - Four core elements exist
- **Background:** Limited literature on medication synchronization and economic effect
 - Most medication synchronization literature evaluates adherence

Ateb, Inc. (2013). "Assessing the Impact of a Community Pharmacy-Based Medication Synchronization Program" National Community Pharmacists Association.

Hayes, T.C. Jr., et al. Evaluation of a Medication Adherence, Synchronization, and Monitoring Program at an Independent Community Pharmacy. J Am Pharm Assoc (2003) 2014;54: e76-e219.

Holdford, D.A., and Saxena K. (2015). "Impact of Appointment-Based Medication Synchronization on Existing Users of Chronic Medications." J Manag Care Spec Pharm 21(8): 662-669.

Holdford, D. A. and Inocencio T.J. (2013). "Adherence and persistence associated with an appointment-based medication synchronization program." J Am Pharm Assoc (2003) 53(6): 576-583.

Painter, J.T., Moore, G., and Morris, B. Addressing Medication Non-Adherence through Implementation of an Appointment-based Model Synchronization Network. Available: <http://ncpa.co/uploads/Arkansas-Report-Final.pdf>

Patterson, J.A., Holdford, D.A., and Saxena, K. The Cost-Benefit of Appointment-Based Medication Synchronization (ABMS) in Community Pharmacies. Presented at APhA March 2016, Baltimore, MD.

Valentin A., Hiland S., and Petrick M. When the Stars Align: Impact on Star Adherence Measures Following a Modified Appointment-based Medication Synchronization Program. J Am Pharm Assoc (2003) 2014;54: e76-e219.



Introduction

- **Primary Objective:** To evaluate the association of medication synchronization on per member per month (PMPM) total healthcare costs in a sample of Medicare Part D beneficiaries
- **Secondary Objectives:**
 - To assess the relationship of medication synchronization on Medicare beneficiaries' outpatient, inpatient, emergency department (ED) utilization, and overall healthcare utilization
 - To assess the relationship of medication synchronization on Medicare beneficiaries' time to first hospitalization and/or ED visit following enrollment in a medication synchronization program
 - To evaluate the relationship between medication synchronization on Medicare beneficiaries' chronic medication adherence through Proportion of Days Covered (PDC) at two time periods (six and twelve months after enrollment)

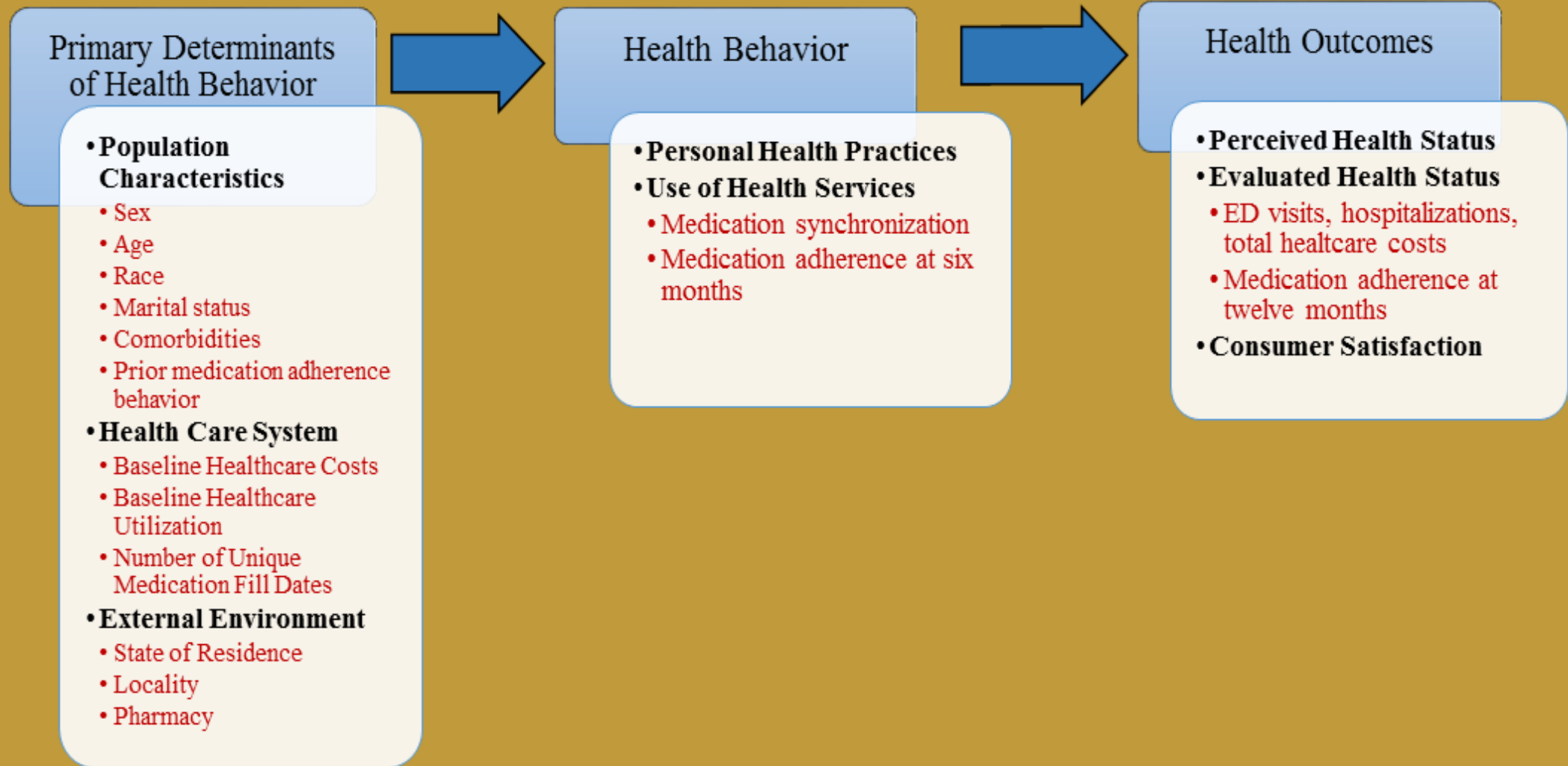


Study Methods

- **Data source:** Medicare data
 - Research Data Assistance Center (ResDAC)
- **Study design:** Retrospective cohort study using Research Identifiable Files (RIF)
 - Cohort identification
 - Propensity score matching
- **Sample size:** 6975 beneficiaries per cohort
 - 80% power for detecting a 10% lower mean in PMPM
 - Type I error rate (α) of 0.05



Conceptual Framework



Study Methods

- **Data years:** 2013, 2014, 2015
- **Data files:** Inpatient, Skilled Nursing, Outpatient, Home Health, Carrier, Part D Event Drug, Drug Characteristics, Plan Characteristics, Prescriber Characteristics, Pharmacy Characteristics and the Medicare Master Beneficiary Summary File
- **Analysis:** SAS 9.4

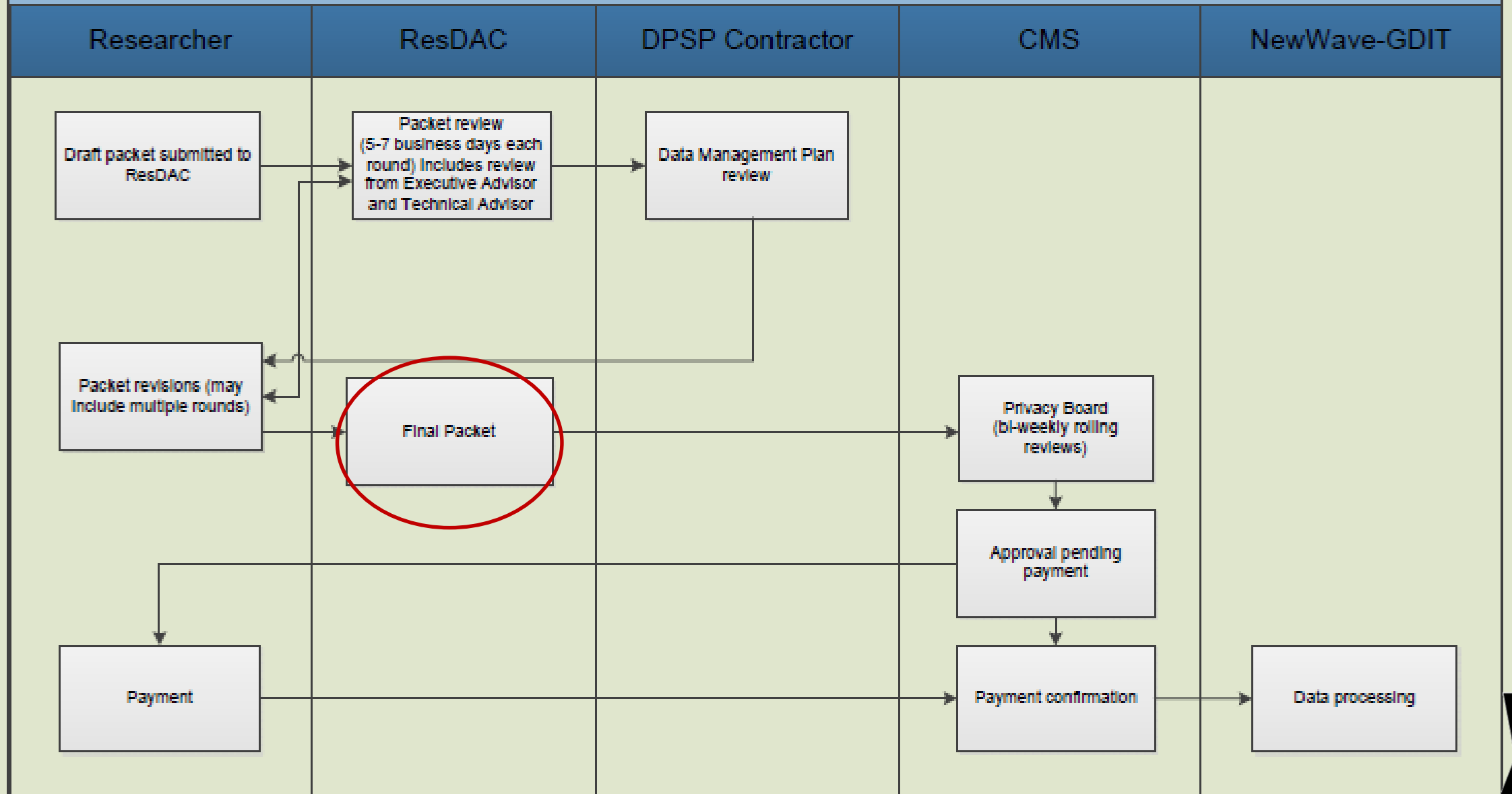


Methods: Timeline

- **Fall 2015:** wrote Community Pharmacy Foundation (CPF) grant
- **January 2016:** CPF grant funded
- **May/June 2016:** Attended ResDAC workshops
 - Introduction to Medicare
 - Introduction to Medicare Part D
- **In progress:** Construction of data dictionary
- **May 2016:** Draft packet submitted to ResDAC for 2013 & 2014 data files
- **June/July 2016:** Draft packet review and revisions
- **August 2016:** Final packet submitted, once approved DUA can be signed and Purdue University IRB paperwork submitted



CMS Research Identifiable Request Process and Timeline



Next Steps

- **Fall 2016:** Expecting data for the 2013 & 2014 files
- **November 2016:** 2015 data available and updated paperwork submitted
- **Winter 2016:** Initial data cleaning and analysis
- **Spring 2017:** Final data cleaning and analysis



Discussion

- Obstacles encountered
 - Cohort identification
 - Change in files desired
- Limitations of data



Acknowledgements

- **Faculty Advisor:** Dr. Margie Snyder
- **Head of the Department of Pharmacy Practice:** Dr. Alan Zillich
- **Additional Members of my Graduate Committee:** Drs. Matthew Murawski, Carol Ott, and Joseph Thomas III
- **Additional thanks to:** Heather Jaynes, Spencer Lourens, and the wonderfully patient technical advisors at ResDAC
- **Funding:** Community Pharmacy Foundation

