



The Agency for Healthcare Research and Quality (AHRQ) Innovations Exchange awards the Pharmacist on the Care Team intervention a “strong” evidence rating: *The results of the evaluation(s) show consistent direct evidence of the effectiveness of the innovation⁵*

A Need for Pharmacy Medication Management

Approximately 25% of patients given a new prescription experienced an adverse drug event in a study of four primary-care practices¹. A pharmacist on the care team can help prevent and ameliorate adverse drug events by optimizing medication therapy.

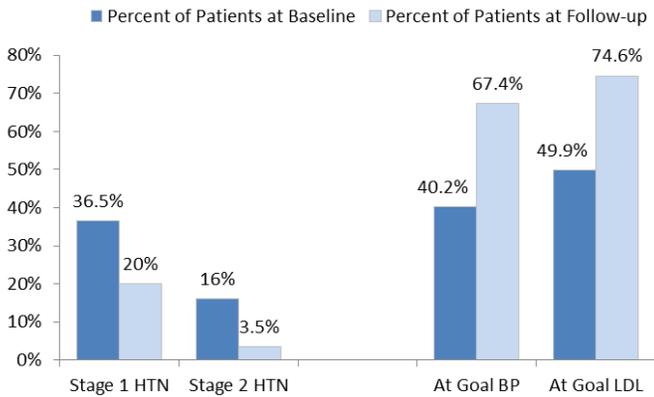
The Asheville Project (City of Asheville, NC)

The Asheville quasi-experimental, longitudinal cohort studies provided initial evidence of pharmacist on care team benefits

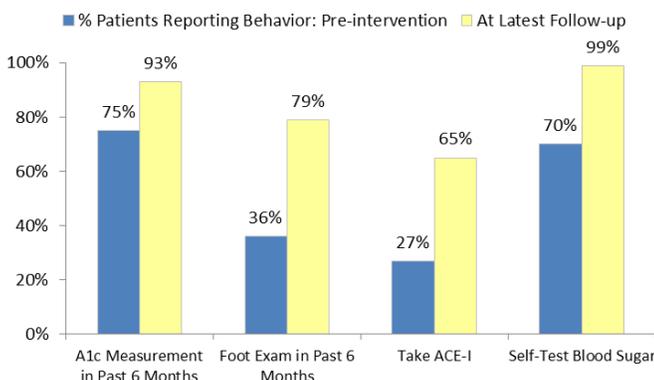
Asheville Cardiovascular (CV) Events and Costs:

Category	Before	After
Rate of CV events	77 per 1,000	38 per 1,000
CV-related medical costs	\$1,362 PPPY	\$734 PPPY

Outcomes for Cardiovascular Pharmacy Management²



Outcomes for Diabetes Pharmacy Management³



Typical “Pharmacist on the Care Team” Services

- 60-minute initial patient interview and counseling session with telephone follow up and future 20-30 minute sessions
- Comprehensive review of lab results and medications (including over-the-counter medications)
- Determination of drug interactions, how to improve medication therapy, and cost savings alternatives
- Interactive communication with physician
- Point of care testing (e.g., blood pressure)

Recent Studies Bolster Evidence for Pharmacy Care

Randomized controlled trials since the Asheville project are adding to the evidence of clinical and economic benefits.

Ralph’s Pharmacy Intervention Clinical Outcomes⁵

	Baseline Mean	Final Mean	% Change in Mean
Heart Patients			
BP Systolic	136.1	129.5	-4.85%
BP Diastolic	83.5	79.3	-5.03%
LDL	104.1	97.2	-6.63%
Diabetes Patients			
HbA1C	7.9	7.1	-10.1%
BP Systolic	136.1	130.4	-4.2%
BP Diastolic	81.0	76.3	-5.8%
LDL	91.6	84.0	-8.3%

Ralph’s Pharmacy Intervention Claims-Related Outcomes (Hypertensive patients, 12 months post-intervention)

	Intervention Group	% Change	Control Group	% Change
Total Costs (Mean ±SD)	\$1792 ±3847	-15.2%	\$1968 ±5112	-2.63%
Office Visits	\$111 ±129	+21.6%	\$97 ±106	+14.8%
ER Visits	\$54 ±229	-39.2%	\$83 ±475	-16.0%
Inpatient Visits	\$584 ±3122	-38.5%	\$1108 ±5025	-3.1%
Pharmacy Claims	\$505 ±550	+14.3%	\$402 ±495	+6.0%
Coaching Program	\$495 ±256	N/A	N/A	N/A

Right Care Initiative Pharmacy Collaborations— Research and Implementation Activities

UC San Diego Demonstration Project

Overview

- A randomized control trial to evaluate a medication therapy management service (MTMS) model in a physician office
- 10 PharmD-MD partnerships implemented
- 90 patients per group (usual care & MTMS)

Selected Findings (Study in process through June 2012)

- 44.6% patients were on 10+ medications
- Drug therapy problem was identified among 46.3% of patients
- Only about 25% of patients are highly adherent to their medications though nearly 75% report rarely had difficulty remembering to take medication
- Preliminary outcomes demonstrate promise

UnitedHealthcare/Ralphs/San Diego School District (VEBA) Collaboration

Overview

- A partnership in San Diego between California Schools Voluntary Employee Benefits Association (VEBA), United Healthcare health plan, and Ralphs pharmacy
- Implements an MTM model for 300 diabetes patients using a community pharmacist model

Progress

- Enrollment is underway
- Intervention will last six months

Center for Comparative Effectiveness and Outcomes Improvement (CEOI) Analyses

Objective Examination of Cost Effectiveness and Modeling

- Return on Investment estimates range from \$3 to \$12 for every \$1 invested. (Though improved study designs needed for more accurate assessment)
- Cost effectiveness varies based on several factors, including:
 - Pharmacist reimbursement rate
 - Intervention intensity
 - Characteristics of population receiving intervention



Questions a Pharmacist Can Review

- Is the medication dose appropriate to the patient's age or other conditions and medications?
- How can medication therapy be changed to improve patient compliance or address side effects?
- Are all prescribed medications necessary?
- What time of day should patients take medications?
- With what should (or should not) a medication be taken?
- Are less expensive, equivalent medications available?

Works Cited

- 1) Gandhi TK, Weingart SN, Borus J, et al. "Adverse Drug Events in Ambulatory Care." *New England Journal of Medicine*. 348, no. 16 (2003): 1556-1564.
- 2) Bunting BA, Smith BH, and Sutherland SE. "The Asheville Project: Clinical and economic outcomes of a community-based long-term medication therapy management program for hypertension and dyslipidemia." *Journal of the American Pharmacists Association*. 48, no. 1 (2008): 23-31.
- 3) Cranor CW, Bunting BA, and Christensen DB. "The Asheville Project: Long-Term Clinical and Economic Outcomes of a Community Pharmacy Diabetes Care Program." *Journal of the American Pharmaceutical Association*. 43, no. 2 (2003): 173-184.
- 4) Wertz D, Hou L, DeVries A, et al. "Clinical and Economic Outcomes of the Cincinnati Pharmacy Coaching Program for Diabetes and Hypertension." *Managed Care*. (March 2012): 44-55.
- 5) AHRQ Health Care Innovations Exchange. "Pharmacists Monitor Hypertensive Patients and Make Recommendations to Physicians, Leading to Better Blood Pressure Control and Increased Physician Adherence to Established Guidelines." 2005.

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