

HealthCall®

MEDICATION ADHERENCE

THE USE OF AUTOMATED PATIENT RESPONSE™ SOLUTIONS
IN MEDICATION THERAPY MANAGEMENT

HealthCall®

Medication Compliance: The use of HealthCall® Automated Patient Response™ solutions in Medication Therapy Management

Introduction

Chronic medical conditions, such as diabetes, renal failure, hypertension, heart failure (HF), and chronic obstructive pulmonary disease presently impose a significant financial and resources burden on the health-care system. Given there is no cure for a number of these conditions, medication therapy management (MTM) is typically of paramount importance. There is also a wealth of literature demonstrating an improvement in patient outcomes with the use of medications that have become a standard of care such as lipid lowering agents in patients with coronary artery disease and beta-blockers in patients with heart failure.

Impact of Disease Management on MTM Compliance: Previous Research

DeBusk et al.¹ reported on the impact of a disease management program on medication therapy compliance using self-reporting in a group of subjects following a myocardial infarction. There were 585 subjects included in this analysis, 293 of which participated in a disease management program in addition to usual care. The remaining 292 subjects received usual care only. Of the disease management group, 98% and 91%, respectively, were compliant to their lipid-lowering drug therapy at the six and twelve month follow-up. Comparatively, compliance with lipid-lowering therapy in the usual care group was only 21% at six months and 17% at twelve months (Figure 1). Furthermore, the reduction in LDL level was significantly greater in the disease management group compared to the control group.

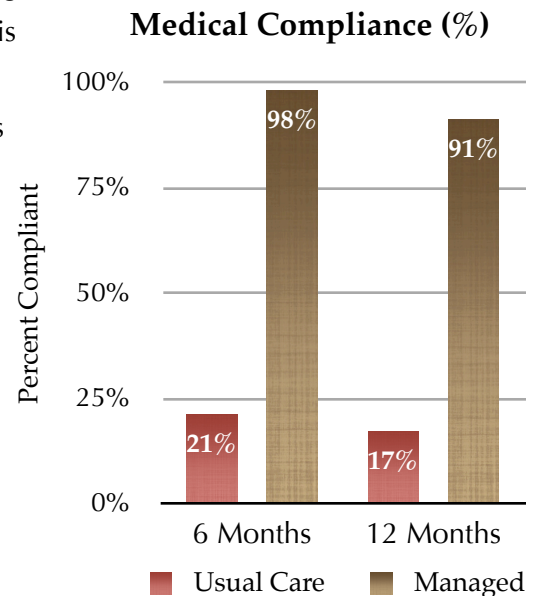


Figure 1: Percent of subjects compliant who are enrolled in an MTM program versus usual care at 6 and 12 months.

HealthCall®: Documented Benefits and Implications for Improved Medication Compliance

HealthCall® is a medical communications company helping healthcare professionals in hospitals, physician groups, home health organizations, dialysis centers, and ambulatory surgery centers to reduce costs and improve patient outcomes. HealthCall® has demonstrated and published clinical and fiscal efficacy. HealthCall Automated Patient Response™ solutions are used throughout healthcare and are designed to support the physician's care plan, increase the patient's understanding of and compliance with the treatment plan and improve the patient's self-management skills.

In a recent study including 282 patients diagnosed with NYHA class III/IV HF, utilization of the HealthCall® system produced a significant reduction in the number of hospitalizations compared to patients receiving usual care only (88% vs. 57% free of repeat hospitalization during seven month follow-up).² Subjects receiving usual care alone were 4 times more likely to be hospitalized during the follow-up period than were those subjects receiving usual care plus HealthCall®. Moreover, the cost-savings associated with the reduction in hospitalization was dramatic. The cost to administer the outpatient management program was \$33,180 over the seven-month period. The average cost for one hospital admission was \$6,744. Hospitalization costs for the HealthCall® group and usual care group were \$161,856 and \$512,544, respectively. After factoring in the cost to administer the outpatient monitoring program, the total estimated expenditure in the HealthCall® group was \$317,508 less than the group receiving usual care alone.

The improvement in clinical outcomes observed with HealthCall® may be linked to positive physiologic adaptations. In a recent study presented at the Heart Failure Association of America annual meeting in 2007, a comparison between HealthCall® and usual care interventions revealed that subjects in the former group demonstrated a significant reduction in b-type natriuretic peptide at the seven-month follow-up. Subjects in the usual care group, however, had no change in this clinically important marker.³

As in the DeBusk study, HealthCall® tracks self-reported daily medication usage; however, HealthCall® employs an automated collection method whereas the DeBusk study staffed nurses who manually called the patients. HealthCall® increases the patient’s awareness and provides a level of accountability that fosters greater self-care. Over time, patients learn the benefits of their medications and how they alleviate related symptoms. In a recently completed analysis, 94% of 523 subjects with HF using HealthCall® reported compliance with MTM over a six-month tracking period. This percentage is comparable to compliance rates reported by DeBusk et al.¹ and well exceeds the estimated compliance rates in patients with chronic disease⁴ (Figure 2). Given the automated approach of HealthCall®, however, high compliance with MTM can be achieved with greater efficiency and a substantially lower administrative cost compared to the model used by DeBusk et al.¹

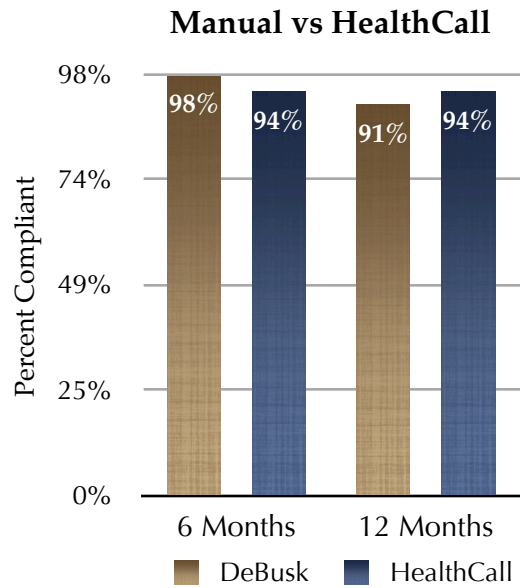


Figure 2: Percent of subjects compliant who are enrolled in a MTM program with manual calls versus HealthCall®.

Previous research has demonstrated the high clinical relevance of self-reported MTM compliance. In 1,015 patients with diagnosed coronary artery disease, Gehi et al.⁵ found the risk of subsequent cardiac events was more than two times greater in subjects who reported non-compliance with MTM compared to those reporting compliance. This analysis further demonstrates the importance of increased communication and individualized care that HealthCall® provides.

Conclusion

Medication therapy management is a central component to the care of patients diagnosed with a chronic disease. Increased communication, coordinated interventions, and individualized care plans embodied in the HealthCall® solution are documented to dramatically improve medication compliance. Cost-efficient medication therapy management programs enabled by HealthCall® are particularly attractive medical compliance options.

Reference List

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- (2) Dunn P, Gambetta M, Nelson D, Herron B, Arena R. Impact of the Implementation of Telemanagement on a Disease Management Program in an Elderly Heart Failure Cohort. *Progress in Cardiovascular Nursing*. In press 2007.
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