

Barriers to Medication Adherence in United States Veteran Administration Patients with Type II Diabetes

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Background & Significance

- The Veterans Health Administration serves 8.76 million Veterans each year, 25% of whom are affected by Type II Diabetes ^[1]
- Among Veterans, Type II Diabetes ^[2]
 - Is the leading cause of blindness, end-stage renal disease, and amputations
 - Imparts a 20-fold increase in risk for lower limb amputations
- Medications reduce retinopathy, nephropathy and vascular disease^[3]
- Nearly 50% of patients with diabetes do not take their medications as prescribed ^[4]
- Nonadherence places financial & functional burdens on Veterans, & leads to social isolation^[2]

Research Question

What barriers exist to medication adherence in the Type II Diabetic U.S. Veteran?

Objectives

This integrative literature review aims to:

- Identify barriers to medication adherence in Type II Diabetic Veterans
- Identify approaches providers can use to better individualize care for Veterans



Method

- Research articles were obtained from Ovid Medline and CINAHL databases
- Search terms used: Type II Diabetes, medication adherence, United States Veteran
- Five research articles met inclusion criteria and were analyzed using Ganong's method (1987)^[5]

Key Findings

Top reported barriers to medication adherence in the Type II Diabetic Veteran:

- **Pharmacy services**
 - Cost of medication/copayments
 - Frequent refills
 - Unaligned refills
- **Communication breakdowns**
 - Pharmacy & Provider
 - Patient & Pharmacy
 - Patient & Provider
- **Lack of education and support**
 - Unclear follow up expectations
 - Complex medication regimens
 - Untreated mental illness



Authors	Findings	Limitations
Wang, V., et al (2011)	Retrospective observational study 2,426 VA diabetic patients. Increased co-pays for medications results in decreased compliance in low-comorbidity groups. Patients choosing which medications to fill based on price	Unable to track Veterans' use of non-VHA primary care. Did not track other insurance coverage available such as Medicare or Medicaid.
Kocarnik, B., et al (2012)	Retrospective cohort study 280,603 diabetic patients in 196 VA clinics. Showed no difference in adherence to oral hypoglycemic agents with the presence of a pharmacist.	Pharmacists' roles may vary between different clinics; additional survey conducted by the clinic director.
Nelson, L., et al (2011)	Kansas VA retrospective EMR review 124 diabetics with ½ psych problems (schizophrenia or related) matched with non-mental health patients. Poor mental health management had a negative impact on diabetes adherence. No difference in adherence with diabetes to those controlled on mental health medication.	Study completed with only Kansas VA patients. Only evaluated mental health as a variable in compliance - just over 50% were at goal in both groups for hgbA1c.
Hsu, C., et al (2014)	45 west coast VA patients 12 focus groups of 6-8 participants Barriers identified pharmacy staff, quality control, customer service with wait time, ordering and deliver meds, and a formulary.	Pharmacy facilitated and didn't focus on other adherence concerns. Insight in low-adherence group not well represented.
Neugaard, B., et al (2011)	VA in Florida looked at adherence to chronic disease treatment guidelines between 2002-2006 with descriptive statistics. 80% adherent with OHA medications 58% compliant with ADA A1c recommendations	Limited to one VA in Florida Didn't identify reasons for non-adherence or Veterans with co-morbidities.

Implications

Education

- Educate "high-risk" and high comorbidity patients about their inter-related disease processes
- Educate patients about their numbers

Policy

- Organization-specific resources for staff, policies, and procedures must be in place
- Clear expectations of pharmacists related to patient care

Practice

- Proper mental health management
- Strict adherence to American Diabetes Association Practice Guidelines with regular follow ups

Listen to your patients, what can they afford? Adjust medication regimens to allow for adherence

Research

- Further research needed to identify and establish consistent role of pharmacists at VA primary care clinics



References

1. Brown, M. T., & Bussell, J. K. (2011). Medication Adherence: WHO Cares? ^[4]
2. Franklin, H., et al (2014). Cost of lower-limb amputation in U.S. veterans with diabetes using health services data in fiscal years 2004 and 2010. *Journal of Rehabilitation Research and Development*, 51(8), 1325-1330. ^[2]
3. Ganong, L.H. (1987). Integrative reviews of nursing research. *Research in Nursing and Health*, 10(1), 1-11. ^[5]
4. Garber, A. J. et al (2017). Consensus Statement By The American Association Of Clinical Endocrinologists And American College Of Endocrinology On The Comprehensive Type 2 Diabetes Management Algorithm – 2017 Executive Summary. *Endocrine Practice*, 23(2), 207-238. Retrieved from <https://www.aace.com/sites/all/files/diabetes-algorithm-executive-summary.pdf> ^[3]
5. Hsu, C., et al (2014). Factors affecting medication adherence: Patient perspectives from five veterans affairs facilities. *BMC Health Services Research*, 14(1).
6. Kocarnik, B. M., et al (2012). Does the presence of a pharmacist in primary care clinics improve diabetes medication adherence?. *BMC Health Services Research*, 12(1), 391-399.
7. Nelson, L. A., et al (2011). Medication adherence and glycemic control in patients with psychotic disorders in the Veterans Affairs healthcare system. *Pharmacy Practice* (18863655), 9(2), 57-65.
8. Neugaard, B. I., et al (2011). Quality of Care for Veterans with Chronic Diseases: Performance on Quality Indicators, Medication Use and Adherence, and Health Care Utilization. *Population Health Management*, 14(2), 99-106.
9. VA research on Diabetes. (2016, October 12). Retrieved January 31, 2017, from <http://www.research.va.gov/topics/diabetes.cfm> ^[1]
10. Wang, V., et al (2011). Does medication adherence following a copayment increase differ by disease burden?. *Health Services Research*, 46(6pt1), 1963-1985.