



Statin Non-Adherence: What Can You do About It?

In 2010, cardiovascular disease was the second most common cause of death, accounting for 3,267 (22%) of the deaths in Nebraska. Cancer ranked first; only one percent higher than heart disease. Cardiovascular disease remained the leading cause of death in Nebraska women and in patients over 75 years of age.¹

The National Heart, Blood, and Lung Institute identifies hypercholesterolemia as a controllable risk factor for cardiovascular disease.² The National Lipid Association recommends all adults, starting at 20 years of age, should be assessed for LDL-C (Low-density lipoprotein cholesterol) and triglyceride levels. Patients with elevated LDL levels should be instructed about lifestyle modifications and receive pharmacologic therapy, when warranted.³ According to the American College of Cardiology and the American Heart Association's 2013 guidelines, the benefit of primary and secondary prevention of cardiovascular disease outweighs the risk of statin therapy in certain patients without heart failure who were not receiving hemodialysis. These patients must have one of the following:

- Clinical atherosclerotic cardiovascular disease (ASCVD)
- LDL-C levels over 190 mg/dL
- Ages 40 to 75 years with diabetes and LDL-C levels between 70 to 189 mg/dL
- Estimated 10-year risk of ASCVD of 7.7% or greater, with LDL-C between 70 to 189 mg/dL, but no clinical evidence of ASCVD or diabetes, between the ages of 40 to 75 years

Patients are considered to have clinical ASCVD if they have a history of acute coronary syndromes, myocardial infarction (MI), angina, arterial revascularization, stroke, transient ischemic attack or peripheral arterial disease due to arterial sclerosis.⁴

According to the World Health Organization, patient adherence is the degree the person's behavior corresponds with the agreed recommendations from a health care provider, implying that patients are part of the decision-making process. Statins have demonstrated the ability to decrease cardiovascular disease, however, studies show that patients who are non-adherent to therapy do not reach LDL-C goals. In one adherence study of primary care patients taking statins, 50% of patients were identified as non-adherent. In this prospective study, the patients who reported adherence were more often male, had a significantly lower body mass index, and a higher level of high density lipoprotein cholesterol.⁵

The causes of non-adherence are complex, but many have been identified. The Understanding Statin Use in America and Gaps in Patient Education (USAGE) survey examined 10,138 current and former statin users. It found the majority of patients indicated that their physician was the major source of information about the treatment for their elevated cholesterol levels. The patients who discontinued treatment were less likely to agree that their physician had adequately explained their cholesterol levels and how this affects their cardiac health. In this study, patients reported that adverse events or the perception of adverse events were the primary reason for treatment discontinuation and one-third did so without consulting their physician.⁶

Direct to consumer advertising and the internet may play a role in statin non-adherence. Patients' concern about negative effects, including liver damage from statin therapy may be overestimated based on information received from advertisements.⁷ Patients who discontinued therapy were more likely to have used the internet to research statins than patients who remained on statin therapy.⁶

A study by Perreault et al. examined the impact of statin adherence on the incidence of coronary artery disease (CAD). In patients who took more than 80% of the prescribed doses, the risk reduction of MI was 47% after the first year, compared to the group who took less than 20% of the prescribed doses. In patients who were followed for less than 1 year, the association of adherence and a reduction in coronary artery disease was not significant. It may require at least a year of treatment to achieve protection from a statin.⁸

Recently, the DUR Board studied nearly 4,000 Nebraska Medicaid patients taking statins or ezetimibe. Prescription filling records did not demonstrate patient compliance in 583 patients. With the high numbers of cardiovascular disease patients in Nebraska and the number of deaths associated with cardiovascular disease, healthcare professionals should not underestimate how important their interactions with patients are for successful treatment. Patients will not benefit if they are non-adherent to therapy. As prescribers and pharmacies are evaluated by third party plans for quality measures, it is important to note that statin adherence is one of

those measures. All healthcare providers can increase adherence by explaining the disease and addressing concerns about adverse effects.

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