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Effects of Increased Utilization of CVD Medications by Medicare Beneficiaries on Spending Vary by CVD Status

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Abstract

Background/Aims: To understand the value of our substantial investment in cardiovascular disease (CVD) care, it is important to understand the associations of CVD therapies and spending. The aim of this study was to assess the effect of increased utilization of CVD medications on spending among different CVD risk subgroups.

Methods: We used 1999-2009 Medicare Current Beneficiary Survey data to identify 26,903 non-institutionalized, fee-for-Service 65 years or older users of angiotensin converting enzyme inhibitor (ACE), angiotensin receptor blocker (ARBs), other antihypertensives, and statins (61,741 person-years). For each drug, we used generalized linear models to estimate the effect of additional prescription fills on spending (i.e. overall, Medicare, out-of-pocket); stratified according to presence of CVD and, in those without CVD, level of CVD risk (high versus low).

Results: In the high CVD risk subgroup, each additional prescription fill of ACE, ARB, or statin decreased overall spending (marginal effects: -\$274 (CI=-405, -143), -\$139 (CI=-300, 22), and -\$93 (CI=-250, 64) respectively) and Medicare spending (marginal effects: -\$273 (CI=-386, -160), -\$156 (CI=-314, 3), and -\$160 (CI=-306, -14) respectively). Similar patterns were found in the subgroup with CVD (marginal effects of ACE, ARB, and statins on overall spending: -\$184 (CI=-362, -6), -\$184 (CI=-377, 8), and -\$117 (CI=-235, 2); and on Medicare spending (-\$232 (CI=-362, -103), -\$186 (CI=-363, -9), and -\$229 (CI=-328, -130)). The increased use of these drugs has the opposite effect in the low CVD risk subgroup generally. In contrast, in all 3 subgroups, each additional prescription fill of these drugs generally increased out-of-pocket spending by up to \$55.

Conclusions: We observed overall cost-savings associated with increased use of CVD medications among both patients with pre-existing CVD and those at high CVD risk. Eliminating or reducing copays for these drugs (i.e. value based insurance design) for such patients may improve their overall health and save money.

Key words: CVD medications, health care spending, CVD risk status, health policy.

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