PREVALENCE, AWARENESS AND MANAGEMENT OF HYPERTENSION, DYSLIPIDEMIA, AND DIABETES AMONG UNITED STATES ADULTS AGED 65 AND OLDER
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OBJECTIVE: Hypertension, dyslipidemia, and diabetes, which are established risk factors for cardiovascular disease (CVD), have been previously described among adults aged 65 and older, but have not been updated to reflect current national data. We assess prevalence, awareness, treatment and control rates among U.S. adults aged 65 and older with respect to hypertension, dyslipidemia, and diabetes, and describe predictors associated with awareness and management of these factors. METHODS: Analysis of nationally representative data collected from adults aged 65 and older (n = 3810) participating in the National Health and Nutrition Examination Survey (NHANES) 1999-2004. RESULTS: Women have a significantly higher prevalence of hypertension than men (76.6% vs 63.0%) and a significantly lower rate of control when treated pharmacologically (42.9% vs 57.9%). Dyslipidemia prevalence is 60.3% overall, and women are significantly more likely to be aware of their condition than men (71.1% vs 59.1%). Diabetes affects 21.2% of older adults, and 50.9% of prevalent cases are treated pharmacologically. Goal attainment among those treated is problematic for all three conditions–hypertension (48.8%), dyslipidemia (64.9%), and diabetes (50.4%). Having two or more doctor visits annually is associated with goal attainment for dyslipidemia. CONCLUSION: Knowledge of cardiovascular health in older adults and understanding gender gaps in awareness can help physicians and policymakers improve disease management and patient education programs.

SIGMOID MAXIMUM EFFECT MODELING OF CORONARY HEART DISEASE DEATH AND MYOCARDIAL INFARCTION RATE VERSUS LOW-DENSITY LIPOPROTEIN CHOLESTEROL IN STATIN SECONDARY PREVENTION TRIALS
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OBJECTIVE: Guidelines and expert opinion regard the relationship between low-density lipoprotein cholesterol (LDL-C) and coronary heart disease (CHD) event rates from prevention trials as linear or log-linear. However, these relationships require key assumptions that are typically invalid in biological systems, and may be more fully described by a sigmoidal maximum effect function. METHODS: Data were extracted from statin secondary prevention trials of at least 4-years duration (CARE, LIPID, 4S, HPS, TNT, IDEAL; N = 57,042; average duration 5.2 yrs, range 4.8-6.1 yrs). Linear and modified nonlinear sigmoid maximum effect (sEmax) models were constructed using WinNONLIN (v.1.5, Pharsight Corporation, Mountain View, CA) to evaluate the relationship of annualized absolute rates of CHD death plus nonfatal myocardial infarction (NFMI) versus average LDL-C on-treatment. Model output included E0 (CHD death + NFMI %/yr at LDL-C = 100 mg/dL) and fit parameters [r2 and Akaike’s Information Criteria (AIC)]. The model-dependent number needed to treat (NNT) for one year to prevent one CHD death + NFMI event with LDL-C reduction from 100 mg/dL to 70 mg/dL was also calculated. RESULTS: Fit parameters indicated that the sEmax was the more correct model (r2 = 0.906, AIC = 8.40; linear r2 = 0.876, AIC = 15.99). The sEmax model yielded an E0 of 1.37%/yr, whereas the linear model E0 was biologically implausible at -0.76%/yr. The CHD death + NFMI rate at LDL-C = 100 mg/dL (sEmax 1.91%/yr; linear 2.13%/yr) and LDL-C = 70 mg/dL (sEmax 1.58%/yr; linear 1.14%/yr) resulted in NNT of 303 and 101 based on sEmax and linear models, respectively. CONCLUSION: The relationship between LDL-C and annualized rate of CHD death + NFMI is sigmoidal and best described by a nonlinear maximum effect model (sEmax). This model demonstrates a marked diminishing rate of return with aggressive LDL-C lowering, strongly suggesting alternative risk modification measures be explored at LDL-C C100 mg/dL. These findings have clinical trial design, treatment guideline, managed care, economic, and public health implications.

MEDICAL CLAIMS FOR GASTROINTESTINAL ADVERSE EVENTS ARE COMMON IN PATIENTS PRESCRIBED CLOPIDOGREL
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OBJECTIVE: Clopidogrel is commonly co-prescribed with aspirin in patients with heart disease, and therefore the associated risk of gastrointestinal adverse events may be high. We sought to determine the incidence of medical claims for potential gastrointestinal adverse events among clopidogrel users in an administrative database. METHODS: Clopidogrel users were identified in a large US database (representing a network of over 70 managed care plans) based on the following criteria: an initial clopidogrel prescription between between October 2003 and January 2004, a clopidogrel-free window in the prior 6 months, and at least 24 months of continuous eligibility over the study time-frame. ICD9 codes were used to identify new peptic ulcer and gastrointestinal bleeding events in the 12 months after the first clopidogrel prescription. RESULTS: There were 368,061 subjects identified who met the selection criteria. Of these subjects, 58% were male and 72% were greater than or equal to 60 years of age. The average duration of clopidogrel use was 200 days. The proportion having a medical claim for peptic ulcer or gastrointestinal bleeding was 6.2%. Higher incidences were seen in women compared to men (7.4% vs. 5.4%; p < 0.000001) and those who were greater than or equal to 60 years of age compared to those under 60 (6.9% vs. 4.3%; p < 0.000001). CONCLUSION: There is a high incidence of medical claims for peptic ulcer or upper gastrointestinal bleeding among patients who receive clopidogrel, especially in women and those who are greater than or equal to 60 years of age.

ASSESSMENT OF SAFETY FOR BROMOCRIPTINE: COMPARISONS OF REPORTING SYSTEMS AND A RETROSPECTIVE COHORT STUDY
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OBJECTIVE: Because of recent attention to public adverse event reporting systems, we assessed findings from published case reports and adverse drug reactions reported to the World Health Organization (WHO) Programme for International Drug Monitoring and findings from an analysis of patients in the General Practice Research Database (GPRD) regarding bromocriptine and risk of myocardial infarction and stroke (CVD). METHODS: We tallied reports of adverse CVD events related to bromocriptine in the medical literature using PubMed (years...