Secondary prevention medications of cardiovascular diseases in China: findings from China PEACE million persons project

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Topic(s):
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Background: Cardiovascular diseases (CVD) is the leading cause of death in China. Secondary prevention medications can improve the prognosis of CVD, yet little is known about the current use, variation and associated factors of these therapies in China.

Purpose: The aim of this study was to describe the current use of secondary prevention medications among patients with established CVD in the community setting in China, assess variations across population subgroups, and identify the individual characteristics associated with these therapies.

Methods: We studied 2.6 million participants aged 35-75 years from all 31 provinces in the China Patient-Centered Evaluative Assessment of Cardiac Events (PEACE) Million Persons Project, a government-funded public health program conducted from 2014 to 2018. Participants self-reported their history of ischemic heart disease (IHD) or ischemic stroke (IS) and medication use in an interview. Among participants with IHD and/or IS, we assessed the reported use of secondary prevention medications (anti-platelet drugs and statins) in the overall population and in 1,530,408 population subgroups, defined by all possible combinations of 16 factors (age, sex, urbanity, geographic region, ethnicity, occupation, annual household income, education, marital status, medical insurance, current smoker, current drinker, history of hypertension, history of diabetes, body mass index and years since diagnosis). Multivariable mixed models with a logit link function and community-specific random intercepts were fitted to assess the associations of demographic, socioeconomic and health behavior factors with the reported use of secondary prevention medications.

Results: Among 2,613,035 screened participants, 2.9% (74,830) had history of IHD and/or IS (1.2% for IHD, 2.4% for IS). Overall, the reported use rate either anti-platelet drugs or statins was 21.9% (18.3% anti-platelet drugs, 11.0% statins, and 7.4% both). Among the 1,530,408 population subgroups, the use of secondary prevention medications varied substantially (3.4% to 52.0%). Multivariable analyses found that that younger people, women, those living in rural areas, current smokers, current drinkers, people without hypertension or diabetes, and those with established CVD for more than 2 years were less likely to take anti-platelet drugs or statins (Figure).

Conclusions: The current use of secondary prevention drugs is suboptimal and varies substantially across population subgroups in China. Our study identifies target populations for interventions to improve secondary prevention of CVD.
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