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Access to essential cardiovascular medicines in Kerala, the state with the highest cardiovascular disease burden in India

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Introduction: The 2030 Agenda for Sustainable Development has prioritized the reduction of premature mortality due to NCDs – including cardiovascular diseases (CVD) - by a third. To achieve this goal, countries must achieve 80% availability of affordable essential medicines. Essential medicines as identified by the World Health Organization are those that meet the priority healthcare needs of majority population. Globally, India has the second highest CVD burden with over 1.7 million deaths annually, with the highest CVD morbidity and mortality rate in Kerala.

Purpose: To evaluate the availability, prices and affordability of essential CVD medicines in Kerala state to facilitate implementation of informed public health policy.

Methods: Using WHO/HAI methodology, we obtained data on availability and prices for 25 essential CVD medicines in a representative sample of 7 public-sector hospitals (survey anchors) and 37 private retail pharmacies located near the survey anchors in four districts. Additionally, we obtained the data from 10 government-subsidized discount pharmacies. We report availability as percentage of surveyed facilities where a given medicine was found. Median prices ratios (MPRs) were calculated by comparing consumer prices to the MSH International Reference Prices (IRPs). Medicines were considered affordable if the monthly supply costs less than one-day's wage of the lowest paid government worker.

Results: In the public-sector facilities (hospital and discount pharmacies combined), the mean (SD) availability of the surveyed CVD medicines was 52% (35.3%) for generic and 35.3% (20.7%) for originator brand (OB) version. 28% of surveyed medicines (including amlodipine, clopidogrel, losartan, metformin) were available in over 80% pharmacies. 12% (captopril, streptokinase and glyceryl trinitrate) were not available in any of the facilities.

In the private sector, mean (SD) availability of generic and OB versions was 64.4% (37.2%) and 43.7% (34.6%), respectively. MPR was 1.28 [range: 0.02 (insulin NPH) – 16.7 (simvastatin)] for both lowest-priced generics (LPG) and most-sold generics (MSG). The lowest paid government worker in Kerala would spend 0.06 - 3.48 days' wages for the monthly supply of essential CVD medicines in the private sector.

In government-subsidized discount pharmacies, mean availability was 49.3%. The generic medicine prices were 74% lower than in the private sector.

Conclusions: Availability of essential CVD medications in both public and private sector pharmacies fall short of the 80% target. In the private-sector, many essential CVD medications seem unaffordable especially considering the polypharmacy among CVD patients. Introducing policies to improve medicine availability in government-subsidized discount pharmacies is crucial in tackling Kerala's ever-increasing CVD burden.