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**Godman, Brian and Zeng, Wenjie and Zhen, Junjie and Feng, Mengying and Finlayson, Alexander and Campbell, Stephen (2014) Initiatives to improve prescribing efficiency in China and their influence : cardio-cerebral vascular medicines as a case history to provide future direction. *Basic and Clinical Pharmacology and Toxicology*, 115 (Suppl ). ISSN 1742-7835 , [http://dx.doi.org/10.1111/bcpt.12259\\_1](http://dx.doi.org/10.1111/bcpt.12259_1)**

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## Initiatives to improve prescribing efficiency in China and their influence; cardio-cerebral vascular medicines as a case history to provide future direction

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### Abstract

Background: Pharmaceutical expenditure has grown by 16% per annum in China during the past decade. This has been enhanced by increased coverage as well as incentives to physicians and hospitals. Hospital pharmacies dispense 80% of medicines in China, with medicines currently accounting for 46% of total hospital expenditure. Hospitals currently rely on revenues from procurement of medicines for their sustainability. Principal measures to moderate growth in drug expenditure include initiatives to reduce procured drug prices. However, to date no formal pricing policies for generics in China similar to Europe and limited demand-side measures to enhance appropriate prescribing, e.g. no universal measures to monitor the quality of prescribing. Current incentives have led to irrationality in prescribing; e.g. high use of injectable drugs, antibiotics and traditional Chinese medicines (TCMs) despite the development of essential medicine lists. Objective: Assess current utilisation and expenditure of CV medicines including TCMs between 2006 and 2012 and compare the findings with Western European countries. Methods: Uncontrolled retrospective study of prescriptions to treat cardio-vascular disease in one of the largest hospitals in Southwest China. Results: Utilisation of CV drugs increased 3.3 fold during the study period, greatest for TCMs. Procured expenditure increased 4.85 fold. Variable utilisation of generics at 29% to 31% of the total for each molecule in recent years among high volume pharmacotherapeutic products. However, low prices for generics have been achieved through multiple supply-side measures, matching those achieved among some European countries. Continued irrationality in prescribing is seen with high use TCMs despite limited evidence and the utilisation of drugs dropping significantly once low prices procured. Conclusion: Prices still have appreciable impact on the subsequent utilization of different CV drugs in China. Consequently, there is appreciable potential to introduce measures similar to Western Europe to improve future rationality and reduce overall drug costs. This could include robust formularies, quality targets and financial incentives. We are beginning to see improved rationality in the use of medicines with a reduction in TCMs. This will be monitored along with other suggestions to further enhance accessibility to medicines in China without prohibitive increases in pharmaceutical and overall expenditure.