

## THE ROLE OF HEALTH INSURANCE IN THE COST-EFFECTIVE USE OF MEDICINES

As part of the joint World Health Organization (WHO)/ Health Action International (HAI) Project on Medicine Prices and Availability, a series of in-depth reviews have been published on pharmaceutical policies and interventions that may improve medicine availability and affordability. This policy brief summarises the key points from the review on pharmaceutical management strategies used by health insurance systems to improve the use of medicines, which included a systematic literature review and four low- and middle-income (LMIC) country case studies. *Page references to the review paper are given in parentheses.*

### WHAT IS THE BASIS FOR THIS POLICY BRIEF?

WHO/HAI Review Series on Pharmaceutical Pricing Policies and Interventions. Working paper 2: *The role of health insurance in the cost-effective use of medicines* by Laura Faden, Catherine Vialle-Valentin, Dennis Ross-Degnan and Anita Wagner, Department of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care Institute. [www.haiweb.org/medicine-prices/policy/index.html](http://www.haiweb.org/medicine-prices/policy/index.html)

### Medicines and Insurance Coverage

#### KEY CONSIDERATIONS

#### What are the main benefits of health insurance coverage of medicines in LMICs?

Reduced financial barriers to access, increased utilisation, a more reliable source of finance, and leverage for influencing medicines use in the public and private sectors.

#### What are the main risks?

Clinically unnecessary increases in consumption, fraud and loss of expenditure control.

#### Is health insurance coverage of medicines feasible and cost-effective in LMICs?

Some low income countries have demonstrated that it is feasible for health insurance to cover essential

inpatient and outpatient medicines for a high share of the population and influence the use of medicine, even in resource-poor settings.

#### Is health insurance coverage of medicines appropriate for all LMICs?

Public delivery systems can also achieve many of the same benefits and use many similar strategies to health insurance schemes, but often have less scope to create consumer and provider incentives for cost-effective use of medicines.

#### Are there any complementary policies needed to support cost-effective health insurance coverage of medicines?

Other national medicines policies such as an essential medicines list and generics policies are complementary. An efficient public sector supply chain for medicines can achieve lower medicines prices and so reduce costs of health insurance coverage for medicines.

#### What are the key pre-requisites for implementing health insurance successfully?

Multi-faceted medicines management strategies are needed to control expenditure, prevent fraud and promote cost-effective use of medicines, combining *selection, purchasing, contracting and utilization management* strategies. Effective monitoring systems and audit are vital.

## What is the role of health insurance in cost-effective medicines use?

Medicines spending may often be high enough to cause poverty in LMICs. Around half of LMIC households spend all of their out-of-pocket health expenditure on medicine (1). (p.2) Health insurance systems can reduce prices paid by consumers for medicines and increase access and use. They also have potential to improve the use of medicines through active purchasing and management. Insurance agencies' defined populations of members give them volume and financial leverage to negotiate better prices from the pharmaceutical industry. Insurance agencies' contracts with providers can be structured to promote rational prescribing and dispensing. The insurance benefits package can be designed to encourage proper use of medicines by consumers. (2) [pp.1,3]

## What strategies can health insurers use to improve cost-effective use of medicines?

Insurance systems are likely to need to use a combination of policies and management strategies that may include:

- 1. Selection:** defining a formulary or reimbursable list, requiring generic substitution for some medicines and prior authorisation for some medicines; designing co-payments to encourage use of preferred cost-effective medicines;
- 2. Purchasing:** negotiating prices and setting quality and other conditions for medicines supplied, negotiating volume rebates, conducting competitive bidding;
- 3. Contracting:** setting the terms and conditions for payment of health service providers to influence prescribing and dispensing; e.g. capitation payments or budgets that include medicines costs; performance related pay; contracting with a preferred pharmacy network;
- 4. Utilisation management:** implementing programmes to educate patients and prescribers and audit and give feedback to prescribers.(3) [pp.3-5]

## Where have these strategies been implemented?

Many high income countries with social or private health insurance systems have implemented combinations of all these strategies. The Medicaid social health insurance programme for the poor in the USA has implemented and evaluated some of these strategies.[pp.5-7] Countries with government-financed public delivery systems have also used some of the same active management strategies but sometimes these systems lack the ability to create financial incentives for members and providers (through contracting). (p.1)

The World Health Survey found that health insurance is not always associated with better access to

medicines. This is not surprising given that, often, LMIC schemes were developed with a primary objective of reducing catastrophic health expenditures of hospitalization and do not cover outpatient medicines.(1) Health insurance schemes have proved able to cover inpatient and outpatient medicines in a wide range of LMICs from low-income, smaller countries such as Kyrgyzstan to upper-middle-income countries such as Jordan, Mexico, Thailand and Turkey.

## Key aspects of designing medicines management strategies for health insurance systems

Based on a synthesis of studies of health insurance medicines management strategies, the review suggests the following considerations for policy design [pp.24-25]:

- 1. Extending medicines coverage to outpatient settings** is important for increasing adherence to treatment for chronic illness and reducing unnecessary hospitalization.
- 2. A combination of strategies** is more likely to be effective than relying on any one of the four types of strategy.
- 3. Medicines prices need to be negotiated regularly with manufacturers and suppliers** to take advantage of health insurers' negotiating leverage through their decisions to include or exclude specific medicines from their reimbursable list.
- If the insurance system reimburses medicines dispensed in the private sector, **contracting with preferred pharmacy networks** may ensure product quality and reduce cost.
- 5. Consider trade-offs when designing the reimbursable medicines list.** Limited lists of reimbursable medicines may limit pharmaceutical expenditures of the insurance system but may lead to members paying for needed medicines out-of-pocket and may reduce the effectiveness of insurance in providing financial protection and influencing medicines use.
- 6. Multi-faceted strategies are needed to increase prescribing, dispensing and use of generics,** encompassing education and financial incentives for providers and consumers.
- 7. Design management strategies that align provider and patient incentives with the desired use of medicines.** Provider payment mechanisms and tiered co-payments, for example, can be used to encourage use of generics and other preferred medicines.
- 8. Arbitrary utilisation limits may be counterproductive** and actually increase total health expenditure by increasing use of more costly services, as well as harming sicker insurees.
- 9. Specific strategies need to be implemented to manage utilisation and expenditure on high-cost medicines** such as prior authorization or use of preferred providers.

## Complementary interventions

Other national medicines policies can complement health insurance coverage, such as an essential medicines list and generics policies. Increasing public sector medicines supply chain efficiency is important for cost control and cost-effectiveness in health insurance systems in LMICs because the public sector often purchases at lower prices, has higher rates of generic prescribing and lower patient prices than private retail outlets. Conversely, an inefficient public sector supply chain can lead to frequent stock outs, forcing insured patients to seek care and purchase medicines from the private sector at higher prices. LMIC health insurance schemes may not cover care in the private sector or cover only small numbers of preferred providers. Health insurance can help to improve the reliability of public sector supply chains by improving cash flow for procurement. (pp. 24-25)

## What specific challenges were encountered in implementing health insurance medicine management strategies in LMICs?

Design of health insurance coverage of medicines can be challenging in LMICs. LMICs schemes may be able to afford to cover only a limited list of essential medicines and doctors may be prescribing medicines excluded from the list. This may reduce the impact of insurance on financial protection, reduce insuree satisfaction and may undermine political support for the scheme – which may depend on the generosity of the benefit package. (p.25)

Case studies of Ghana and Jordan highlight that administrative and technical capacity limits in LMICs have made it difficult for them to adopt management methods used in upper-income countries, and require investment in effective monitoring systems and audit.

## How are LMIC insurance medicines policies monitored and evaluated?

To enable wise use of resources, it is vital that LMIC insurance schemes build robust systems for routinely monitoring medicines use. Health insurance data from claims can and should be used to monitor and evaluate the impacts of medicines policies and management strategies on access, efficiency, quality and health outcomes and re-design policy as needed. (p.26)

## What evidence exists on pharmaceutical management and policy approaches?

There is reasonably good evidence in high-income countries on the following strategies (pp.5-7):

- *Cost-sharing* reduces medicines utilisation and expenditure but increases the economic burden on patients, with negative outcomes for the

vulnerable. Lower co-payments for preferred medicines (e.g. generics) increase use of the preferred medicines.

- *Quantity limits* on the amount of medicines reimbursed may reduce expenditures but may decrease quality of prescribing and also have negative outcomes on the vulnerable.
- *Restricted formularies and prior authorisation requirements* can reduce expenditure and reduce use of less cost-effective medicines. But some studies find negative effects, depending on how the policy is implemented. Prior authorisation may result in unintended disruption in therapy. Removing a medicine from a formulary can lead to substitution with an alternative therapy that is less cost-effective.
- *Price regulation, negotiation of prices or rebates and pooled purchasing* can decrease costs to insurers.
- *Pharmacy incentives* that provide higher payment for generic dispensing increase the proportion of generic prescribing and dispensing.
- *Disseminating educational materials* on its own is not effective in changing doctors' behaviour. Combining clinical practice guidelines with audit and feedback and educational outreach visits to prescribers has been found to be effective.

There is some evidence in high income countries on the following strategies (pp.5-7):

- *Preferred pharmacy networks* can reduce costs and increase generic substitution.
- *Fixed payment systems for primary care doctors such as capitation or salary* are generally expected to reduce quantity of services provided, but there is the possibility that they may reduce needed prescription as well.
- *Fixed budgets for healthcare providers that include medicines costs* decrease pharmaceutical spending and increase generic prescribing, but there is little evidence about effects on utilisation and outcomes.

Most LMIC evidence supports use of insurance to reduce financial barriers to access and increase utilisation of medicines. LMIC studies have shown that consumers place higher value on insurance schemes that cover medicines (4). Insurance has been associated with an increase in the percentage of prescriptions filled, increased adherence to a prescribed treatment regimen and improved control of some chronic diseases, including diabetes and high blood pressure. Insurance has been associated with a decrease in self-medication. However, some studies contradict these findings, including the only randomised controlled study found by the review: an evaluation of Mexico's Seguro Popular insurance system for the poor found no impact on medicine access, affordability or outcomes, though the study may have been carried out too soon after implementation. (5)

A number of LMIC insurance systems use product selection strategies. The few available studies of the effects of limited formularies and consumer cost sharing find effects similar in LMICs to those in upper income countries. Generic substitution policies have been instituted in several countries, but there are no LMIC studies of their effectiveness. (pp.11-12)

Few LMIC insurance schemes use active purchasing strategies. Some LMICs use generic prices as a reference price to set the reimbursement rate for medicines. Kyrgyzstan's use of this policy reduced retail prices and improved access, while Taiwan found that the reduced prices were offset by an increase in the volume prescribed and total expenditure. Very few LMIC insurers use their leverage as large purchasers to negotiate lower prices. Kyrgyzstan did so successfully, reducing prices 12-24%. A private insurer in South Africa used a combination of market power, formularies and generic reference pricing to achieve price reductions and lower price growth due to competition among generic suppliers. (pp.13-14)

There is more evidence of LMICs' using provider contracting strategies to influence use of medicines. Studies in Thailand and China suggest that capitation payment systems in the public sector can contain medicines expenditures and promote generic prescribing and appropriate use. But some studies found negative effects of capitation: increased likelihood of hospitalization for hypertensive patients, and providers avoiding high-cost patients. Taiwan reported hospitals cut medicines cost following a shift from fee-for-service to case-based payment which included medicine costs in the case price, but did not describe impact on patient outcomes. Some LMICs report positive impacts of financial incentives for quality (e.g. the Philippines) and of contracts with preferred networks of pharmacies (e.g. Kyrgyzstan, South Africa). (pp.15-19) We do not know the impacts of strategies on equity in access, use and affordability. (1)

### Are there risks associated with the policy?

Subsidising the cost of medicines through insurance systems may increase consumption and, if not managed, may lead to irrational consumption as well as fraud. To reduce over-consumption and encourage rational use and contain costs, insurance systems should restrict medicines reimbursement to a list of cost-effective quality products, containing medicines recommended in valid standard treatment guidelines to treat the conditions of the population, incentivize prescribers and dispensers as well as consumers, to provide and seek respectively, appropriate medicines and importantly, establish routine monitoring systems.

### What lessons can be learned?

Routine monitoring and periodic evaluations of impacts of medicines management and benefit policies and expansions of insurance schemes are strongly recommended in LMICs to ensure that insurance coverage of medicines achieves its goals of risk protection and positive health outcomes, while remaining sustainable.

## REFERENCES

- Faden L, Vialle-Valentin C, Ross-Degnan D, Wagner AK.** Active pharmaceutical management strategies of health insurance systems to improve cost-effective use of medicines in low- and middle-income countries: A systematic review of current evidence. *Health Policy*, 2011; 100: 134-143.
- Wagner AK, Ross-Degnan D.** Insurance systems in the Asia-Pacific region: Improving appropriate use of and access to medicines. In Eggleston D, ed. *Prescribing cultures and pharmaceutical policy in the Asia Pacific*. The Walter H. Shorenstein Asia-Pacific Research Center at Stanford, 2009:313-335.
- Tetteh EK.** Policies and institutional arrangements for rationalizing drug selection and consumption patterns in African healthcare systems. *Research in Social and Administrative Pharmacy*, 2009, 5(3):274-285; Seiter A. *A Practical Approach to Pharmaceutical Policy*. The World Bank, 2010:110-113.
- Gibson TB, Ozminkowski RJ, Goetzel RZ.** The effects of prescription drug cost sharing: A Review of the Evidence. *American Journal of Managed Care*, 2005, 11:730-740.
- King G, Gakidou E, Imai K, Lakin J, Moore RT, Nall C, et al.** Public policy for the poor? A randomised assessment of the Mexican universal health insurance programme. *The Lancet*, 2009, 373(9673):1447-1454.

## OTHER USEFUL RESOURCES

A list of useful links and resources, other reviews and policy briefs in this series, and a glossary of terms used in the policy briefs can be found at: [www.haiweb.org/medicineprices/policy/index.html](http://www.haiweb.org/medicineprices/policy/index.html)