



Implementation of a national program to promote Rational Use of Medicines (RUM) in Nepal: a secondary analysis

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Background

Irrational and inappropriate medicines use is a serious problem world-wide.

According to the WHO nearly half of the medicines available in the market are used irrationally.

Medicine use problems are common in Nepal. Polypharmacy, irrational drug combinations, overuse of vitamins and injections are noted.

Rational medicine use can decrease the financial load for patients who pay out of the pocket for the medicines.



Objective

- This study was done with the objective “to assess implementation of a national program to promote rational use of medicines (RUM) in Nepal”.



Methodology

Ethical approval: Nepal Health Research Council

Study design: Secondary research

Sampling method: Secondary data collection and document analysis

Study tool: Workbook tool to assess implementation of a national program to promote rational use of medicines



Data collection tool

Mapping who does what, Essential Medicines Policy Implementation

Each subsection - “Core indicators” - policy implementation to answer

“Supplementary Information” - whether a policy is implemented, partially implemented or not implemented



Core and supplementary indicators analysis

National Essential Medicines Policies
National Structures to promote rational use
of medicines
National Essential Medicines

Formularies, Clinical Guidelines
Educational strategies to promote
RUM
Generic Policies

Financial incentives, Appropriate and enforced regulation and Adequate
availability of medicines and staffs

Agencies responsible for different functions regarding essential
medicines policies to promote RUM, drug supply and drug regulation



Documents used

- Drug Act
- National Health Policy
- National List of Essential Medicines Nepal
- National action plan on AMR
- National Drug Policy
- Drug Bulletins of Nepal
- Drug Standard Regulations and Banned Drug Lists



Results

Government agencies regarding essential medicines policies **to promote RUM**

Curative Division of Department of Health Services

Local Government (Municipality), DDA

Implementing generic policies - MoHP

Negotiation of Drug Prices -DDA

Selection, Quantification, Procurement, Storage, Distribution, Monitoring & evaluation

Federal: Management Division store (Warehouse)

Provincial: Provincial Health Management Supply Division

Local : Health Office, Municipality, Health Post



Government agencies responsible for actions regarding drug regulation

- Drug Schedules, Licensing/Inspection of manufacturing plants, Drug licensing or registration, Pharmacovigilance - DDA
- Clinical trial oversight, Drug price regulation – NHRC, DDA
- Drug promotion-DDA
- Health professional licensing/accreditation - Respective councils
- Health facility/hospital licensing/accreditation
 - Federal: QSRD, MoHP, Curative service division of DOHS
 - Provincial : Provincial Health Ministry
 - Local: Metropolitan/Municipality/ Rural Municipality



Government agencies responsible for different functions/actions regarding **drug supply**

Federal: Management Division

Provincial: Provincial Health management and supply division

Local: Health offices, Municipality

Health facilities : Primary Health care center (PHC)



National Essential Medicines Policies and include specific objectives for RUM

National Government Body to Promote RUM - Is it multi-disciplinary and representative of all stakeholders? Yes / Partly

Drug and Therapeutic Committees (DTCs) - partly present



National Medicines Information Centre and Independent Medicines Information

Drug information center –IOM, PHECT Nepal

National strategy and national task force to contain
antimicrobial resistance

National Action Plan on AMR 2080/81- 2084/85



National Essential Medicines, Formularies, Clinical Guidelines

- Essential Medicines Lists (EML) -Yes
- National Formulary -Yes (2018)
- National Clinical Guidelines or Standard Treatment Guidelines (STGs) - Yes
- Standard Treatment protocol for Basic Health Care Services Package- 2078



- Educational strategies to promote RUM -Yes
- CMEs for providers on medicines use - partly
- Public education on medicines use - partly
 - **Antibiotic use**



Generic Policies

Is prescribing by generic name obligatory in the public sector? -
Yes

Public Health Service act 2075- But not implemented properly



Avoiding perverse financial incentives

User fees for medicines

Prescribers fees - Yes

Dispensing fees -No



Availability of prescription-only medicines without a prescription

- Antibiotics classified as prescription-only medicines? Yes
- Systemic antibiotics available over-the-counter (OTC) without prescription - Frequently
- Easy is to purchase systemic antibiotics without a prescription -Yes



Pharmaceutical Promotion

- Provisions in the national medicines' legislation/regulations covering medicine promotion and advertising? -Yes
- Prohibition of advertising of prescription-only medicines to the public?- Yes
- Active monitoring of pharmaceutical adverts- No



Licensing and inspection of health facilities and medicine outlets

- What proportion of retail outlets selling medicines are licensed to operate -Most
- What proportion of licensed private pharmacies have a qualified pharmacist present on-site while medicines are being dispensed / sold? -Most
- What proportion of outlets and facilities was inspected in the last one year? –Few (limited coverage)

RATIONAL USE OF MEDICINES (RUM) IN NEPAL: POLICY VS. PRACTICE

POLICY & REGULATORY FRAMEWORK



COMPREHENSIVE NATIONAL GUIDELINES ESTABLISHED

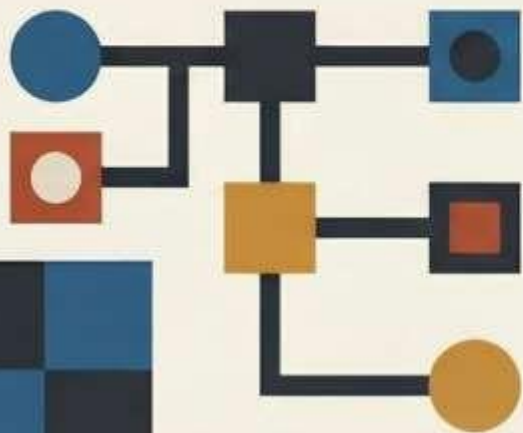
Nepal utilizes an Essential Medicines List, National Formulary, and Standard Treatment Guidelines.

MULTI-AGENCY REGULATORY OVERSIGHT

The DDA and NHRC manage drug licensing, registration, and clinical trial oversight.

POLICY GOALS & OBJECTIVES

National policies include specific objectives to ensure medicines are used appropriately.

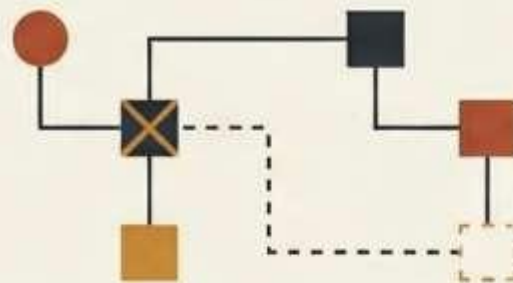


IMPLEMENTATION & ENFORCEMENT GAPS



HIGH OTC ANTIBIOTIC ACCESSIBILITY

Systemic antibiotics are frequently purchased without prescriptions despite being classified as "prescription-only."



LIMITED FACILITY INSPECTIONS

Only a few health facilities and medicine outlets were inspected within the last year.



INACTIVE PROMOTION MONITORING

There is no active monitoring of pharmaceutical advertisements despite existing legislative prohibitions.



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Brief Bio



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References

1. Holloway KA. Combating inappropriate use of medicines. *Expert Rev Clin Pharmacol*. 2011;4(3):335–48.
2. Holloway KA, van Dijk L. The world medicines situation. Rational use of medicines. WHO/EMP/MIE/2011.2.2. 3rd ed. Geneva: World Health Organization; 2011. Available: http://www.who.int/medicines/areas/policy/world_medicines_situation/en/index.html.
3. Pirmohamed M, James S, Meakin S, Green C, Scott AK, Walley TJ, Farrar F, Park BK, Breckenridge AM. Adverse drug reactions as cause of admission to hospital: prospective analysis of 18,820 patients. *Br Med J*. 2004;329:15–9.
4. Howard RL, Avery AJ, Slavenburg S, Royal S, Pipe G, Lucassen P, Pirmohamed M. Which drugs cause preventable admissions to hospital? A systematic review. *Br J Clin Pharmacol*. 2006;63(2):136–47.
5. Hitchen L. Adverse drug reactions result in 250 000 UK admissions a year. *Br Med J*. 2006;332:1109.
6. World Health Organisation. Using indicators to measure country pharmaceutical situations: fact book on WHO level I and level II monitoring indicators. Who/TCM/2006.2. Geneva: World Health Organisation; 2006.
7. World Health Organisation. Country pharmaceutical situations: fact book on WHO Level 1 indicators 2007. WHO/EMP/MPC/2010.1. Geneva: World Health Organisation; 2010.
8. World Health Organization. Promoting rational use of medicines: core components WHO policy perspectives on medicine. 2002 Sep;5.
9. Jha N, Bajracharya O, Shankar P. Knowledge, attitude and practice towards medicines among school teachers in Lalitpur district, Nepal before and after an educational intervention *BMC Public Health*. 2013;13:652.
10. Amal M, AA Elnour, A Ahmed Ali, Nageeb A.G.M. Hassan, A Shehab, Akshaya S. B. Evaluation of rational use of medicines (RUM) in four government hospitals in UAE. *Saudi Pharm J*. 2016; 24: 189–196.
11. Workbook tool to assess implementation of a national program to promote RUM. May, 2025