

Rational Medicine Use: A medicine use evaluation of aspirin in the public healthcare sector of the Western Cape Province, South Africa

Renier Coetzee¹, Yasmina Johnson² & Percival Daames³

1 School of Pharmacy, University of the Western Cape, Cape Town, South Africa ; 2 Pharmaceutical Services, Western Cape Government, Cape Town, South Africa; 3 Systems for Improved Access to Pharmaceuticals and Services (SIAPS), South Africa

BACKGROUND

The Western Cape Province's expenditure on aspirin for a 6-month period (01 April 2014 to 30 September 2014) was R 3 628 154,00. Aspirin ranked as the top 18th medicine on the provincial expenditure report. Using aspirin packs (14's) dispensed as proxy, it would suggest that approximately 170000 patients receive aspirin per month in the province. Similar usage patterns were observed for 2013/14 and 2014/15. Based on these indicators, the Western Cape Pharmacy and Therapeutics Committee requested that a Medicine Use Evaluation (MUE) be conducted for aspirin.

AIM & OBJECTIVES

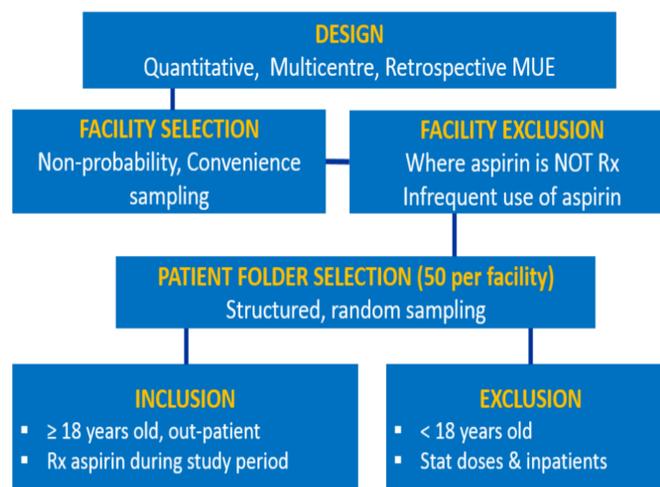
The aim of this MUE were to describe and evaluate the use of aspirin at various public health care institutions in the Western Cape in order to identify areas for improvement in its prescribing.

The objectives were to:

- Determine whether aspirin is prescribed for chronic indications as set out in the Standard Treatment Guidelines (STGs) and Essential Medicines List (EML) for Primary Health Care (2008), as well as Adult Hospital Level (2012).
- To make policy recommendations to improve the prescribing of aspirin and reduce inappropriate expenditure.

METHODOLOGY

The MUE followed a multicentre, retrospective, quantitative research method in order to describe the use of aspirin.



Ethics approval was granted by the Research and Ethics Committee at the University of the Western Cape.

MUE CRITERIA

The criteria were diagnosis-related. This was to assist in identifying indications for which aspirin use was appropriate. Hence, a threshold of 100% were used. Immediate, high-dose indications were excluded.

INDICATIONS

1. Atherosclerotic Peripheral Arterial Disease
2. Ischemic Heart Disease(Angina)
3. Heart Attack (Myocardial Infarction)
4. Pre-Eclampsia
5. Systemic Lupus Erythematosus (SLE)
6. Stroke (Cerebrovascular incident)

DOSAGE

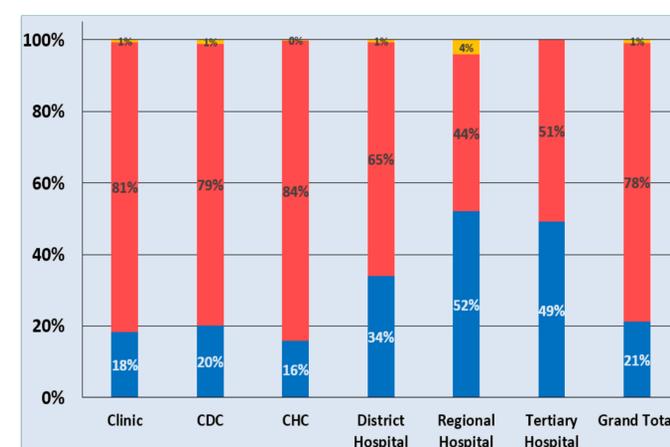
75mg (80mg)
150 mg

RESULTS & DISCUSSION

A total of 7113 aspirin prescriptions from 147 facilities were reviewed. More than 80% of all prescriptions for aspirin were from clinics, community day centres (CDCs) and community health centres (CHCs). This corresponds with the fact that 80% of prescribing happens at primary health care level.

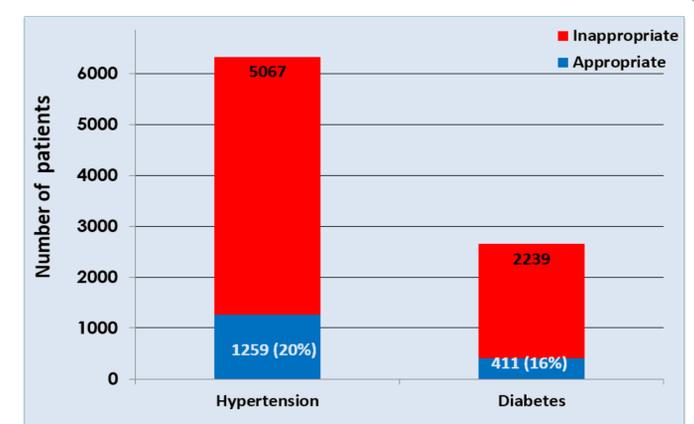
FACILITY TYPE	TOTAL (n = 7113)
Primary Health Care Clinics	3330 (46.82%)
Community Day Centres (CDC)	2486 (34.95%)
Community Health Centres (CHC)	469 (6.59%)
District Hospitals	569 (8.00%)
Regional Hospitals	149 (2.09%)
Tertiary Hospitals	110 (1.55%)
DEMOGRAPHS	
Gender (n = 7111)	
Males	2528 (36.00%)
Females	4583 (64.00%)
Mean Age (n = 7107)	60 (±12.28)

Aspirin was prescribed appropriately according to dose recommendations in 100% of patients.



- **APPROPRIATE:** Indications matched STGs
- **INAPPROPRIATE:** Indications did not match STGs
- **NO DIAGNOSIS:** Unable to determine diagnosis

Overall, only 21% of prescriptions were according to STG recommendations. Tertiary and regional hospitals performed the best with approximately 50% of the prescriptions in line with the STGs. Adherence to STGs was much lower and ranged from 16% to 20% for primary health care level facilities, reflecting the impact of other inappropriate guidelines that were promoted together with national guidelines.



More than 88% of the patients had hypertension and of these only 20% of patients required aspirin as per the STGs. In patients with diabetes only 16% matched the STG criteria for aspirin use.

CONCLUSION

A multi-centre MUE identified areas of irrational use of aspirin. Policy recommendations implemented include dissemination of evidence-based guideline, as well as effective communication of guideline changes.

REFERENCES

- DEPARTMENT OF HEALTH. SOUTH AFRICA. 2012. Standard Treatment Guidelines and Essential Medicines List. Hospital Level. Adults. Pretoria: Government Printers.
DEPARTMENT OF HEALTH. SOUTH AFRICA. 2008. Standard Treatment Guidelines and Essential Medicines List. Primary Health Care. Pretoria: Government Printers.