Assessment of antibiotic prescribing pattern as per AWaRe assessment tool of Antimicrobial Stewardship program in a Tertiary Care Hospital Central India

Authors:-

Presenting Author- Dr. Shikha Jaiswal, Associate Professor

Dr. Sachin Srivastava, 2nd year PG student

Dr. Ajitesh Mishra, Demonstrator

Pt. JNM Medical College Raipur, Chhattisgarh, India

Objectives

OBJECTIVES- Monitor stewardship policies that optimize antibiotic use and curb antimicrobial resistance in various departments of Pt. JNM Medical College Raipur (C.G).

Background- The development of antimicrobial resistance is a matter of great public health concern . Antimicrobial resistance attributes 700,000 deaths per year which may increase to 10 million by the year 2050. Antimicrobial Stewardship program (ASPs) have been implemented worldwide to promote the responsible use of antibiotics. One essential tool utilized in these programs is the AWaRe classification system Developed by WHO to combat the rise of antimicrobial resistance.

Methods

A cross-sectional study was conducted in the Department of Pharmacology Pt. JNM Medical College & associated Dr. B.R.A.M. Hospital Raipur, Chhattisgarh, India after getting approval from the Institutional Ethics Committee (IEC). A Google form was formulated according to WHO Antibiotic AWaRe classification. Digital pictures of 1013 OPD prescriptions of various departments of Dr. B.R.A.M. Hospital Raipur were taken from 8/ 7/ 2023 to 8 /10/2023. Prescriptions were used to fill the formulated Google form. Data was analysed and subjected to statistical analysis by using MS Excel version 2021.

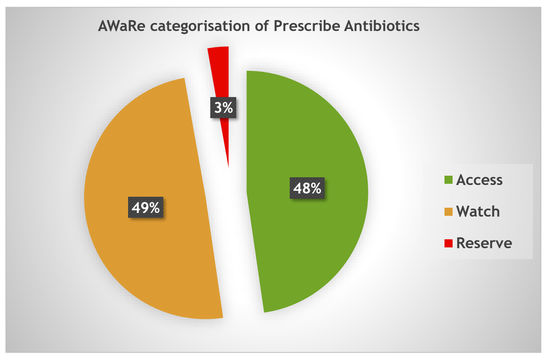
Limitations -This study is limited by the observational study design and could not prove the causal relationship between policies and variation in antibiotic consumption.

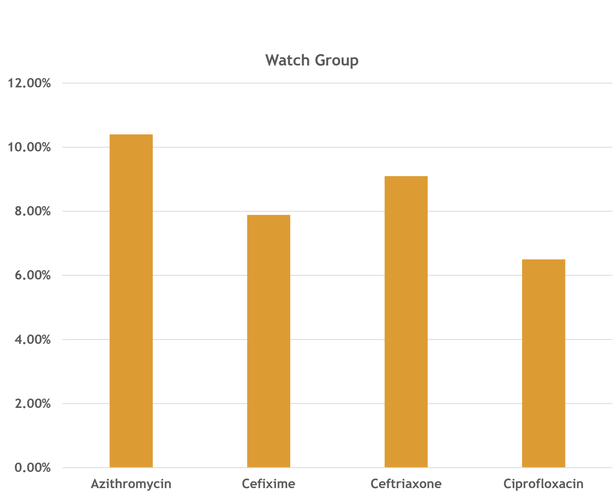
Approval from IEC → Digital pictures of 1013 prescriptions collected → Google form filled → Antibiotics categorized into AWaRe groups → Data analysing as per WHO AMSP GUIDELINES

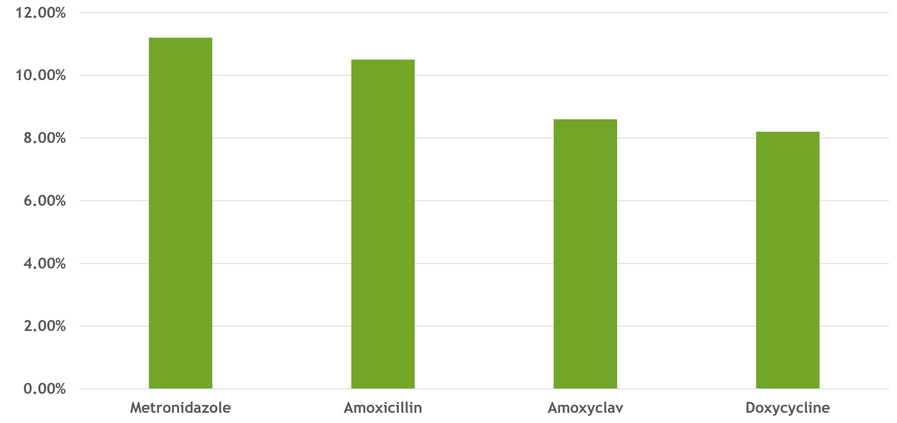
Results

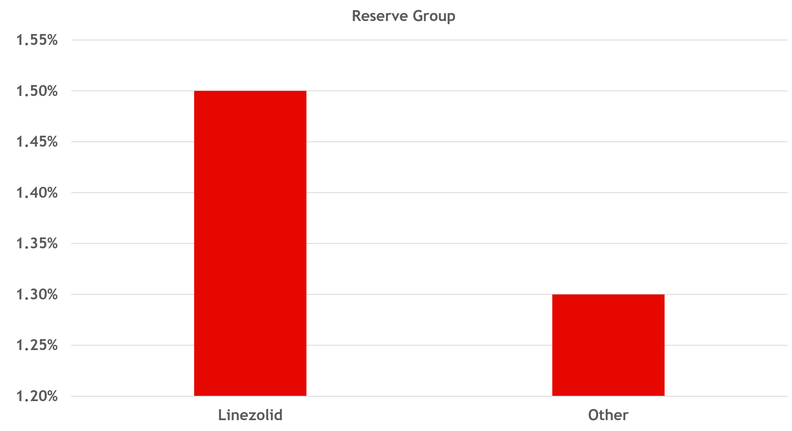
Variation in Antibiotic Use Across Departments

Department	ACCESS	WATCH	RESERVE
MEDICINE (474)	37.7%	58.8%	3.6%
PEDIATRICS(46)	63%	37%	0
OPHTHALMOLOGY (68)	0	100%	0
OBS & GYN (106)	53.9%	41.7%	4.3%
ENT(80)	83.7%	16.3%	0
SURGERY (18)	22.2%	81.8%	0
DERMATOLOGY (141)	70%	30%	0
RESPIRATORY MEDICINE (36)	90%	10%	0
ORTHOPEDICS (44)	0	100%	0









Conclusions

This study found considerable variation from WHO AWaRe prescribing guidelines in the Access group and Watch group Antibiotics. Azithromycin and ceftriaxone were the most prescribed antibiotics. This result is of great concern and emphasizes strengthening the antimicrobial stewardship program at Pt JNM Medical College Raipur, Chhattisgarh, India, and similar studies, orientation programs are advised to be conducted globally in various health sectors to combat antimicrobial resistance. The WHO's AWaRe tool offers a standardized and practical approach for assessing antibiotic prescribing patterns and guiding interventions. Antimicrobial stewardship program can play a pivotal role in safeguarding the effectiveness of these life-saving medications for current and future generations.

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