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A Quantitative Survey of Antibiotic Use at a Hospital in Jambi Province Indonesia in Three-month Before and After Implementation of Antimicrobial Resistance Control Program by RASPRO Concept

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RASPRO
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INTRODUCTION

Based on Decree of Minister of Health Number 8/2015 in article 11 concerning quality indicators of Antimicrobial Resistance Control Program (ARCP)/ *Program Pengendalian Resistensi Antimikroba (PPRA)* implementation in hospitals, it has been known that reduced quantity of antimicrobial use has become one of those indicators.
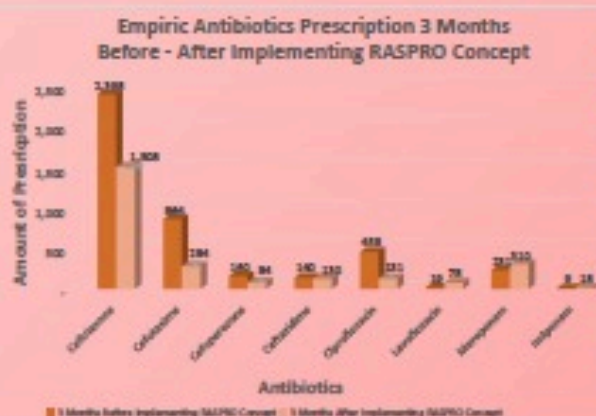
OBJECTIVES

This survey is a descriptive study using secondary data retrieved between July and September 2019 (3 months before implementation of *RASPRO* concept) as well as between October and December 2019 (3 months after the implementation), which was aimed to evaluate impacts on implementing *Regulasi Antimikroba Sistem Prospektif (RASPRO)* concept at a hospital in Jambi province, Indonesia.

METHODS

The survey was carried out by calculating the expenditure of 3 antibiotic classes, which were the most commonly used and usually given by injection in hospitals and Intensive Care Units (ICU)s, i.e. the beta–lactam, quinolones and carbapenem.

RESULT

Empiric Antibiotics Prescription 3 Months Before - After Implementing RASPRO Concept

Suitability of Prophylaxis Antibiotics within 3 Months of RASPRO Concept Implementation

We found reduced use of Ceftriaxone as many as 890 ampules (37.11%), for Cefotaxime the reduction was 580 ampules (67.13%); while the use of Cefoperazone reduced as many as 76 ampules (47.50%) and Ceftazidime reduced as many as 10 ampules (7.14%). The use of Ciprofloxacin reduced as many as 327 ampules (71.40%), but there was a drastic increase in the use of Levofloxacin as many as 59 ampules (>100%). The use of Carbapenems increased, which included 79 ampules (34.20%) for Meropenem; while the use of Imipenem increased as many as 9 ampules (100%).

PROPHYLAXIS ANTIBIOTICS PRESCRIPTION WITHIN 3 MONTHS OF RASPRO CONCEPT IMPLEMENTATION
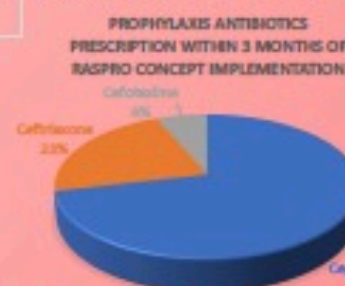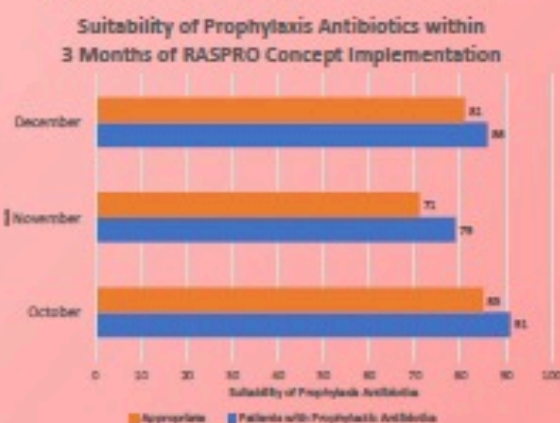
In three months after the implementation of *RASPRO* concept, 92.58% prophylaxis antibiotics had been given for appropriate indication and the antibiotic use of Cefazolin 71.31 %. Within three months before and after the implementation of *RASPRO* concept, there was a total reduction of antibiotic use, which reached 1736 ampules (40.57%).

CONCLUSION

The implementation of *RASPRO* concept can be executed as an effort to reduce the quantity of antimicrobial use in hospitals. However, larger studies and longer monitoring are required in order to identify the impact of implementation of *RASPRO* concepts at a hospital.

Acknowledgement

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