

EVALUATION OF EDUCATIONAL INTERVENTION PROGRAM ON APPROPRIATE ANTIMICROBIAL USAGE IN DEPARTMENT OF CHILD HEALTH, INDONESIA

Mulya Rahma Karyanti, Antonius H Pudjiadi and Fetria Faisal

Department of Child Health, Cipto Mangunkusumo Hospital, Faculty of Medicine, Universitas Indonesia, Indonesia

Abstract. Inappropriate use of antimicrobials is one of the factors that accelerate antimicrobial resistance. One of the applicable methods of antimicrobial stewardship program is education of clinicians. An interventional study was carried out to evaluate qualitatively antimicrobial use in the Department of Child Health, Cipto Mangunkusumo Hospital, Jakarta, Indonesia before and after education intervention of medical staff regarding appropriate antimicrobial use. The intervention program consisted of courses and dissemination of empiric antimicrobial therapy guideline cards. Qualitative analysis of antimicrobial use was performed by two independent clinicians using a Gyssens algorithm. Data was obtained from patients medical records during pre-intervention period (December 2015 - February 2016) and post-intervention period (April 2016 - June 2016). Antimicrobial use decreased from 374 to 339 times after intervention education. Appropriate antimicrobial use (Category I) prior-intervention was 58% and significantly increased to 67% post-intervention (p -value = 0.01). Inappropriate antimicrobial use was categorized as insufficient data (Category VI: 2 prior- and 1 post-intervention), no indication (Category V: 24 prior- and 11 post-intervention), inappropriate antimicrobial choice (Category IV: 56 prior- and 43 post-intervention), incorrect duration (Category III: 53 prior- and 32 post-intervention), incorrect dosage (Category IIa: 39 prior- and 29 post-intervention), incorrect dosage interval (Category IIb: 23 prior- and 16 post-intervention), and incorrect route of dosing (Category IIc: none). Thus, the educational intervention program has a significant effect on appropriate antimicrobial use by medical staff at the Department of Child Health, Cipto Mangunkusumo Hospital, Jakarta.

Keywords: antimicrobial use, educational intervention program, Gyssens algorithm, medical staff, qualitative analysis.

Correspondence: Mulya Rahma Karyanti,
Division of Infection and Tropical Pediatric,
Department of Child Health, Cipto
Mangunkusumo Hospital, Jl. Diponegoro
No. 71, Jakarta 10430, Indonesia
Tel: +62 213907742
E-mail: karyanti@ikafkui.net