

ANALYSIS OF EFFECTIVENESS AND POSITIVE PREDICTIVE VALUE OF ANTIMICROBIAL STEWARDSHIP ALERTS USING A CLINICAL-DECISION SUPPORT SYSTEM

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BACKGROUND AND IMPORTANCE

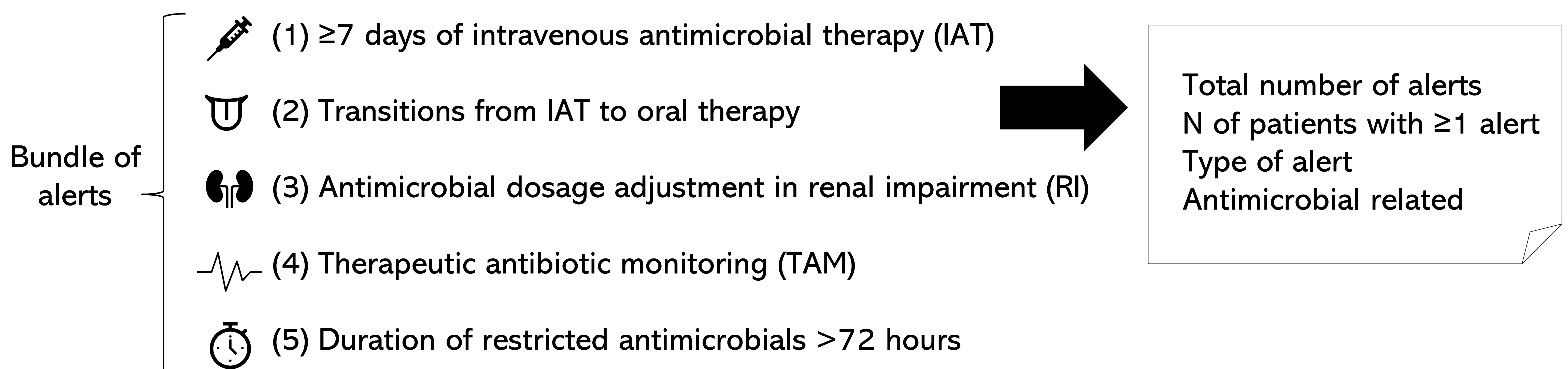
Clinical decision support systems (CDSS) are commonly used in clinical practice to generate antimicrobial stewardship (ASP)-alerts, which could help implement evidence-based recommendations.

AIM AND OBJECTIVE

To analyse use, effectiveness, and positive predictive value (PPV) of a bundle of ASP alerts generated by CDSS in a first-level hospital.

MATERIALS AND METHODS

Observational, retrospective study. ASP alerts generated between 2021-11-01 and 2022-08-31.



$$\text{Effectiveness} = \frac{\text{Alerts requiring intervention}}{\text{Total number of alerts}}$$


$$\text{PPV} = \frac{\text{Accepted interventions}}{\text{Total number of alerts}}$$

RESULTS

2,546 alerts

947 patients

28.6% piperacillin/tazobactam
 13.6% meropenem
 7.5% linezolid
 6.7% levofloxacin
 6.2% ceftriaxone

	Frequency	Effect.	PPV
≥ 7 days of AIT	32.0%	9.5%	6.2%
Duration of RA > 72 hours	31.6%	21.1%	19.9%
Antimicrobial dosage adjustment in RI	19.2%	11.0%	9.2%
Transition from IAT to oral therapy	13.2%	19.6%	11.8%
TAM	4.0%	18.1%	8.7%

Global **14.5%** **9.6%**

CONCLUSION AND RELEVANCE

Most frequently triggered alerts were duration of IAT and RA. Alerts with a higher PPV were transitions from IAT to oral therapy and TAM. Further studies are needed to optimise their use and avoid alert fatigue.

