







Mdr samples and micro organisms	No of sample	Percentage
Sample		
Respiratory samples	73	70.87%
Blood samples	13	12.62%
Urine samples	6	5.82%
Fluid samples	9	8.73%
CSF cultures	2	1.94%
Organism type		
Acinetobacter	34	33%
Serratia	46	44.66%
Pseudomonas aeruginosa	1	0.97%
Gram negative bacilli	11	10.67%
E.coli	2	1.94%
Enterobacter	6	5.82%
	3	2.91%

Table 3: MDR samples and organisms in percentage (%).

Intervention characteristics	Total percentages among interventions	Accepted percentages
De-escalation	35.97%	94.10%
Escalation	11.10%	71.40%
Dose adjustment	7.40%	100%
Prolonged duration	2.60%	20%
Wrong indication	20.60%	51.10%
Dual coverage	15.30%	44.80%
Drug interaction	2.10%	100%
ADR	4.70%	100%

Table 4: Intervention characteristics among interventions in percentage (%).

Outcome parameters	Accepted cases	Not accepted cases
Improved	60.22%	21.42%
Readmitted (within 30 days of admissions)	0.45%	17.85%
LAMA	13.63%	32.14%
Death	21.59%	28.57%

Table 5: Study of outcome measures of stewardship intervention.

## D

The study was conducted in a tertiary care unit and the role of clinical pharmacist was to implement stewardship in intensive care unit. The study was conducted in a tertiary care unit and the role of clinical pharmacist was to implement stewardship in intensive care unit. The study was conducted in a tertiary care unit and the role of clinical pharmacist was to implement stewardship in intensive care unit.

---

11. De Bus L, Gadeyne B, Steen J, Boelens J, Claeys G, et al. (2018) A complete and multifaceted overview of antibiotic use and infection diagnosis in the intensive care unit: Results from a prospective four-year registration. *Crit Care* 22:241.

12. Luyt CE, Bréchet N, Trouillet JL, Chastre J (2014) Antibiotic stewardship in the intensive care unit. *Crit Care* 18:480.

13. Perveen RA, Nasir M, Farha N, Islam MA (2018) Antibiotics in ICU: The challenges of use, cost and response in a tertiary care hospital. *Int J Med Res Health Sci* 7:94-99.

14. Halstead DC, Gomez N, YS McCarter (2004) Reality of developing a community-wide antibiogram. *J Clin Microbiol* 42:1-6.

15. Moehring RW, Hazen KC, Hawkins MR, Drew RH, Sexton DJ, et al. (2015) Challenges in preparation of cumulative antibiogram reports for community hospitals. *J Clin Microbiol* 53:2977-2982.

16. Barlam TF, Cosgrove SE, Abbo LM, MacDougall C, Schuetz AN, et al. (2016) Implementing an antibiotic stewardship program: Guidelines by the infectious diseases society of America and the society for healthcare epidemiology of America. *Clin Infect Dis* 62:e51-e77.

17. Khilnani GC, Zirpe K, Hadda V, Mehta Y, Madan K, et al. (2019) Guidelines for antibiotic prescription in intensive care unit. *Indian J Crit Care Med* 23:S1-S63.

18. Pødenphant J, et al. (2016) Antibiotic prescription pattern in a medical intensive care unit in Qatar. *Saudi Med J* 26:1269-1276.

19. Naqvi M, Chiranjeevi U, Shobha JC (2014) Prescription patterns of antibiotics in acute medical care unit of a tertiary care hospital in India. *Int J Curr Microbiol App Sci* 3:673-679.

20. Patel MK, Barvaliya MJ, Patel TK, Tripathi CB (2013) Drug utilization pattern in critical care unit in a tertiary care teaching hospital in India. *Int J Crit Illn Inj Sci* 3:250-255.

21. Smythe MA, Melendy S, Jahns B, Dmuchowski C (1993) An exploratory analysis of medication utilization in a medical intensive care unit. *Crit Care Med* 21:1319-1323.

22. Guidelines for the prevention and control of carbapenem-resistant Enterobacteriaceae, *Acinetobacter baumannii* and *Pseudomonas aeruginosa* in health care facilities, World Health Organization, 2017.

23. Salehifar E, Shiva A, Moshayedi M, Kashi TS, Chabra A (2015) Drug use evaluation of Meropenem at a tertiary care university hospital: A report from Northern Iran. *J Res Pharm Pract* 4:222-225.

24. Sanhoury OM, Eldalo AS (2016) Evaluation of meropenem utilization in intensive care unit in Sudan. *Int J Clin Pharmacol Pharmacother* 1:106.

25. Katchanov J, Kreuels B, Maurer FP, Wöstmann K, Jochum J, et al. (2017) Risk factors for excessively prolonged meropenem use in the intensive care setting: A case-control study. *BMC Infect Dis* 17:131.

26. Balkhy HH, El-Saed A, El-Metwally A, Arabi YM, Aljohany SM, et al. (2018) Surveillance study. *Antimicrob Resist Infect Control* 7:156.

27. Tenney J, Hudson N, Alnifaity H, Li JTC, Fung KH (2018) Risk factors for acquiring multidrug-resistant organisms in urinary tract infections: A systematic literature review. *Saudi Pharm J* 26:678-684.

28. Aliberti S, Pasquale MD, Zanaboni AM, Cosentini R, Brambilla AM, et al. (2012) Identifying risk factors for multidrug-resistant pathogens in hospitalizations. *Clin Infect Dis* 54:705-708.