



IMPACT OF ADVERSE DRUG REACTIONS ON LENGTH OF STAY AND MORTALITY IN HOSPITALIZED PATIENTS THROUGH A CLINICAL ADMINISTRATIVE NATIONAL DATASET

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BACKGROUND AND IMPORTANCE

Adverse Drug Reactions (ADRs) cause 5-10% of hospital admissions and occur in 10-20% of hospitalized patients.

AIM AND OBJECTIVES

To find out the impact of ADRs on patients' hospitalization.

MATERIALS AND METHODS

- Retrospective case-control study that included patients' hospitalization over 17 years of age during the period 2017-2023, using a clinical administrative national dataset.
- Cases were defined as hospitalizations with a record of ADRs, in terms of chapter T36-T50 of ICD-10. Controls were the remaining hospitalizations exempt from these ADRs codes.
- Medians were compared by Wilcoxon test and proportions by Chi2. Two multivariate regression models and two propensity-score matching models were constructed to study the influence of ADRs on the length of hospital stay and mortality.

RESULTS

126,075 hospitalizations were analyzed Prevalence of ADRs 7.08% (95%IC 6.90-7.20).

	non-ADRs	ADRs	Sig.
Hospitalization episodes, n (% , 95%IC)	117,145 (92,92%,90,86-93,54)	8,930 (7,08%, 6.90-7.20)	
Men, % (95%CI)	53.38% (53.10-53.70)	51.10% (50.10-52.10)	
Age, median (IQR)	72 years (56-82)	77 years (68-85)	p<0.0000
vanWalraven comorbidity index, median (IQR)	4 (2-8)	7 (4-13)	p<0.0000
Hospital length of stay, median (IQR)	4 days (2-8)	7 days (4-13)	p<0.0000
Hospital mortality , % (95%CI)	4.73% (4.60-4.90)	6.55% (6.00-7.10)	p<0.0000

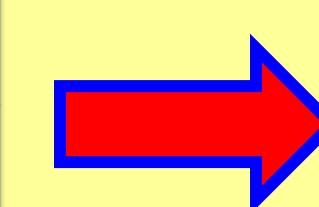
	Magnitude effect	95%IC	Sig.
Length of stay	IRR=1.412	1.376-1.448	p> z <0.000
mortality rate	OR=0.807	0.743-0.877	p> z <0.000

*Using sex, age and IW as covariates

	OR	95%IC	Sig.
Age	1.05	1.03-1.06	p> z <0.000
Female sex	1.15	1.10-1.20	p> z <0.000
Length of stay	1.54	1.51-1.57	p> z <0.000
vanWalraven comorbidity index (IW)	1.60	1.56-1.63	p> z <0.000

	Matching test Coefficient	95%IC	Sig.
Length of stay	3.226	2.922-3.532	p> z <0.000
Mortality rate	(-)0.007	(-)0.12- (-)0.026],	p> z <0.000

*Control patient: the same sex, age and comorbidity (IW) free of ADRs



Increase of 3.226 days in length of stay

CONCLUSION AND RELEVANCE

- ✓ Patients with ADRs are older and have more comorbidity.
- ✓ ADRs are associated with increase length of hospital stay but advanced analysis shows no increase in mortality.