

SARS-CoV-2 vaccination and risk of infectious diseases in hospitalized older patients

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Marco Balducci, Edoardo Locatelli, Maria Giorgia Barbieri, Elena Ferrighi, Serena Scardina, Giulia Barrile, Federica Sganga, Irene Mattioli, Francesca Remelli, Stefania Maggi, Stefano Volpato, Caterina Trevisan

Corresponding author:

Dr. Francesca Remelli, MD

Department of Medical Science, University of Ferrara

Address: Via Aldo Moro 8, 44124, Ferrara, Italy

Phone: +39 0532 239572

Supplementary materials

Supplementary Table 1. Diagnosis of infectious diseases considered at hospital admission and during the hospital stay

ICD-9 codes	Disease
001-139	Infectious diseases
460-466	Acute respiratory infections
480-487	Pneumonia, flu disease
320-326	Nervous system infections
540-543	Appendicitis
535.0	Infectious gastro-duodenitis
590, 595.0, 595.4, 599.0, 597	Urinary system infections
601, 604	Prostatitis, orchitis and epididymitis
616, 574.0, 571.1	Gynecological system infections
572.0, 573.1, 573.2	Acute hepatitis, abscess hepaticus
575-576.1	Cholecystitis, cholangitis

Notes: ICD-9: International Classification of Diseases, 9th revision - Clinical Modification

Supplementary Table 2. Main causes of hospital admission for the 745 participants according to SARS-CoV-2 vaccination status

	Overall (N = 754)	Unvaccinated (N = 185)	Vaccinated (N = 569)	p-value
Acute coronary syndrome	34 (4.5)	11 (5.9)	23 (4)	0.379
Heart failure	163 (21.6)	40 (21.6)	123 (21.6)	1
Venous thromboembolism	9 (1.2)	1 (0.5)	8 (1.4)	0.585
Acute peripheral artery diseases	11 (1.5)	3 (1.6)	8 (1.4)	1
Stroke or TIA	24 (3.2)	6 (3.2)	18 (3.2)	1
Anemia	157 (20.8)	60 (32.4)	97 (17)	<0.001
Acute kidney failure	105 (13.9)	26 (14.1)	79 (13.9)	1
Dizziness	12 (1.6)	2 (1.1)	10 (1.8)	0.764
Syncope	45 (6)	13 (7)	32 (5.6)	0.602
Fall	103 (13.7)	35 (18.9)	68 (12)	0.023
Fracture	50 (6.6)	20 (10.8)	30 (5.3)	0.014
Delirium	112 (14.9)	28 (15.1)	84 (14.8)	0.996
Intestinal subocclusion	71 (9.4)	18 (9.7)	53 (9.3)	0.982
Pancreatitis	15 (2)	1 (0.5)	14 (2.5)	0.186
Pneumonia	152 (20.2)	27 (14.6)	125 (22)	0.039

COPD exacerbation	37 (4.9)	8 (4.3)	29 (5.1)	0.821
Urinary tract infection	110 (14.6)	28 (15.1)	82 (14.4)	0.903
Sepsis	189 (25.1)	54 (29.2)	135 (23.7)	0.164
Diverticulitis	39 (5.2)	10 (5.4)	29 (5.1)	1
Any kind of acute infection	375 (49.7)	91 (49.2)	284 (49.9)	0.931

Numbers are count (%). *Abbreviations:* COPD, chronic obstructive pulmonary disease; TIA, transient ischemic attack.

Supplementary Table 3. Multinomial logistic regression for the association between SARS-CoV-2 vaccination and discharge setting

Discharge setting	Model 1		Model 2		Model 3	
	OR (95%CI)	p-value	OR (95%CI)	p-value	OR (95%CI)	p-value
Come back to the pre-hospital setting	[ref]	-	[ref]	-	[ref]	-
Transfer to LPA or other acute wards	0.60 (0.39-0.93)	0.021	0.63 (0.40-0.99)	0.043	0.64 (0.41-1.02)	0.059
New NH admission	0.55 (0.25-1.21)	0.139	0.58 (0.26-1.30)	0.187	0.62 (0.27-1.42)	0.255

Notes: death is considered in the model as an alternative outcome. Model 1 is adjusted for age, sex, and pre-admission setting; Model 2 is also adjusted for the number of chronic diseases, polypharmacy, use of corticosteroid or immunosuppressant drugs, and BADL; Model 3 includes the variables in Model 2 and also the presence of acute cerebrovascular diseases, falls, anemia and infections at hospital admission. *Abbreviations:* BADL, Basic Activities of Daily Living; HR, Hazard Ratio; 95% CI, 95% Confidence Intervals.