

Documentation of Do-Not-Attempt-Cardiopulmonary-Resuscitation Orders amid the COVID-19 Pandemic

D Connellan¹, K Diffley¹, J McCabe^{1,2}, A Cotter^{1,2}, T McGinty^{1,2}, G Sheehan¹, K Ryan^{1,2}, W Cullen^{1,2}, JS Lambert^{1,2}, EL Callaly^{1,2}, L Kyne^{1,2}

1. Mater Misericordiae University Hospital
2. School of Medicine, University College Dublin

Introduction

The COVID-19 pandemic has brought the decision-making process regarding cardiopulmonary resuscitation (CPR) into focus. The aim of this study is to compare rates of Do-Not-Attempt CPR (DNACPR) documentation in older hospitalised patients before and during the COVID-19 pandemic.

Methods

This was a retrospective repeated cross-sectional study. Data including co-morbidities and resuscitation status was collected on 300 patients with COVID-19 hospitalised from March 1st to May 31st 2020. DNACPR documentation rates in patients aged ≥ 65 years with a diagnosis of COVID-19 were compared to those without COVID-19 admitted during the same period and also compared to documentation rates pre-COVID-19 pandemic (March 1st to May 31st 2019).

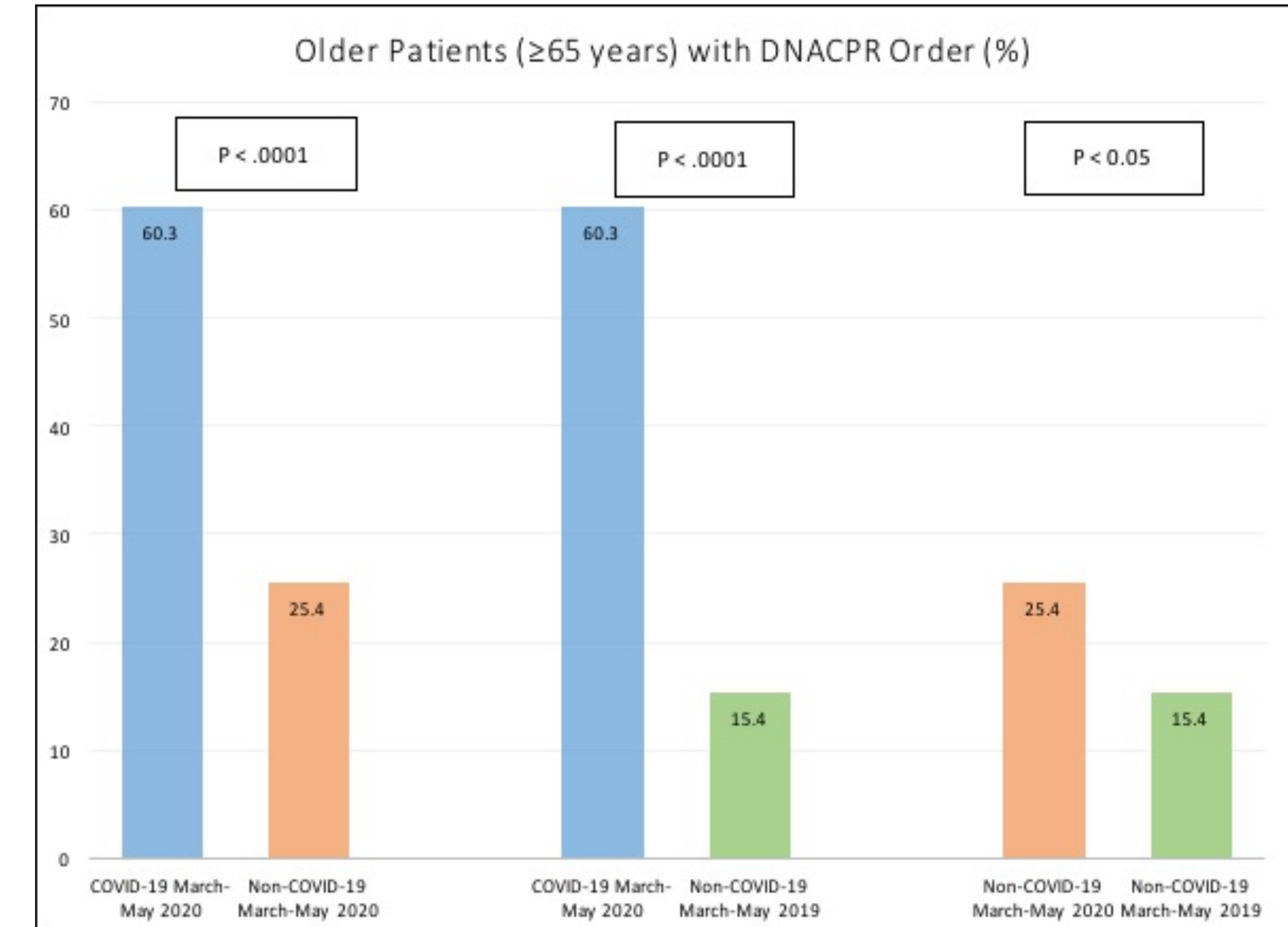
Results

Of 300 COVID-19-positive patients, 28% had a DNACPR order documented during their admission. Of 131 older (≥ 65 years) patients with COVID-19, 60.3% had a DNACPR order compared to 25.4% of 130 older patients without COVID-19 ($p < 0.0001$). During a comparable time period pre-pandemic, 15.4% of 130 older patients had a DNACPR order in place ($p < 0.0001$). Almost fifty percent of DNACPR orders were recorded within 24 hours of a positive swab result for SARS-CoV-2. Of older COVID-19-positive patients, 39.2% were referred to palliative care services and 70.2% survived.

Table 1: Baseline characteristics and outcomes of hospitalised patients with COVID-19 aged ≥ 65 and bivariable analysis of factors associated with DNACPR order documentation

	All patients ≥ 65 (n=131)	DNACPR group (n=79)	Non-DNACPR group (n=52)	P value
Mean Age	77.8 \pm 7.7	80.4 \pm 7.6	73.9 \pm 6.1	< 0.0001
Age 65-74 years	50 (38.2%)	23 (29.1%)	27 (51.9%)	0.01
Age 75-84 years	53 (40.5%)	29 (36.7%)	24 (46.2%)	0.28
Age ≥ 85 years	28 (21.4%)	27 (34.2%)	1 (1.9%)	< 0.0001
Female Sex	71 (54.2%)	45 (57%)	26 (50%)	0.43
Nursing Home Resident	48 (36.6%)	40 (50.6%)	8 (15.4%)	< 0.0001
Cardiovascular Disease	88 (67.2%)	55 (69.6%)	33 (63.5%)	0.47
Cognitive Impairment	45 (34.4%)	38 (48.1%)	7 (13.5%)	< 0.0001
Respiratory Disease	42 (32.1%)	30 (38%)	12 (23.1%)	0.08
Chronic Renal Impairment	28 (21.4%)	21 (26.6%)	7 (13.5%)	0.07
Diabetes Mellitus	26 (19.8%)	16 (20.3%)	10 (19.2%)	0.88
Cerebrovascular Disease	17 (13%)	12 (15.2%)	5 (9.2%)	0.35
Current or Prior Malignancy	21 (16%)	10 (12.7%)	11 (21.2%)	0.20
Multi-Morbidity	126 (96.2%)	78 (98.7%)	48 (92.3%)	0.06
Frailty	73 (55.7%)	53 (67.1%)	20 (38.5%)	< 0.002
Palliative Care Referral	31 (23.7%)	31 (39.2%)	0 (0%)	< 0.0001
ICU Admission	9 (6.9%)	3 (3.8%)	6 (11.5%)	0.09
Deaths	39 (29.8%)	37 (46.8%)	2 (3.8%)	< 0.0001

Figure 1: Proportion of patients ≥ 65 years with DNACPR order in place – COVID-19 group vs. non-COVID-19 admissions in March-May 2020 vs. non-COVID-19 admissions in March-May 2019



Conclusion

The COVID-19 pandemic has prompted more widespread and earlier decision-making regarding resuscitation status. Although case-fatality-rates were higher for older hospitalised patients with COVID-19, many older patients survived the illness.

Advance care planning should be prioritised in all patients and should remain good clinical practice despite the pandemic.

