EfCCNa
European federation of Critical Care Nursing associations

The influence of COVID-19 on nurse activity

Arnaud Bruyneel, RN, CCRN, PhD candidate

Public health assistant, ULB

Member of council EfCCNa

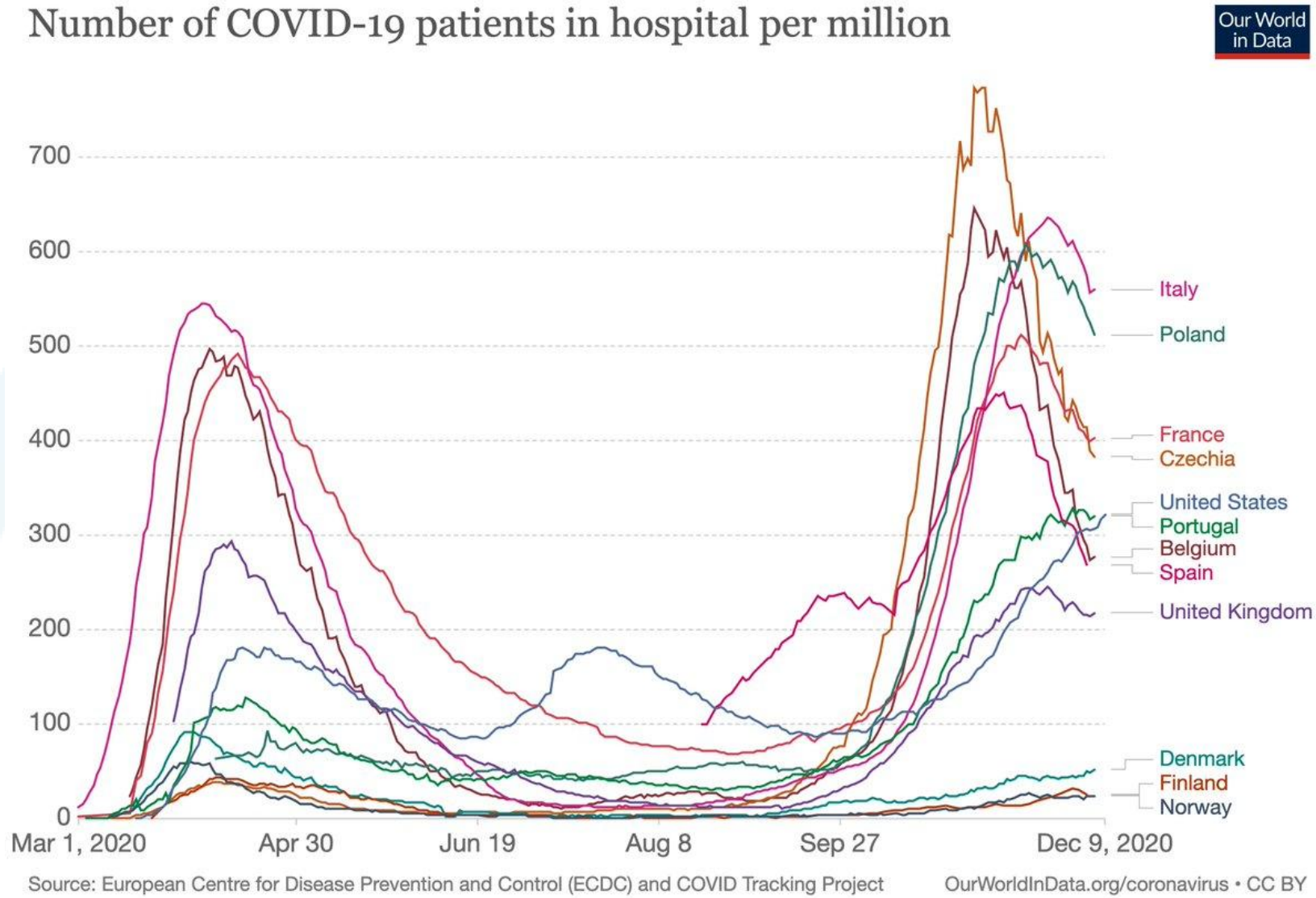
Nurse ICU, CHU Tivoli

Conflicts of interest

I declare no conflict of interest with the presentation

Table of Contents

Introduction

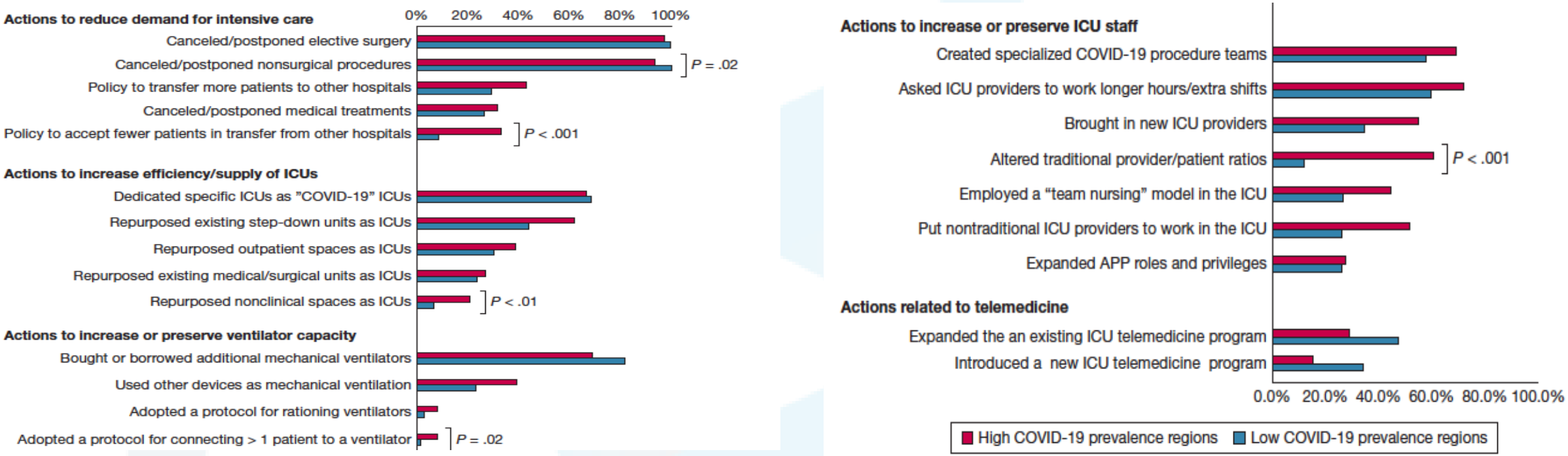


CHEST

Actions Taken by US Hospitals to Prepare for Increased Demand for Intensive Care During the First Wave of COVID-19

A National Survey

Meeta Prasad Kerlin, MD, MSCE; Deena Kelly Costa, PhD, RN; Billie S. Davis, PhD; Andrew J. Admon, MD, MPH; Kelly C. Vranas, MD; and Jeremy M. Kahn, MD



Contents lists available at ScienceDirect

Intensive & Critical Care Nursing

journal homepage: www.elsevier.com/iccn

Research Article

Impact of COVID-19 on nursing time in intensive care units in Belgium

Arnaud Bruyneel [a,b,c], Maria-Cécillia Gallani [d], Jérôme Tack [b,e], Alain d'Hondt [f], Sebastien Canipel [b,f], Stéphane Franck [a], Pascal Reper [g], Magali Pirson [c]

[a] Soins intensifs – Centre Hospitalier Universitaire Tivoli, Belgium
[b] SIZ Nursing, A Society of Intensive Care Nurses, Belgium
[c] Health Economics, Hospital Management and Nursing Research Dept, School of Public Health, Université Libre de Bruxelles, Belgium
[d] Université de Laval, Canada
[e] Soins intensifs – Cliniques Universitaire de Bruxelles – Hôpital Erasme, Belgium
[f] Soins intensifs – Centre Hospitalier Universitaire Ambroise Paré, Belgium
[g] Soins intensifs – Centre Hospitalier de la Haute Senne, le Tilleriau, Belgium

Table 1
Sociodemographic characteristics of the patients.

Characteristic	COVID patients (n = 95)	Non-COVID-19 patients (n = 1,604)	Test values	p value*
Age-y, mean ±	64.1 ± 16.2	63.0 ± 12.5	t = 1,57	0.51
Men, n (%)	66 (70)	871 (54)	χ^2 = 8.34	0.004
BMI - kg/m^2, mdn (IQR)	29.4 (7.4)	26.7 (8.7)	t = −15.72	0.002
Length of stay - d, mdn (IQR)	9 (16)	2 (3)	U = −26,54	<0.0001
APACHE II, mdn (IQR)	17 (11)	14 (16)	U = −2.16	0.03
SAPS 3, mdn (IQR)	48 (21)	46 (24)	U = 1.08	0.28
Readmission ICU, n (%)	8 (8.4)	87 (5.4)	χ^2 = 3.52	0.06
Ventilated patients, n (%)	62 (65)	439 (27)	χ^2 = 49.03	<0.0001
Mechanical ventilation time-d, mdn (IQR)	11 (15)	2 (4)	U = −7.36	<0.0001
Patients with CVVH, n (%)	32 (34)	82 (5)	χ^2 = 116.97	<0.0001
Type of admission n (%)				
Emergency	30 (31)	674 (42)	χ^2 = 3.27	0.07
Ward	65 (69)	366 (23)	χ^2 = 116.84	<0.0001
Elective surgery	0	473 (29)		–
Urgent surgery	0	77 (5)		–
Destination, n (%)				
Deceased	28 (29)	188 (11)	χ^2 = 19.40	<0.0001
Ward	55 (58)	1254 (78)	χ^2 = 384.54	<0.0001
Other hospital	12 (12)	122 (8)	χ^2 = 113.49	<0.0001
Home	0	40 (2)		–

International Journal of Nursing Studies 121 (2021) 104005

Contents lists available at ScienceDirect

International Journal of Nursing Studies

journal homepage: www.elsevier.com/ijns

The impact of COVID-19 on nursing workload and planning of nursing staff on the Intensive Care: A prospective descriptive multicenter study

M.E. Hoogendoorn[a,e,*], S. Brinkman[b,e], R.J. Bosman[c,e], J. Haringman[a,d], N.F. de Keizer[b,e], J.J. Spijkstra[d,e]

[a] Department of Anesthesiology and Intensive Care, Isala, Zwolle, the Netherlands
[b] Department of Medical Informatics, Amsterdam UMC, Amsterdam Public Health Research Institute, Amsterdam, the Netherlands
[c] Department of Intensive Care, OLVG, Amsterdam, the Netherlands
[d] Department of Intensive Care, Amsterdam UMC, Location VUMC, Amsterdam, the Netherlands
[e] National Intensive Care Evaluation (NICE) Foundation, Amsterdam, the Netherlands

Table 1
Baseline characteristics.

Patient factors:	COVID -patients versus pneumonia patients		Significance	Non-COVID patients versus non-pneumonia patients		Significance
Patient type	COVID-19 -patients	Pneumonia-patients	p-value	Non-COVID-patients	Non-pneumonia -patients	p-value
Number of patients – N (%)	218 (13.8%)	147 (6.1%)		1367 (86.2%)	2262 (93.9%)	
ICU admission type:						
Medical patients – N (%)	217 (99.5)	147 (100)	1	447 (32.8)*	828 (36.6)*	0.019
Elective surgical patients – N (%)	1 (0.5)	0 (0)	1	678 (49.6)*	1188 (52.5)*	0.100
Urgent surgery patients – N (%)	0 (0)	0 (0)	–	239 (17.5)*	245 (10.8)*	<0.001
Comorbidities:						
Diabetes Mellitus – N (%)	53 (24.3)	28 (19.0)	0.263	251 (18.4)	411 (18.2)*	0.890
Renal insufficiency – N (%)	7 (3.2)	16 (10.9)	0.002	57 (4.2)	147 (6.5)*	0.005
Cardiovascular insufficiency – N (%)	6 (2.8)	7 (4.8)	0.404	76 (5.6)	97 (4.3)	0.098
Respiratory insufficiency – N (%)	26 (11.9)	55 (37.4)	<0.001	145 (10.6)*	277 (12.2)*	0.151
Apache-APS score – Median (IQR)	50 (42 - 64)*	54 (44 – 68)	0.079	37 (27 - 51)	38 (27 - 55)*	0.079
Age – Median (IQR)	66 (58 - 74)	68 (59 - 76)	0.219	67 (58 - 73)	66 (56 – 73)	0.105
BMI – Median (IQR)	27.7 (25.2 - 30.2)	25.7 (23.0 – 29.8)	0.001	26.0 (23.2 - 29.4)	26.2 (23.5 – 29.6)	0.262
Mechanical ventilation in first 24 h-N (%)	181 (83.0)	82 (55.8)	<0.001	779 (57.0)	1373 (60.7)	0.026
Mortality						
ICU-mortality - N (%	63 (28.9)*	28 (19.0)	0.031	83 (6.1)	160 (7.1)*	0.240
In hospital mortality – N (%)	85 (39.0)*	39 (26.5)	0.017	133 (9.7)	201 (8.9)*	0.405
Length of ICU stay in days – Median (IQR)	14.0 (8.0 – 27.0)	3.9 (1.5 – 6.8)	<0.001	0.9 (0.8 - 1.8)	0.9 (0.8 – 2.0)*	0.457
Nursing Activities Scores – Median (IQR)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* Statistically significant difference compared to baseline characteristics of other hospitals in the NICE database.

Table of Contents

NURSING ACTIVITIES SCORE

Range: 0 - 177%

1. Monitoring and titration	
• 1a - baseline	4.5
• 1b - cont. obs or active ≥2hrs	12.1
• 1c - idem ≥4hrs	19.6
2. Laboratory	4.3
3. Medication	5.6
4. Hygiene procedures	
• 4a - baseline	4.1
• 4b - procedures ≥2hours	16.5
• 4c - idem ≥4hours	20.0
5. Care of drains	1.8
6. Mobilisation and positioning	
• 6a - up to 3 times/day	5.5
• 6b - >3 times, or 2 nurses	12.4
• 6c - ≥3 nurses any time	17.0
7. Support and care of relatives	
• 7a - full dedication 1 hour	4.0
• 7b - idem ≥3hours	32.0
8. Administrative and managerial tasks	
• 8a - baseline	4.2
• 8b - full dedication for 2hours	23.2
• 8c - idem ≥4hours	30.0
9. Respiratory support	1.4
10. Care of artificial airways	1.8
11. Improving lung function	4.4
12. Vasoactive medication	1.2
13. IV replacement of large volume	2.5
14. Left atrium monitoring	1.7
15. CPR	7.1
16. Hemofiltration techniques	7.7
17. Quantitative urine output	7.0
18. Measurement of ICP	1.6
19. Complex metabolic conditions	1.3
20. IV hyper alimentation	2.8
21. Enteral feeding	1.3
22. Specific interventions in the ICU	2.8
23. Idem outside the ICU	1.9

100% → 1 nurse

50% → ½ nurse

Retrospectively

Intensive & Critical Care Nursing 59 (2020) 102876

Contents lists available at ScienceDirect

Intensive & Critical Care Nursing

journal homepage: www.elsevier.com/iccn

Letter to the Editor

Nursing Activities Score is increased in COVID-19 patients

Table 1
NAS score according to clinical characteristics. Data are expressed as mean ± SD (range) or absolute (relative) frequency.*Student's *T*-test, #Chi square test.

	COVID-19 patients n = 15 *MD ± SD* *(range)*	2019 ICU patients n = 474 *MD ± SD* *(range)*	p.value
Age, years	65 ± 9 (49–81)	60 ± 20 (1–91)	0.810*
Gender, females n=(%)	5 (33%)	132 (38%)	0.001#
ICU length of stay, days	8 ± 6 (2–17)	6 ± 9 (1–69)	<0.001*
Pts with ECMO support n=(%)	2 (13%)	26 (5%)	<0.001#
NAS	84 ± 10 (67–99)	63 ± 15 (28–117)	<0.001*
Alive n=(%)	10 (66%)	444 (94%)	<0.001#

OR (95%CI)
4.84 (3.63–6.42) <0.0001

Table 2
NAS description and score according to admission source.

Characteristic	COVID-19 patients (NAS = 905)	Non-COVID-19 patients (NAS = 5,453)	Test values	p value*	Total (NAS = 6,358)
NAS per 24 h, mean ±	92.0 ± 16.1	71.7 ± 18.2	t = −31.48	<0.0001	74.6 ± 0.19.3
NAS per 24 h admission day, mdn (IQR)	96.4 (29.2)	71.1 (21.5)	U = −29.52	<0.0001	81.75 (24.5)
NAS per 24 h discharge ICU, mdn (IQR)	91.8 (16.7)	68.3 (22.6)	U = −30.52	<0.0001	69.7 (18.3)
NAS < 50%, n (%)	1 (0.1)	611 (11)	χ^2 = 109.82	<0.0001	612 (10)
NAS : 51%–75%, n (%)	148 (16)	2,680 (49)	χ^2 = 338.01	<0.0001	2,828 (44)
NAS : 76%–100%, n (%)	482 (53)	1,793 (33)	χ^2 = 140.28	<0.0001	2,275 (36)
NAS > 100%, n (%)	274 (30)	369 (7)	χ^2 = 471.90	<0.0001	643 (10)
Analysis by item					
Monitoring and titration n (%)					
Normal (4.5% in NAS)	220 (24)	3,524 (65)	χ^2 = 521.09	<0.0001	–
More than normal (12.1% in NAS)	489 (54)	1,743 (32)	χ^2 = 165.04	<0.0001	–
Much more than normal (19.6% in NAS)	196 (22)	186 (3)	χ^2 = 457.60	<0.0001	–
Hygiene and procedures n (%)					
Normal (4.1% in NAS)	41 (4)	2,817 (52)	χ^2 = 665.95	<0.0001	–
More than normal (16.5% in NAS)	535 (60)	2,148 (39)	χ^2 = 151.67	<0.0001	–
Much more than normal (20.0% in NAS)	329 (36)	488 (9)	χ^2 = 557.77	<0.0001	–
Mobilisation and positioning n (%)					
Normal (5.5% in NAS)	53 (6)	1,306 (24)	χ^2 = 151.20	<0.0001	–
More than normal (12.4% in NAS)	637 (70)	3,640 (67)	χ^2 = 4.66	0.031	–
Much more than normal (17.0% in NAS)	215 (24)	507 (9)	χ^2 = 161.21	<0.0001	–

Abbreviations: ICU = Intensive Care Unit, NAS = Nursing Activities Score
*pvalue: T test for parametric variable (t), the Wilcoxon ranksum test for non-parametric test (U) and chi-square for categorical variables (χ^2)

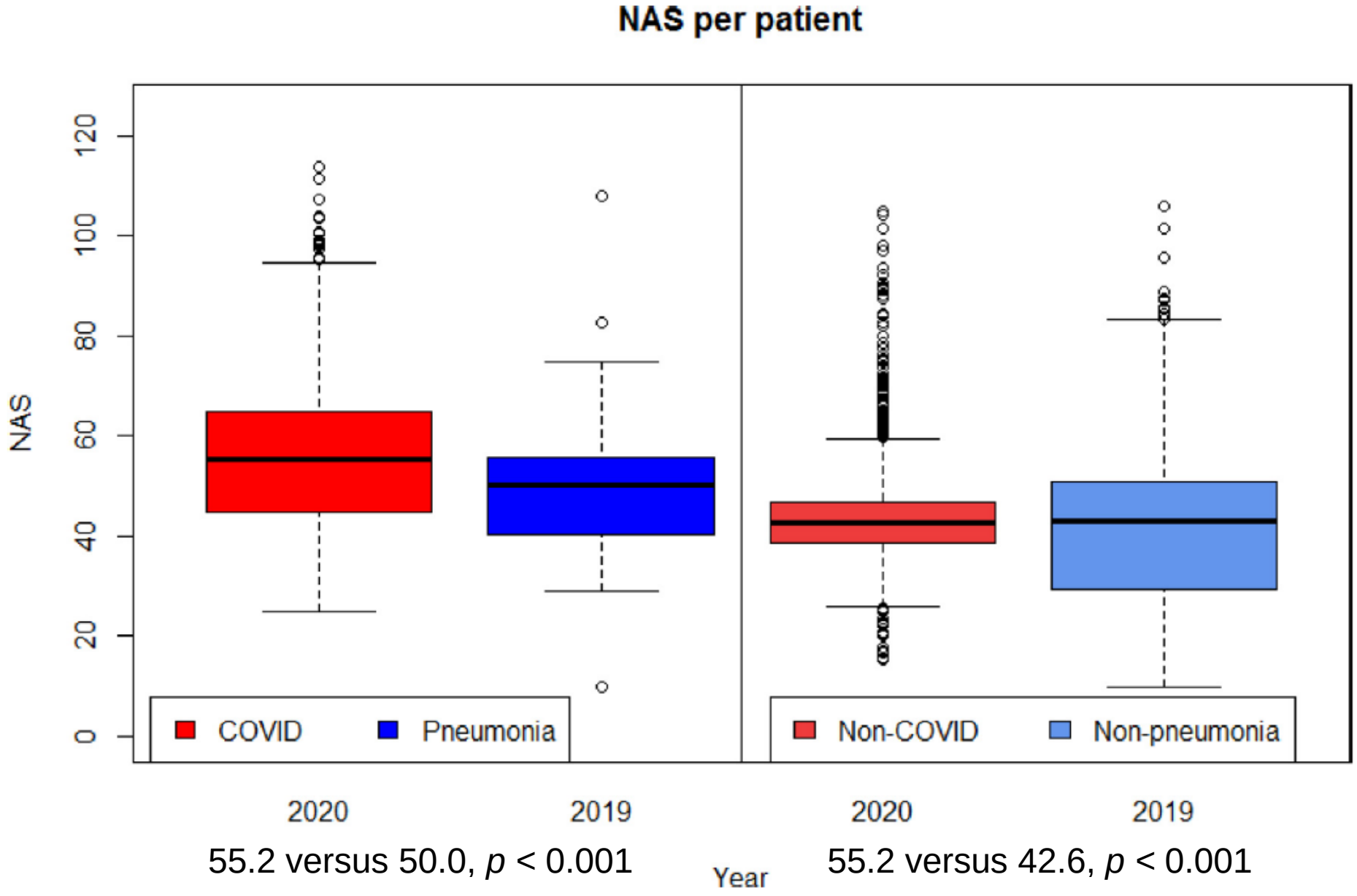


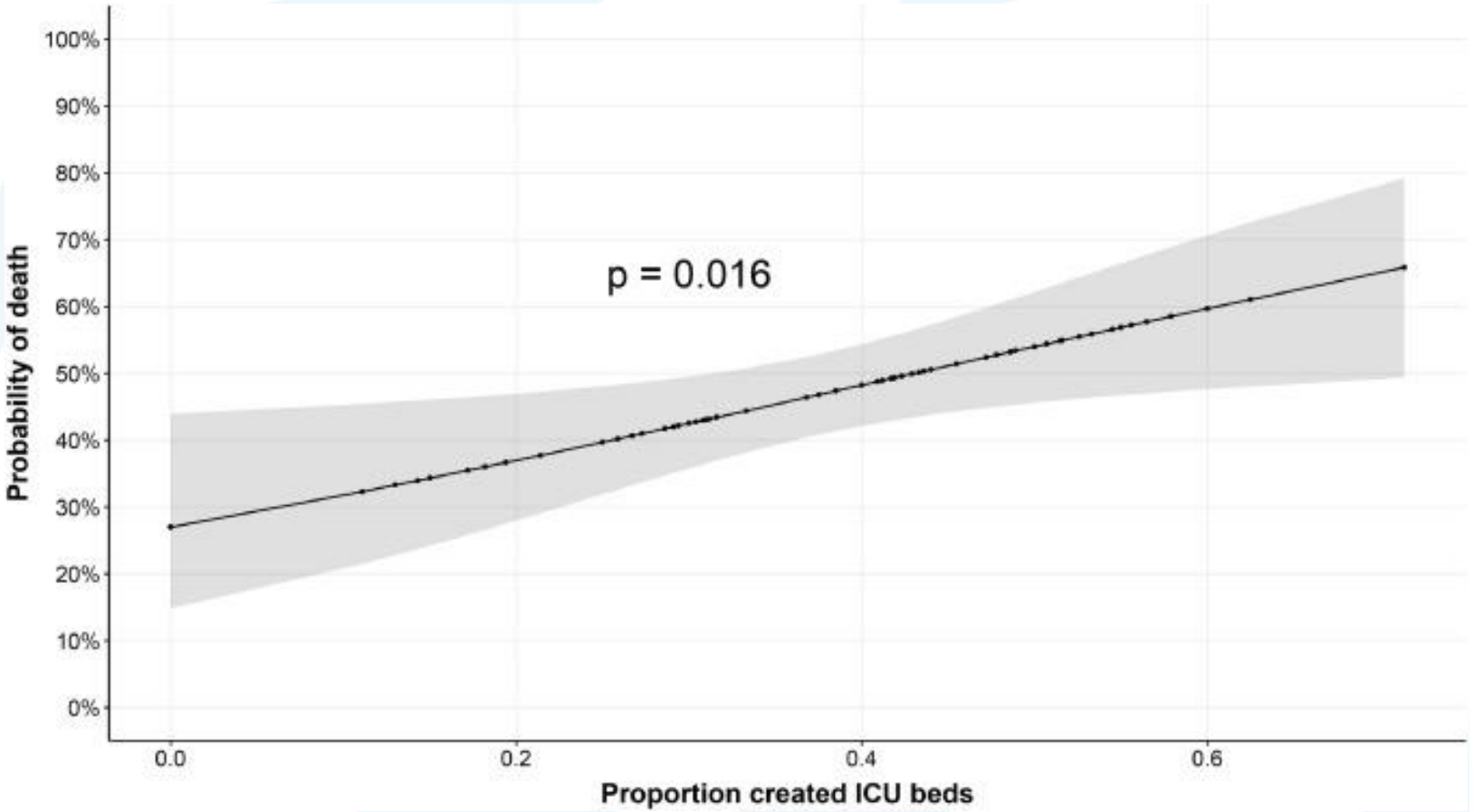
Fig. 3. Differences in NAS per patient of COVID-19 versus pneumonia patients and non-COVID versus non-pneumonia patients.

RESEARCH PAPER | VOLUME 2, 100019, MARCH 01, 2021

The role of organizational characteristics on the outcome of COVID-19 patients admitted to the ICU in Belgium

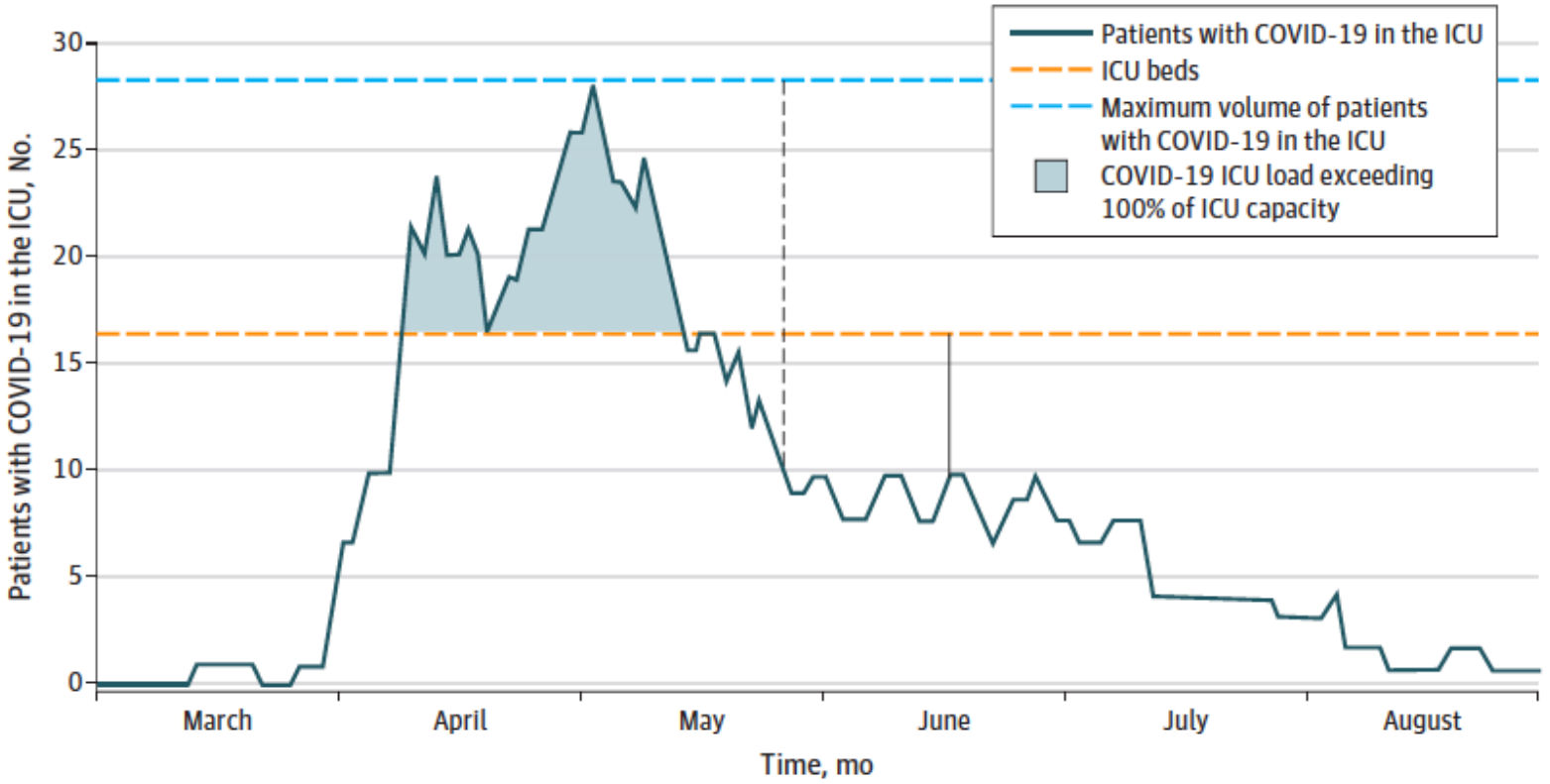
Fabio Silvio Taccone [1] • Nina Van Goethem [1] • Robby De Pauw • Xavier Wittebole • Koen Blot • Herman Van Oyen • et al. Show all authors • Show footnotes

Open Access • Published: January 13, 2021 • DOI: https://doi.org/10.1016/j.lanepe.2020.100019



Among 8516 patients admitted to 88 VA hospitals, US

Figure 1. Coronavirus Disease 2019 (COVID-19) Intensive Care Unit (ICU) Load and Demand at an Example Facility



Black solid vertical line with arrows indicates the numbers at 1 time point used to calculate COVID-19 ICU load, defined as the mean number of patients with COVID-19 in the ICU during a patient's hospital stay divided by the number of ICU beds. Black dotted vertical line indicates the numbers at 1 time point used to calculate COVID-19 demand, defined as the mean number of patients with COVID-19 in the ICU during a patient's hospital stay divided by the maximum number of patients with COVID-19 in the ICU during the study period. The results suggest that the risk of mortality would be highest if a COVID-19 patient's stay was during the peak of ICU demand and if ICU caseload approached or exceeded ICU bed capacity.

14,513 COVID-19 patients were admitted to IC

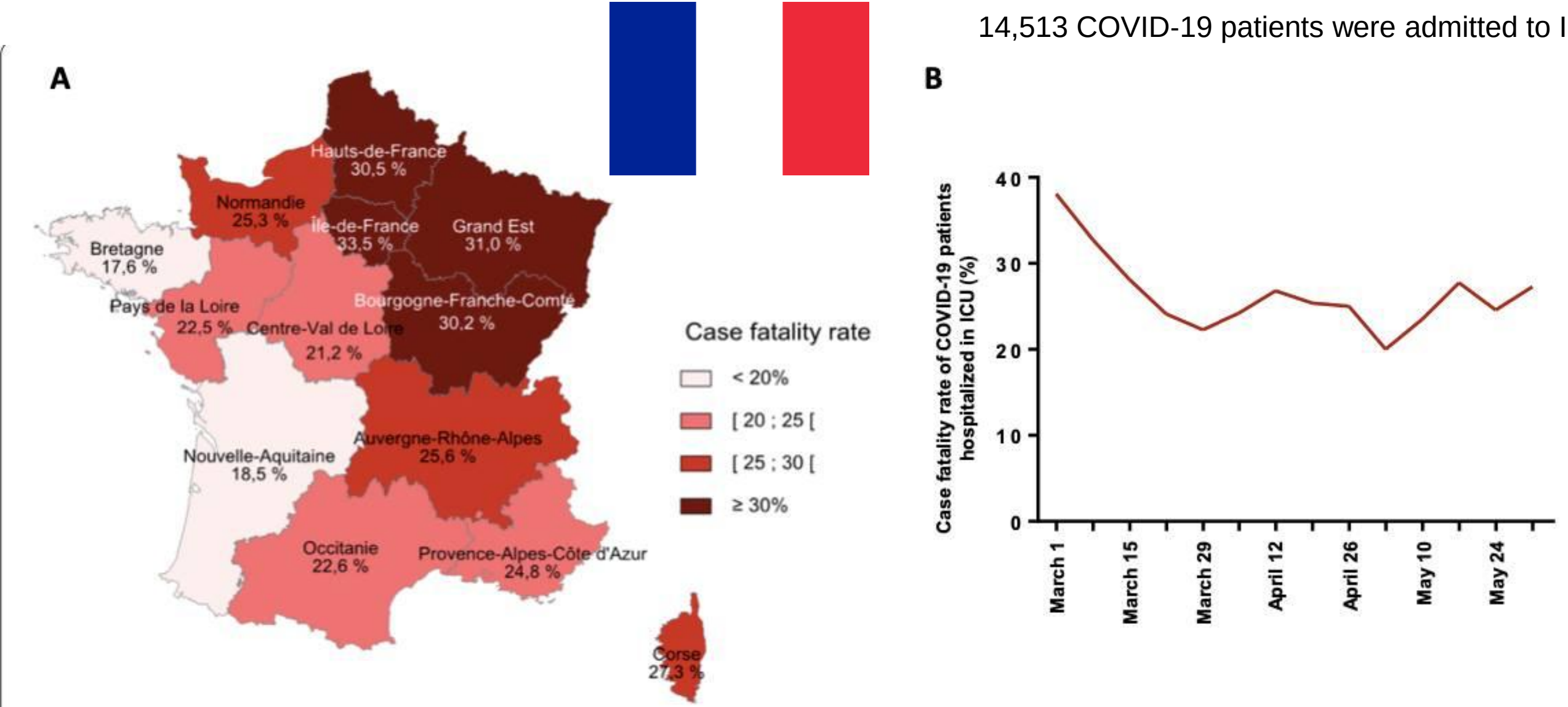


Fig. 2 Case fatality rate of COVID-19 patients admitted to ICU in France, March 1st to May 31st, 2020. Case fatality rate of COVID-19 patients according to: **A** the French administrative region, **B** the date of admission

Guillon *et al. Ann. Intensive Care (2021) 11:127*

Table 2 Factors associated with case fatality in COVID-19 patients admitted in the ICU in France, March, 1st to May, 31st 2020, analyzed by logistic regression model

	Univariate	Multivariate		
	N = 14,513	*N* = 14,232		
	p	Adjusted OR	95% CI	*p*
in hospital 2019, age ≥ 18 y–o***				
< 100	0.003	1.3	[1.1–1.4]	< .0001
[1000–2000]		1.0	[0.9–1.2]	0.73
≥ 2000		Ref		
Regional level				
Number of days with 75% or more of ICU beds occupied by COVID-19 patients				
< 10 days	< .0001	Ref		
10–19 days		1.2	[1.0–1.5]	0.03
20–29 days		1.5	[1.2–1.7]	< .0001
≥ 30 days		2.2	[1.9–2.6]	< .0001

*Missing data SAPS II *n* = 281

**Dobutamine, dopamine, epinephrine, norepinephrine

***For hospitals with several ICUs, all ICU stays were included

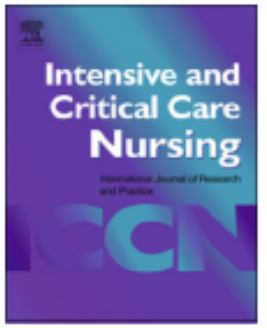
Table of Contents

Fig. 2. Exploratory NVivo™ word frequency cloud for the four included full-text documents. *Note*: Figure from NVivo's™ word frequency query illustrating the 1000 most frequent exact word matches with minimum length of four characters. Word font size represents frequency, with larger font indicating more commonly used words.

Contents lists available at ScienceDirect

Intensive & Critical Care Nursing

journal homepage: www.elsevier.com/iccn



Research Article

Prevalence of burnout risk and factors associated with burnout risk among ICU nurses during the COVID-19 outbreak in French speaking Belgium

Arnaud Bruyneel [a,b,*], Pierre Smith [c], Jérôme Tack [a,d], Magali Pirson [a]

[a] Health Economics, Hospital Management and Nursing Research Dept, School of Public Health, Université Libre de Bruxelles, Belgium
[b] SIZ Nursing, A Society of Intensive Care Nurses, Belgium
[c] Institute of Health and Society (IRSS), Université Catholique de Louvain, Brussels, Belgium
[d] Department of Intensive Care, Erasme Hospital, Université Libre de Bruxelles, Belgium

ARTICLE INFO

Article history:
Received 25 January 2021
Revised 29 March 2021
Accepted 30 March 2021
Available online xxxx

https://doi.org/10.1016/j.iccn.2021.103059

Burnout assessment

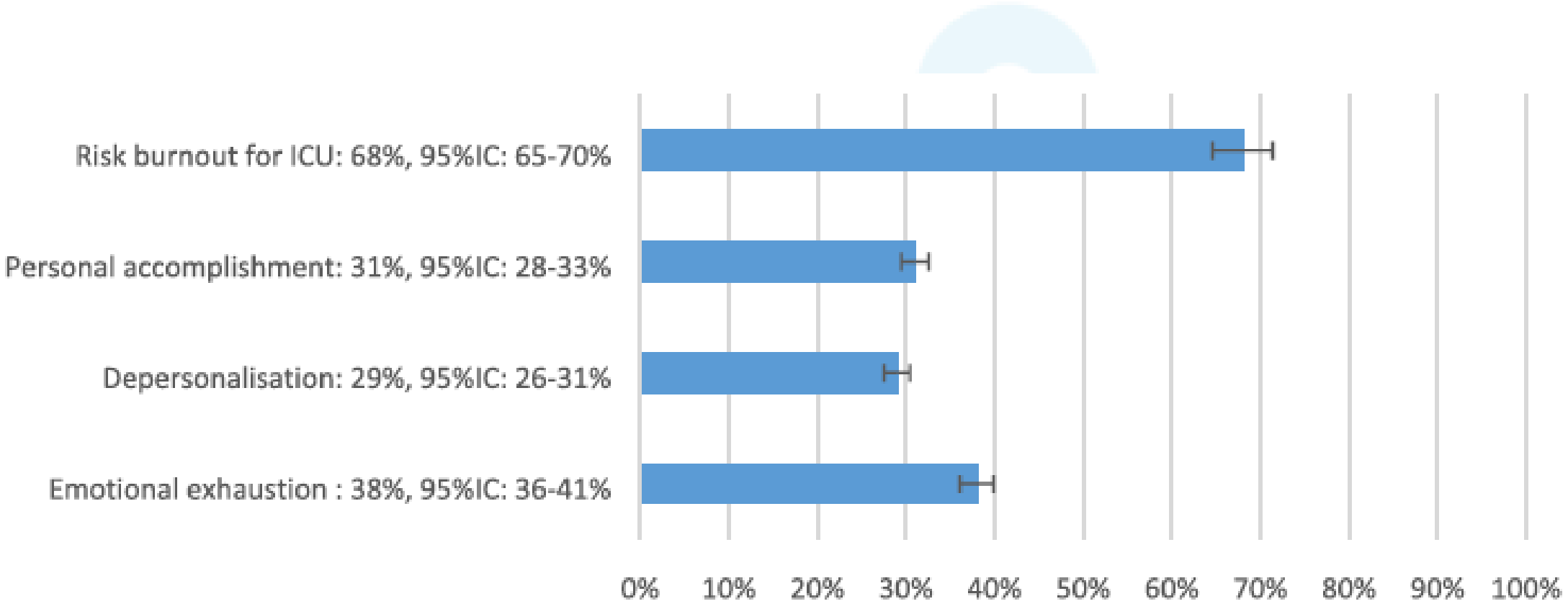


Fig. 1. Prevalence of burnout risk and high-risk dimensions of MBI for ICU nurses MBI, Maslach burnout inventory.

n=1135

Risk factors for burnout

Variables	Emotional exhaustion OR (95%CI)	Depersonalization OR (95%CI)	Reduced personal accomplishment OR (95%CI)
Nurse-to-patient ratio, ref = 1:1			
1:2	1.07 (0.68-1.68)	0.84 (0.52-1.37)	1.05 (0.59-1.69)
1:3	**1.77 (1.07-2.95) ***	**1.38 (1.09-2.40)***	1.20 (0.67-2.16)
>1:3	1.23 (0.48-3.16)	**2.72 (1.07-7.54)***	2.02 (0.74-5.50)
Perceived workload during the COVID-19 pandemic, ref = same			
Lower	-	-	-
Higher	**3.23 (1.77-5.93)*****	**2.22 (1.14-4.33)****	**3.07 (1.39-6.76)****

Table 4 Identification of risk factors of high psychiatric scores and low well-being scale among ICU and non-ICU HCW

GAD-7	PHQ-9	PDI	WHO-5
Female	Older	Older	Female
No minor children	Female	Female	Single
Work overload	Single	Single	Work overload
Fear of catching COVID-19	Work overload	Work overload	Occupation
Fear of transmitting COVID-19	Fear of catching COVID-19	Care assistant	Relatives affected by COVID-19
Stress of working in Contact with COVID-19	Fear of transmitting COVID-19	Relatives affected by COVID-19	Fear of catching COVID-19
Trouble sleeping	Stress of working in contact with COVID-19	Fear of catching COVID-19	Fear of transmitting COVID-19
Eating less	Trouble sleeping	Fear of transmitting COVID-19	Stress of working in contact with COVID -19
More alcohol	Eating less	Stress of working in contact with COVID-19	Trouble sleeping
	More alcohol	Trouble sleeping	Eating less
	Less physical exercise	Eating less	More alcohol
		More alcohol	Less physical exercise

WHO-5 World Health Organization Well-Being Index, *GAD-7* 7-item Generalized Anxiety Disorders, *PHQ-9* 9 items Patient Health Questionnaire, *PDI* Peritraumatic Distress Inventory

Intensive & Critical Care Nursing 65 (2021) 103034

Contents lists available at ScienceDirect

Intensive & Critical Care Nursing

journal homepage: www.elsevier.com/iccn

Research Article

The impact of the first COVID-19 surge on the mental well-being of ICU nurses: A nationwide survey study

Hidde Heesakkers [a,*], Marieke Zegers [a], Margo M.C. van Mol [b], Mark van den Boogaard [a]

[a] Radboud University Medical Center, Radboud Institute for Health Sciences, Department Intensive Care, Nijmegen, the Netherlands
[b] Erasmus MC, University Medical Center Rotterdam, Department of Intensive Care Adults, the Netherlands

Results: Symptoms of anxiety, depression, and post traumatic stress disorder were reported by 27.0%, 18.6% and 22.2% of the 726 respondents, respectively. The NFR was positive, meaning not being recovered from work, in 41.7%. Working in an academic hospital, being afraid of infecting relatives and experiencing insufficient numbers of colleagues were associated with more mental symptoms, while having been on holiday was associated with reduced depression symptoms and need for recovery.

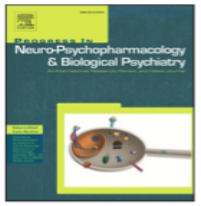
Conclusion: The first COVID-19 surge had a high impact on the mental well-being of intensive care nurses, increasing the risk for drop out and jeopardising the continuity of care. Effort should be made to optimize working conditions and decrease workload to guarantee care in the next months of the COVID-19 pandemic.

Progress in Neuropsychopharmacology & Biological Psychiatry 110 (2021) 110299

Contents lists available at ScienceDirect

Progress in Neuropsychopharmacology & Biological Psychiatry

journal homepage: www.elsevier.com/locate/pnp



The impact of the COVID-19 pandemic in an intensive care unit (ICU): Psychiatric symptoms in healthcare professionals

Flaviane Cristine Troglio da Silva *, Caio Parente Barbosa

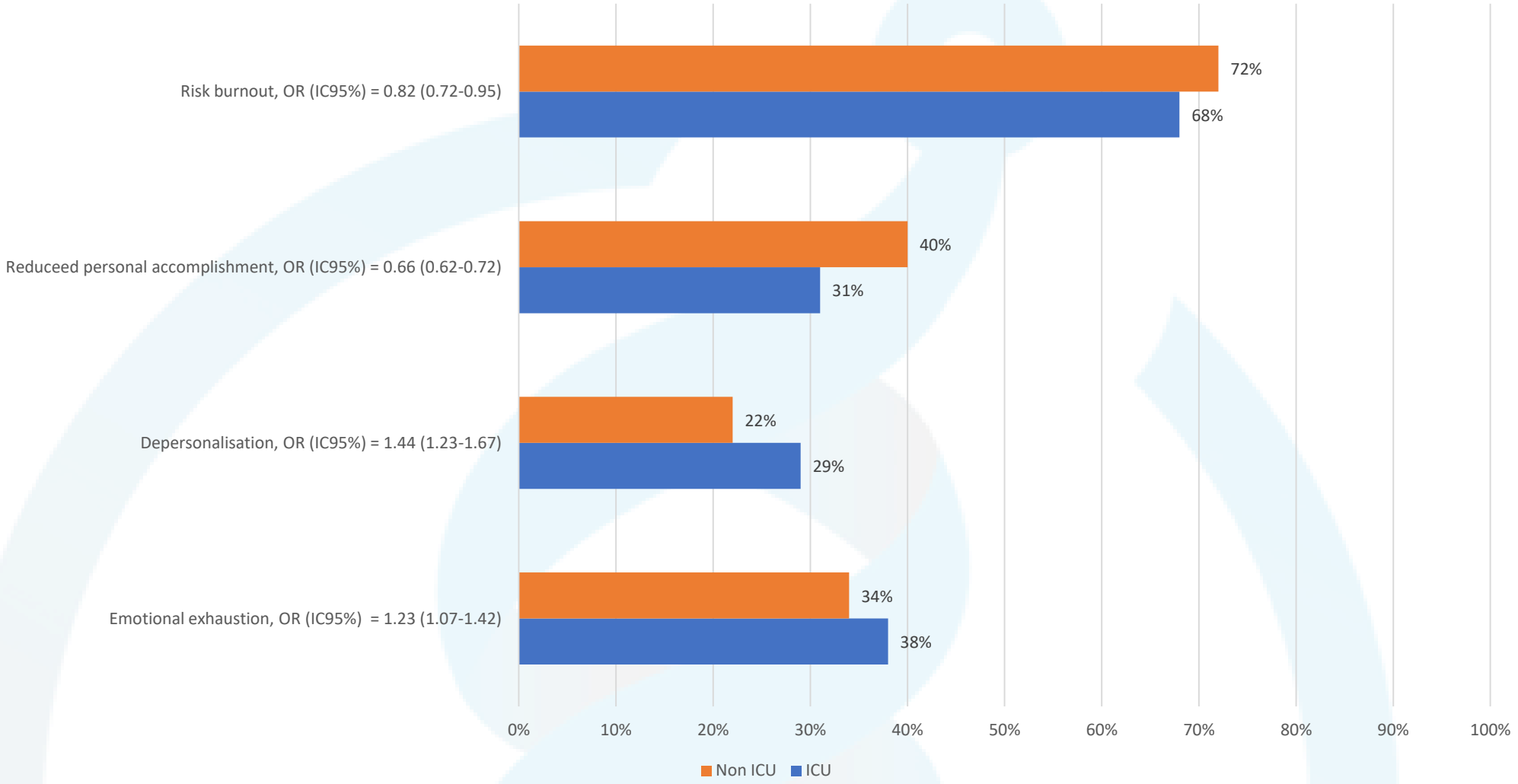
Postgraduate Program in Health Sciences, School of Medicine of ABC, Santo André, São Paulo, Brazil

Results: Twenty-one studies reported on the urgent need for interventions to prevent or reduce mental health problems caused by COVID-19 among health professionals in ICU. Eleven studies demonstrated possibilities for interventions involving organizational adjustments in the ICU, particularly linked to emotional conflicts in the fight against COVID-19.

Conclusion: The disproportion between the need for technological supplies of intensive care medicine and their scarcity promotes, among many factors, high rates of psychological distress. Anxiety, irritability, insomnia, fear and anguish were observed during the pandemic, probably related to extremely high workloads and the lack of personal protective equipment.

Burnout assessment

n=4552



https://doi.org/10.1016/j.iccn.2021.103086

Impact of the Covid-19 epidemic on the risk of burnout for nurses in Belgium

- Online survey
- April 2020
- Maslach Burn-out Inventory (MBI) scale
- n = 4552

Prevalence risk of burnout

71%
(KCE 2019, 36%)

Risk factors !

Working beyond full time (18%)
(OR = 1.16, p < 0.01)

Increase in Covid-19 patient/nurse ratio
(OR = 1.13, p < 0.01)

Shortage of protective equipment (61%)
(OR = 1.51, p < 0.01)

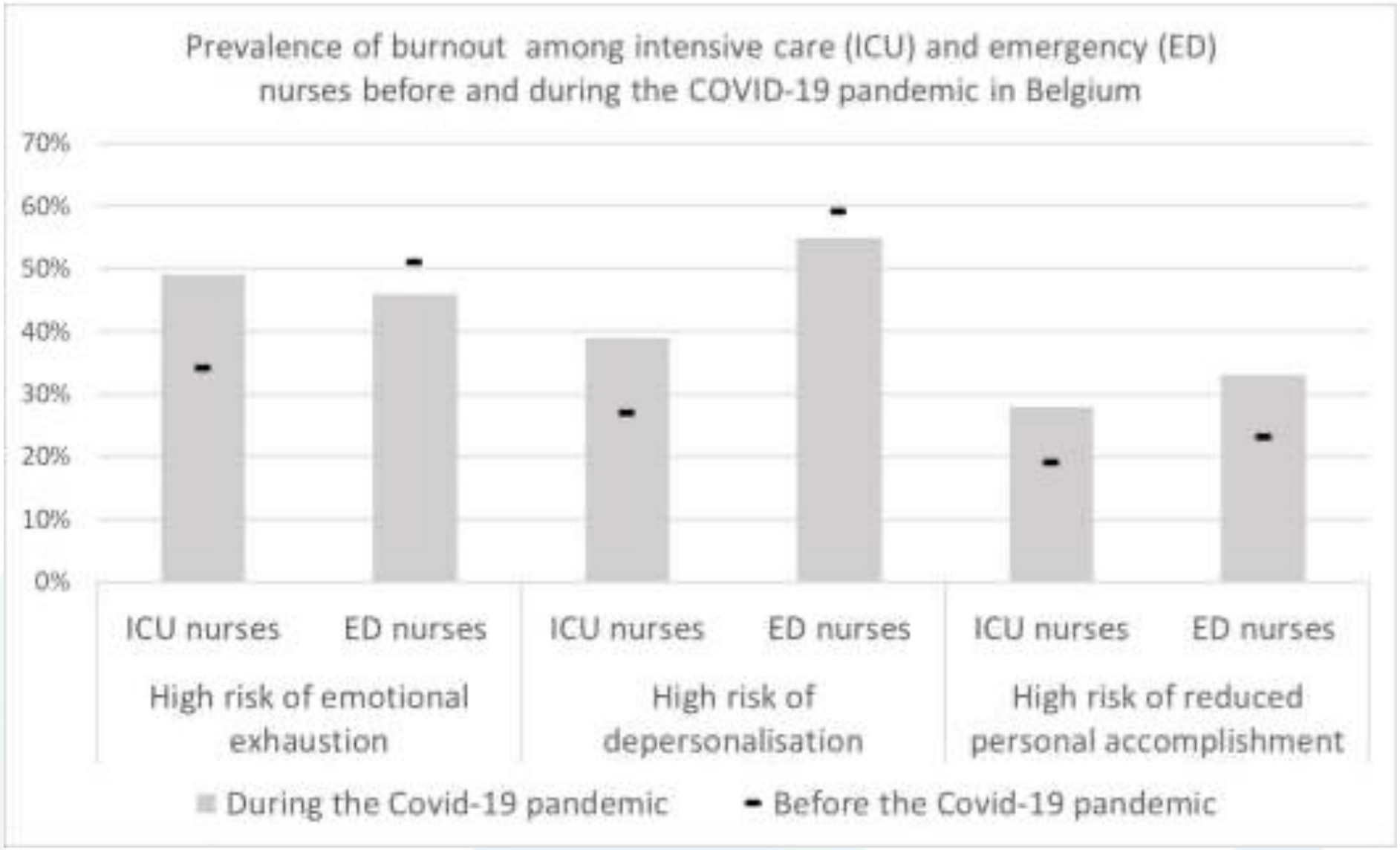
Working in :
- Nursing homes (OR = 1.37, p < 0.01)
- Covid wards (OR = 1.32, p < 0.01)
- Emergency departments (OR = 1.29, p < 0.01)
- Intensive care units (OR = 1.25, p < 0.01)

Increased workload (70%)
(OR = 1.81, p < 0.01)

Younger nurses
(OR = 2.08, p < 0.01)

(1) Systematic assessment and screening
(2) Prevent risk factors
(3) Set up diagnostic and treatment programs

Pierre SMITH
UCLouvain
Institute of Health & Society (IRSS)



https://doi.org/10.1016/j.jen.2021.08.007

Literature review

thebmj

BMJ 2020;369:m1642 | doi: 10.1136/bmj.m1642

Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis

Steve Kisely,[1,2,3,4] Nicola Warren,[1,3] Laura McMahon,[3] Christine Dalais,[3] Irene Henry,[1] Dan Siskind[1,2,5]

Recommendations to deal with psychological problems in healthcare workers in novel outbreaks

Individual factors	Service / system factors
Sufficient rest and time off	Workload: • Appropriate work shift and regular breaks • Reducing the density of patients on wards • Redeployment of wards and human resources
Opportunities for reflection on the effects of stress (debriefing*)	Access to adequate personal protection
Training and education around infectious diseases	Practical and psychological support
	Clear communication

JAMA Network | Open

RCT: Cannabidiol for Emotional Exhaustion in Frontline Health Care Workers During the COVID-19 Pandemic

POPULATION

39 Men, 79 Women

Frontline health care workers working with patients with COVID-19 disease

Mean age 33.7 (range, 24-60) y

INTERVENTION

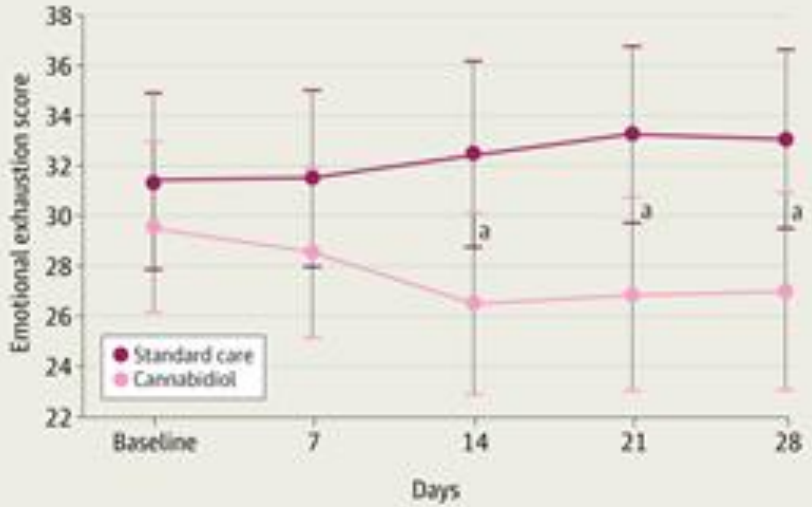
120 Randomized

59 Cannabidiol and standard care
Cannabidiol 300 mg by mouth daily + motivational videos and weekly psychiatric consultations over 4 wk

59 Standard care alone
Motivational videos and weekly psychiatric consultations over 4 wk

FINDINGS

Compared with standard care alone, the cannabidiol group had significantly lower emotional exhaustion scores.



Mean difference between groups at 28 d
-4.0 (95% CI, 0.04-7.58)

SETTINGS / LOCATIONS

A public university hospital in Ribeirão Preto, Brazil

PRIMARY OUTCOME

Change from baseline on the emotional exhaustion subscale of the Maslach Burnout Inventory (total score ranges from 0-54, with higher score indicating more emotional exhaustion)

Crippa JAS, Zuardi AW, Guimarães FS, et al; Burnout and Distress Prevention With Cannabidiol in Front-line Health Care Workers Dealing With COVID-19 (BONSAI) Trial Investigators. Efficacy and safety of cannabidiol plus standard care vs standard care alone for the treatment of emotional exhaustion and burnout among frontline health care workers during the COVID-19 pandemic: a randomized clinical trial. *JAMA Netw Open*. 2021;4(8):e2120603. doi:10.1001/jamanetworkopen.2021.20603

Table of Contents

Conclusions

- The pandemic has changed the way intensive care is **organised** in a large majority of countries around the world. Having qualified staff is the important key to increasing the number of ICU beds while maintaining the quality of care.
- The pandemic has had an impact on the **nursing workload** in the ICU. Workload assessment **scores** may need to be adapted (e.g. PPE, communication with family, ...). In addition, the integration of **non-ICU nurses** should be analysed.
- The pandemic has also had an impact on the risk of **burnout** and on the **well-being** of ICU nurses. **Prevention** is very important by paying attention to **workload**, personal protective equipment, **management & team work**, **non-pharmacological treatments** (yoga, mindfulness, ...) as well as the systematic intervention of **psychologists**


THANK YOU
GRAZIE
MERCI
MULTUMESC
MAAKE
TERMA KASIH
JUSPAXAR
OBRIGADO
MATONDO
KIITOS
KIA ORA
MULTUMESC
CHOKRANE
CAM ON BAN
MERCI
OBRIGADO
ASANTE
UA TSAUG RAU KOJ
KIITOS
MATONDO
CHOKRANE
MATUR NUWUN
DANK JE
SPASIBO
MAAKE
SPASIBO
WELALIN
ARIGATO
MOCHCHAKKERAM
OBRIGADO
KIITOS
DANKON
NIRRINGRAZZJAK
MULTUMESC
VINAKA
NIRRINGRAZZJAK
OBRIGADO
DANK JE
MAHALO