Supplement to "ABCDEF Bundle and Supportive ICU Care Practices for patients with COVID-19: An international point prevalence study ~ISIIC Study~"

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Appendix 3: Survey Reporting Forms: Survey of daily ICU care

Supplemental Table 1. Reporting checklist for a cross-sectional study based on the STROBE cross sectional guidelines.

List		Reporting Item	Page Number
Title and abstract			
Title	#1a	Indicate the study's design with a commonly used term in the title or the abstract	1
Abstract	#1b	Provide in the abstract an informative and balanced summary of what was done and what was found	5
Introduction			
Background / rationale	#2	Explain the scientific background and rationale for the investigation being reported	7
Objectives	#3	State specific objectives, including any prespecified hypotheses	8
Methods			
Study design	#4	Present key elements of study design early in the paper	9
Setting	#5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	9, 10
Eligibility criteria	#6a	Give the eligibility criteria, and the sources and methods of selection of participants.	10
	#7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	10-13
Data sources / measurement	#8	For each variable of interest give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group. Give information separately for exposed and unexposed groups if applicable.	11, 12
Bias	#9	Describe any efforts to address potential sources of bias	n/a
Study size	#10	Explain how the study size was arrived at	n/a
Quantitative	#11	Explain how quantitative variables were	11, 12

variables		handled in the analyses. If applicable, describe which groupings were chosen, and why	
Statistical methods	#12a	Describe all statistical methods, including those used to control for confounding	12, 13
Statistical methods	#12b	Describe any methods used to examine subgroups and interactions	12, 13
Statistical methods	#12c	Explain how missing data were addressed	12
Statistical methods	#12d	If applicable, describe analytical methods taking account of sampling strategy	11-13
Statistical methods	#12e	Describe any sensitivity analyses	n/a
Results			
Participants	#13a	Report numbers of individuals at each stage of study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed. Give information separately for exposed and unexposed groups if applicable.	14
Participants	#13b	Give reasons for non-participation at each stage	Figure 1
Participants	#13c	Consider use of a flow diagram	Figure 1
Descriptive data	#14a	Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders. Give information separately for exposed and unexposed groups if applicable.	14, 15 Table 1 and 2 Supplemental Table 4 and 5
Descriptive data	#14b	Indicate number of participants with missing data for each variable of interest	n/a
Outcome data	#15	Report numbers of outcome events or summary measures. Give information separately for exposed and unexposed groups if applicable.	14, 15 Table 3
Main results	#16a	Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included	15, 16 Table 3

Main results	#16b	Report category boundaries when continuous variables were categorized	13, 14 Table 1-3
Main results	#16c	If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	n/a
Other analyses	#17	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses	17, 18
Discussion			
Key results	#18	Summaries key results with reference to study objectives	19
Limitations	#19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias.	23, 24
Interpretation	#20	Give a cautious overall interpretation considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence.	19-24
Generalizability	#21	Discuss the generalizability (external validity) of the study results	23, 24
Other Information			
Funding	#22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	3, 4

This checklist can be completed online using https://www.goodreports.org/, a tool made by the EQUATOR Network in collaboration with Penelope.ai

Supplemental Table 2. Operational definitions of evidence-based and supportive ICU care

Variables	Operational definition	Variable type
Elements of the ABCDEF bundle		
Element A	Regular **Pain** assessment that medical staff assesses all patients with COVID-19 6 times or more per day by using a pain assessment tool such as the Numerical Rating Scale (NRS), Critical-care Pain Observation Tool (CPOT), Behavioral Pain Scale (BPS), and others	Dichotomous variable (Yes / No)
Element B	Both **Spontaneous Awakening Trials** and **Spontaneous Breathing Trials** assessment. Regular **Spontaneous Awakening Trials** assessment means that medical staff orders cessation of sedatives and narcotics, or a similar local protocol, for all patients with COVID-19 using continuous or intermittent sedation to evaluate consciousness. Regular **Spontaneous Breathing Trials** assessment means that medical staff sets a respiratory rate of zero with 8 cm or less of pressure support ventilation, or similar local protocol, to evaluate whether a patient meets requirements for extubation.	Dichotomous variable (Yes / No)
Element C	Regular **Sedation** assessment that medical staff assesses all patients with COVID-19 6 times or more per day by using assessment tools such as the Richmond Agitation- Sedation Scale.	Dichotomous variable (Yes / No)
Element D	Regular **Delirium** assessment means that medical staff assesses all patients with COVID-19 2 times or more per day by using assessment tools such as the Confusion Assessment Method for ICU.	Dichotomous variable (Yes / No)
Element E	**Mobility activities** higher than active mobilization level, such as dangling at edge of bed, standing at side of bed, marching in place, ambulating in the ICU. (A score of 4 or higher according to the Intensive Care Unit Mobility Scale are defined as implementation of element E)	Numeric variable (the Intensive Care Unit Mobility Scale)

Element F	**Family engagement and empowerment** that a family member/significant other was educated regarding the ABCDEF bundle and/or participated in at least one of the following: rounds; conference; plan of care; or ABCDEF bundle related care.	Dichotomous variable (Yes / No)
Other ICU care		
Nutrition: Total estimated energy (kcal)	Total estimated nutritional energy (kcal) means the total energy provided to patients within the last 24 hours, from 12 a.m. on June 3 and July 1.	Categorial variable
Nutrition: Total estimated protein (g/kg)	Total estimated nutritional protein (g/kg) means the total protein provided to patients within the last 24 hours, from 12 a.m. on June 3 and July 1.	Categorial variable
ICU diary	An ICU diary is written for a patient by family and staff in everyday language	Dichotomous variable (Yes / No)
Physical restraint	If the patient was physically restrained in bed at any time of the survey date, you should select “yes”	Dichotomous variable (Yes / No)

ICU = intensive care unit

Supplemental Table 3. Countries with participating sites

Country	ICUs participating in the first survey (n=166)	ICUs participating in the second survey (n=212)
Africa	**4 (2%)**	**12 (6%)**
Egypt	1	4
Libya	2	5
Nigeria		1
Rwanda		1
Sudan	1	1
Asia	**130 (78%)**	**155 (73%)**
Afghanistan	1	1
India	7	15
Indonesia	2	3
Iran	1	1
Iraq		2
Japan	107	114
Korea	2	2
Philippines	3	4
Saudi Arabia	2	5
Singapore	4	5
Thailand		1
United Arab Emirates	1	2
Europe	**24 (14%)**	**32 (15%)**
Andorra		1
France	2	2
Germany	1	1
Greece	3	3
Ireland	1	1
Italy		1
Lithuania	1	1
Netherlands	2	2
Portugal	4	4
Romania		1
Spain	4	7

Switzerland	2	2
Turkey	1	2
United Kingdom	3	4
Americas	**8 (5%)**	**13 (6%)**
Brazil	2	4
Columbia		1
Mexico	1	1
Peru	1	1
Uruguay	1	1
USA	3	4
Venezuela		1
Total participating ICUs	**166**	**212**

Data are presented as number (%)

ICU = intensive care unit

Supplemental Table 4. Basic information for hospitals with participating ICUs

Parameter	ICUs participating in the first survey (n=166)	ICUs participating in the second survey (n=212)
Type, n (%)		
University hospital	58 (36%)	75 (35%)
University affiliated hospital	34 (20%)	48 (23%)
Community hospital	60 (36%)	71 (34%)
Others	14 (8%)	18 (8%)
Number of (beds), n (%)		
x <200	10 (6%)	19 (9%)
200≦ x ＜400	29 (17%)	40 (19%)
400≦ x ＜600	41 (25%)	48 (23%)
x ≧600	86 (52%)	105 (50%)
Beds exclusively for patients with COVID-19 infection, n (%)		
x <10	61 (37%)	71 (35%)
10≦ x ＜20	34 (20%)	41 (19%)
x ≧20	71 (43%)	100 (47%)

Data are presented as number (%)

ICU = intensive care unit

In five instances, two different ICUs in the same hospital participated in this study.

Supplemental Table 5. ICU Visiting hours/day for family members before and after the COVID-19 pandemic

Variable	ICUs participating in the first survey (n=166)	ICUs participating in the second survey (n=212)
ICU visiting hours/day for family members **BEFORE** the COVID-19 pandemic (hours)		
No visiting hours	7 (4%)	17 (8%)
0< x <6	**104 (63%)**	**133 (63%)**
6≦ x <12	28 (17%)	34 (16%)
12≦ x <18	3 (2%)	3 (1%)
18≦ x <24	4 (2%)	4 (2%)
No limitation on visiting hours	20 (12%)	21 (10%)
The number of visiting hours/day for patients **OTHER THAN** those with COVID-19 in the ICU **AFTER** the COVID-19 pandemic (hours)		
No visiting hours	**120 (72%)**	**154 (73%)**
0< x <6	42 (25%)	54 (25%)
6≦ x <24	0 (0%)	0 (0%)
No limitation on visiting hours	4 (2%)	4 (2%)

Data are presented as number (%)

ICU = intensive care unit

Supplemental Table 6. Details of Implementing the ABCDEF bundle.

(a) **Element A**: Tools and agents used to implement element A

Variable	Total patients	Patients without mechanical ventilation or ECMO	Patients on mechanical ventilation	Patients on ECMO
Tools used for routine **Pain** assessment among patients with implementation of **element A**	(n=118)	(n=42)	(n=75)	(n=12)
Numerical Rating Scale; NRS	**49 (42%)**	**21 (50%)**	**27 (36%)**	**4 (33%)**
Critical-care Pain Observation Tool; CPOT	**37 (31%)**	9 (21%)	**28 (37%)**	**5 (42%)**
Behavioral Pain Scale: BPS	**30 (25%)**	8 (19%)	**21 (28%)**	**6 (50%)**
Other[a]	13 (11%)	6 (14%)	5 (5%)	0 (0%)
Multiple use: Numerical Rating Scale and Behavioral Pain Scale	7 (6%)	0 (%)	6 (8%)	2 (17%)
Multiple use: Numerical Rating Scale and Critical-care Pain Observation Tool	3 (3%)	0 (%)	3 (4%)	1 (8%)
Analgesic agents provided to patients who received continuous analgesia, n (%)	(n=118)	(n=32)	(n=85)	(n=11)
Fentanyl	**67 (57%)**	**11 (34%)**	**56 (66%)**	**6 (55%)**
Morphine	14 (12%)	2 (6%)	12 (14%)	**4 (36%)**
Remifentanil	7 (6%)	1 (3%)	6 (7%)	1 (9%)
Ketamine	2 (2%)	0 (0%)	2 (2%)	0 (0%)
Others	29 (24%)	18 (56%)	11 (13%)	0 (0%)

Data are presented as number (%), ICU = intensive care unit, ECMO = extracorporeal membrane oxygenation

[a]Among 13 others used, 6 were Escala de Conductas Indicadoras de Dolor (ESCID); 2 were Visual Analog Scale; 1 was Face, Legs, Activity, Cry,

Consolability (FLACC).

(b) **Element B**: Main reason why Spontaneous Awakening Trials were not performed

Variable	Total patients	The patients without mechanical ventilation and ECMO	The patients on mechanical ventilation	The patients on ECMO
Patients who did not undergo **element B: Spontaneous Awakening Trials**	(n=72)	(n=17)	(n=54)	(n=10)
Fear of self-extubation	2 (3%)	0 (0%)	2 (4%)	1 (10%)
Agitation or delirium	1 (1%)	0 (0%)	1 (2%)	0 (0%)
Respiratory instability	**27 (38%)**	2 (12%)	**25 (46%)**	**6 (60%)**
Hemodynamic instability	11 (15%)	0 (0%)	11 (20%)	1 (10%)
Neurological dysfunction including cerebrovascular disease, such as intracranial hemorrhage	1 (1%)	0 (0%)	1 (2%)	0 (0%)
Multiple organ-system dysfunction	4 (6%)	0 (0%)	5 (9%)	0 (0%)
Many procedures, examinations, and tests such as computed tomography scan or endoscopy	0 (0%)	0 (0%)	0 (0%)	0 (0%)
No Spontaneous Awakening Trial protocol in place	**13 (18%)**	**7 (41%)**	6 (11%)	0 (0%)
Other	14 (19%)	8 (47%)	5 (9%)	2 (20%)

Data are presented as number (%)

ICU = intensive care unit, ECMO = extracorporeal membrane oxygenation

(c) **Element C**: Tools and agents used to implement element C

Variable	Total patients	Patients without mechanical ventilation or ECMO	Patients on mechanical ventilation	Patients on ECMO
Tools used for regular **Sedation** assessment among patients who underwent implementation of **element C**	(n=136)	(n=45)	(n=90)	(n=12)
Richmond Agitation- Sedation Scale; RASS	**104 (75%)**	**23 (51%)**	**80 (89%)**	**12 (100%)**
Sedation-Agitation Scale; SAS	9 (7%)	3 (7%)	6 (7%)	0 (0%)
Other[a]	25 (18%)	20 (44%)	5 (6%)	0 (0%)
Multiple use: Richmond Agitation- Sedation Scale and Sedation-Agitation Scale	2 (1%)	1 (2%)	1 (1%)	0 (0%)
Agents provided to patients who received continuous sedation	(n=102)	(n=19)	(n=82)	(n=10)
Benzodiazepine	**60 (59%)**	**13 (68%)**	**44 (54%)**	**5 (50%)**
Propofol	28 (27%)	1 (5%)	27 (33%)	5 (50%)
Dexmedetomidine	**33(32%)**	**6 (32%)**	**26 (32%)**	**7 (70%)**
Other	8 (7%)	4 (21%)	4 (5%)	1 (10%)

Data are presented as number (%)

ICU = intensive care unit, ECMO = extracorporeal membrane oxygenation

[a]Among 25 others used, 5 used the Ramsay Sedation Scale.

(d) **Element D**: Tools and non-pharmacologic and pharmacologic interventions to control delirium

Variable	Total patients	Patients without mechanical ventilation or ECMO	Patients on mechanical ventilation	Patients on ECMO
Tools used for routine **Delirium** assessment among patients who underwent implementation of **element D**	(n=100)	(n=37)	(n=62)	(n=7)
Confusion Assessment Method for ICU	**78 (78%)**	**25 (68%)**	**52 (84%)**	**7 (100%)**
Intensive Care Delirium Screening Checklist	14 (14%)	4 (11%)	10 (16%)	0 (0%)
Others	9 (9%)	9 (24%)	0 (0%)	0 (0%)
Multiple use: Confusion Assessment Method for ICU and Intensive Care Delirium Screening Checklist	1 (1%)	1 (3%)	0 (0%)	0 (0%)
Non-pharmacological interventions to control delirium	(n=167)	(n=85)	(n=81)	(n=6)
Orientation	**98 (59%)**	**51 (60%)**	**46 (57%)**	**6 (100%)**
Maximize sleep condition	**96 (57%)**	**51 (60%)**	**48 (59%)**	**4 (67%)**
Strengthen mobilization/rehabilitation (duration, frequency, or intensity)	**72 (43%)**	**30 (35%)**	**44 (54%)**	**4 (67%)**
Changing the round environment	**61 (37%)**	**30 (35%)**	**36 (44%)**	**3 (50%)**
Support for senses (hearing aids/glasses)	38 (23%)	22 (26%)	16 (20%)	1 (17%)
Stop use of benzodiazepine	23 (14%)	6 (7%)	18 (22%)	1 (17%)
Sunbathing	15 (9%)	13 (15%)	6 (7%)	0 (0%)
Monitor taste/smell failure due to CoV predilection to olfactory nerves	13 (8%)	11 (13%)	2 (2%)	0 (0%)
Stop use of narcotics	10 (6%)	4 (5%)	7 (9%)	0 (0%)
Other interventions	7 (4%)	6 (7%)	7 (9%)	0 (0%)

Pharmacological interventions to control delirium	(n=52)	(n=7)	(n=38)	(n=4)
Antipsychotic agents	**41 (79%)**	**6 (86%)**	**29 (76%)**	**2 (50%)**
Other	12 (23%)	1 (14%)	10 (26%)	2 (50%)

Data in table are presented as number (%), ICU = intensive care unit, ECMO = extracorporeal membrane oxygenation; CoV = coronavirus

(e) Person delivering, devices employed, and barriers to mobilization/rehabilitation: **element E**

Variable	Total patients	Patients without mechanical ventilation or ECMO	Patients on mechanical ventilation	Patients on ECMO
Person delivering mobilization/rehabilitation to patients	(n=191)	(n=92)	(n=98)	(n=10)
Intensivist	39 (20%)	10 (11%)	19 (19%)	3 (30%)
Physician other than intensivists	19 (10%)	8 (9%)	11 (11%)	1 (10%)
Nurse	**115 (60%)**	**58 (63%)**	**56 (57%)**	**9 (90%)**
Physiotherapist	**108 (57%)**	**40 (44%)**	**68 (69%)**	**5 (50%)**
Respiratory Therapist	13 (7%)	6 (7%)	7 (7%)	0 (0%)
Mobility device/devices employed	(n=51)	(n=35)	(n=16)	(n=0)
Portable cyclergometer on the bed	5 (10%)	1 (3%)	**4 (25%)**	0 (0%)
Electro neuromuscular stimulation	3 (6%)	1 (3%)	2 (13%)	0 (0%)
Lift-up device	**18 (35%)**	**11 (31%)**	**7 (44%)**	0 (0%)
Tilt bed	**18 (35%)**	**11 (31%)**	**7 (44%)**	0 (0%)
Walker	15 (29%)	14 (40%)	1 (6%)	0 (0%)
Other	7 (14%)	4 (11%)	3 (19%)	0 (0%)
Most important barriers preventing the achievement of mobility level of sitting on the edge of the bed or more.	(n=138)	(n=34)	(n=104)	(n=10)
Consciousness factor[a]	**36 (26%)**	4 (12%)	**32 (31%)**	**4 (40%)**
Subjective symptoms[b]	11 (8%)	7 (21%)	4 (4%)	0 (0%)
Respiratory factor[c]	**42 (30%)**	**10 (29%)**	**32 (31%)**	**3 (30%)**
Circulatory factor[d]	17 (12%)	2 (6%)	15 (14%)	1 (10%)

Device factor[e]	12 (9%)	2 (6%)	10 (10%)	1 (10%)
Medical staff factor[f]	1 (1%)	0 (0%)	1 (1%)	1 (10%)
Factors associated with COVID-19[g]	11 (8%)	7 (21%)	4 (4%)	0 (0%)
Other	8 (6%)	2 (6)	6 (6%)	0 (0%)

Data presented as number (%), ICU = intensive care unit, ECMO = extracorporeal membrane oxygenation

[a] Consciousness factor: existing consciousness disorder, RASS: ≤ -3 or ≥+2, deep sedation, delirium, etc.

[b] Subjective symptoms: respiratory distress, BPS or > 3 or NRS > 5, fatigue, patient refusal, etc.

[c] Respiratory factor: SpO_2: <90%; FIO_2: >0.6; respiratory rate: >30 times/min, ventilator unsynchronized, etc.

[d] Circulatory factor: systolic blood pressure: <90 or >180 mmHg; mean blood pressure: <65 or >110 mmHg; heart rate: <50 or >120 beats/min; new arrhythmias; additional administration of vasopressors, etc.)

[e] Device factor: exist catheter, drain, dialysis, mechanical ventilation, or extracorporeal membrane oxygenation, etc.

[f] Medical staff factor: lack of staff, holidays, many examinations, poor time adjustment, etc.

[g] Factors associated with COVID-19: restrictions for medical staff contact with the patients, restrictions for rehabilitation, infection control, etc.

(f) Arrangement for family to meet patients with COVID-19: **element F**

Variables	Total patients (n=262)	Patients without mechanical ventilation or ECMO (n=137)	Patients on mechanical ventilation (n=124)	Patients on ECMO (n=12)
Meeting not allowed	144 (55%)	63 (46%)	79 (64%)	10 (83%)
In person	28 (11%)	19 (14%)	9 (7%)	0 (0%)
Electronic device (using a monitor such as phone / video)	107 (41%)	68 (50%)	38 (31%)	2 (17%)

Data in table are presented as number (%)

ICU = intensive care unit, ECMO = extracorporeal membrane oxygenation

Supplemental Table 7. Association Between the Presence of a Written Protocol and Implementation of the ABCDEF Bundle

Element	Total patients	Specific written protocol for each element: **Present**	Specific written protocol for each element: **Absent**	*P* value
Patients receiving element **A**	118/262 (45)	62/102 (61)	56/160 (35)	**<0.001**
Patients receiving element **B (SAT)**	29/102 (28)	16/48 (33)	13/54 (24)	0.38
Patients receiving element **B (SBT)**	35/124 (28)	17/63 (27)	18/61 (30)	0.84
Patients receiving element **C**	136/262 (52)	97/174 (56)	39/88 (44)	0.09
Patients receiving element **D**	100/262 (38)	34/83 (41)	66/179 (37)	0.59
Patients receiving element **E**	93/262 (35)	14/81 (17)	79/181 (44)	**<0.001**
Patients receiving element **F***	42/262 (16)	n/a	n/a	
Patients receiving **nutrition support* (protein >1.2g/kg/day)**	105/262 (40)	n/a	n/a	

Data are presented as number (%). *Data associated with element F and nutrition support were not obtained.

ICU = intensive care unit; SAT = spontaneous awakening trials; SBT = spontaneous breathing trials.

Supplemental Table 8. Association Between Multidisciplinary Rounds and Implementation of the ABCDEF Bundle

Element	Total patients	Multidisciplinary rounds frequency			*P* value
		Daily	At least once a week	Not applicable	
Patients receiving element **A**	118/262 (45)	95/224 (42)	3/4 (75)	20/34 (59)	0.12
Patients receiving element **B (SAT)**	29/102 (28)	26/85 (31)	0/3 (0)	3/14 (21)	0.62
Patients receiving element **B (SBT)**	35/124 (28)	27/101 (27)	1/3 (33)	7/20 (35)	1.0
Patients receiving element **C**	136/262 (52)	117/224 (52)	3/4 (75)	16/34 (47)	0.74
Patients receiving element **D**	100/262 (38)	76/224 (34)	4/4 (100)	20/34 (59)	**<0.001**
Patients receiving element **E**	93/262 (35)	86/224 (38)	0/4 (0)	7/34 (20)	0.06
Patients receiving element **F**	42/262 (16)	37/224 (17)	1/4 (25)	4/34 (12)	0.69
Patients receiving **nutrition support (protein >1.2g/kg/day)**	105/262 (40)	92/224 (41)	3/4 (75)	10/34 (29)	0.16

Data are presented as number (%).

SAT = spontaneous awakening trials; SBT = spontaneous breathing trials.

Supplemental Table 9. Association Between Nurse-to-Patient Ratio and Implementation of the ABCDEF Bundle

Element	Total patients	Nurse-to-patient ratio in the ICU			*P* value
		1:1	1:2	1:≥3	
Patients receiving element **A**	118/262 (45%)	18/45 (40%)	79/161 (49%)	21/56 (38%)	0.25
Patients receiving element **B (SAT)**	29/102 (28%)	7/29 (24%)	14/53 (26%)	8/20 (40%)	0.43
Patients receiving element **B (SBT)**	35/124 (28%)	8/30 (27%)	19/64 (30%)	8/30 (27%)	0.93
Patients receiving element **C**	136/262 (52%)	24/45 (53%)	87/161 (54%)	25/56 (45%)	0.47
Patients receiving element **D**	100/262 (38%)	16/45 (36%)	73/161 (45%)	11/56 (20%)	**0.03**
Patients receiving element **E**	93/262 (35)	6/45 (13%)	72/161 (45%)	15/56 (27%)	**<0.001**
Patients receiving element **F**	42/262 (16%)	4/45 (9%)	28/161 (17%)	10/56 (18%)	0.36
Patients receiving **nutrition support (protein >1.2g/kg/day)**	105/262 (40%)	10/45 (22%)	76/161 (47%)	19/56 (34%)	**0.01**

Data are presented as number (%).

ICU = intensive care unit; SAT = spontaneous awakening trials; SBT = spontaneous breathing trials.

Supplemental Table 10. Association Between Number of ICU Beds Exclusively for COVID-19 Patients and Implementation of the ABCDEF Bundle

Element	Total patients	Total ICU beds exclusively for the patients with COVID-19			*P* value
		<5	5–19	≥20	
Patients receiving element **A**	118/262 (45)	23/39 (59)	62/117 (53)	33/106 (31)	**<0.001**
Patients receiving element **B (SAT)**	29/102 (28)	4/14 (29)	17/54 (31)	8/34 (24)	0.72
Patients receiving element **B (SBT)**	35/124 (28)	7/24 (29)	20/74 (27)	8/26 (31)	0.93
Patients receiving element **C**	136/262 (52)	17/39 (44)	65/117 (56)	54/106 (51)	0.42
Patients receiving element **D**	100/262 (38)	17/39 (44)	53/117 (45)	30/106 (28)	**0.03**
Patients receiving element **E**	93/262 (35)	1/39 (3)	24/117 (21)	68/106 (64)	**<0.001**
Patients receiving element **F**	42/262 (16)	2/39 (5)	23/117 (20)	17/106 (16)	0.10
Patients receiving **Nutrition support (protein >1.2g/kg/day)**	105/262 (40)	16/39 (41)	35/117 (30)	54/106 (51)	**0.01**

Data are presented as number (%).

ICU = intensive care unit; SAT = spontaneous awakening trials; SBT = spontaneous breathing trials.

Supplemental Table 11. Association between ICU structure and implementation of elements E and F.

(a) Association between involvement of physiotherapists and implementation of **element E**

Variable	Patients who received element E (n=93)	Patients who did not receive element E (n=169)	P value
Dedicated physiotherapists in the ICU	34 (37%)	94 (56%)	**<0.001**
Physiotherapists allowed to enter the room of patients with COVID-19 infection	18 (19%)	88 (52%)	**<0.001**

Data presented as number (%)

ICU = intensive care unit

(b) Association between number of visiting hours/day and implementation of **element F**

Variable	Patients who received element F (n=42)	Patients who did not receive element F (n=220)	P value
Number of visiting hours/day for a patient with COVID-19 (hours)			
No visiting hours	37 (88%)	201 (91%)	0.56
0＜ x ＜6	5 (12%)	18 (8%)	
6≦ x ＜12	0 (0%)	0 (0%)	
12≦ x ＜18	0 (0%)	1 (0%)	
18≦ x ＜24	0 (0%)	0 (0%)	
No limit	0 (0%)	0 (0%)	

Data presented as number (%)

ICU = intensive care unit

Supplemental Table 12. Implementation of the ABCDE bundle in the present study compared to prior to the COVID-19 pandemic.

Variable	Total patients (n=262)	Reference [1]	Reference [2]
Patients receiving element **A**, n (%)	118 (45%)	**(77%)**	**(83%)**
Patients receiving element **B**			
Spontaneous Awakening Trial during continuous sedation, n (%)[a]	29 (28%)	**(34%)**	**(66%)**
Spontaneous Breathing Trial on mechanical ventilation, n (%)[b]	35 (28%)	**(36%)**	**(67%)**
Patients receiving element **C**, n (%)	136 (52%)	**(59%)**	**(89%)**
Patients receiving element **D**, n (%)	101 (39%)	**(56%)**	**(70%)**
Patients receiving element **E**, n (%)	93 (35%)	**(29%)**	
Patients receiving element **F**, n (%)	42 (16%)	**(63%)**	**(67%)**

Data presented as number (%)

ICU intensive care unit, IQR interquartile range

[a]Percentages are calculated by dividing by the number of sedated patients. The number of sedated patients as total, at first survey, and at second survey are 102, 59, and 63 respectively.

[b]Percentages are calculated by dividing by the number of ventilated patients. The number of ventilated patients as total, at first survey, and at second survey are 124, 86, and 38 respectively.

References

(1) Pun BT, Balas MC, Barnes-Daly MA, T et al. Caring for critically ill patients with the ABCDEF bundle: results of the ICU liberation collaborative in over 15,000 Adults. Crit Care Med. 2019;47:3-14.

(2) Morandi A, Piva S, Ely WE, et al. Worldwide ABCDEF (Assessing Pain Both Spontaneous Awakening and Breathing Trials, Choice of Drugs, Delirium monitoring/management, Early exercise/mobility, and Family Empowerment). Crit Care Med. 2017;e1111-1122.