

SCCM Rapid Cycle 3 Response Summary

Updated: 8/28/2020

Overview: The third rapid-cycle COVID-19 survey was conducted with an online survey open for a 3-week period in July 2020. The survey focused on surge capacity, including the availability of critical care-trained staff to support pandemic response in the intensive care unit (ICU), specific ICU staffing modifications implemented to manage COVID-19 pandemic, and mechanical ventilation and prone positioning practices.

A total of 587 ICU clinicians responded to the survey including 23 physicians, 279 nurses, 170 respiratory therapists (RTs), 6 nurse practitioners, and 4 pharmacists. Majority (N= 457, 95.4%) reported caring for a COVID-19 patient.

Staffing: there were significant increases in staffing needed for nurses, respiratory therapists, doctors, and advanced practice providers; much less so for pharmacists and dietitians.

ICU modifications: more ICU teams employed and increased help with donning and doffing; trainees often were not involved in care.

Novel ICU spaces: often included acute care floors, PACUs, and emergency departments, with other spaces used less frequently.

Ventilators: 53% did not have enough ventilators and had to use either non-standard ventilators or non-invasive devices; some had to secure more ventilators from the Strategic National Stockpile. Two respondents indicated that they experienced two patients placed on a ventilator together, and 6 respondents indicated that care was declined at some point due to not having enough ventilators.

Prone positioning: was more common and often accomplished with dedicated teams. It was often used on patients not (yet) on ventilators.

Overall, each of the survey respondents are reporting on their ICU/hospital, thus potentially reflecting care at 587 different hospitals across the United States. Significant surges in personnel, space and equipment were necessary at these hospitals, often more than 50% of the time.

Additionally, there was a high amount of proning ventilated and non-ventilated patients, demonstrating the shift we have seen when compared to pre-COVID ICU practices. The summary table below outlines the survey results.

SCCM Rapid Cycle Survey 3: Summary Response Table

	n	%
Critical Care Setting		
Academic center	158	26.9
Community hospital	393	67.0
Government hospital	21	3.6
Other	15	2.6
Primary ICU setting		
Metropolitan	40 6	69.2
Micropolitan	13 8	23.5
Rural	43	7.3
Practicing in United States	N = 586	
No*	16	2.7
Yes	57 0	97.3
Cared for presumed or confirmed COVID-19-positive patients in ICU	N = 479	
No	22	4.6
Yes	45 7	95.4
Profession	N = 489	
Intensivist	20	4.1
Nonintensivist physician	3	0.6
Nurse	27 9	57.1
Nurse practitioner	6	1.2
Pharmacist	4	0.8
Respiratory therapist	17 0	34.8
Other	7	1.4

*1 from Armenia, 3 from Canada, 1 from Egypt, 1 from Sweden, and 1 from United Arab Emirates.

Availability of critical care-trained staff to support pandemic response in ICUs		
	n	%
Nurses	N = 483	
Additional ICU nurses were assigned to help with increased demands.	11 0	22.8
Additional non-ICU nurses (e.g., medical-surgical, stepdown) were assigned to help with increased demands.	27 6	57.1

Additional nurses-in-training (nursing students) were assigned to help with increased demands.	5	1.0
Patient care needs did not increase sufficiently in my hospital; no change in nurse staffing was needed.	25	5.2
There were increased patient care demands, but routine nurse staffing was sufficient to meet the demand.	48	9.9
Unsure	19	3.9
Physicians	N = 479	
Additional intensivists were assigned to help with increased demands.	11 1	23.2
Additional nonintensivist physicians (e.g., hospitalists) were assigned to help with increased demands.	94	19.6
Additional physicians-in-training (residents, fellows) were assigned to help with increased demands.	43	9.0
Patient care needs did not increase sufficiently in my hospital; no change in physician staffing was needed.	35	7.3
There were increased patient care demands, but routine intensivist staffing was sufficient to meet the demand.	14 0	29.2
Unsure	56	11.7
APPs (nurse practitioners and physician assistants)	N = 478	
Additional APPs-in-training (APP students and fellows) were assigned to help with increased demands.	17	3.6
Additional critical care APPs were assigned to help with increased demands.	86	18.0
Additional non-ICU APPs (e.g., hospitalist, emergency, surgical specialty) were assigned to help with increased demand.	99	20.7
Patient care needs did not increase sufficiently in my hospital; no change in APP staffing was needed.	47	9.8
There were increased patient care demands, but routine APP staffing was sufficient to meet the demand.	12 9	27.0
Unsure	10 0	20.9
Respiratory therapists (RTs)	N = 481	
Additional non-ICU RTs were assigned to help with increased demands.	89	18.5
Additional RTs were assigned to help with increased demands.	21 3	44.3
Additional RTs-in-training (students) were assigned to help with increased demands.	15	3.1
Patient care needs did not increase sufficiently in my hospital; no change in RT staffing was needed.	24	5.0
There were increased patient care demands, but routine RT staffing was sufficient to meet the demand.	94	19.5
Unsure	46	9.6
Pharmacists	N = 476	
Additional ICU pharmacists were assigned to help with	51	10.7

increased demands.		
Additional non-ICU pharmacists (e.g., general ward) were assigned to help with increased demands.	27	5.7
Additional pharmacists-in-training (students) were assigned to help with increased demands.	4	.8
Patient care needs did not increase sufficiently in my hospital; no change in pharmacist staffing was needed.	43	9.0
There were increased patient care demands, but routine pharmacist staffing was sufficient to meet the demand.	17 8	37.4
Unsure	17 3	36.3
Physical therapists (PTs)	N = 478	
Additional PTs-in-training (students) were assigned to help with increased demands.	3	.6
Additional PTs were assigned to help with increased demands.	56	11.7
Patient care needs did not increase sufficiently in my hospital; no change in PT staffing was needed.	78	16.3
There were increased patient care demands, but routine PT staffing was sufficient to meet the demand.	14 3	29.9
Unsure	19 8	41.4
Registered dietitians	N = 476	
Additional ICU RDs were assigned to help with increased demands.	15	3.2
Additional non-ICU RDs (e.g., general ward) were assigned to help with increased demands.	10	2.1
Additional RDs-in-training (students) were assigned to help with increased demands.	2	.4
Patient care needs did not increase sufficiently in my hospital; no change in RD staffing was needed.	83	17.4
There were increased patient care demands, but routine RD staffing was sufficient to meet the demand.	16 1	33.8
Unsure	20 5	43.1

Specific ICU Staffing modifications implemented to manage COVID-19 pandemic (N = 587) (multiple choices possible)		
	n	%
Shortened shifts	8	1.4
Lengthened shifts	10 3	17.5
More frequent breaks	23	3.9
More nurse aid staffing	80	13.6
Donning/doffing oversight staffing	18 1	30.8
More ICU teams overall	15	25.7

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More ICU team members in-house at night	97	16.5
Elimination of students from teams	22 4	38.2
Elimination of trainees from teams	10 6	18.1
Increased tele-critical care coverage (more beds covered)	10 4	17.7
Nighttime intensivist in-house	89	15.2
Other	93	15.8
Spaces converted into novel ICU spaces (N = 587) (multiple choices possible)		
	n	%
Did not create any new ICU space	96	16.4
Acute care floor	26 9	45.8
Postanesthesia care unit rooms	17 7	30.2
Emergency department rooms	10 4	17.7
Temporary tent space	60	10.2
Operating rooms	36	6.1
Other	99	16.9
<i>If yes to any of the above:</i>		
Were these novel ICU spaces effective for providing critical care?	N = 385	
Yes	21 3	55.3
Not sure	90	23.4
No	82	21.3
<i>If no (multiple choices possible):</i>		
	N = 82	
Inadequate monitoring	61	74.4
Difficulty finding supplies	56	68.3
Difficulty being alerted to alarms	48	58.5
Difficulty maintaining infection control precautions	48	58.5
Inadequate space	47	57.3
Lack of team space	36	43.9
Lack of privacy for patients	34	41.5
Difficulty summoning medical emergency response team aid	26	31.7
Too far from medication room	22	26.8
Difficulty renaming spaces to ICU space in electronic health record	20	24.4
Wireless connectivity failure	16	19.5
Difficulty obtaining portable imaging	15	18.3
Other	9	11.0

Mechanical Ventilation and Prone Positioning		
	n	%

Mechanical ventilators	N = 383	
We had enough existing invasive ventilators for patient demand.	17 2	44.9
We used nonstandard invasive ventilators (e.g., transport ventilators, anesthesia ventilators) for bedside care in the ICU.	83	21.7
We adapted noninvasive ventilation devices for invasive ventilation.	25	6.5
Due to a lack of devices we have not offered invasive or noninvasive ventilation to all patients with acute respiratory failure.	6	1.6
We needed to place more than one patient on a single ventilator.	2	0.5
We procured additional ventilators.	95	24.8
<i>From where were additional ventilators procured?</i>	N = 95	
Strategic National Stockpile	18	18.9
Donation from local government agency	14	14.7
Donation from a private entity	23	24.2
Purchased from U.S. supplier	22	23.2
Purchased from non-U.S. supplier	1	1.1
Other	35	36.8
Prone positioning (multiple choices possible)	N = 461	
No changes to how or how often we prone patients	48	10.4
Prone positioning nonventilated patients	26 6	57.7
Prone positioning more patients than usual on mechanical ventilation	34 5	74.8
Made modifications to practice of prone positioning, such as use of prone teams	16 1	34.9

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