Supplementary Table S1 Characteristics of patients with septic shock and respiratory failure—including those that died and did not complete baseline HRQL assessment

Characteristics	No oxygenation defect ($n = 143$)	Mild oxygenation severity ($n = 69$)	Moderate oxygenation severity ($n = 69$)	Severe oxygenation severity ($n = 67$)
Sex, *n* (%)				
Male	75 (52)	36 (52)	42 (61)	36 (54)
Female	68 (48)	33 (48)	27 (39)	31 (46)
Age in years, median (IQR)	6.4 (2.0–13.2)	4.9 (1.5–12.3)	3.5 (1.0–11.7)	7.1 (2.2–12.5)
Race/Ethnicity				
American Indian/Alaskan Native	5 (4%)	2 (3%)	2 (3%)	1 (1%)
Asian	8 (6%)	2 (3%)	6 (9%)	4 (6%)
Black or African-American	38 (27%)	7 (10%)	15 (22%)	16 (24%)
White	82 (57%)	54 (78%)	42 (61%)	44 (66%)
Native Hawaiian or Other Pacific Islander	2 (1%)	0 (0%)	1 (1%)	2 (3%)
Unknown/Not reported	12 (8%)	7 (10%)	6 (9%)	2 (3%)
Baseline HRQL measure, median (IQR)				
PedsQL ($n = 202$)	78.5 (66.4–93.1)	78.4 (62.9–90.7)	81.0 (72.2–92.2)	79.9 (69.7–96.9)
FS II-R ($n = 119$)	67.9 (60.7–82.1)	64.3 (57.1–85.7)	67.9 (57.1–78.6)	75.0 (60.7–82.1)
Baseline FSS, median (IQR)	7 (6–12)	7 (6–11)	6 (6–9)	6 (6–13)
Medical history, *n* (%)				
Immunocompromised	25 (18)	7 (10)	9 (13)	12 (18)
Congenital immunodeficiency	4 (6)	1 (4)	0 (0)	1 (3)
Bone marrow/SCT	1 (2)	0 (0)	0 (0)	1 (3)
Malignancy	4 (6)	1 (4)	2 (6)	7 (23)
Rheumatologic disease	2 (3)	1 (4)	0 (0)	1 (3)
Sickle cell disease	2 (3)	0 (0)	0 (0)	0 (0)
Adjunct respiratory support				
Neuromuscular blockade	106 (74%)	58 (84%)	58 (84%)	60 (90%)
Days of neuromuscular blockade	1 (0–3)	2 (1–3)	3 (1–6)	5 (2–10)
HFV	8 (6%)	2 (3%)	5 (7%)	16 (24%)
ECLS	6 (4%)	3 (4%)	5 (7%)	13 (19%)
Mechanical ventilation days, median (IQR)	6 (4–10)	8 (5–12)	10 (7–16)	16 (10–28)
PICU LOS (d), median (IQR)	8 (5–13)	9 (6–15)	11 (8–15)	17 (10–29)
Hospital LOS (d), median (IQR)	15 (8–24)	16 (10–23)	18 (11–32)	21 (13–44)
Survived to PICU discharge, *n* (%)	134 (94)	64 (93)	65 (94)	56 (84)
Survived to hospital discharge, *n* (%)	133 (93)	63 (91)	62 (90)	56 (84)

Abbreviations: ECMO, extracorporeal membrane oxygenation; FS II-R, Functional Status II-Revised; FSS, Functional Status Scale; HFV, high frequency ventilation; HRQL, health-related quality of life; IQR, interquartile range; LOS, length of stay; PedsQL, Pediatric Quality of Life Inventory 4.0; PICU, pediatric intensive care unit.

Supplementary Table S2 Logistic regression models for failure to return to baseline (within 4.5 points of baseline HRQL measure)

	Follow-up time point					
	3 mo ($n = 178$)		6 mo ($n = 154$)		12 mo ($n = 145$)	
Oxygenation failure severity	Odds ratio	Confidence interval	Odds ratio	Confidence interval	Odds ratio	Confidence interval
Absent	Ref	Ref	Ref	Ref	Ref	Ref
Mild	0.44	0.18–1.13	0.45	0.13–1.49	0.55	0.21–1.46
Moderate	0.60	0.26–1.41	1.60	0.61–4.18	0.61	0.24–1.56
Severe	1.53	0.66–3.59	1.06	0.41–2.76	0.53	0.19–1.45
Age (y)	1.04	0.98–1.10	1.06	0.99–1.13	0.98	0.92–1.04
Nonrespiratory PELOD-2	1.05	0.91–1.20	0.98	0.84–1.15	1.05	0.90–1.23

Abbreviations: HRQL, health-related quality of life; PELOD-2, Pediatric Logistic Organ Dysfunction-2 score.

Supplementary Table S3 Logistic regression models with exposure of highest oxygenation severity category achieved for failure to return to within 25% of baseline HRQL

	Follow-up time point		
	3 mo ($n = 178$)	6 mo ($n = 154$)	12 mo ($n = 145$)
	Adjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Oxygenation failure severity			
None	Ref	Ref	Ref
Mild	0.23 [0.03, 1.98]	1.23 [0.20, 7.60]	0.43 [0.08, 2.33]
Moderate	1.60 [0.50, 5.19]	1.12 [0.19, 6.67]	0.36 [0.07, 1.87]
Severe	1.84 [0.65, 5.23]	3.31 [0.93, 11.84]	1.26 [0.40, 4.03]

Abbreviations: CI, confidence interval; HRQL, health-related quality of life.
Note: Models adjusted for patient age and nonpulmonary Pediatric Logistic Organ Dysfunction-2 (PELOD-2) score. This analysis stratified the 291 survivors with respiratory failure by the highest severity category achieved. Note that the cohorts presented here are different than in the primary analysis: 33% (95/291) did not meet criteria for mild oxygenation defect, 21% (60/291) had mild oxygenation defect, 21% (62/291) had moderate, and 25% (74/291) had severe oxygenation defect.

