

Supplementary digital content:

Supplementary digital content 1: Pre- and post-course self-assessment categories

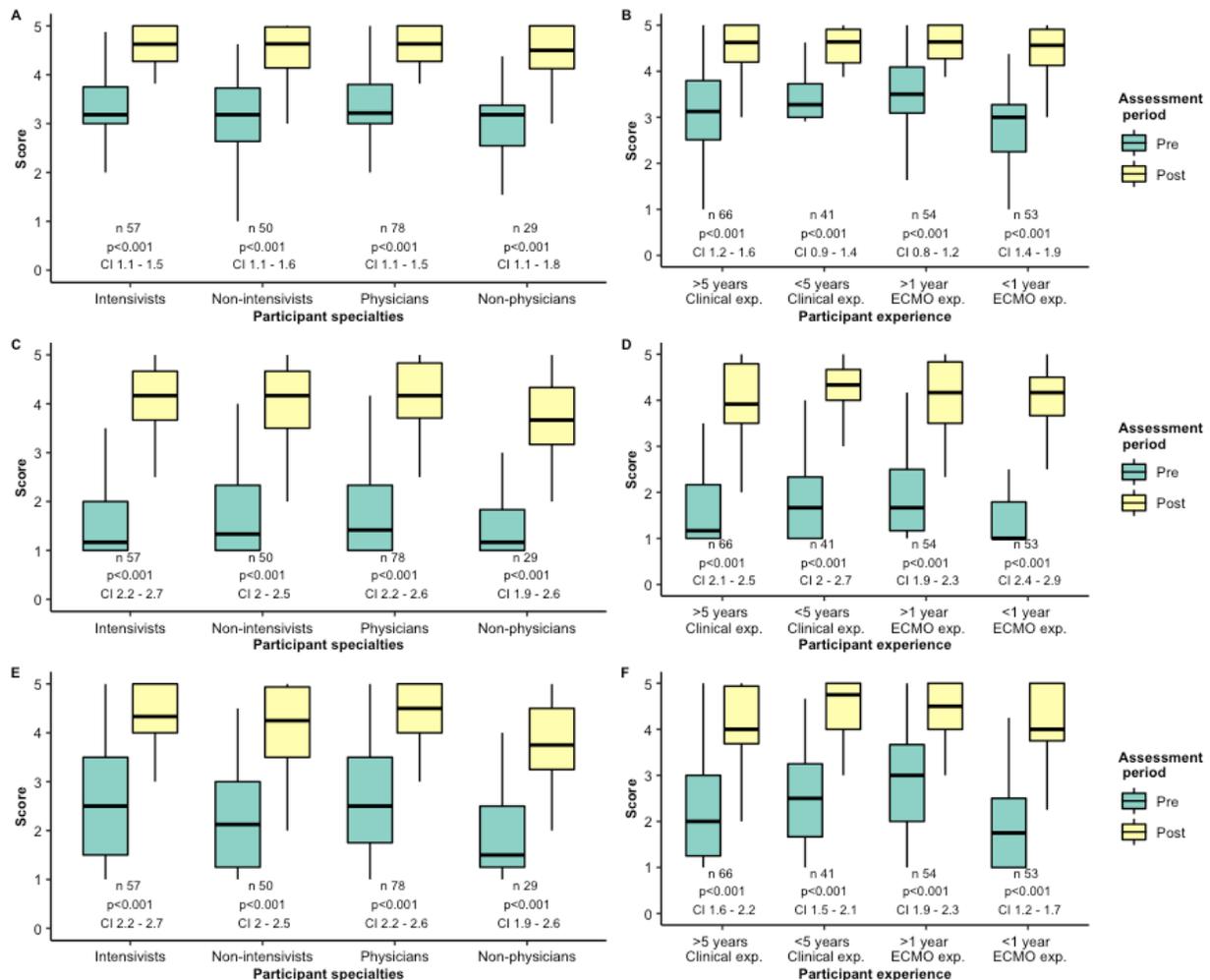
Category	Assessed aspect
 Cognitive	Physiological basis of ECMO
	Composition of an ECMO circuit
	Physiologic differences between VA and VV ECMO
	Indications for VA ECMO
	Indications for VV ECMO
	Contraindications for ECMO
	Configurational options for VA ECMO
	Configurational options for VV ECMO
	Concept of heart and lung rest on ECMO
	Weaning off VA ECMO
	Weaning off VV ECMO
 Technical	Performing a complete circuit check
	Priming an ECMO circuit
	Change out an ECMO circuit component
	Remove air from an ECMO circuit
	Troubleshoot oxygenator failure
	Troubleshoot pump failure
 Behavioral	Confident as a member of an ECMO team
	Can lead a team caring for a VV ECMO patient
	Can lead a team caring for a VA ECMO patient
	Can emergently come off ECMO and support a patient when needed

Supplementary digital content 2: Pre and post-course knowledge assessment score results

Group (n)	Pre-course Median [IQR]	Post-course Median [IQR]	p value	Cohen's <i>d</i>
All participants (97)	10 [9, 12]	12 [11, 13]	<0.001	0.8
Physicians (70)	11 [9, 12]	12 [11,14]	<0.001	0.57
Non-physicians (27)	10 [9,11]	11 [11, 12]	0.017	0.75
Intensivists (51)	11 [10, 12]	12 [10-14]	<0.001	0.53
Non-intensivists (46)	10 [9, 11]	12 [11,13]	0.002	0.71
< 5 years clinical experience (37)	11 [9, 12]	12 [11,14]	0.001	0.69
< 5 years clinical experience (60)	10 [9, 12]	11 [11,13]	<0.001	0.56
< 1 year ECMO experience (49)	10 [9, 12]	12 [10, 13]	<0.001	0.72
>1 year ECMO experience (48)	11 [10, 13]	12 [11, 13]	0.019	0.5

IQR = interquartile range

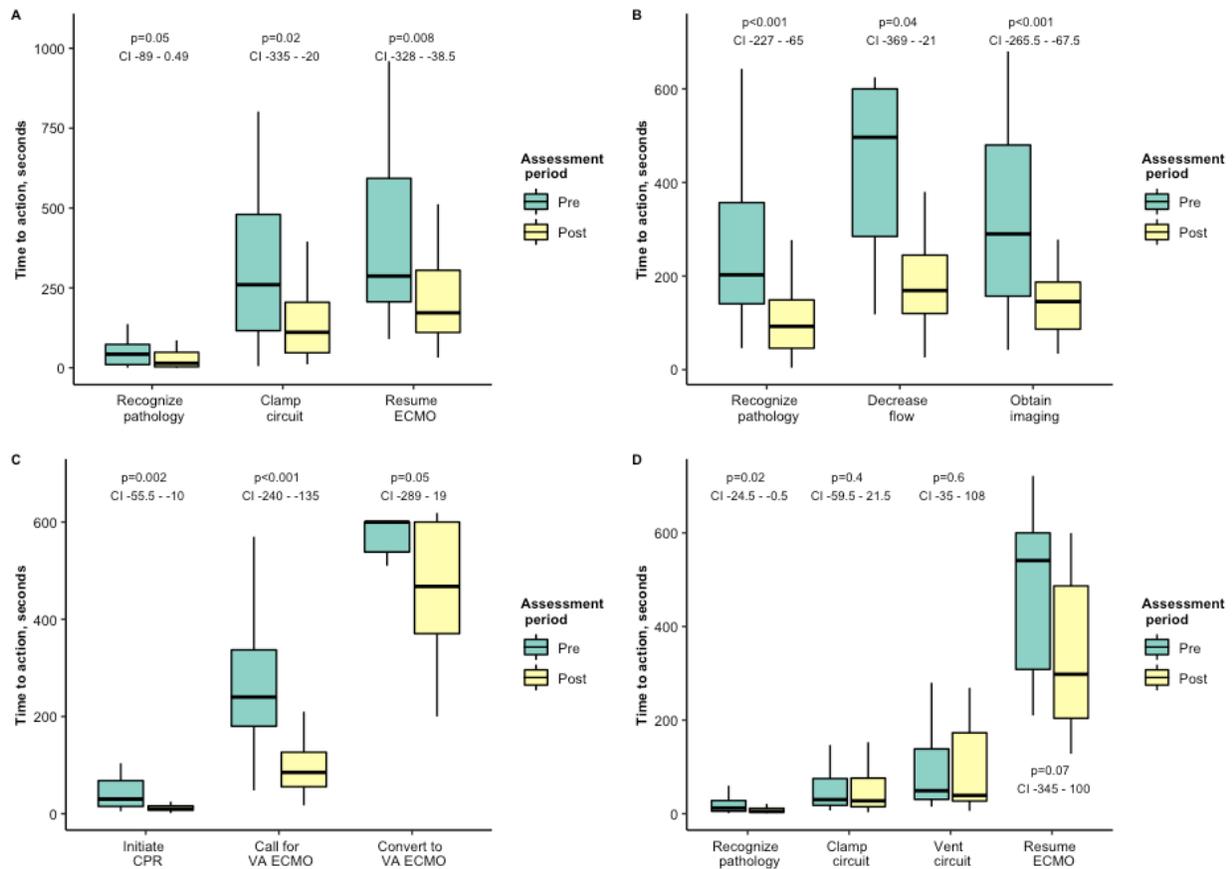
Paired t test



Supplementary digital content 3: Pre and post-course cognitive self-assessments by subgroups

Box and Whisker plots of the pre and post-course cognitive self-assessment results. A) There was a statistically significant increase in the post-course cognitive self-assessment results for all participant specialties; intensivists, non-intensivists, physicians and non-physicians. B) There was a statistically significant increase in the post-course cognitive self-assessment results across groups by years of clinical experience (<5 or >5 years) or years of ECMO experience (<1 or >1 year). C) There was a statistically significant increase in the post-course technical self-assessment results for all participant

specialties; intensivists, non-intensivists, physicians and non-physicians. D) There was a statistically significant increase in the post-course technical self-assessment results across groups by years of clinical experience (<5 or >5 years) or years of ECMO experience. E) There was a statistically significant increase in the post-course behavioral self-assessment results for all participant specialties; intensivists, non-intensivists, physicians and non-physicians. F) There was a statistically significant increase in the post-course behavioral self-assessment results across groups by years of clinical experience (<5 or >5 years) or years of ECMO experience (<1 or > 1year). Wilcoxon signed rank sum test. Pre= pre-course, Post = post-course.



Supplementary digital content 4: Simulation data results

Box and Whisker plots of time to task completion in simulation scenarios. A) Breach in circuit scenario: there was a statistically significant decrease in the time to complete tasks of: recognition of pathology, clamping the circuit and resumption of ECMO flow (Wilcoxon signed rank sum test). B) Recirculation on VV ECMO: there was a statistically significant decrease in the time to complete tasks of: recognition of pathology, decreasing flow and cannula imaging (Wilcoxon signed rank sum test). C) Ventricular tachycardia on VV ECMO and conversion to VA ECMO: there was a statistically significant decrease in the time to complete tasks of: initiation of CPR, call for VA ECMO and conversion to VA ECMO (Wilcoxon signed rank sum test). D) Air entrainment into ECMO circuit: there was no statistically significant decrease in the time to complete tasks of: recognition of

pathology, clamping the ECMO circuit, venting the ECMO circuit or resumption of ECMO flow (Wilcoxon signed rank sum test). Pre= pre-course, Post = post-course, VT = ventricular tachycardia, VV ECMO = veno-venous ECMO, VA ECMO = veno-arterial ECMO.