Healthcare Innovations
How practice has changed

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SCAN ME

Suspected nosocomial infection in patients receiving ECMO across Australia & New Zealand

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BACKGROUND

Nosocomial infection is one of the most frequent and serious complications of ECMO treatment, however, **clinical diagnosis of infection in ECMO patient is difficult**.

Infection treatments are often instigated off a **clinical suspicion of infection**, not laboratory confirmation, leading to sub-optimal infection treatment and patient outcomes.

The aim of this study was to **describe suspected nosocomial infection prevalence** in patients receiving ECMO in Australia & New Zealand.

METHODS

A prospective point prevalence study of adult & paediatric ECMO patients in 11 Australian & New Zealand ICUs for one week per month over 12 months.

RESULTS

Total of **127 patients** (adult n=100, paediatric n=27)

Table 1: Patient Demographics

	Adults	Paediatric/Neonates	Total
Group size	100 (79)	27 (21)	127 (100)
Age (years), mean (SD)	46 (16)	5 (6)	37 (22)
Male	65 (65)	13 (48)	77 (61)
Duration of ECMO (days), median (IQR)	4 (2, 9)	4 (1, 6)	4 (1, 8)
Indication for ECMO			
Cardiac support	56 (56)	16 (59)	72 (57)
Respiratory support	44 (44)	11 (41)	55 (43)
ECMO modality			
VA	53 (53)	18 (67)	71 (56)
VV	43 (43)	8 (30)	51 (40)
V-PA	2 (2)	1 (4)	3 (2)
VV+A	1 (1)	-	1 (1)
VA+Impella	1 (1)	-	1 (1)

All values are n (%) unless otherwise indicated

Antimicrobial agents were commenced on suspicion of infection in 13% (n=17) of patients

Table 2: Suspected Nosocomial infections

	Adults	Paediatric/Neonates	Total
Group size	100 (79)	27 (21)	127 (100)
Suspected infections			
Vascular access device	1 (1)	0 (0)	1 (1)
Bloodstream infection	1 (1)	0 (0)	1 (1)
Ventilator-acquired pneumonia	16 (16)	6 (22)	22 (17)
Urinary tract infection	2 (2)	0 (0)	2 (2)
Surgical site infection	1 (1)	0 (0)	1 (1)
Other	3 (3)	0 (0)	3 (2)
Unknown	1 (1)	1 (4)	2 (2)
ECMO cannula infection	1 (1)	0 (0)	1 (1)

All values are n (%) unless otherwise indicated

CONCLUSIONS

Rates of suspected nosocomial infection in Australian & New Zealand ECMO patients are high (27%).

Development of diagnostic criteria for nosocomial infections and **prevention of infection** in the first instance must be priorities for clinicians and researchers.