

Supplementary Materials: Optimising an Infusion Protocol Containing Cefepime to Limit Particulate Load to Newborns in a Neonatal Intensive Care Unit

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Table S1. Number of particles $\geq 2 \mu\text{m}$, $\geq 5 \mu\text{m}$, $\geq 10 \mu\text{m}$, $\geq 15 \mu\text{m}$, $\geq 25 \mu\text{m}$ and total for both infusion sets over the period T0-T8H. Results are expressed as medians [minimum; maximum] (Mann-Whitney test, $p < 0.05$, $n = 6$).

Particles T0-T8H	CEF Infusion Set	CAF Infusion Set	P
$\geq 2 \mu\text{m}$	56,465 [22,352–68,051]	2391 [990–3145]	0.0022
$\geq 5 \mu\text{m}$	9794 [3087–17,064]	383 [227–852]	0.0022
$\geq 10 \mu\text{m}$	1238 [338–1884]	127 [14–189]	0.0022
$\geq 15 \mu\text{m}$	342 [83–526]	43 [1–58]	0.0022
$\geq 25 \mu\text{m}$	59 [14–64]	3 [0–33]	0.0043
Total	89,389 [44,763–104,972]	4982 [1609–6159]	0.0022

Table S2. Number of particles $\geq 2 \mu\text{m}$, $\geq 5 \mu\text{m}$, $\geq 10 \mu\text{m}$, $\geq 15 \mu\text{m}$, $\geq 25 \mu\text{m}$ and total for both infusion sets over the period T4H-T5H. Results are expressed as medians [minimum; maximum] (Mann-Whitney test, $p < 0.05$, $n = 6$).

Particles T4H-T5H	CEF Infusion Set	CAF Infusion Set	P
$\geq 2 \mu\text{m}$	55,141 [19,641–66,060]	817 [215–2230]	0.0022
$\geq 5 \mu\text{m}$	9475 [2028–16,688]	136 [58–665]	0.0022
$\geq 10 \mu\text{m}$	1168 [327–1837]	19 [2–189]	0.0022
$\geq 15 \mu\text{m}$	331 [81–516]	6 [0–50]	0.0022
$\geq 25 \mu\text{m}$	58 [14–64]	1 [0–4]	0.0022
Total	86,246 [40,160–100,874]	1760 [376–4544]	0.0022

Table S3. Number of particles $\geq 2 \mu\text{m}$, $\geq 5 \mu\text{m}$, $\geq 10 \mu\text{m}$, $\geq 15 \mu\text{m}$, $\geq 25 \mu\text{m}$ and total for both infusion sets over the period T0-T8H. Results are expressed as medians [minimum; maximum] (Mann-Whitney test, $p < 0.05$, $n = 6$).

Particles T0-T8H	CEF Infusion Set with Vancomycin	CEF Infusion Set without Vancomycin	P
$\geq 2 \mu\text{m}$	56,465 [22,352–68,051]	55,710 [38,181–88,563]	0.9372
$\geq 5 \mu\text{m}$	9794 [3087–17,064]	13,874 [10,237–23,064]	0.0931
$\geq 10 \mu\text{m}$	1238 [338–1 884]	1426 [1305–2274]	0.0649
$\geq 15 \mu\text{m}$	342 [83–526]	552 [349–938]	0.0649
$\geq 25 \mu\text{m}$	59 [14–64]	74 [27–249]	0.5887
Total	89,389 [44,763–104,972]	80,315 [60,218–125,714]	0.6991

Table S4. Number of particles $\geq 2 \mu\text{m}$, $\geq 5 \mu\text{m}$, $\geq 10 \mu\text{m}$, $\geq 15 \mu\text{m}$, $\geq 25 \mu\text{m}$ and total for both infusion sets over the period T4H-T5H. Results are expressed as medians [minimum; maximum] (Mann-Whitney test, $p < 0.05$, $n = 6$).

Particles T4H-T5H	CEF Infusion Set with Vancomycin	CEF Infusion Set without Vancomycin	P
$\geq 2 \mu\text{m}$	55,141 [19,641–66,060]	53,449 [36,624–85,663]	>0.9999
$\geq 5 \mu\text{m}$	9,475 [2,028–16,688]	13,495 [9,819–22,646]	0.0931
$\geq 10 \mu\text{m}$	1,168 [327–1,837]	1,321 [1,141–2,183]	0.1797
$\geq 15 \mu\text{m}$	331 [81–516]	528 [348–887]	0.0649
$\geq 25 \mu\text{m}$	58 [14–64]	74 [27–222]	0.4545
Total	86,246 [40,160–100,874]	77,000 [58,118–121,362]	0.8182

Table S5. Number of particles $\geq 2 \mu\text{m}$, $\geq 5 \mu\text{m}$, $\geq 10 \mu\text{m}$, $\geq 15 \mu\text{m}$, $\geq 25 \mu\text{m}$ and total on CEF infusion sets with and without filter on the emergency route over the period T0-T8H. Results are expressed as medians [minimum; maximum] (Mann-Whitney test, $p < 0.05$, $n = 6$).

Particles T0-T8H	CEF Infusion Set without Filter	CEF Infusion Set with Filter	P
$\geq 2 \mu\text{m}$	56,465 [22,352–68,051]	1541 [220–2360]	0.0022
$\geq 5 \mu\text{m}$	9794 [3087–17,064]	291 [71–657]	0.0022
$\geq 10 \mu\text{m}$	1238 [338–1884]	22 [8–46]	0.0022
$\geq 15 \mu\text{m}$	342 [83–526]	8 [1–20]	0.0022
$\geq 25 \mu\text{m}$	59 [14–64]	3 [0–12]	0.0022
Total	89,389 [44,763–104,972]	2254 [322–3,642]	0.0022

Table S6. Number of particles $\geq 2 \mu\text{m}$, $\geq 5 \mu\text{m}$, $\geq 10 \mu\text{m}$, $\geq 15 \mu\text{m}$, $\geq 25 \mu\text{m}$ and total on CEF infusion sets with and without filter on the emergency route over the period T4H-T5H. Results are expressed as medians [minimum; maximum] (Mann-Whitney test, $p < 0.05$, $n = 6$).

Particles T4H-T5H	CEF Infusion Set without Filter	CEF Infusion Set with Filter	P
$\geq 2 \mu\text{m}$	55,141 [19,641–6060]	296 [57–681]	0.0022
$\geq 5 \mu\text{m}$	9475 [2028–16,688]	44 [31–238]	0.0022
$\geq 10 \mu\text{m}$	1168 [327–1837]	13 [1–25]	0.0022
$\geq 15 \mu\text{m}$	331 [81–516]	3 [1–17]	0.0022
$\geq 25 \mu\text{m}$	58 [14–64]	1 [0–12]	0.0022
Total	86,246 [40,160–100,874]	475 [85–988]	0.0022