

CRITICAL CARE · EARLY SEPSIS RESUSCITATION

Vasopressors or fluids in early septic shock

The **ARISE FLUIDS** trial — a pragmatic, open-label randomized trial testing whether restricting fluids and starting vasopressors **early** changes recovery from septic shock.

1000 randomized

51 sites · 3 countries

Open-label RCT

NCT04569942

THE CLINICAL QUESTION

In adults with septic shock in the emergency department, does **restricted fluid with early vasopressors** increase days alive and out of hospital at day 90 versus **greater fluid with later vasopressors**?

WHO WAS STUDIED

2080

eligible patients screened

1000

underwent randomization

963

intention-to-treat analysis

● 481 vasopressor group
● 482 fluids group

Enrolment criteria — suspected sepsis with:

● SYSTOLIC BP
<90 mmHg

● OR MAP
<65 mmHg

● LACTATE
>2.0 mmol/L

● FLUID GIVEN
≥1000 mL bolus

At baseline, groups were well matched — Median age **68 yr** · APACHE II **18** · Lactate **3.3 mmol/L** · Respiratory **31%** · urinary **24%** source

THE TWO STRATEGIES

Both delivered for at least 6 hours and up to 24 hours in a critical-care area, then usual care.

VASOPRESSOR GROUP

Restricted fluids, early vasopressors

n = 481

- IV resuscitation fluid stopped at randomization
- Vasopressors started immediately, titrated to target MAP
- 250 mL boluses only if clinically indicated

1140

mL fluid, 0–24 h

86.5%

got vasopressors

0.4 h

to vasopressor

FLUIDS GROUP

Greater fluids, later vasopressors

n = 482

- Bolus up to 1000 mL, then 500 mL boluses as needed
- Aim for ≥30 mL/kg within 3 h of presentation
- Vasopressors only once fluid level restored

2248

mL fluid, 0–24 h

67.6%

got vasopressors

1.4 h

to vasopressor

SEPARATION ACHIEVED

-1108 mL less fluid at 24 h · +18.9 pp vasopressor use · -1.0 h to first vasopressor

Vasopressor

1140 mL

Fluids

2248 mL

PRIMARY OUTCOME

Days alive and out of hospital, to day 90

76

vs

76

days

VASOPRESSOR · IQR 55–83

FLUIDS · IQR 55–82

No difference

Median difference **0.0 days** (95% CI -2.7 to 2.7)

P = 1.00 · no meaningful difference in any prespecified subgroup

SECONDARY & SAFETY OUTCOMES

Mortality at day 90

16.4% vs 14.4%

RR 1.14 (0.85–1.54) · similar

Mortality at day 28

12.9% vs 10.0%

RR 1.29 (0.91–1.85) · similar

Pulmonary edema

0.6% vs 5.0%

RR 0.12 · P<0.001 · fewer with early vasopressors

The one notable safety signal: **pulmonary edema was eight-fold less common** in the restricted-fluid group — a plausible benefit of giving less fluid, though some difference may reflect reporting bias in an open-label trial.

BOTTOM LINE

Among adults presenting to the emergency department with early septic shock, restricting fluids and starting vasopressors early did **not** increase days alive and out of hospital at day 90 compared with greater fluids and later vasopressors. Either approach is reasonable — early vasopressors safely allow less fluid, and may reduce pulmonary edema.