TARGETED TEMPERATURE MANAGEMENT at 33°C vs 36°C AFTER CARDIAC ARREST

Guidelines recommended therapeutic hypothermia post cardiac arrest, but supporting evidence was limited. It was unclear whether the benefit was due to the therapeutic effect of hypothermia or prevention of fever.

OBJECTIVE
To investigate the benefits and harms of targeted temperature of 36°C vs 33°C post cardiac arrest, both of which were intended to prevent fever.

Randomized Control Trial, 2013

Europe

36
TOTAL INTENSIVE CARE UNITS

Australia

466
Patients

Sedated and Targeted to 36°C

Gradually Rewarmed

Sedation Discontinued

473
Patients

Sedated and Targeted to 33°C

Gradually Rewarmed

Sedation Discontinued

End of Intervention:
Body Temperature Maintained Below 37.5°C
With Fever Control Measures

48%
MORTALITY

50%

52%
180-DAY MORTALITY OR POOR NEUROLOGICAL OUTCOME

54%

INCLUSION

Unwitnessed arrest with asystole as initial rhythm

Greater than 240 min interval between return of spontaneous circulation and screening

Suspected or known acute intracranial hemorrhage or stroke

Body temperature less than 30°C

EXCLUSION

Cardiac Arrest

20 mins of spontaneous circulation after resuscitation

T = 0 hrs

T = 28 hrs

T = 36.3 hrs

TAKING HOME POINT:
Targeted temperature management to 33 degrees was not superior in neurological and mortality outcomes when compared to targeted temperature management to 36 degrees.

REFERENCES:

This infographic was created by Sparsh Shah and edited by Alvin Chin.