

VITAL SIGNS

Temp = Temperature

1. CDE Variable	Temp = Temperature AvTEMP = Average daily temperature AvTEMPUnits = Units for average daily temperature HighTEMP = Highest daily temperature HighTEMPUnits = Units for highest daily temperature TempMod = Mode of temperature measurement
2. CDE Definition	Core or external temperature during clinical treatment
3. Recommended instrument for assessment	Degrees centigrade or degrees Fahrenheit
4. Description of measure	Core (preferred) or external temperature
5. Permissible values	28-42 (degrees Centigrade) 82-108 (degrees Fahrenheit) <i>The range presented represents the range of plausible values. Values outside this range may be queried. The numbers given between brackets, represent the range of possible values, including extreme situations. Values outside these ranges, will be queried immediately.</i> Mode of temperature measurement: External: - Axillary - skin Core: - Rectal - Oesophageal, bladder - Ear
6. Classification: Basic/Intermediate/Advanced	<u>Basic</u> : record the temperature most representative of this period each day. Record also the highest temperature over this 24 hour period. <u>Intermediate and advanced</u> : record lowest and highest temperature over this 24 hour period.
7. Procedure	Record the temperature value from rectal or bladder temperature probe, check units (degrees Celsius or degrees Fahrenheit); check unknown if information is not available.
8. Comments/Special instructions:	We note that brain temperature is reportedly up to 1 degree higher than core temperature and the pressure differential between brain and core temperature is dependent on cerebral perfusion. If brain temperature is measured, we recommend documenting this separately.
9. Rationale/justification:	Hypothermia on admission is associated with a worse outcome. The cause of this association is unknown, and may be related to rapid rewarming. Deep hypothermia (t < 32°C) may induce electrolyte disturbances and coagulopathy. Cerebral metabolism is increased during hyperthermia, and the occurrence of fever may tip the balance to ischaemia in patients with a marginal cerebral perfusion. Hyperthermia during clinical treatment is therefore considered an adverse event which may potentiate second brain damage.
10. References:	<i>Murray GD, Butcher I, McHugh GS, et al. Multivariable prognostic analysis in traumatic brain injury. J Neurotrauma. Feb 2007;24(2):329-337.</i> <i>McHugh GS, Engel DC, Butcher I, et al. Prognostic value of secondary insults in traumatic brain injury: results from the IMPACT study. J Neurotrauma. Feb 2007;24(2):287-293.</i>

Puccio AM, Fischer MR, Jankowitz B, et al. Induced Normothermia Attenuates Intracranial Hypertension and Reduces Fever Burden after Severe Traumatic Brain Injury. Neurocritical Care. 2009;11(1):82-7. Epub 2009 Apr 1

Recommended time for assessment:

On admission and daily as required by protocol.