Supplementary Appendix A Details of perfusion pressure and blood pressure

Supplementary Material S1 STROBE Statement—Checklist of items that should be included in reports of *cohort studies*

	Item No	Recommendation
Title and Abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract Page 1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found Page 2
Introduction		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported Page 3–4
Objectives	3	State specific objectives, including any prespecified hypotheses Pages 3–4 Introduction explains the background for the hypothesis and states specific objectives
Methods		
Study design	4	Present key elements of study design early in the paper Page 4–7
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection Page 4–7
Participants	6	(*a*) Give the eligibility criteria, Page 4–5 and the sources and methods of selection of participants. Page 4–5, flow diagram. Describe methods of follow-up Page 6–7
		(*b*) For matched studies, give matching criteria and number of exposed and unexposed
Variables	7	Clearly define all outcomes, Page 6–7 exposures, Page 4–6, predictors, Page 6 potential confounders, Page 7–8 and discussion, Page 9–13 and effect modifiers. Page 9–13 Give diagnostic criteria, if applicable Page 5
Data sources/ measurement	8[a]	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group Page 6–8
Bias	9	Describe any efforts to address potential sources of bias Page 7–13 Information on mortality data analyzed externally. Dates of outpatient clinical follow-up with data collection – before the study was conceived and therefore clinician was blind to outcome. Notes review was of entries/assessments made by other professionals – as no investigator was involved in any further clinical follow up – after the original clinic visit. Methods and Discussion detail limitations and confounders.
Study size	10	Explain how the study size was arrived at Page 4–5, and Fig. 1
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why Page 7–8
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding Page 7–8
		(*b*) Describe any methods used to examine subgroups and interactions Page 7–8
		(*c*) Explain how missing data were addressed flowchart
		(*d*) If applicable, explain how loss to follow-up was addressed Lost data was not entered into analysis
		(*e*) Describe any sensitivity analyses effect size is given for length of stay, confidence intervals are given for other data Discussion acknowledges small size of sample
Results		
Participants	13[a]	(a) Report numbers of individuals at each stage of study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed flowchart
		(b) Give reasons for non-participation at each stage flowchart
		(c) Consider use of a flow diagram provided

Supplementary Material S1 (*Continued*)

	Item No	Recommendation
Descriptive data	14[a]	(a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders Table 2 Page 8–9
		(b) Indicate number of participants with missing data for each variable of interest flowchart
		(c) Summarize follow-up time (e.g., average and total amount) Page 6–7
Outcome data	15[a]	Report numbers of outcome events or summary measures over time Page 8–9
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included Table 3–6 Page 8–9
		(*b*) Report category boundaries when continuous variables were categorized Page 8–9, Fig. 2, appendix
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period
Other analyses	17	Report other analyses done—e.g. analyses of subgroups and interactions, and sensitivity analyses Page 8–9, Table 2–5
Discussion		
Key results	18	Summarize key results with reference to study objectives Page 9–13
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias Page 9–13
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence Page 9–13
Generalizability	21	Discuss the generalizability (external validity) of the study results Page 10–13
Other information		
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based Page 13 and COI disclosure forms

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Websites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.
[a]Give information separately for exposed and unexposed groups.

Supplementary Table S1 Perfusion pressure for patients with sepsis[a]

Age (y)	PP
Age <1	MAP − CVP = 55
Age 1–2	MAP − CVP = 60
Age 2 or older	MAP − CVP = 65

Abbreviations: BP, blood pressure; CVP, central venous pressure; MAP, mean arterial blood pressure; PP, perfusion pressure; y, year.
[a]Adapted from Carcillo JA, Fields AI. American College of Critical Care Medicine Task Force Committee Members. Clinical practice parameters for hemodynamic support of pediatric and neonatal patients in septic shock, 2002.[9]

Supplementary Table S2 Cerebral perfusion pressures for patients in higher BP cohort

Age range	CPP
Infants	MAP − ICP = 55
Children	MAP − ICP = 60
Adolescents	MAP − ICP = 70

Abbreviations: BP, blood pressure; CPP, cerebral perfusion pressure; ICP, intracranial pressure; MAP, mean arterial blood pressure.

Supplementary Table S3 BP levels: age-related blood pressures for patients with traumatic brain injury in permissive BP cohort

Age (y)	Systolic BP (mm Hg)
<1	70–90
2–5	80–100
5–12	90–110
>12	100–120

Abbreviations: BP, blood pressure; TBI, traumatic brain injury; y, year.

Supplementary Table S4 Systolic blood pressure centiles calculations [ab]

For age over 1
50^{th} /median centile BP = 90 mm Hg plus (two times age in years)
Lower limit 5^{th} centile BP = 70 mm Hg +2 (age in years)
For age under 1 y
Normal = 80 – 90 mm Hg with lower limit of normal 70 mm Hg

Abbreviation: BP, blood pressure.
Derived from [a]Chameides L, Hazinski MF, eds. Pediatric Advanced Life Support.1994–1997.[18]
[b]European Resuscitation Council and Rescuscitation Council (UK). European Pediatric Life, 2006.[20]

Supplementary Table S5 Paediatric Intensive Care Follow Up Clinic

PICU Follow Up Clinic	Name	Hospital Number		
Date	Age	PIM/PRISM Score		
PICU Problems		Date PICU Admission: Date PICU Discharge: Date Hospital Discharge:		
Medication				
Past Medical History				
Exam				
Current Problems				
Plan				
Motor Performance		DEFICIT	YES	NO
		MILD	MODERATE	SEVERE
Verbal Performance		DEFICIT	YES	NO
		MILD	MODERATE	SEVERE
Visual Performance		DEFICIT	YES	NO
		MILD	MODERATE	SEVERE
Focal Deficit		DEFICIT	YES	NO
		MILD	MODERATE	SEVERE

Overall Function Level

If more room required please give details overleaf

Respiratory Problems	YES	NO	
	MILD	MODERATE	SEVERE

Paediatric Cerebral Performance Category

Death	Persistent Vegetative State	Good recovery
Severe Disability (Conscious but disabled)	Moderate Disability (Disabled but independent) Special educational needs/ learning deficit	Mild Disability (Independent but mild deficit – eg, normal education but poor grades

Space For Further Details If Needed
DOCTORS NAME AND SIGNATURE

