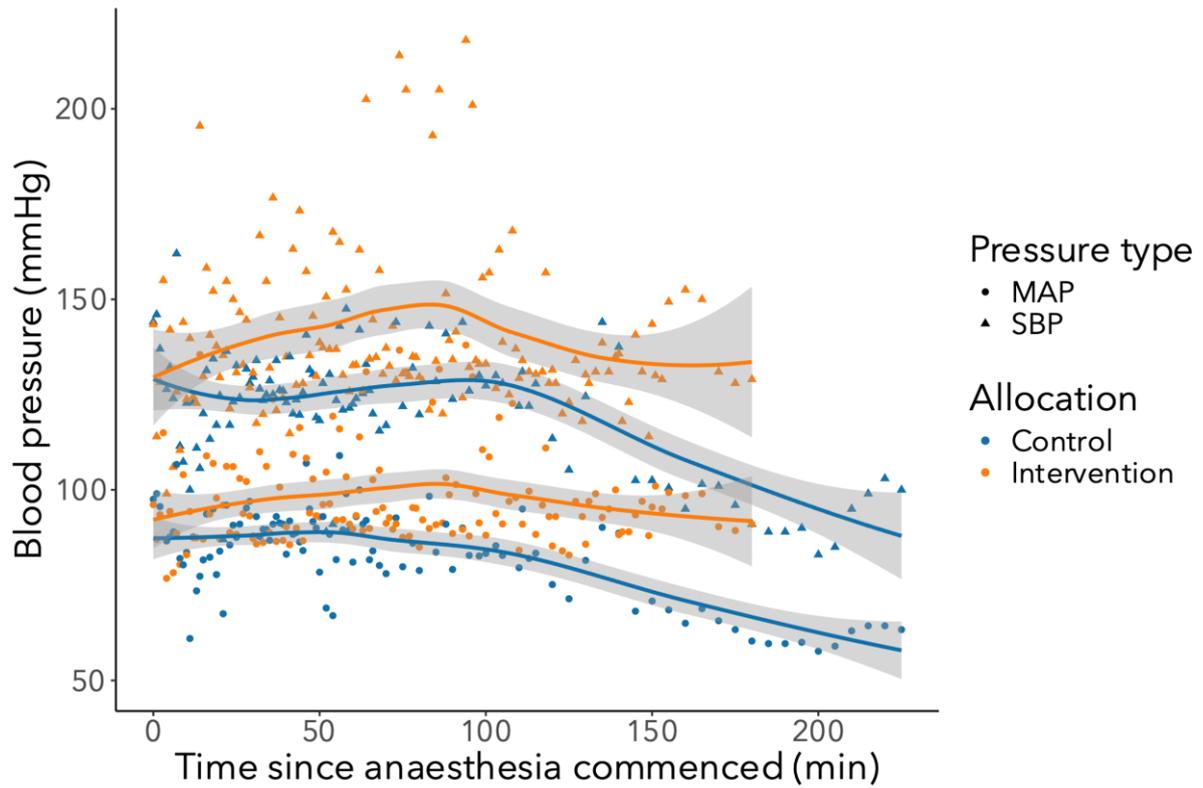


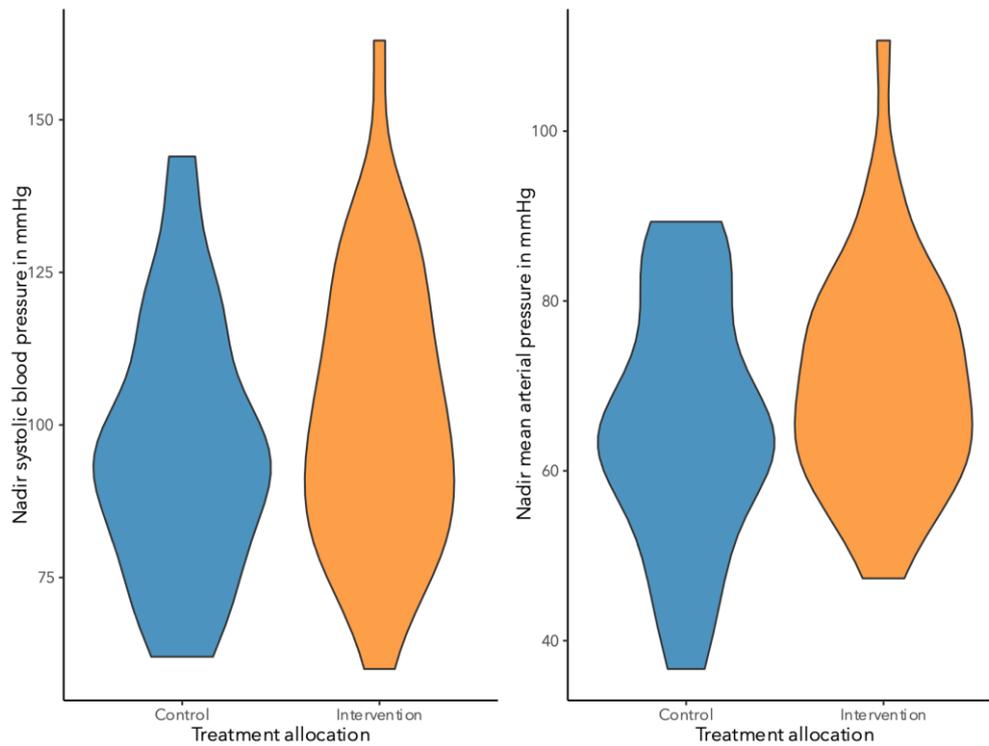
## Online Supporting Information for HIPHOP

**Figure S1.** Blood pressure during surgery by treatment allocation

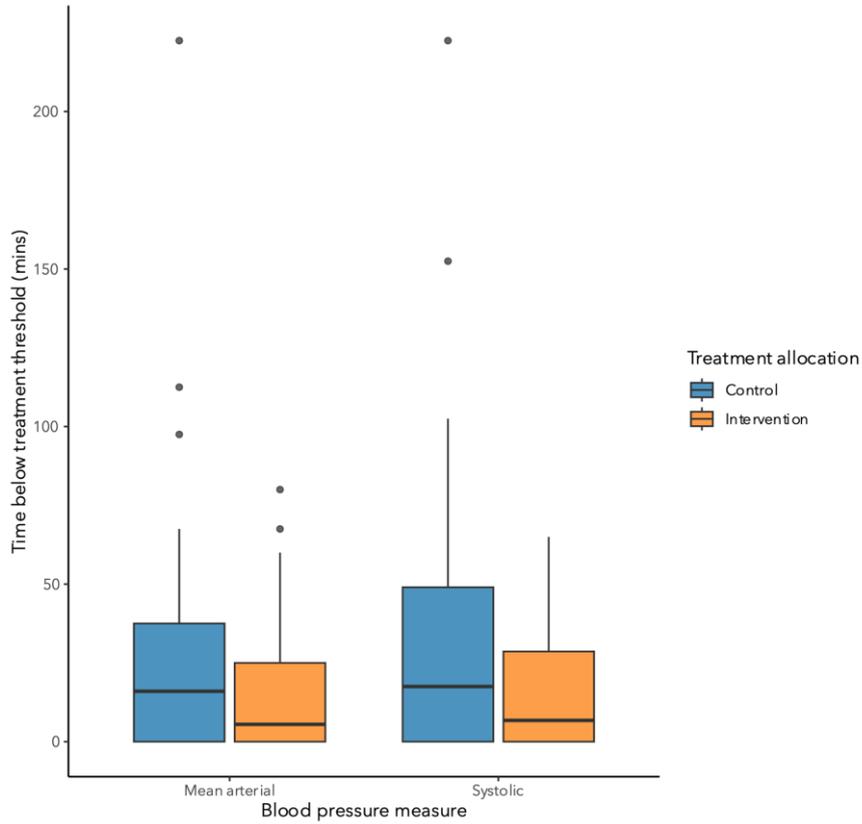


Mean blood pressure (solid lines), individual participant blood pressure (circles/triangles)

**Figure S2.** Lowest intraoperative blood pressures per participant

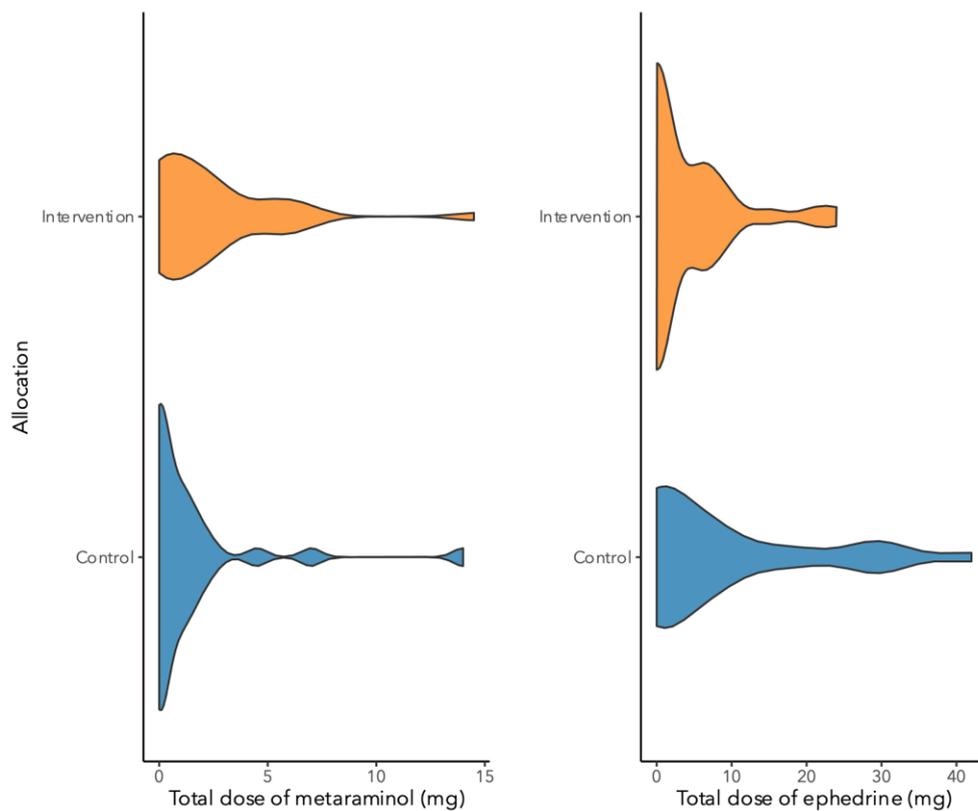


**Figure S3.** Total time blood pressure is below treatment threshold

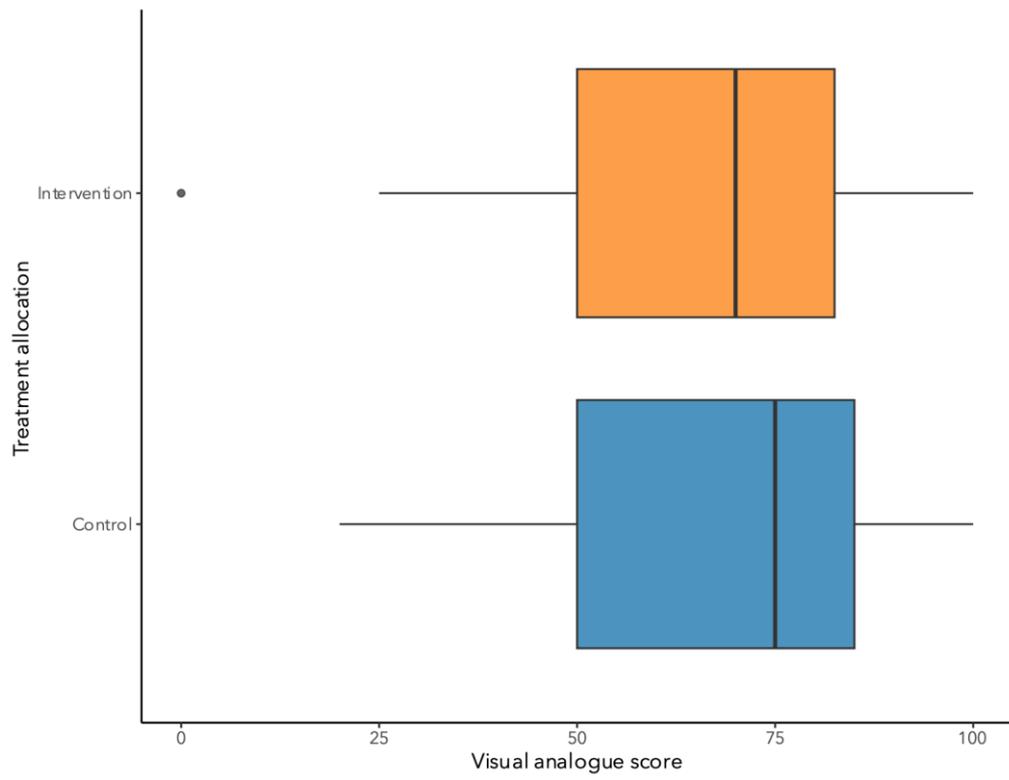


Thresholds: Systolic blood pressure <80% pre-induction, Mean arterial pressure <75mmHg.

**Figure S4.** Vasoactive use by treatment allocation



**Figure S5.** EQ-5D Visual Analogue Score at 30 days postoperatively for participants allocated to tight blood pressure control (orange) or usual care (blue).



**Table S1.** Duration of time below treatment threshold

Threshold	Control	Intervention
Less than 80% pre-induction SBP	20 (0, 85 [0-222.5])	6 (0, 20.5 [0-65])
Less than MAP 75mmHg	18 (0, 57.5 [0-222.5])	4 (0, 25 [0-80])
Less than 80% pre-induction SBP and MAP 75mmHg	35 (0, 85 [0-222.5])	16 (2.5, 44.5 [0-80])

Median (IQR [Range]) in minutes

**Table S2.** Vasoactive drug administration (separating those with none given)

Total dose	Overall, N = 64 <sup>a</sup>	Control, N = 30 <sup>a</sup>	Intervention, N = 34 <sup>a</sup>
<b>Metaraminol (mg)</b>	1.80 (1.00, 4.00 [0.10-14.50])	1.50 (1.00, 2.25 [0.10-14.00])	2.50 (1.50, 5.00 [0.30-14.50])
None used	25	15	10
<b>Ephedrine (mg)</b>	9 (6, 18 [3-42])	11 (6, 28 [3-42])	6 (6, 9 [3-24])
None used	35	14	21

<sup>a</sup>Median (IQR [Minimum-Maximum])

**Table S3.** Intraoperative fluid administration

	Overall, N = 64 <sup>a</sup>	Control, N = 30 <sup>a</sup>	Intervention, N = 34 <sup>a</sup>
<b>Crystalloid (ml)</b>	1,000 (800, 1,000 [0-2,500])	1,000 (1,000, 1,000 [300-2,000])	1,000 (713, 1,000 [0-2,500])
<b>Received blood transfusion</b>	4 (6.3%)	2 (6.7%)	2 (5.9%)

<sup>a</sup>Median (IQR [Minimum-Maximum]); n (%)

**Table S4.** Daily postoperative creatinine and troponin values by treatment allocation

Postoperative Day	Troponin		Creatinine	
	Control <sup>a</sup>	Intervention <sup>a</sup>	Control <sup>a</sup>	Intervention <sup>a</sup>
1	95.5 ± 357.4	70.0 ± 141.2	84.8 ± 51.4	90.8 ± 44.3
2	59.7 ± 129.9	162.8 ± 438.5	85.7 ± 56.0	95.5 ± 58.4
3	37.7 ± 40.2	1,468.6 ± 7,573.0	82.3 ± 55.9	95.8 ± 59.9
4	31.5 ± 32.8	609.6 ± 2,873.5	82.3 ± 53.6	88.5 ± 56.1
5	27.3 ± 26.9	374.4 ± 1,661.9	80.0 ± 48.2	86.8 ± 50.1
6	25.6 ± 26.1	300.2 ± 1,269.9	80.8 ± 50.4	88.4 ± 45.9
7	23.5 ± 27.5	208.0 ± 771.5	78.9 ± 44.6	88.9 ± 47.3

<sup>a</sup>Mean ± SD**Table S5.** Daily occurrence of stroke and delirium by treatment allocation

Postoperative Day	Stroke		Delirium	
	Control <sup>a</sup>	Intervention <sup>a</sup>	Control <sup>a</sup>	Intervention <sup>a</sup>
1	1 (3.4%)	0 (0%)	0 (0%)	3 (8.8%)
2	0 (0%)	0 (0%)	1 (3.3%)	2 (5.9%)
3	0 (0%)	0 (0%)	1 (3.3%)	1 (2.9%)
4	0 (0%)	0 (0%)	0 (0%)	2 (5.9%)
5	0 (0%)	0 (0%)	0 (0%)	1 (2.9%)
6	0 (0%)	0 (0%)	0 (0%)	2 (5.9%)
7	0 (0%)	0 (0%)	1 (3.3%)	2 (5.9%)

<sup>a</sup>n (%)

**Table S6.** Adverse events

<b>Event type</b>	<b>Control</b>	<b>Intervention</b>
Any adverse event	18	17
Serious adverse event	3	1
Postoperative hypotension	3	6
Anaemia	4	4
Bone cement implantation syndrome	0	0