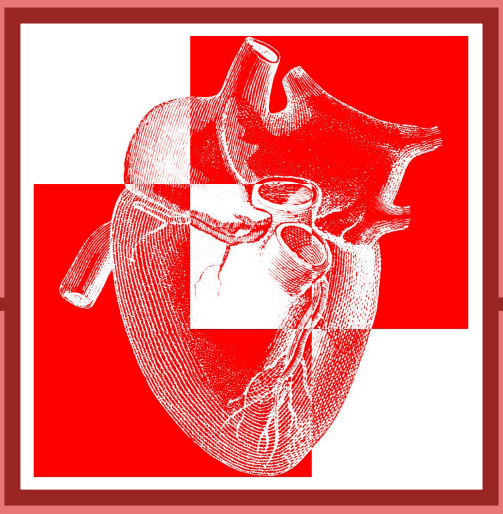
ANZSCTS Cardiac Surgery Database Program



Supplementary Annual Report

2025



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Image location: Wilsons Promontory National Park, Victoria

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Acronyms

ANZSCTS	Australian and New Zealand Society for Cardiac and Thoracic Surgeons
AVR	Aortic valve replacement
CABG	Coronary artery bypass graft
CCRET	Centre of Cardiovascular Research and Education in Therapeutics
dNRI	Derived new renal insufficiency
DSWI	Deep sternal wound infection
EF	Ejection fraction
ICU	Intensive care unit
LOS	Length of stay
LVF	Left ventricular function
MI	Myocardial infarction
NSTEMI	Non-ST-elevation myocardial infarction
OM	Operative mortality
RA-dNRI	Risk-adjusted derived new renal insufficiency
RA-OM	Risk-adjusted operative mortality
RBC	Red blood cell
RTT	Return to theatre
STEMI	ST-elevation myocardial infarction

Introduction

This Supplementary Report accompanies the ANZSCTS Database 2025 Annual Report and should be read alongside it. The Annual Report, which presents the Database's key clinical outcomes and benchmarking, can be downloaded here: 2025 ANZSCTS Database Annual Report.

The ANZSCTS Database Program was established in 2001 with the support of the Victorian Department of Health and Human Services. It has since expanded to national coverage and to Aotearoa New Zealand, becoming a binational Program in 2019. Currently, 65 hospitals are contracted to participate.

Based on feedback from contributing surgeons, most risk factor, demographic and resource utilisation analyses have been moved from the main report to this companion report, allowing the main report to focus more directly on clinical outcomes. This report contains analyses not included in the main report and gives more detail on selected measures, including unit-level results for data the main report presents in aggregate form, for units and researchers wanting a closer look at the underlying data.

Like the main report, the Supplementary Report includes cases submitted by 53 cardiac surgery units across Australia and New Zealand, 98.9% of which were flagged as complete. As tables include all available data, case totals may vary slightly between tables due to missing values for individual variables.

The main report presents key clinical outcomes alongside a special theme marking 25 years of the ANZSCTS Database, covering its evolution since 2001, key assets and impact on cardiac surgery across Australia and Aotearoa New Zealand. Its appendices provide full detail on the Program, including definitions of key performance indicators, ANZSCORE risk-adjustment models, and data preparation and hospital inclusion criteria.

S1. Isolated CABG Surgery

Risk factors

Figure S1. Sex of isolated coronary artery bypass graft (CABG) patients by unit, 2025

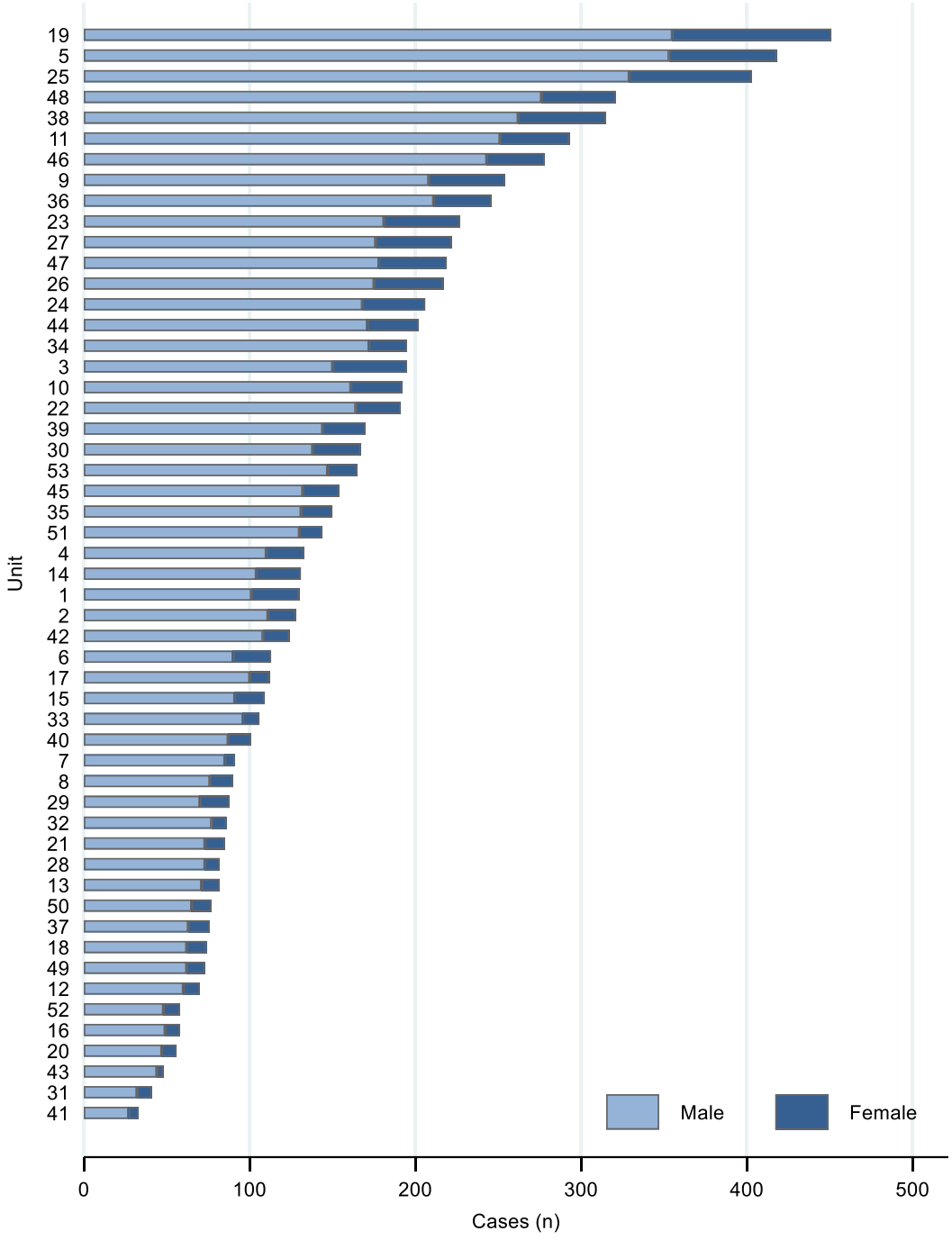
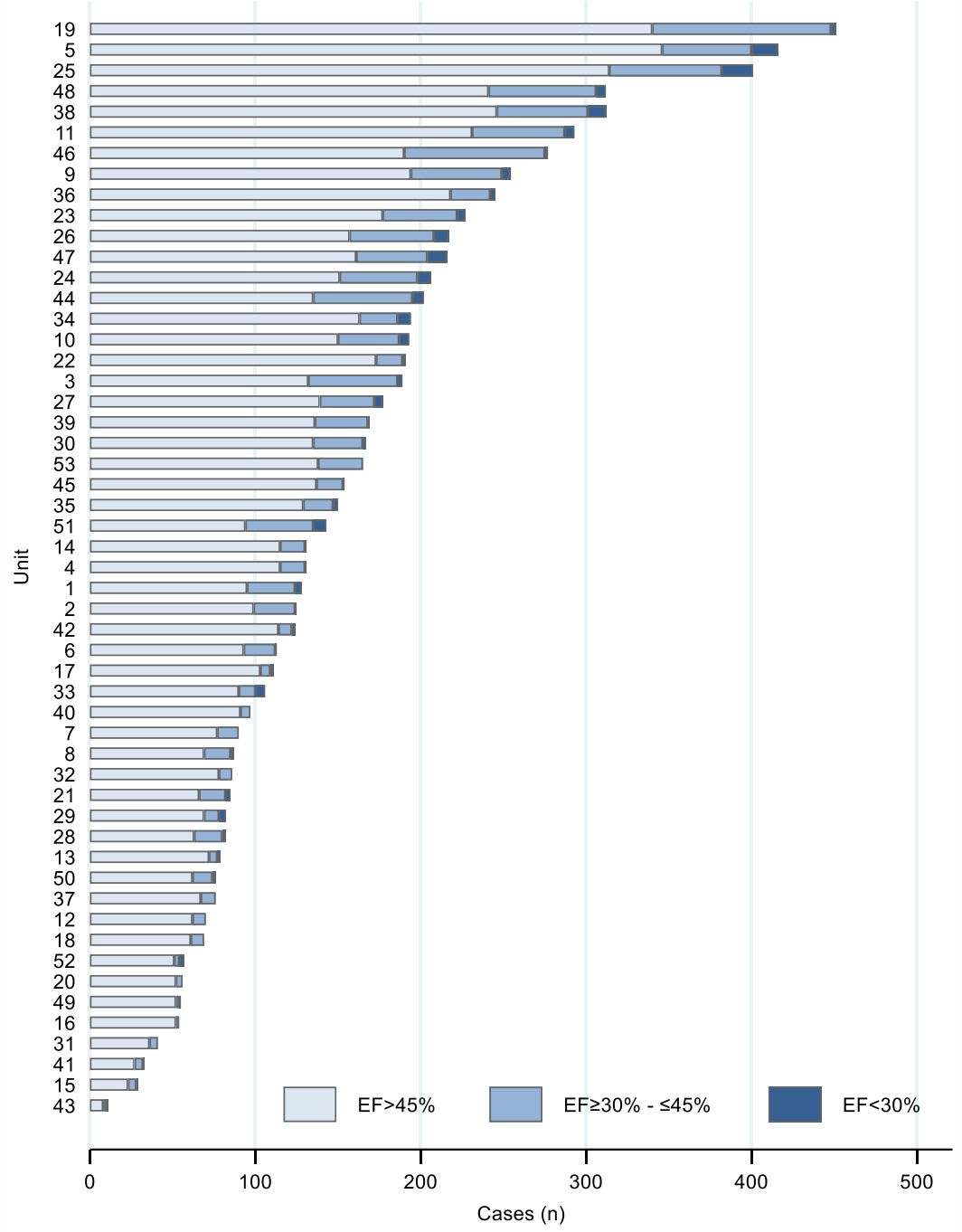
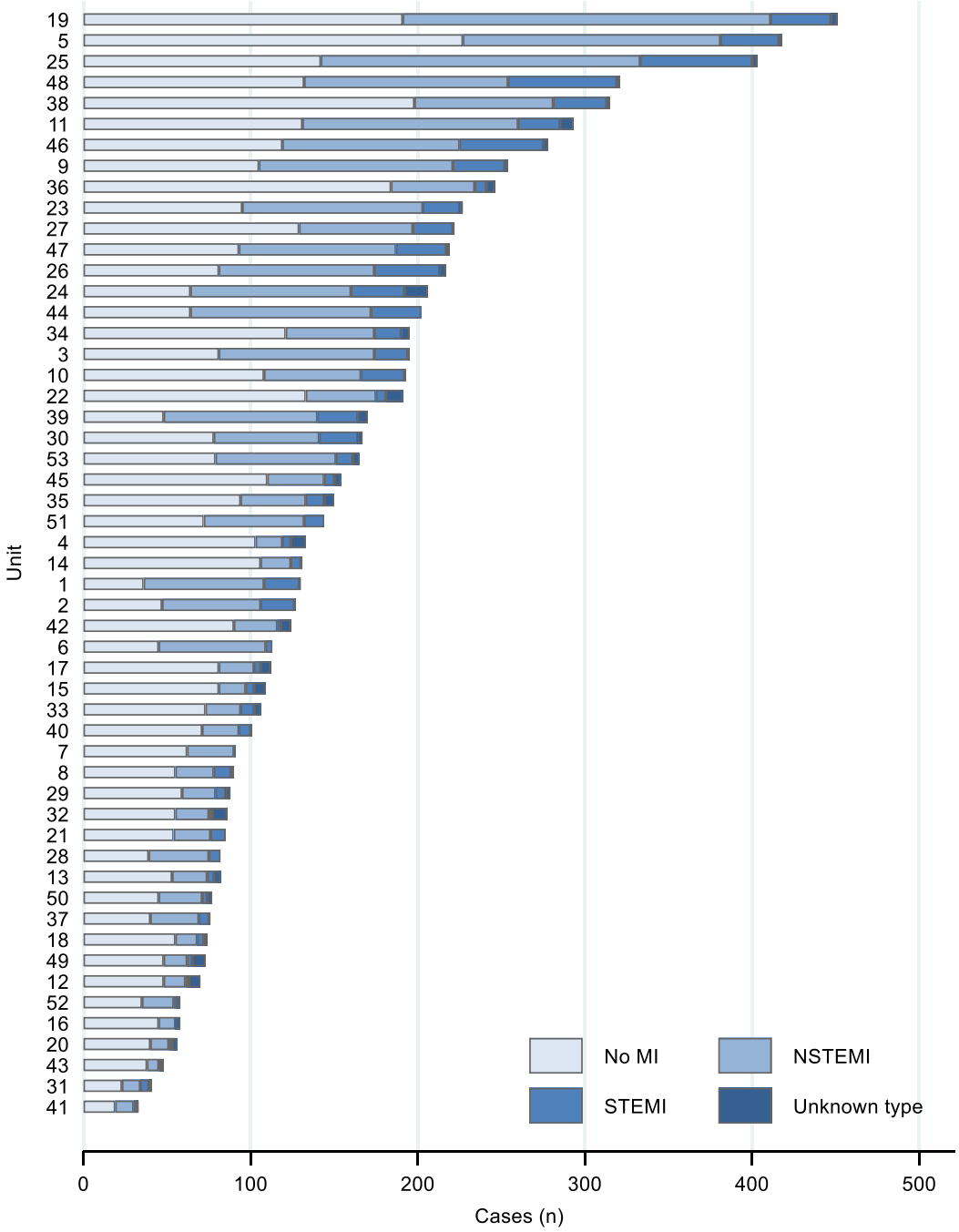


Figure S2. Pre-operative left ventricular function (LVF) of isolated CABG patients by unit, 2025



EF indicates ejection fraction

Figure S3. Previous myocardial infarction (MI) in isolated CABG patients by unit, 2025



NSTEMI indicates non-ST-elevation myocardial infarction; STEMI, ST-elevation myocardial infarction

Figure S4. Timing of previous MI in isolated CABG patients by unit, 2025

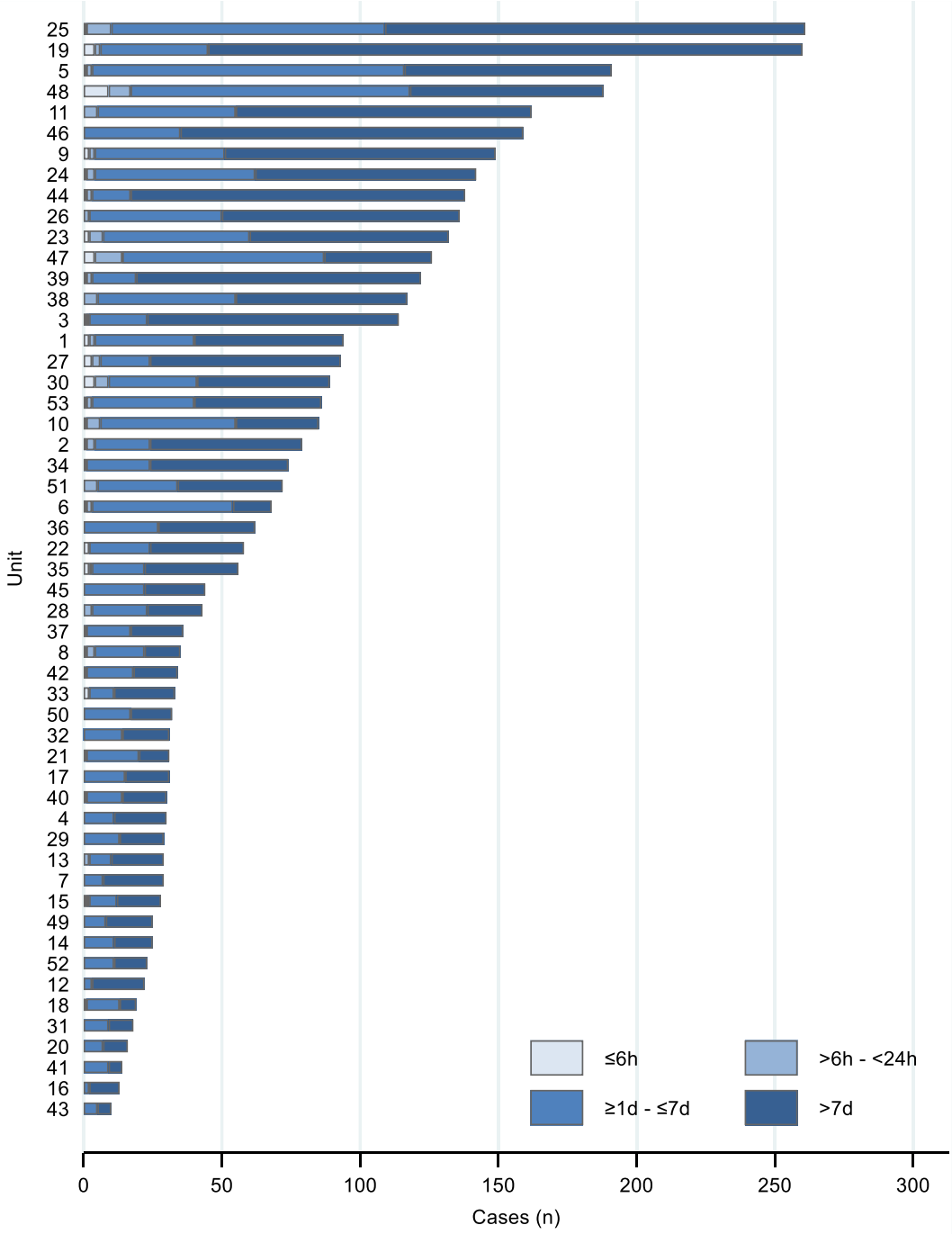


Figure S5. Initial vs redo surgery in isolated CABG patients by unit, 2025

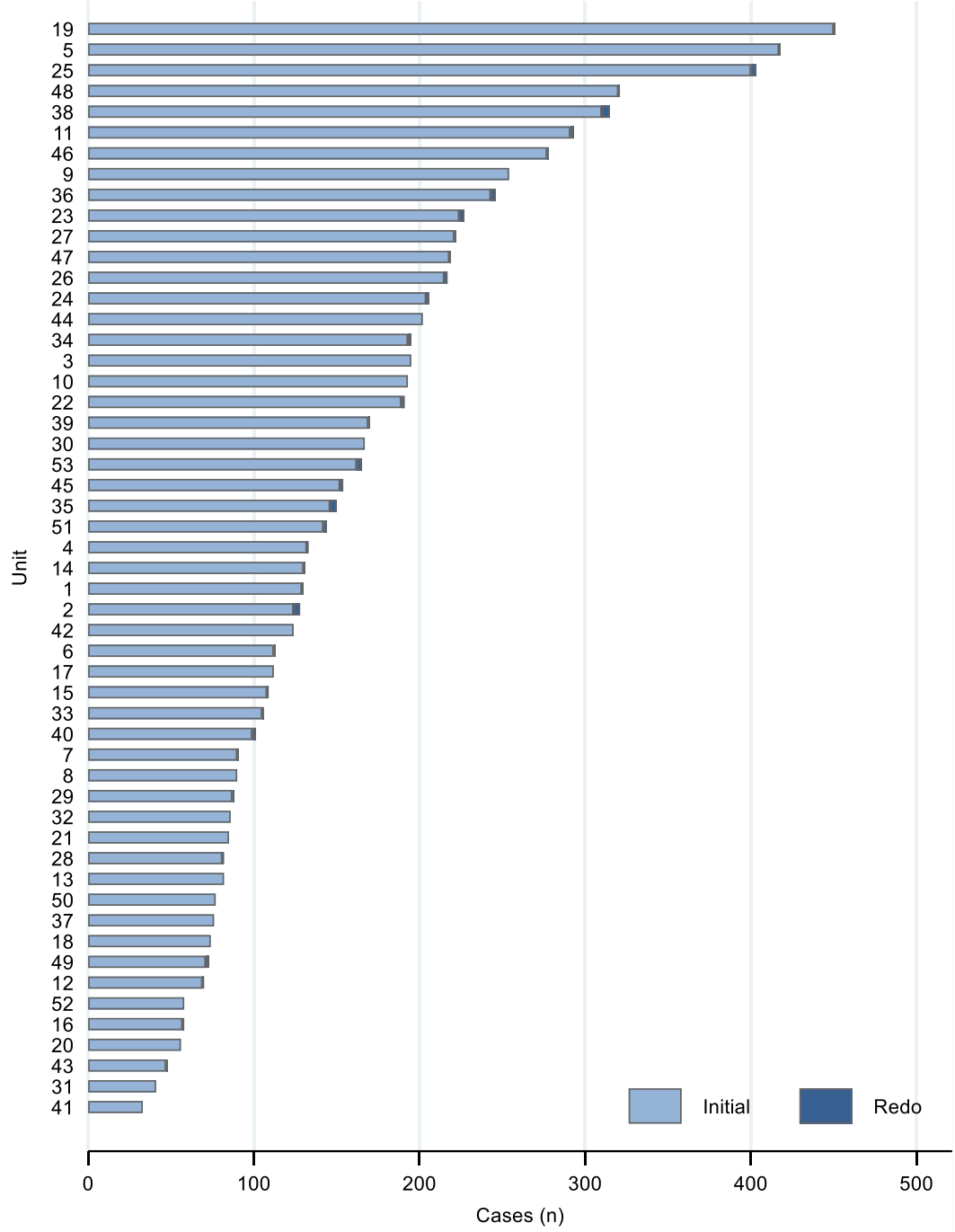


Figure S6. On-pump vs off-pump surgery in isolated CABG patients by unit, 2025

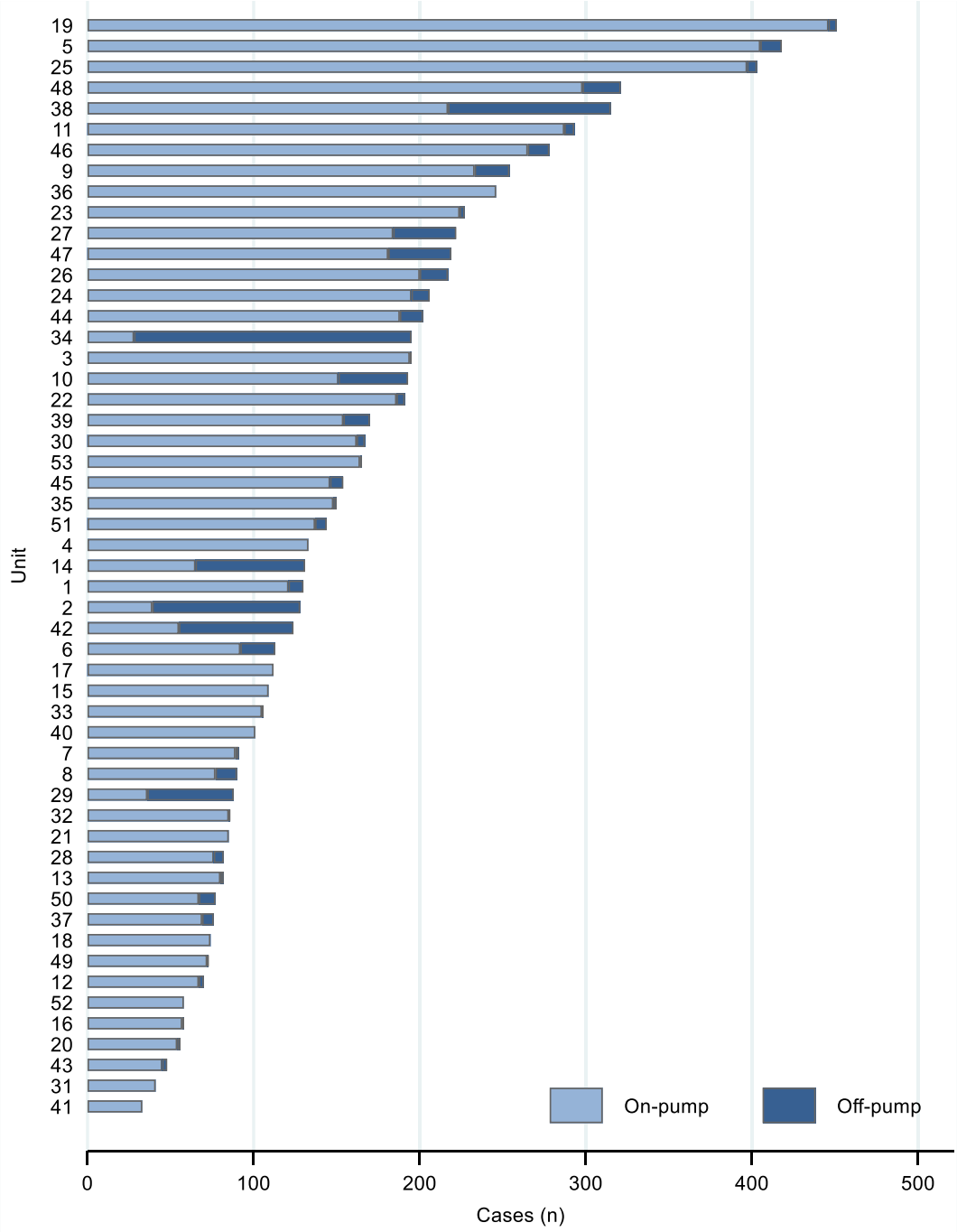
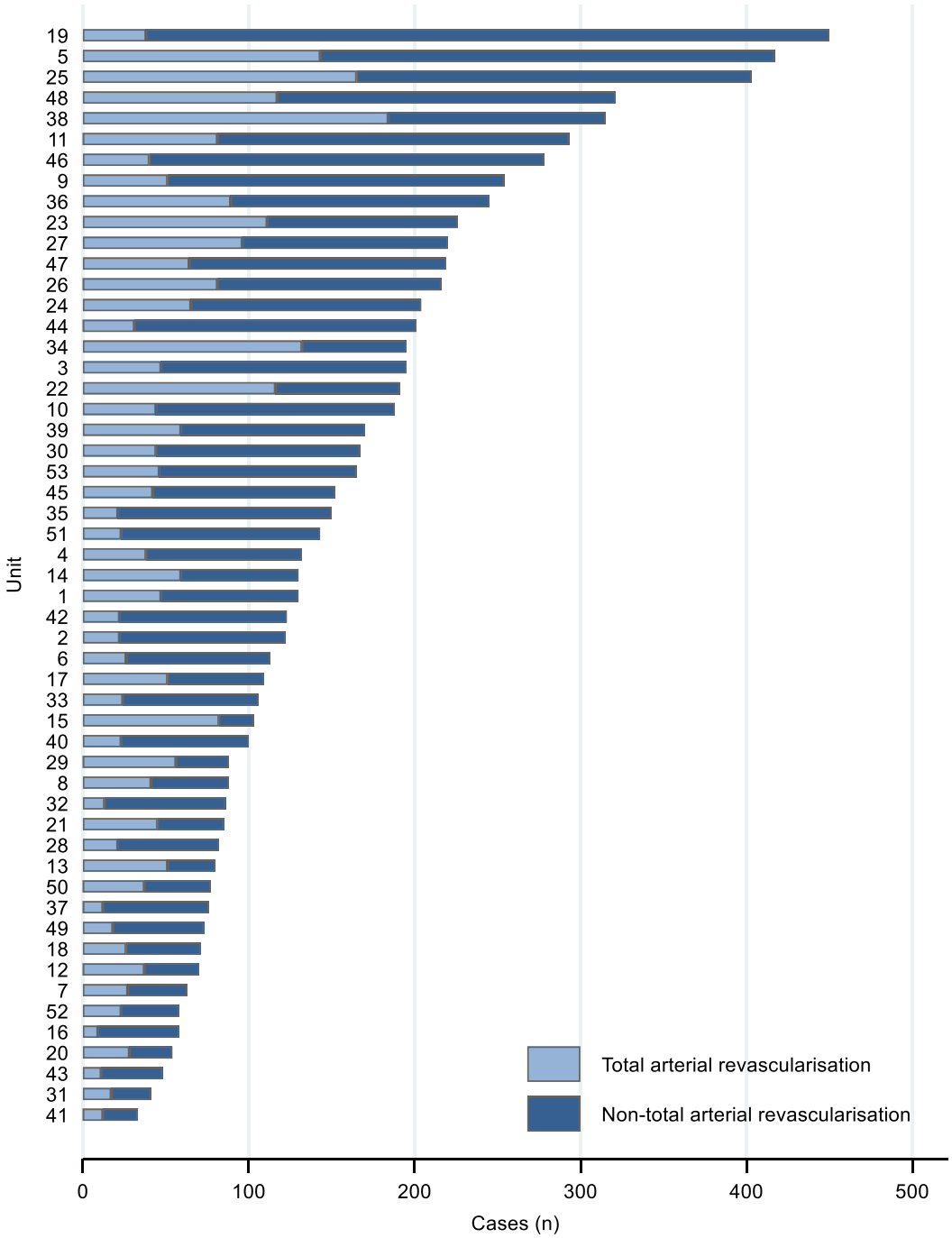


Figure S7. Total arterial revascularisation vs non-total arterial revascularisation in isolated CABG surgery by unit, 2025



Unit level outcomes

Table S1. Outcomes for isolated CABG surgery by unit, 2025

	n	OM (%)	RA-OM (%)	dNRI (%)	RA-dNRI (%)	Permanent Stroke (%)	DSWI (%)	RTT for bleeding (%)
Unit 1	130	1.5	1.0	1.6	1.3	0.8	3.1	1.5
Unit 2	128	1.6	1.6	2.4	2.5	0.0	0.8	3.1
Unit 3	195	2.1	2.0	4.1	3.8	2.1	2.6	3.6
Unit 4	133	0.0	0.0	0.8	0.8	0.0	2.3	0.8
Unit 5	418	1.0	0.9	6.3^	5.4^	0.2	1.2	1.9
Unit 6	113	1.8	1.9	2.7	2.7	0.0	0.9	6.2
Unit 7	91	1.1	2.1	0.0	0.0	0.0	0.0	3.3
Unit 8	90	2.2	1.5	5.6	6.0	3.4	0.0	1.1
Unit 9	254	0.0	0.0	2.4	2.0	0.4	0.8	1.6
Unit 10	193	0.5	0.5	0.5	0.6	1.0	1.0	2.1
Unit 11	293	1.4	1.3	1.7	1.5	2.0	0.3	1.4
Unit 12	70	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Unit 13	82	1.2	1.5	0.0	0.0	0.0	0.0	0.0
Unit 14	131	0.8	1.3	1.6	2.7	0.0	0.0	0.8
Unit 15	109	0.0	0.0	0.9	1.2	0.9	0.0	1.8
Unit 16	58	3.6	6.3	0.0	0.0	0.0	1.7	5.2
Unit 17	112	0.0	0.0	1.8	2.5	0.0	0.0	2.7
Unit 18	74	1.4	1.0	0.0	0.0	0.0	0.0	0.0
Unit 19	451	2.4	2.7	1.8	1.5	1.8	2.2	2.7
Unit 20	56	3.6	5.9	1.8	2.4	1.8	1.8	1.8
Unit 21	85	1.2	0.9	2.4	2.5	0.0	0.0	3.5
Unit 22	191	0.5	0.7	5.8	7.5^	1.0	0.0	1.6
Unit 23	227	1.3	0.9	4.2	4.0	2.2	0.4	0.9
Unit 24	206	1.5	1.1	1.5	1.4	0.0	0.5	3.9
Unit 25	403	1.5	1.2	2.5	1.9	0.2	1.2	3.0
Unit 26	217	1.4	1.2	4.7	4.5	0.5	3.2^	3.2
Unit 27	222	0.0	0.0	2.8	2.6	0.9	1.8	1.8
Unit 28	82	1.2	1.2	7.3	6.0	1.2	2.4	1.2
Unit 29	88	0.0	0.0	1.1	1.5	0.0	0.0	1.1
Unit 30	167	1.2	0.9	4.8	4.7	2.4	1.2	1.2
Unit 31	41	4.9	5.5	0.0	0.0	0.0	2.5	2.5
Unit 32	86	0.0	0.0	4.7	7.9	0.0	0.0	0.0
Unit 33	106	1.9	2.2	2.9	5.0	0.9	0.0	0.0
Unit 34	195	0.5	0.5	0.5	0.5	0.0	0.0	0.5
Unit 35	150	0.0	0.0	6.4	9.3	0.7	0.7	1.3
Unit 36	246	0.4	0.5	1.6	1.8	0.0	0.0	1.6
Unit 37	76	0.0	0.0	1.3	1.5	1.3	0.0	1.3
Unit 38	315	1.0	1.0	1.0	1.1	1.3	1.0	1.6
Unit 39	170	1.8	1.8	3.6	2.9	0.6	0.6	4.7
Unit 40	101	0.0	0.0	2.0	2.4	0.0	2.0	1.0
Unit 41	33	3.0	2.8	0.0	0.0	3.0	0.0	9.1
Unit 42	124	0.0	0.0	0.8	0.9	0.0	0.0	1.6
Unit 43	48	0.0	0.0	2.1	3.7	0.0	2.1	4.2
Unit 44	202	1.5	1.5	1.5	1.0	0.5	0.5	2.0
Unit 45	154	0.6	1.0	0.7	0.9	1.9	0.0	1.9
Unit 46	278	0.7	0.8	2.2	1.9	0.7	0.4	2.5
Unit 47	219	1.8	1.0	3.3	2.2	1.4	0.0	1.8
Unit 48	321	1.6	1.0	2.5	1.9	2.2	0.6	1.9
Unit 49	73	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Unit 50	77	1.3	1.6	6.6	6.8	1.3	0.0	1.3
Unit 51	144	2.8	2.1	4.4	3.7	1.4	0.0	4.2
Unit 52	58	1.7	1.5	5.2	5.8	0.0	0.0	0.0
Unit 53	165	0.0	0.0	6.2	5.4	1.2	0.6	2.4

OM indicates operative mortality; RA-OM, risk-adjusted operative mortality; dNRI, derived new renal insufficiency; RA-dNRI, risk-adjusted derived new renal insufficiency; DSWI, deep sternal wound infection; RTT, return to theatre

^ unit is above the upper 99.7% control limit on the corresponding funnel plot

ᵛ unit is below the lower 99.7% control limit on the corresponding funnel plot

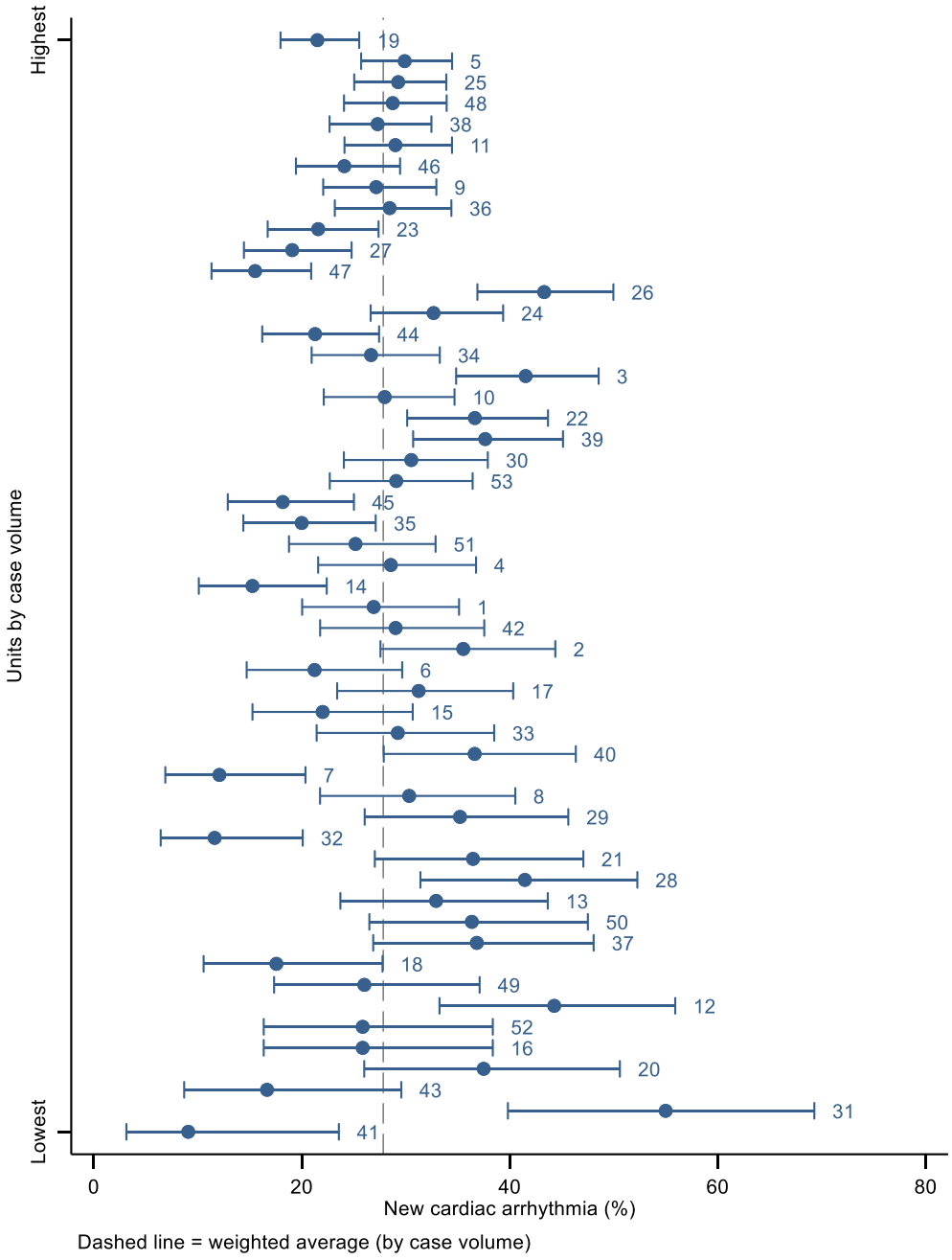
Table S2. Outcomes for isolated CABG surgery by unit, 2021-2024

	n	OM (%)	RA-OM (%)	dNRI (%)	RA-dNRI (%)	Permanent Stroke (%)	DSWI (%)	RTT for bleeding (%)
Unit 1	400	2.1	1.3	3.5	2.3	0.3	2.9^	1.9
Unit 2	148	2.0	1.7	2.7	2.6	0.0	0.0	4.1
Unit 3	251	1.2	1.4	1.2	1.2	0.8	1.2	1.6
Unit 4	472	0.6	0.7	2.2	2.4	0.6	2.3	1.7
Unit 5	1265	1.2	1.1	4.6^	3.8^	0.9	0.9	2.2
Unit 6	397	1.0	1.0	3.4	3.0	2.0	1.3	2.5
Unit 7	278	0.8	0.7	1.1	1.1	0.4	0.0	1.4
Unit 8	237	0.0	0.0	2.6	3.2	0.4	0.0	1.7
Unit 9	1237	1.3	1.1	3.3	3.0	0.8	2.3^	3.1
Unit 10	742	1.2	1.0	2.2	2.2	1.6	1.3	2.4
Unit 11	1065	2.1	1.8	3.2	2.6	1.4	0.9	0.8ᵛ
Unit 12	325	0.9	1.2	1.5	1.9	0.3	0.9	1.2
Unit 13	348	1.0	1.0	1.2	1.1	0.6	1.1	3.4
Unit 14	308	0.0	0.0	0.3	0.5	0.3	0.0	1.9
Unit 15	421	0.0	0.0	2.7	3.0	0.5	0.0	1.8
Unit 16	391	0.8	1.1	0.3ᵛ	0.3	0.0	0.0	4.9
Unit 17	541	0.7	1.0	3.0	3.4	0.7	0.7	0.6
Unit 18	329	0.9	0.6	2.7	2.4	0.0	1.2	1.8
Unit 19	1814	2.0^	1.9^	2.2	1.7	0.9	1.1	4.0^
Unit 20	76	0.0	0.0	2.7	2.2	0.0	0.0	5.3
Unit 21	435	0.5	0.5	4.0	4.7	0.5	0.2	2.1
Unit 22	800	0.4	0.5	4.3	5.7^	0.5	0.5	1.9
Unit 23	863	1.5	1.2	3.8	3.3	0.7	0.2	2.0
Unit 24	745	1.5	0.9	0.8ᵛ	0.7ᵛ	0.9	1.1	2.7
Unit 25	1686	1.1	0.7	2.7	2.1	0.5	0.9	2.1
Unit 26	723	1.5	1.4	4.4	4.2	1.1	1.5	1.8
Unit 27	975	0.7	0.6	2.8	2.2	1.3	0.7	1.9
Unit 28	254	1.2	1.6	2.4	2.8	1.2	0.8	1.2
Unit 29	362	0.3	0.4	1.4	1.7	0.3	0.3	1.1
Unit 30	666	1.9	1.1	2.5	2.0	0.8	0.3	2.1
Unit 31	206	1.5	1.5	0.0	0.0	0.5	1.0	3.9
Unit 32	343	0.3	0.4	5.3	7.3^	0.6	0.6	3.2
Unit 33	623	0.2	0.3	1.1	1.7	0.8	0.3	1.1
Unit 34	779	0.4	0.4	2.1	1.7	0.1	0.4	2.2
Unit 35	646	0.9	0.8	3.3	2.6	1.7	0.3	3.6
Unit 36	929	0.3	0.3	0.8ᵛ	0.8ᵛ	0.4	1.0	1.9
Unit 37	324	0.0	0.0	1.9	2.0	0.0	0.3	1.9
Unit 38	1198	1.0	0.8	2.0	1.7	1.7	1.1	2.3
Unit 39	617	1.0	0.8	1.2	0.8	0.3	1.0	3.6
Unit 40	455	0.9	1.0	2.9	2.8	1.1	0.2	3.3
Unit 41	205	0.5	0.6	1.5	1.7	0.0	2.0	2.9
Unit 42	351	0.0	0.0	3.7	4.2	0.6	0.6	2.0
Unit 43	283	1.8	2.6	1.4	1.8	1.4	2.1	1.4
Unit 44	215	0.9	0.8	2.3	1.4	1.4	1.4	5.6
Unit 45	478	0.8	1.4	0.8	1.0	0.6	0.8	2.1
Unit 46	1221	0.7	0.6	1.9	1.4	0.9	0.6	2.8
Unit 47	910	1.5	0.9	3.7	2.6	1.1	1.5	1.9
Unit 48	915	1.7	0.9	4.3	3.4	1.1	0.3	1.5
Unit 49	409	0.0	0.0	0.2ᵛ	0.2ᵛ	0.0	0.3	1.7
Unit 50	447	1.6	1.4	2.7	2.3	0.9	0.4	1.8
Unit 51	553	0.9	0.8	3.0	2.7	1.6	0.7	2.4
Unit 52	273	0.4	0.3	3.0	2.6	0.7	1.1	2.9
Unit 53	640	1.4	1.3	4.4	4.0	1.1	0.8	4.5^

^ unit is above the upper 99.7% control limit on the corresponding funnel plot

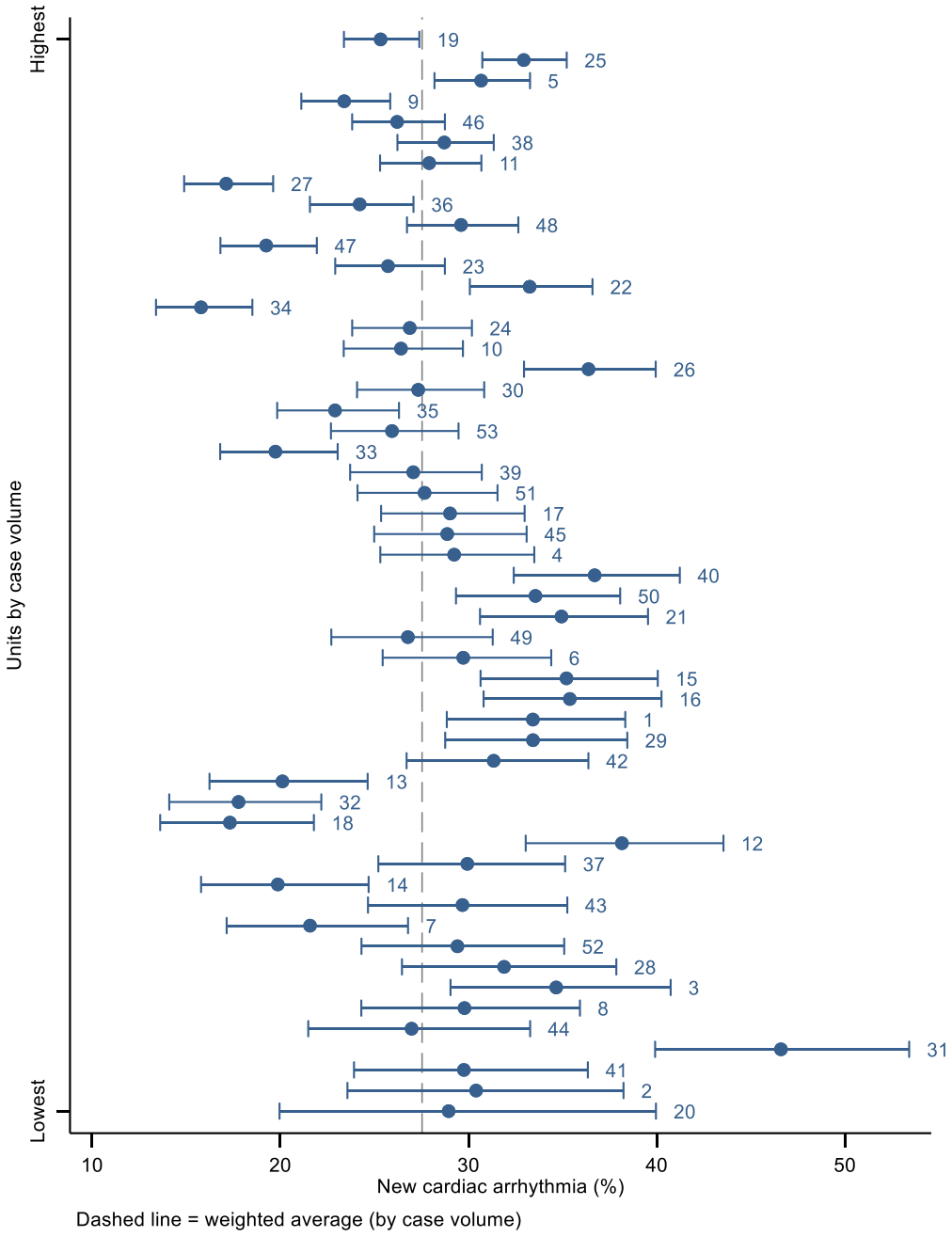
ᵛ unit is below the lower 99.7% control limit on the corresponding funnel plot

Figure S8. New cardiac arrhythmia for isolated CABG surgery by unit, 2025



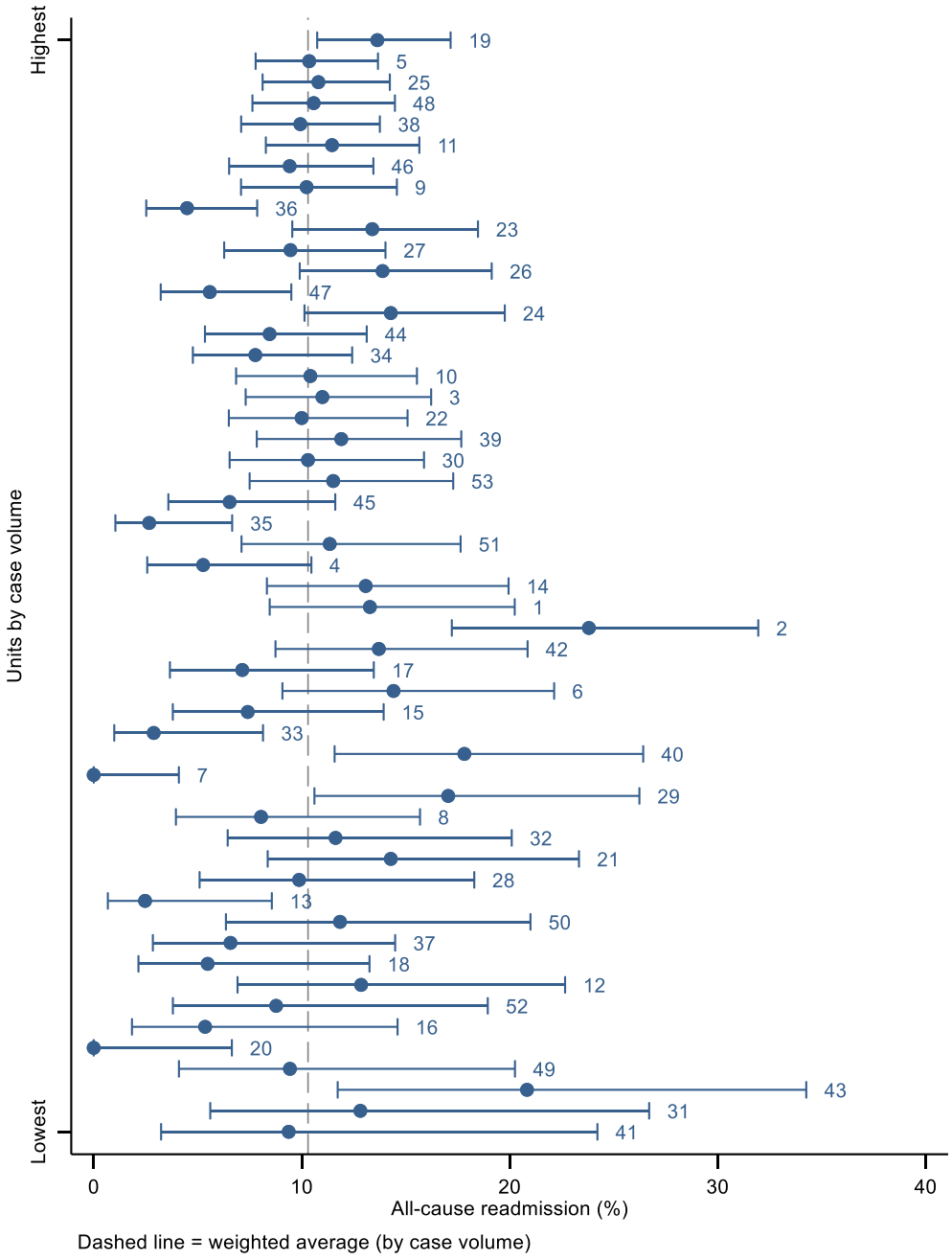
Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for new cardiac arrhythmia

Figure S9. New cardiac arrhythmia for isolated CABG surgery by unit, 2021-2024



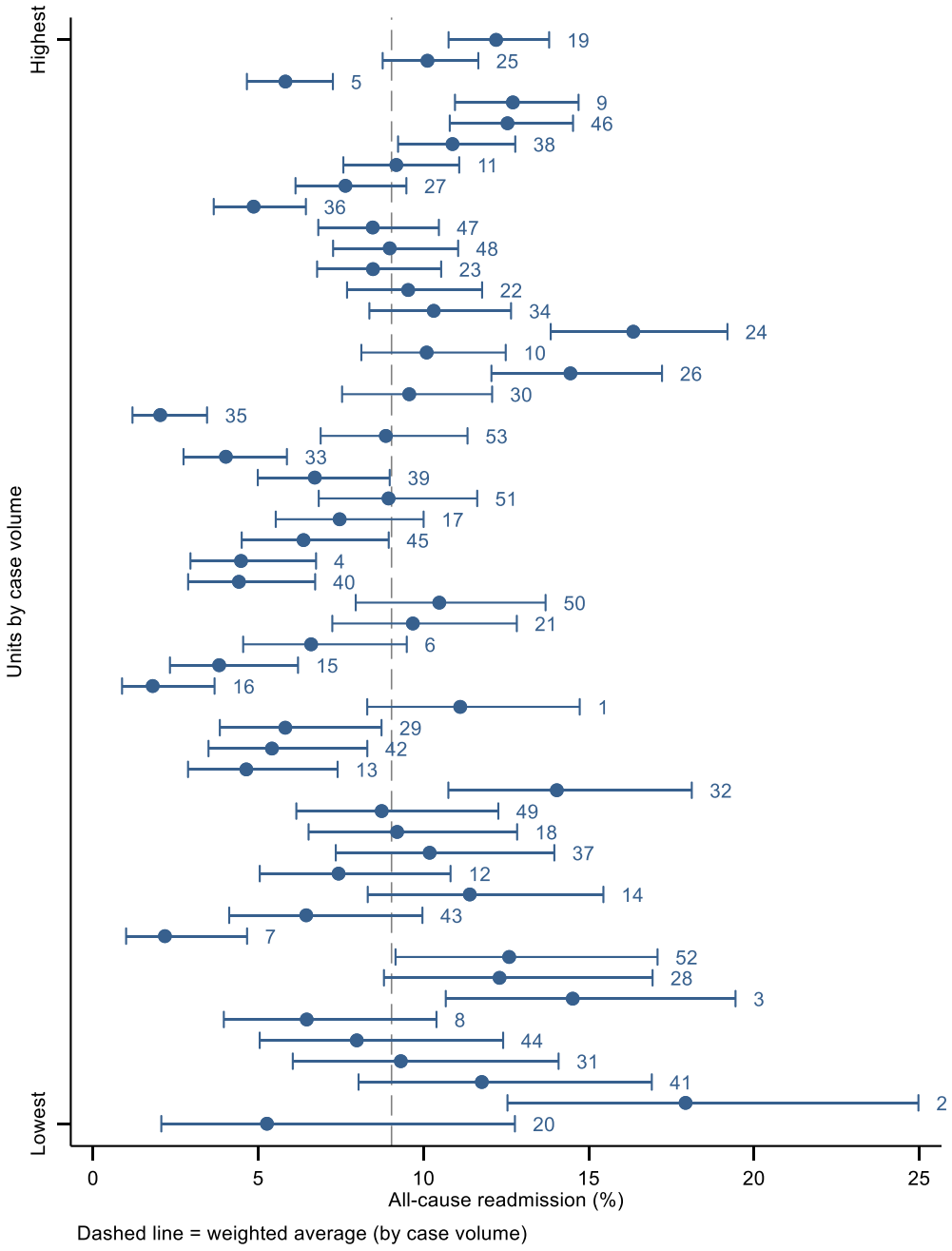
Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for new cardiac arrhythmia

Figure S10. All-cause readmission for isolated CABG surgery by unit, 2025



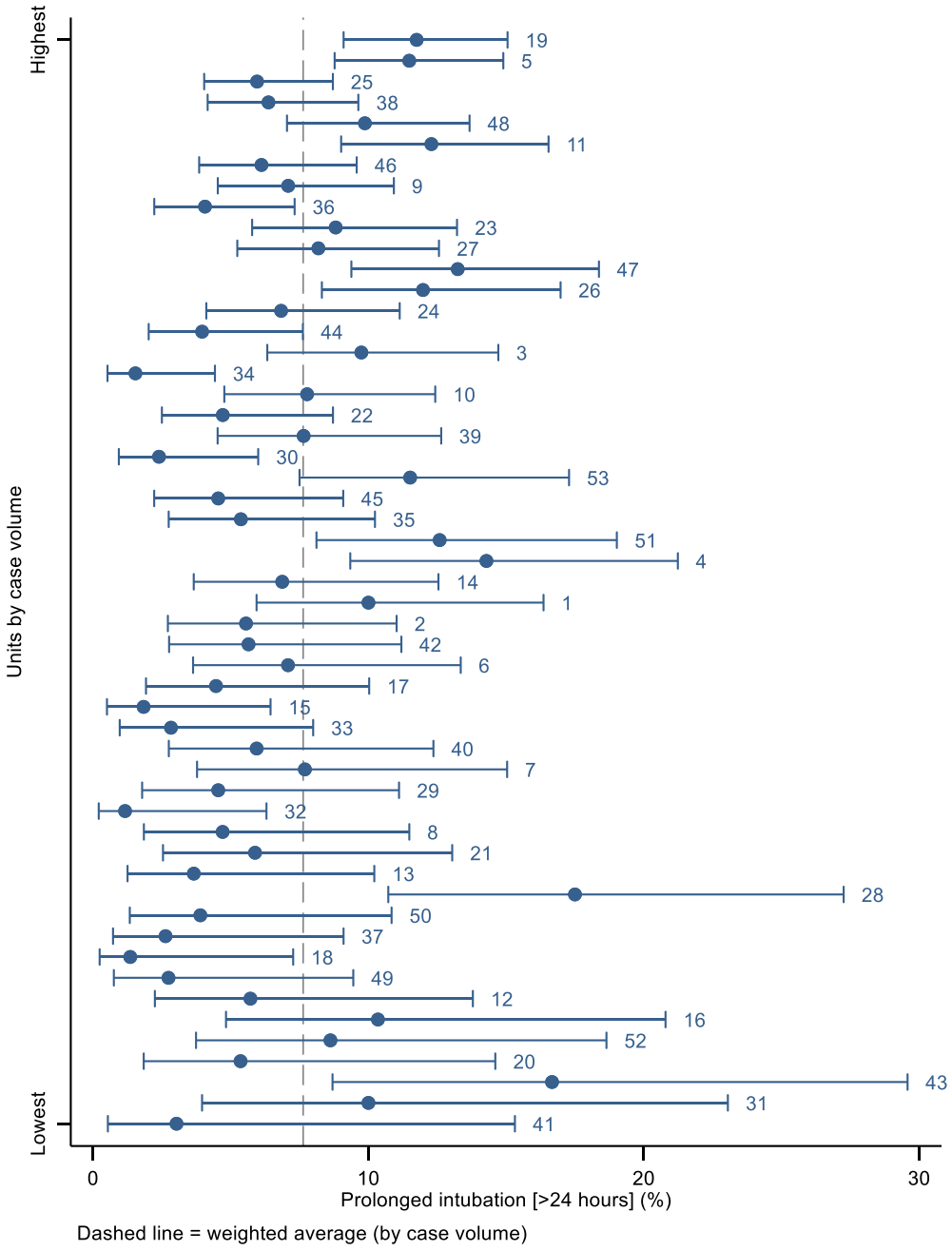
Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for all-cause readmission

Figure S11. All-cause readmission for isolated CABG surgery by unit, 2021-2024



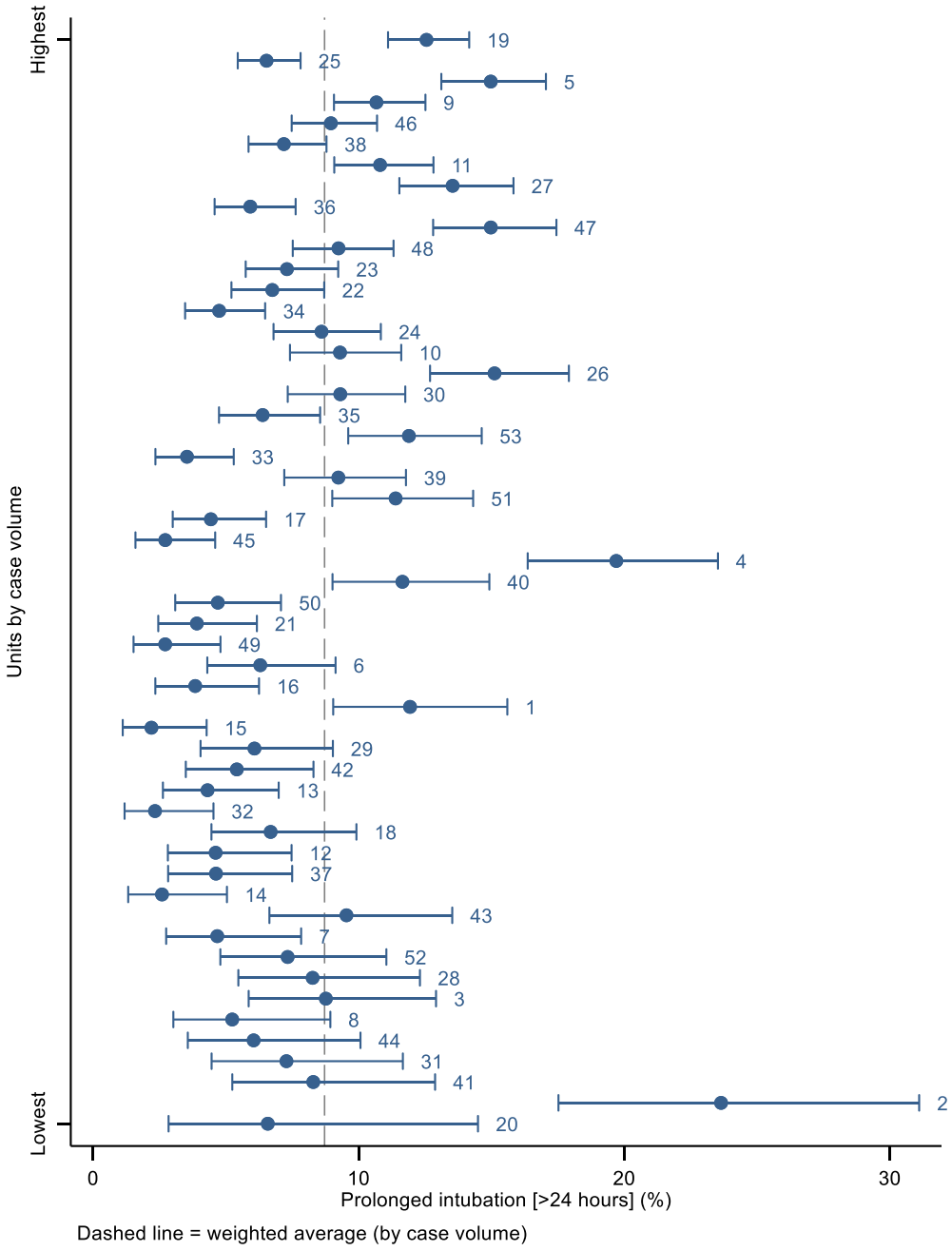
Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for all-cause readmission

Figure S12. Prolonged intubation for isolated CABG surgery by unit, 2025



Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for prolonged intubation

Figure S13. Prolonged intubation for isolated CABG surgery by unit, 2021-2024

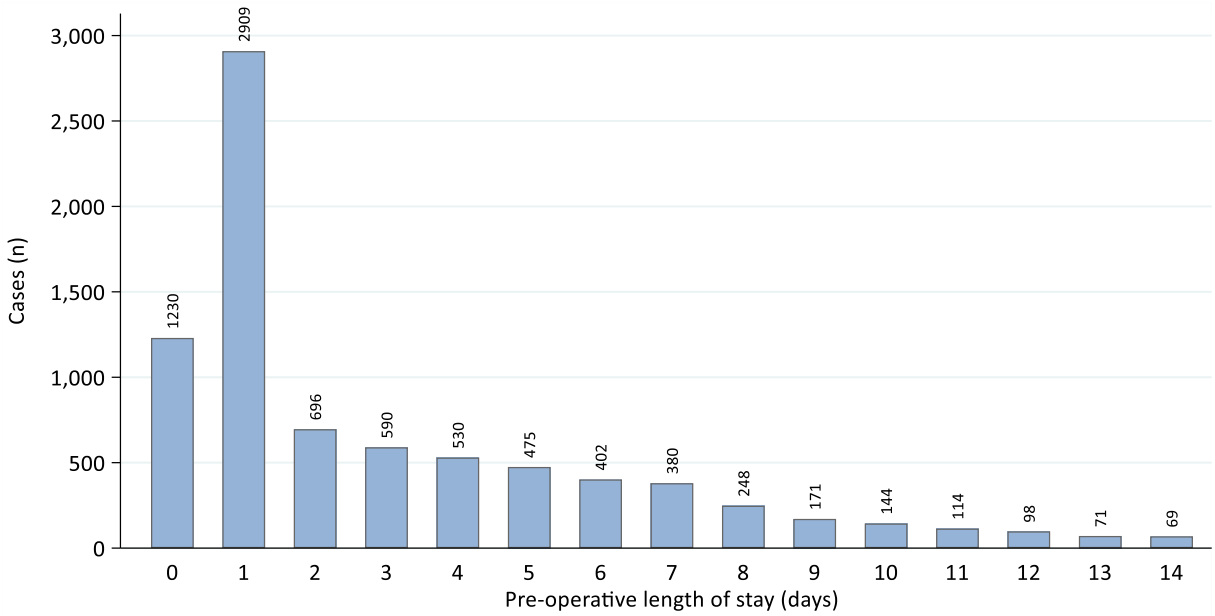


Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for prolonged intubation

Resource utilisation

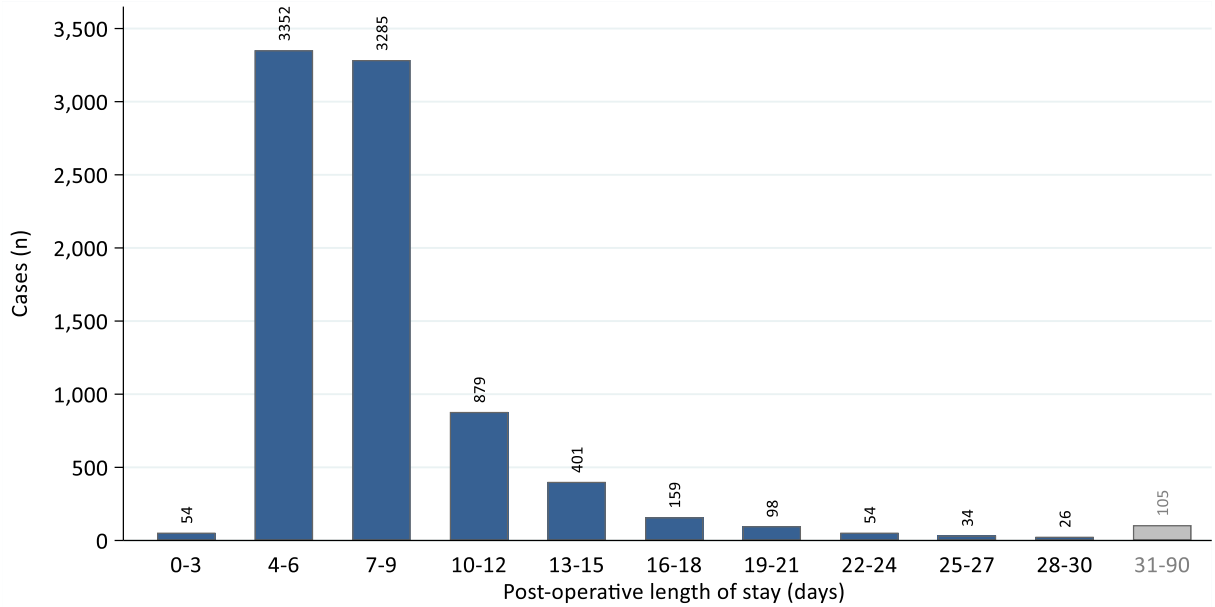
Cases with a pre-operative length of stay (LOS) of more than 14 days were classified as clinical outliers and excluded from the analysis.

Figure S14. Distribution of pre-operative LOS for isolated CABG patients, 2025



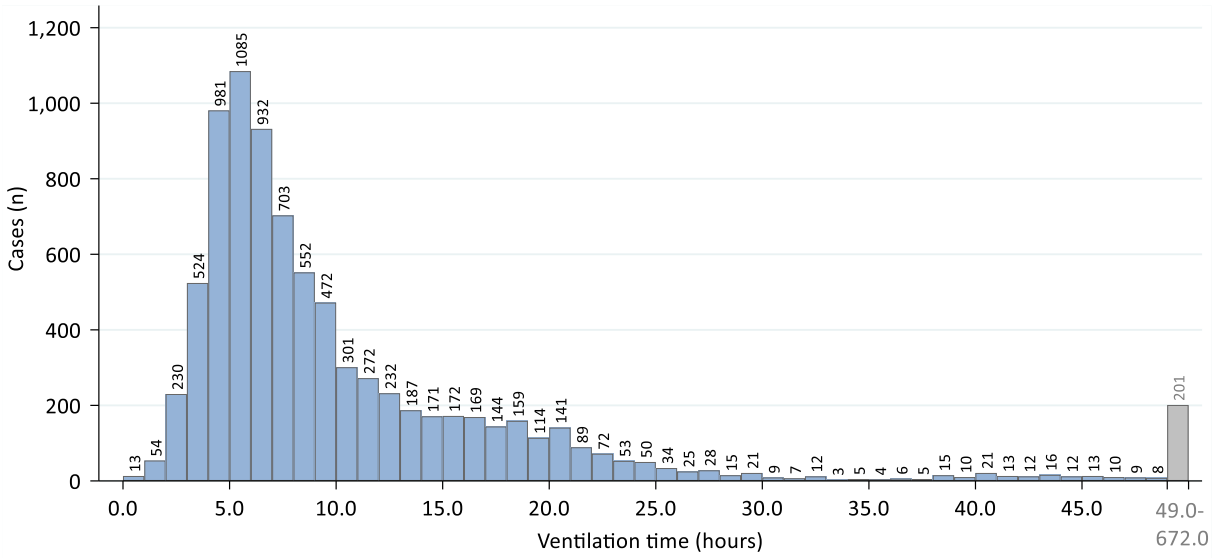
Cases with a post-operative LOS of more than 90 days were classified as clinical outliers and excluded from the analysis.

Figure S15. Distribution of post-operative LOS for isolated CABG patients, 2025



Cases with a ventilation time of more than four weeks (672 hours) were classified as clinical outliers and excluded from the analysis.

Figure S16. Distribution of initial post-operative ventilation time for isolated CABG patients, 2025



Cases with an intensive care unit (ICU) LOS of more than six weeks (1,008 hours) were classified as clinical outliers and excluded from the analysis.

Figure S17. Distribution of ICU LOS for isolated CABG patients, 2025

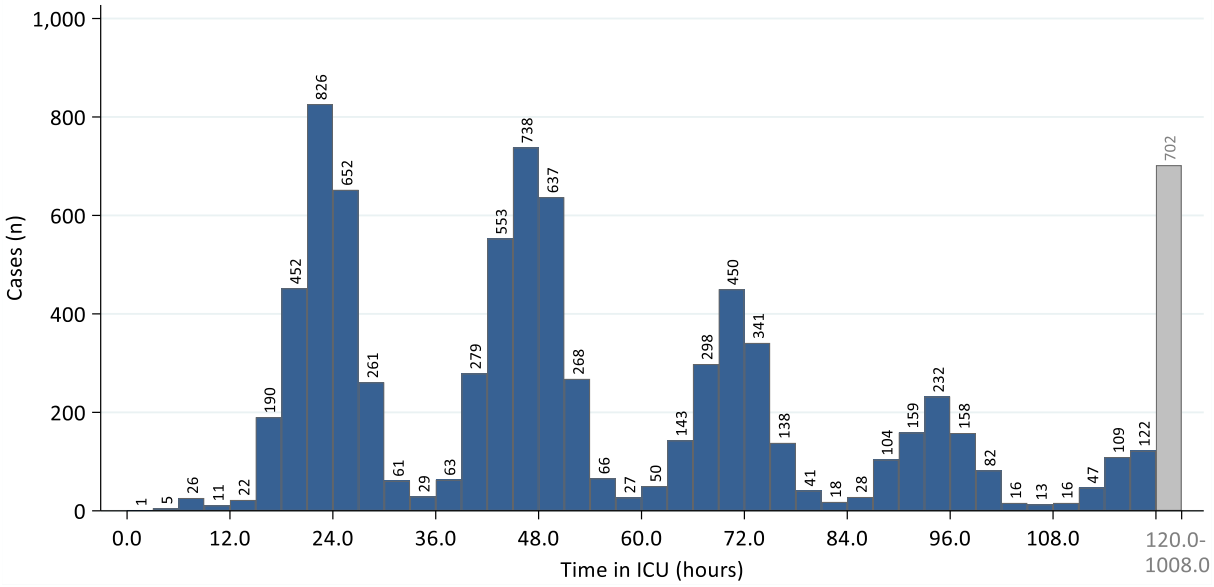
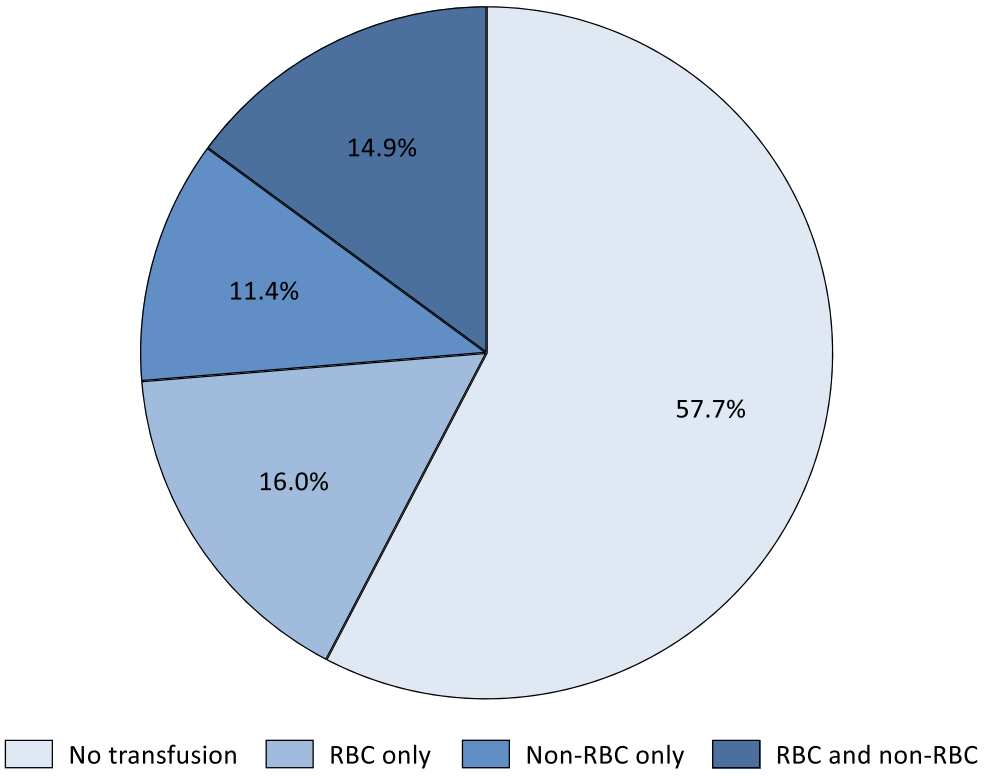


Figure S18. Blood product usage for isolated CABG patients, 2025



RBC indicates red blood cell
Note: non-RBC consists of platelets, Novo 7, cryoprecipitate and fresh frozen plasma, prothrombinex and fibrinogen

S2. Isolated Valve Surgery

Risk factors

Figure S19. Sex of isolated valve patients by unit, 2025

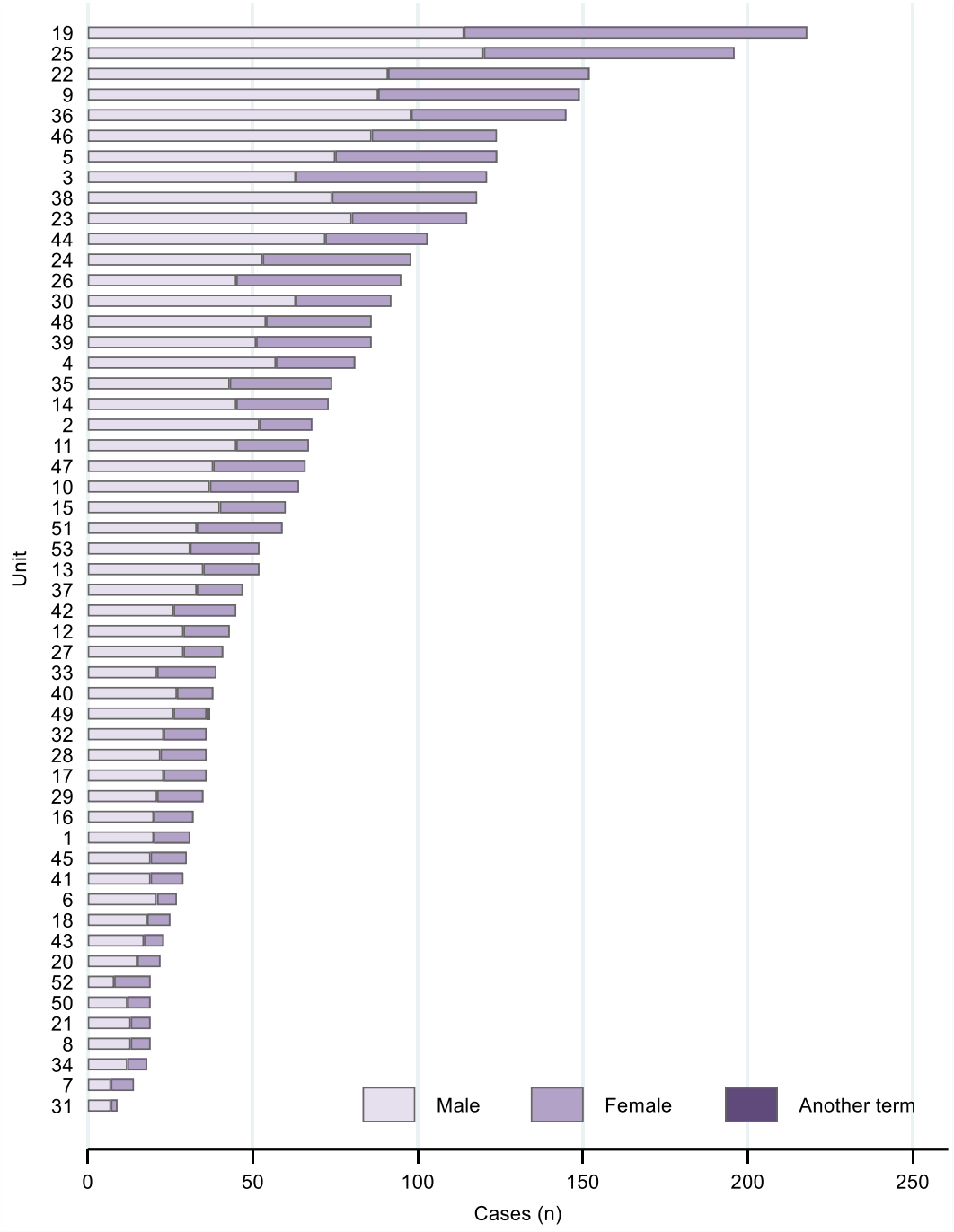


Figure S20. Initial vs redo surgery in isolated valve patients by unit, 2025

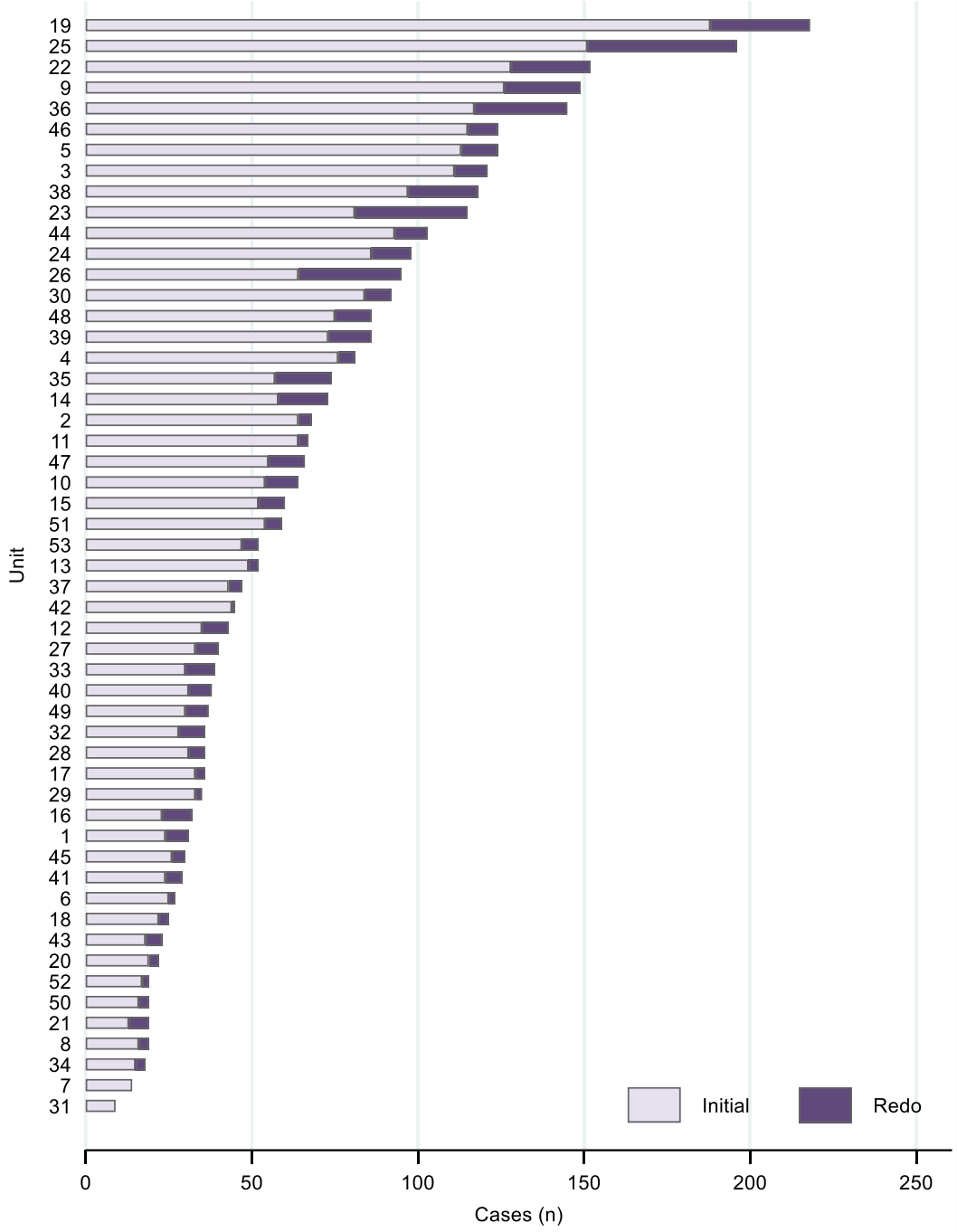
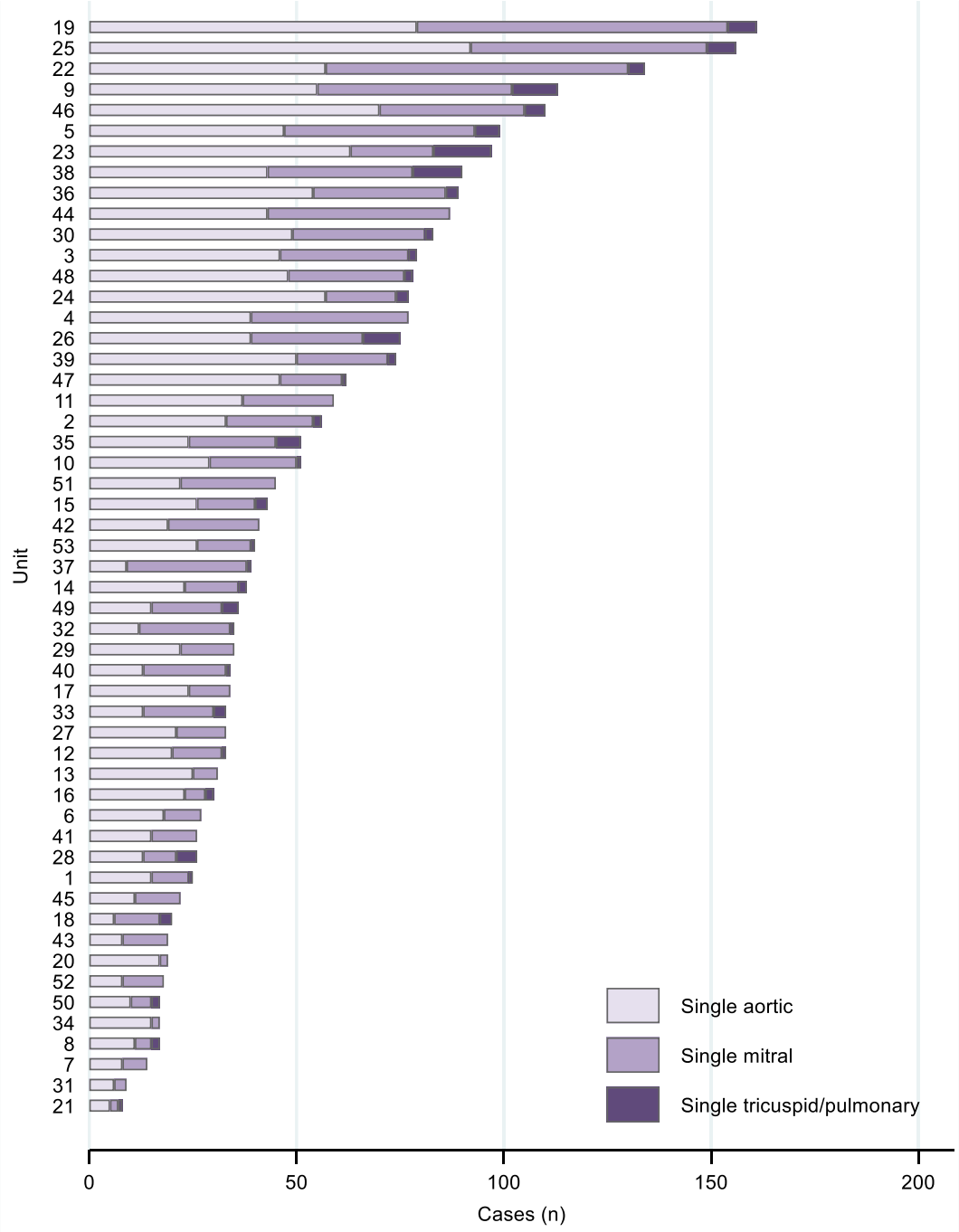


Figure S21. Types of isolated single valve surgery performed by unit, 2025



Unit level outcomes

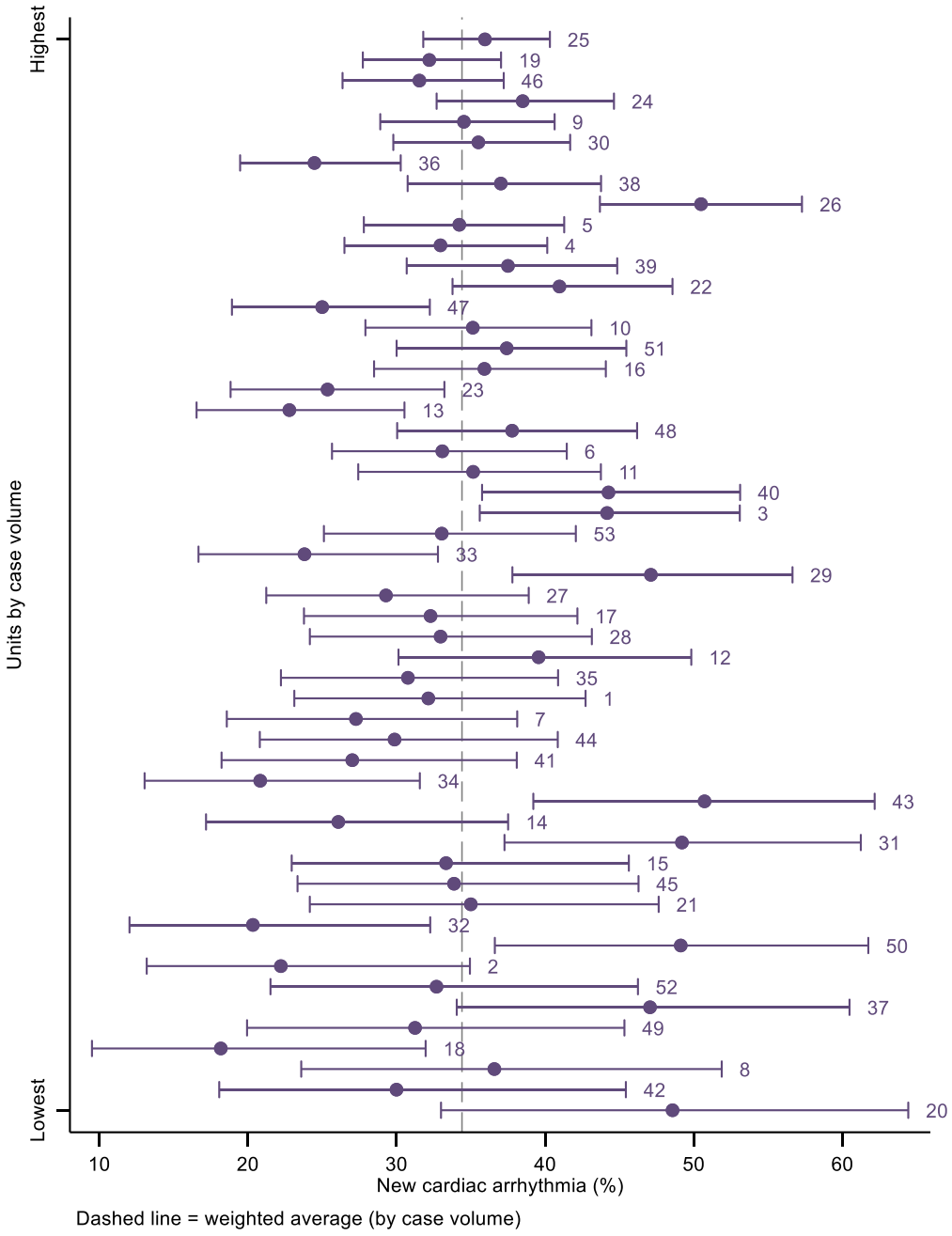
Table S3. Outcomes for isolated aortic valve replacement (AVR) surgery by unit, 2021-2025

	n	OM (%)	RA-OM (%)	dNRI (%)	RA-dNRI (%)	Permanent Stroke (%)	DSWI (%)	RTT for bleeding (%)
Unit 1	90	3.6	2.2	7.2	2.8	1.2	0.0	2.4
Unit 2	54	0.0	0.0	1.9	0.9	0.0	1.9	0.0
Unit 3	120	0.8	0.6	4.2	2.5	2.5	0.0	4.2
Unit 4	179	0.0	0.0	1.7	1.5	0.0	0.6	1.1
Unit 5	187	2.7	2.2	6.6	3.9	3.2	0.5	6.4
Unit 6	133	1.5	1.5	0.8	0.4	0.8	0.8	5.3
Unit 7	77	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Unit 8	41	2.4	2.0	2.4	1.9	0.0	0.0	2.4
Unit 9	250	2.0	1.2	4.6	2.3	1.2	0.8	4.0
Unit 10	148	0.7	0.4	2.1	1.1	0.7	0.0	4.1
Unit 11	128	0.0	0.0	3.1	1.8	0.8	0.0	5.5
Unit 12	91	0.0	0.0	1.1	0.9	2.2	1.1	6.6
Unit 13	137	1.6	1.4	0.0	0.0	0.0	0.0	5.9
Unit 14	69	0.0	0.0	0.0	0.0	0.0	0.0	8.7
Unit 15	64	1.8	1.0	1.6	1.6	0.0	0.0	1.6
Unit 16	142	0.7	0.5	1.4	1.6	0.0	0.0	2.8
Unit 17	96	1.0	1.1	1.1	1.0	0.0	0.0	2.1
Unit 18	44	4.5	3.4	0.0	0.0	0.0	0.0	2.3
Unit 19	385	2.6	1.9	2.9	1.5	1.8	0.5	6.0
Unit 20	35	2.9	4.2	2.9	2.6	5.7	0.0	0.0
Unit 21	60	1.7	1.6	5.0	4.0	1.7	0.0	1.7
Unit 22	166	1.8	2.2	3.0	3.2	0.6	0.0	4.8
Unit 23	138	0.0	0.0	5.1	2.9	2.2	0.0	0.7
Unit 24	252	2.0	1.4	2.0	1.2	2.0	0.4	2.4
Unit 25	484	0.6	0.4	2.3	1.3	0.2	0.4	4.5
Unit 26	204	1.5	1.4	2.5	1.4	1.5	2.0	4.4
Unit 27	100	3.0	2.0	6.1	3.7	2.0	0.0	3.0
Unit 28	91	0.0	0.0	2.2	1.9	1.1	0.0	1.1
Unit 29	104	1.9	2.2	1.0	1.1	1.0	0.0	4.8
Unit 30	245	0.8	0.6	1.2	0.8	1.2	0.4	7.8
Unit 31	63	3.2	2.0	3.2	2.1	0.0	0.0	6.3
Unit 32	59	0.0	0.0	5.1	4.3	0.0	0.0	5.1
Unit 33	105	2.9	2.7	3.8	2.9	1.0	0.0	2.9
Unit 34	72	0.0	0.0	1.4	0.9	0.0	0.0	2.8
Unit 35	91	0.0	0.0	2.6	1.8	1.1	0.0	1.1
Unit 36	241	1.2	1.3	1.3	1.1	0.0	0.8	0.8
Unit 37	51	0.0	0.0	2.0	1.7	0.0	0.0	5.9
Unit 38	208	0.0	0.0	2.9	1.5	0.0	1.0	6.7
Unit 39	176	1.2	0.7	3.4	1.9	1.7	0.6	5.7
Unit 40	122	1.6	1.4	2.5	1.8	0.8	0.8	1.6
Unit 41	74	1.4	0.8	5.6	5.2	1.4	0.0	4.1
Unit 42	40	2.5	1.4	0.0	0.0	2.5	0.0	12.5
Unit 43	69	2.9	2.4	2.9	2.4	1.4	0.0	2.9
Unit 44	77	0.0	0.0	1.4	0.7	3.9	1.3	7.8
Unit 45	62	0.0	0.0	3.3	2.4	1.6	3.3	3.2
Unit 46	279	1.1	0.8	2.2	1.2	0.0	2.2^	6.5
Unit 47	160	3.8	2.7	5.1	3.3	3.1	0.6	3.1
Unit 48	135	1.5	1.1	3.8	2.3	3.0	0.0	4.4
Unit 49	48	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unit 50	57	3.5	3.3	5.3	4.5	0.0	0.0	1.8
Unit 51	147	1.4	1.5	3.5	2.4	0.0	0.7	4.8
Unit 52	52	1.9	2.0	3.8	3.1	0.0	1.9	1.9
Unit 53	115	2.6	2.4	4.4	2.7	1.7	0.9	2.6

^ unit is above the upper 99.7% control limit on the corresponding funnel plot

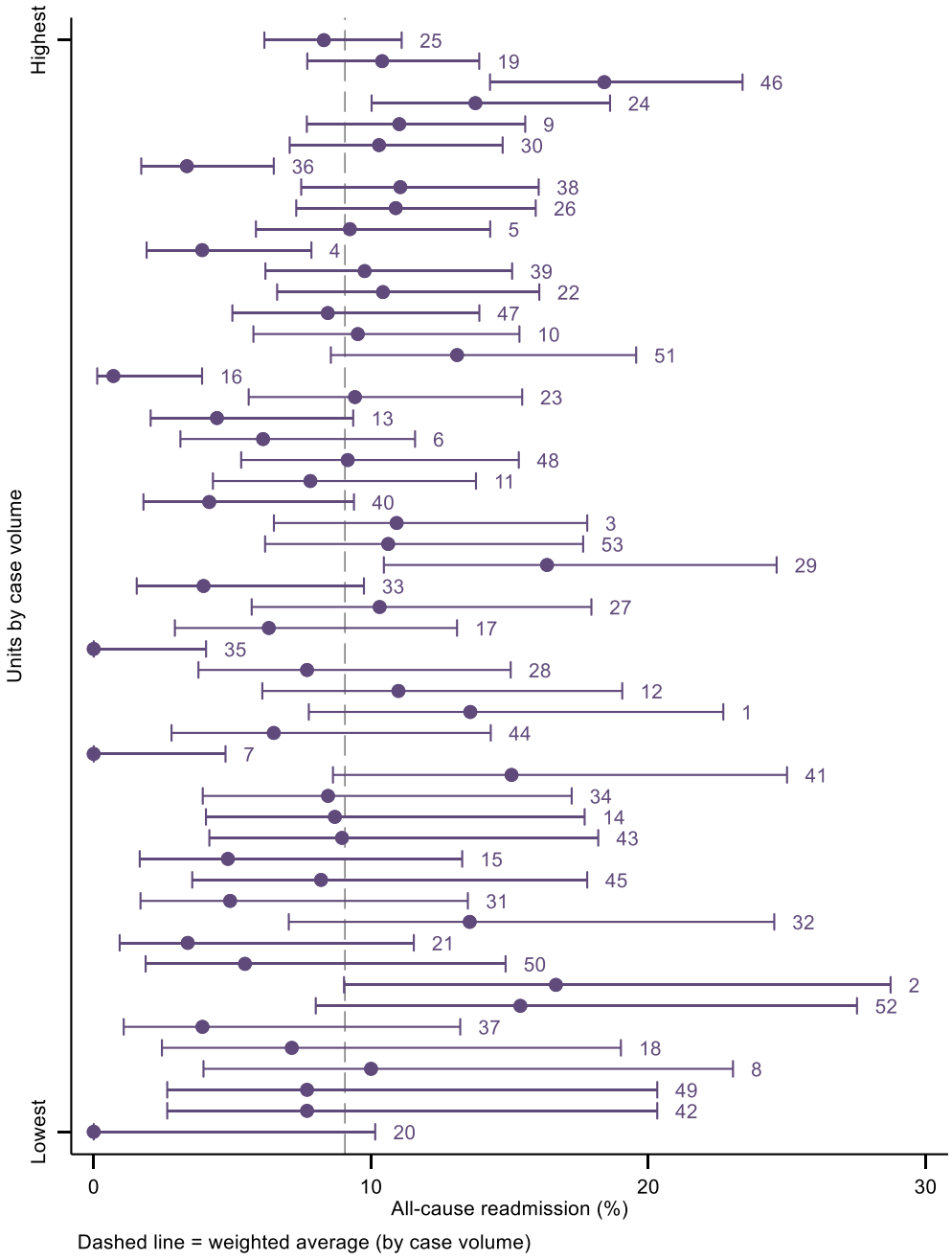
ᵛ unit is below the lower 99.7% control limit on the corresponding funnel plot

Figure S22. New cardiac arrhythmia for isolated AVR surgery by unit, 2021-2025



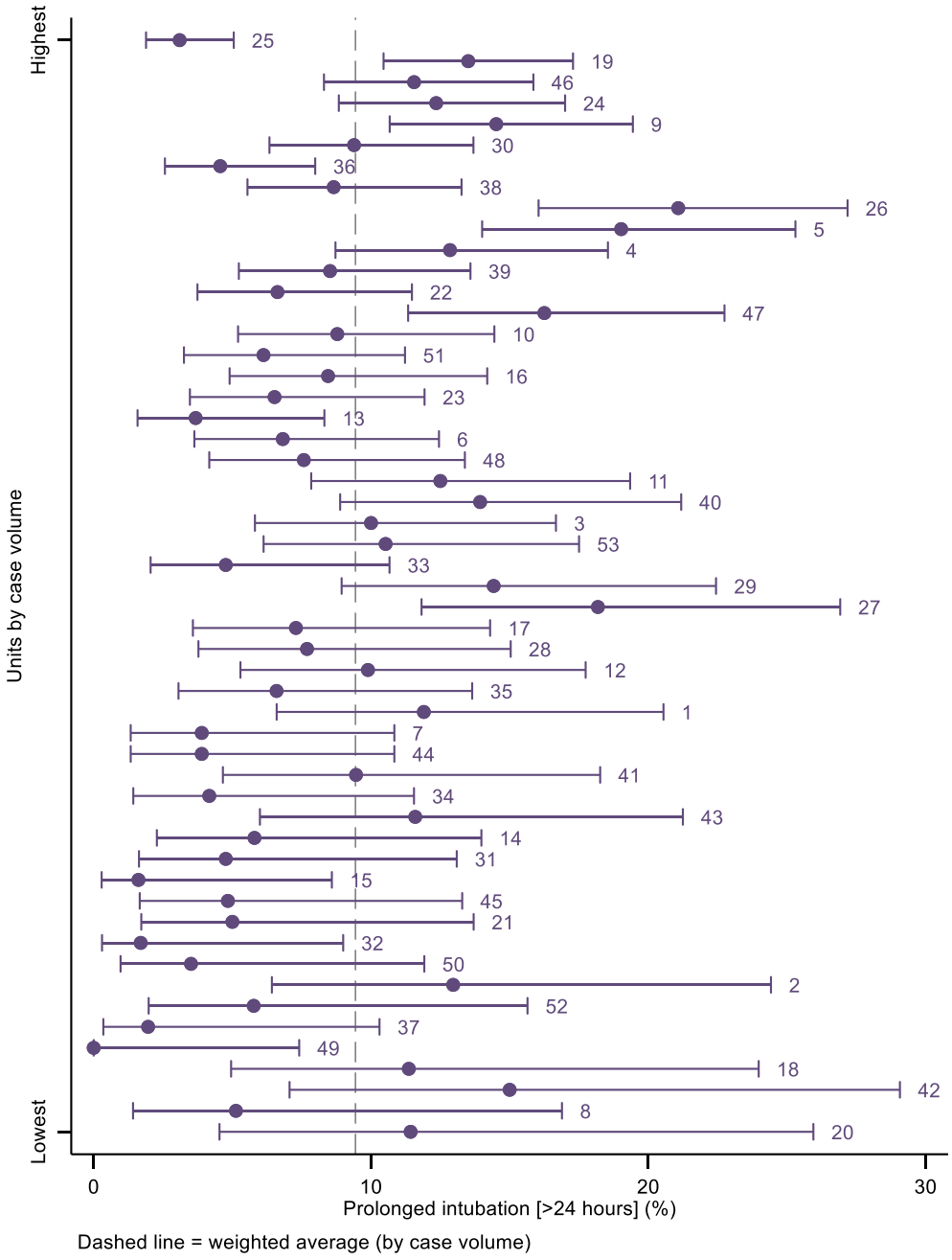
Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for new cardiac arrhythmia

Figure S23. All-cause readmission for isolated AVR surgery by unit, 2021-2025



Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for all-cause readmission

Figure S24. Prolonged intubation for isolated AVR surgery by unit, 2021-2025

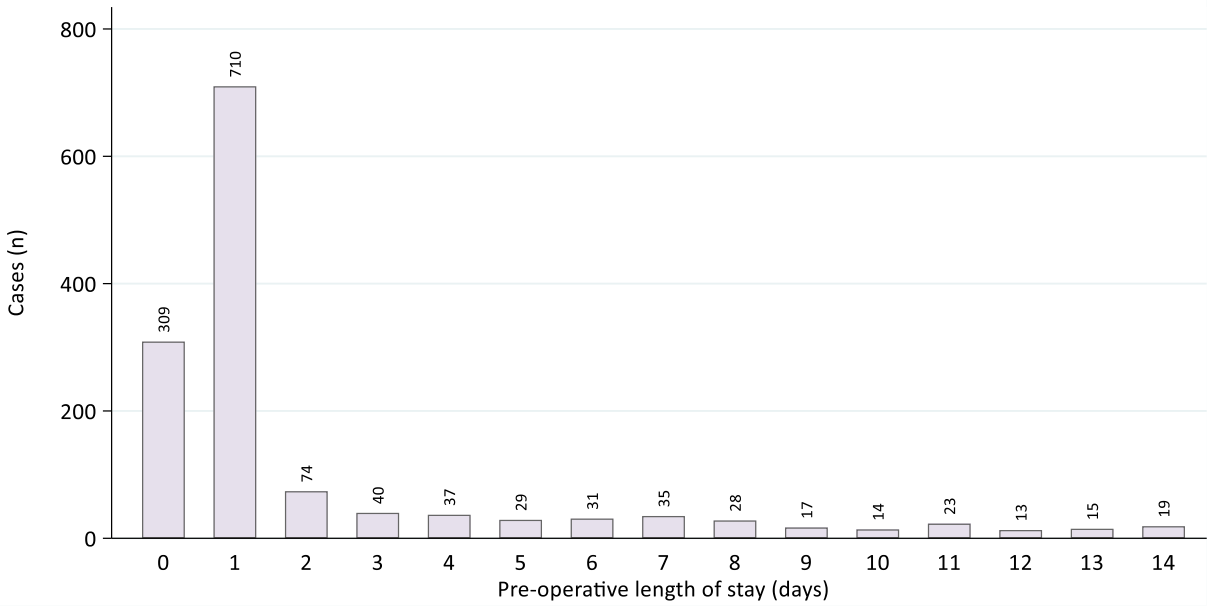


Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for prolonged intubation

Resource utilisation

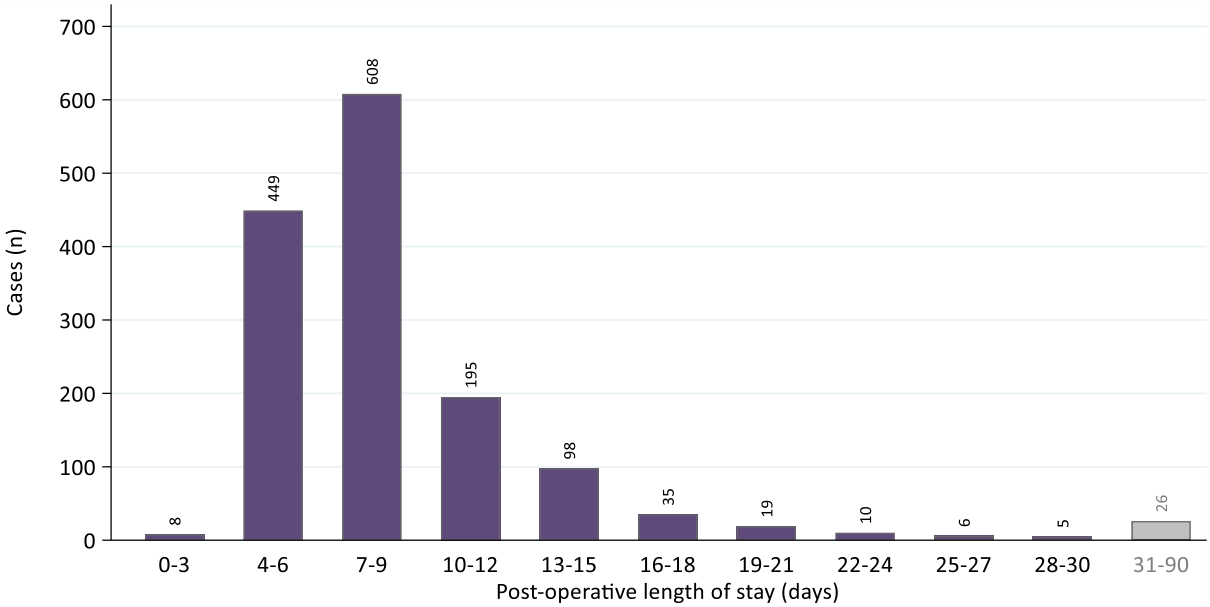
Cases with a pre-operative LOS of more than 14 days were classified as clinical outliers and excluded from the analysis.

Figure S25. Distribution of pre-operative LOS for isolated AVR patients, 2025



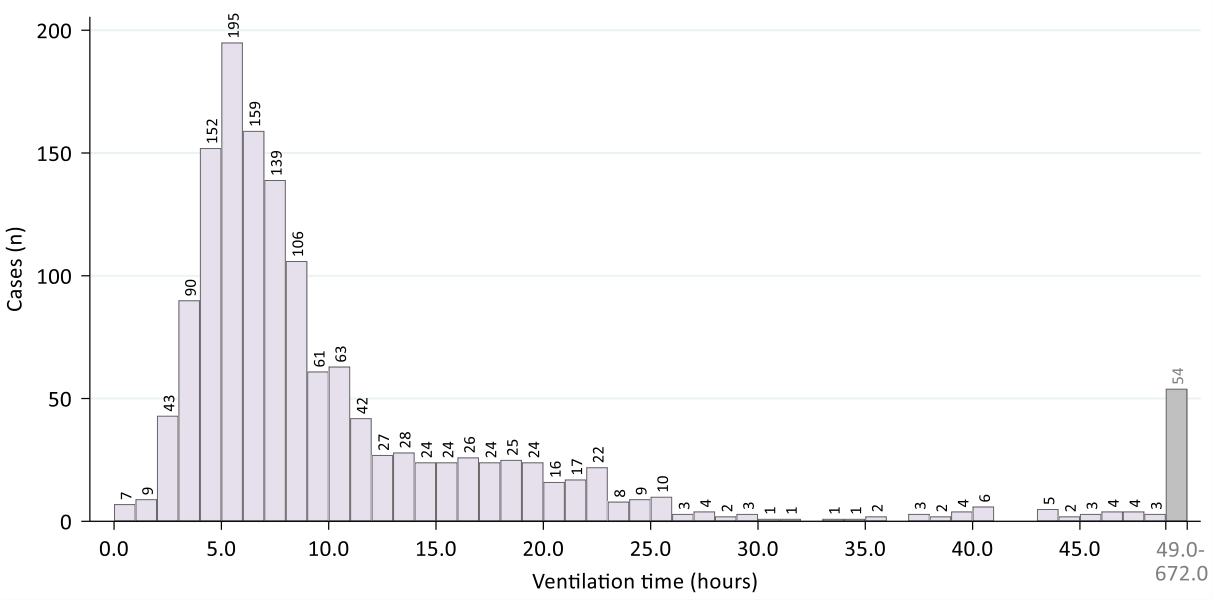
Cases with a post-operative LOS of more than 90 days were classified as clinical outliers and excluded from the analysis.

Figure S26. Distribution of post-operative LOS for isolated AVR patients, 2025



Cases with a ventilation time of more than four weeks (672 hours) were classified as clinical outliers and excluded from the analysis.

Figure S27. Distribution of initial post-operative ventilation time for isolated AVR patients, 2025



Cases with an ICU LOS of more than six weeks (1,008 hours) were classified as clinical outliers and excluded from the analysis.

Figure S28. Distribution of ICU LOS for isolated AVR patients, 2025

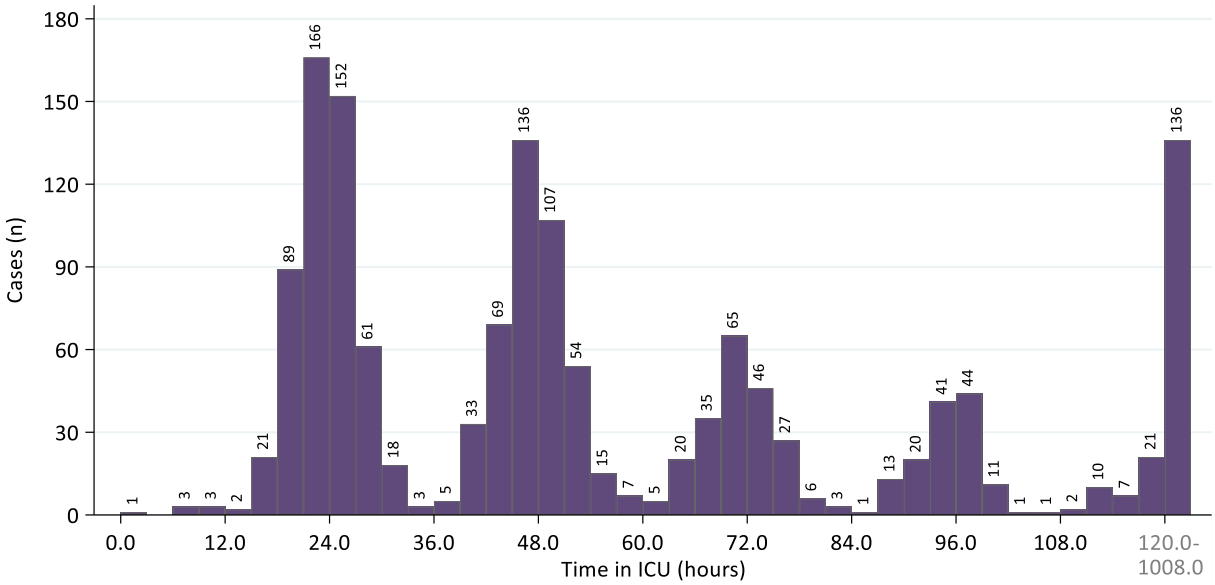
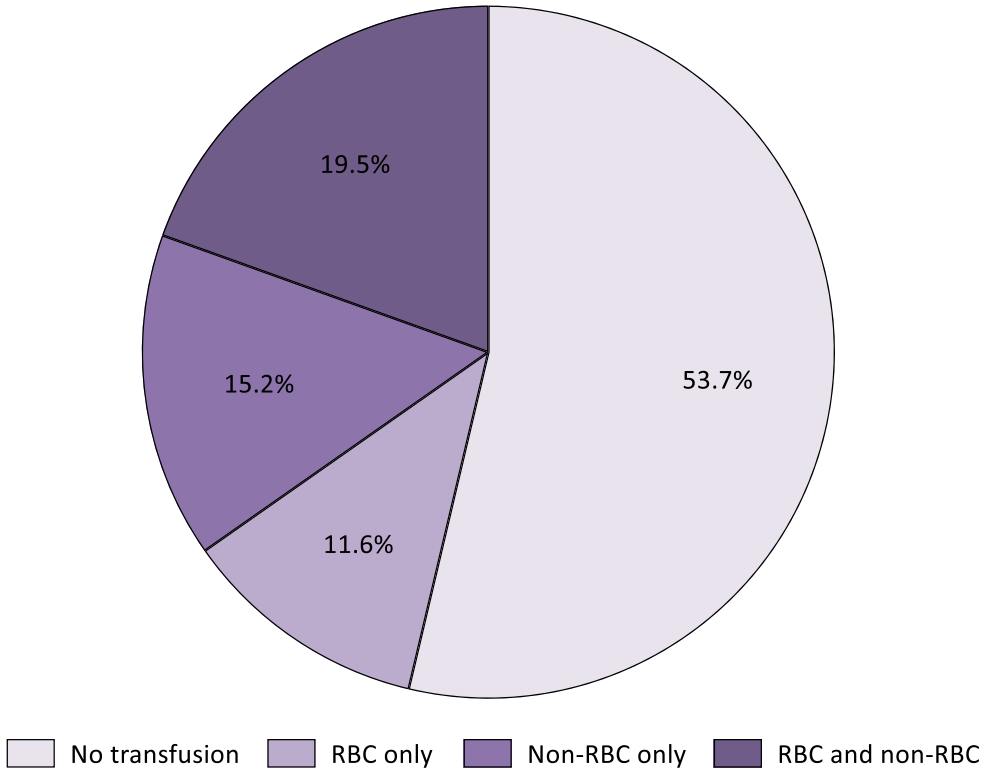


Figure S29. Blood product usage for isolated AVR patients, 2025



Note: non-RBC consists of platelets, Novo 7, cryoprecipitate and fresh frozen plasma, prothrombinex and fibrinogen

S3. Combined Valve with CABG Surgery

Risk factors

Figure S30. Sex of combined valve and CABG patients by unit, 2025

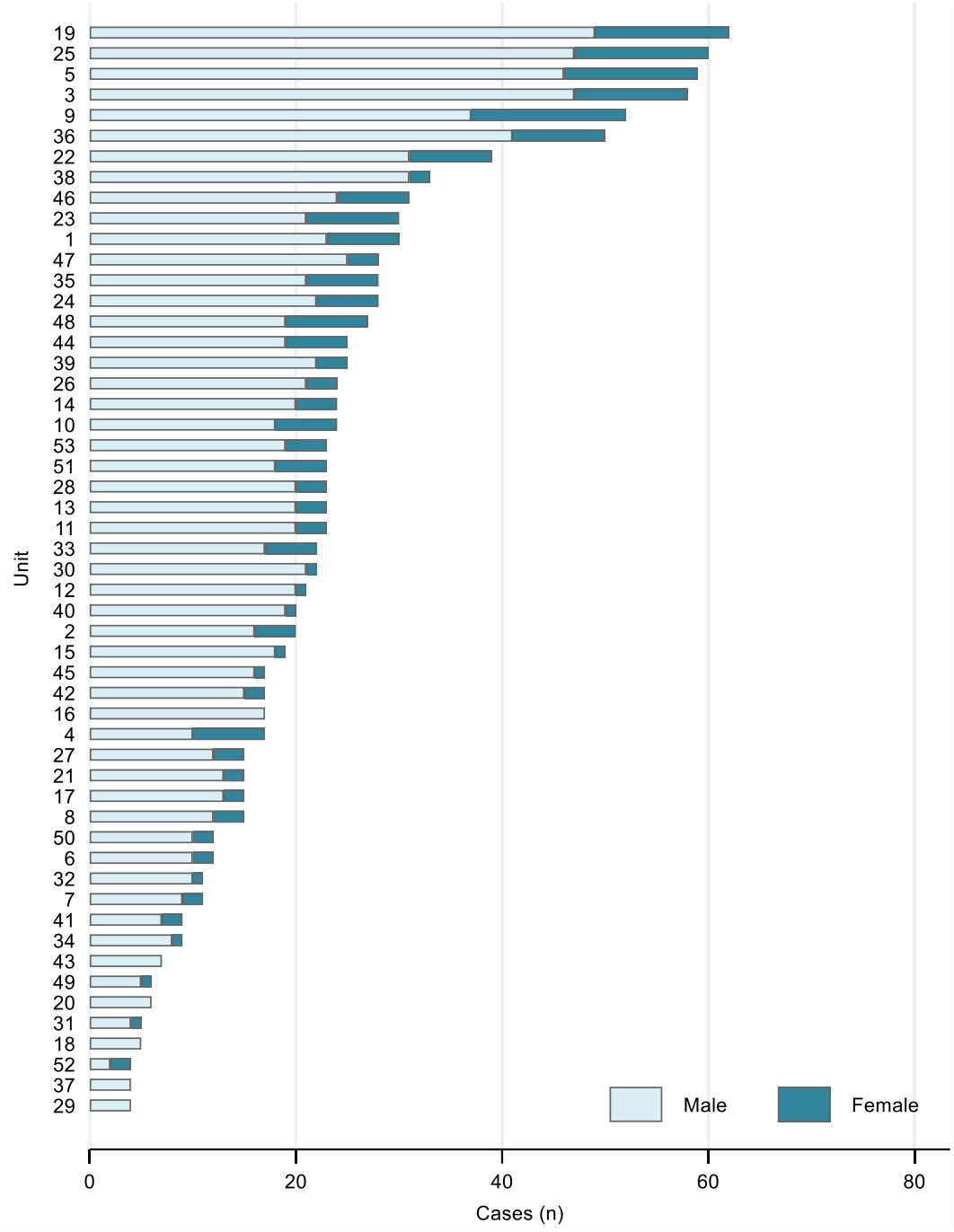


Figure S31. Pre-operative LVF of combined valve and CABG patients by unit, 2025

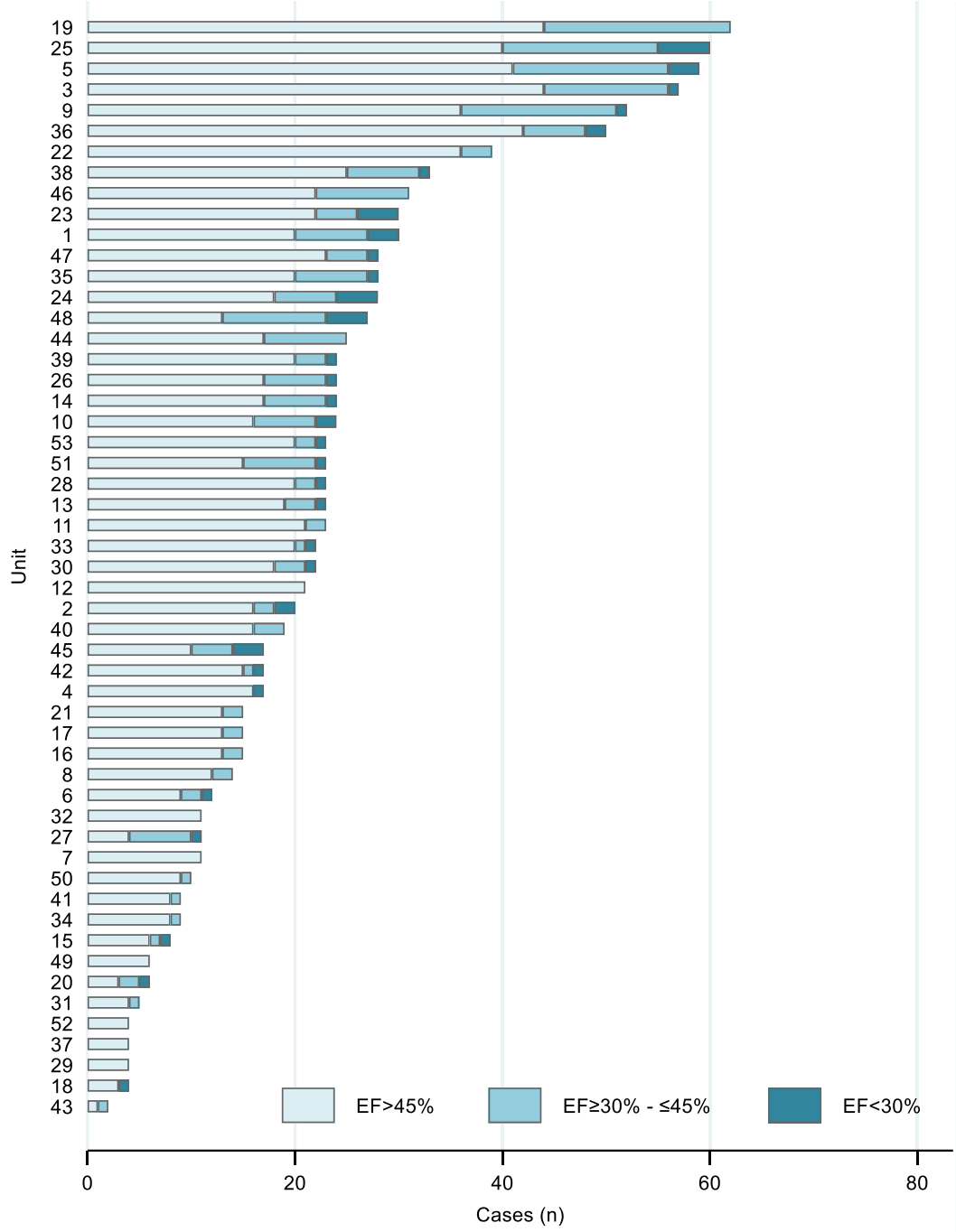


Figure S32. Previous MI in combined valve and CABG patients by unit, 2025

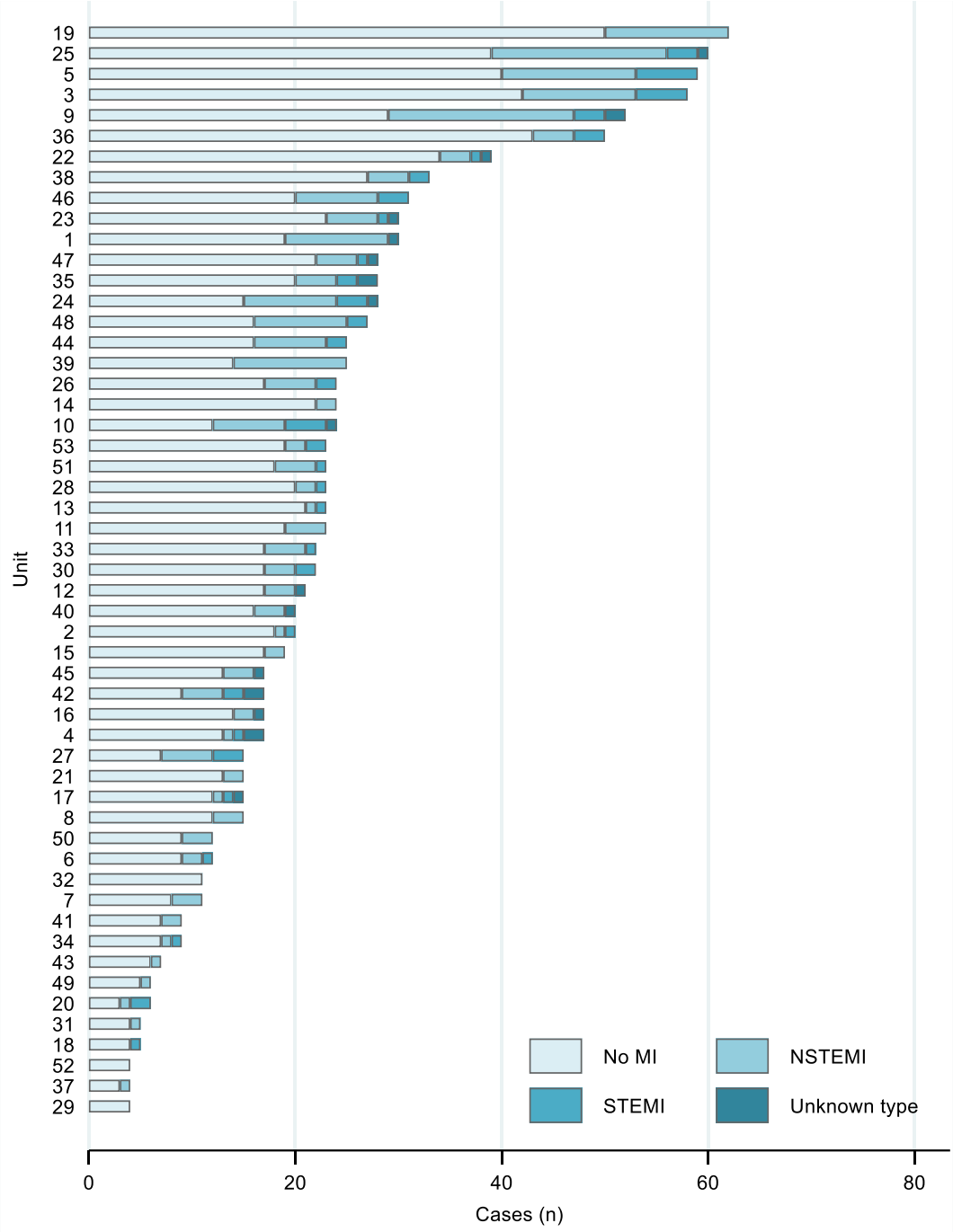


Figure S33. Timing of previous MI in combined valve and CABG patients by unit, 2025

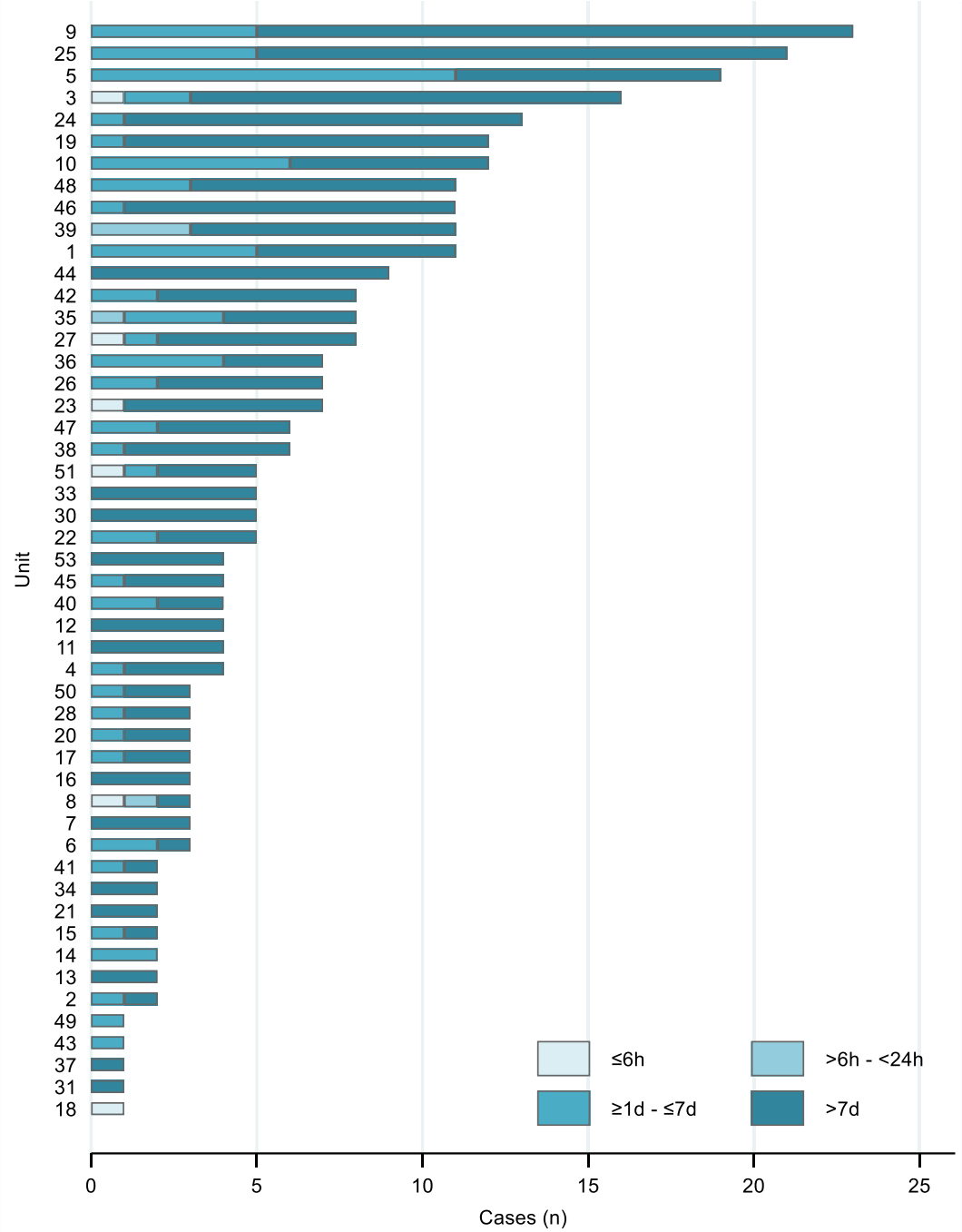


Figure S34. Initial vs redo surgery in combined valve and CABG patients by unit, 2025

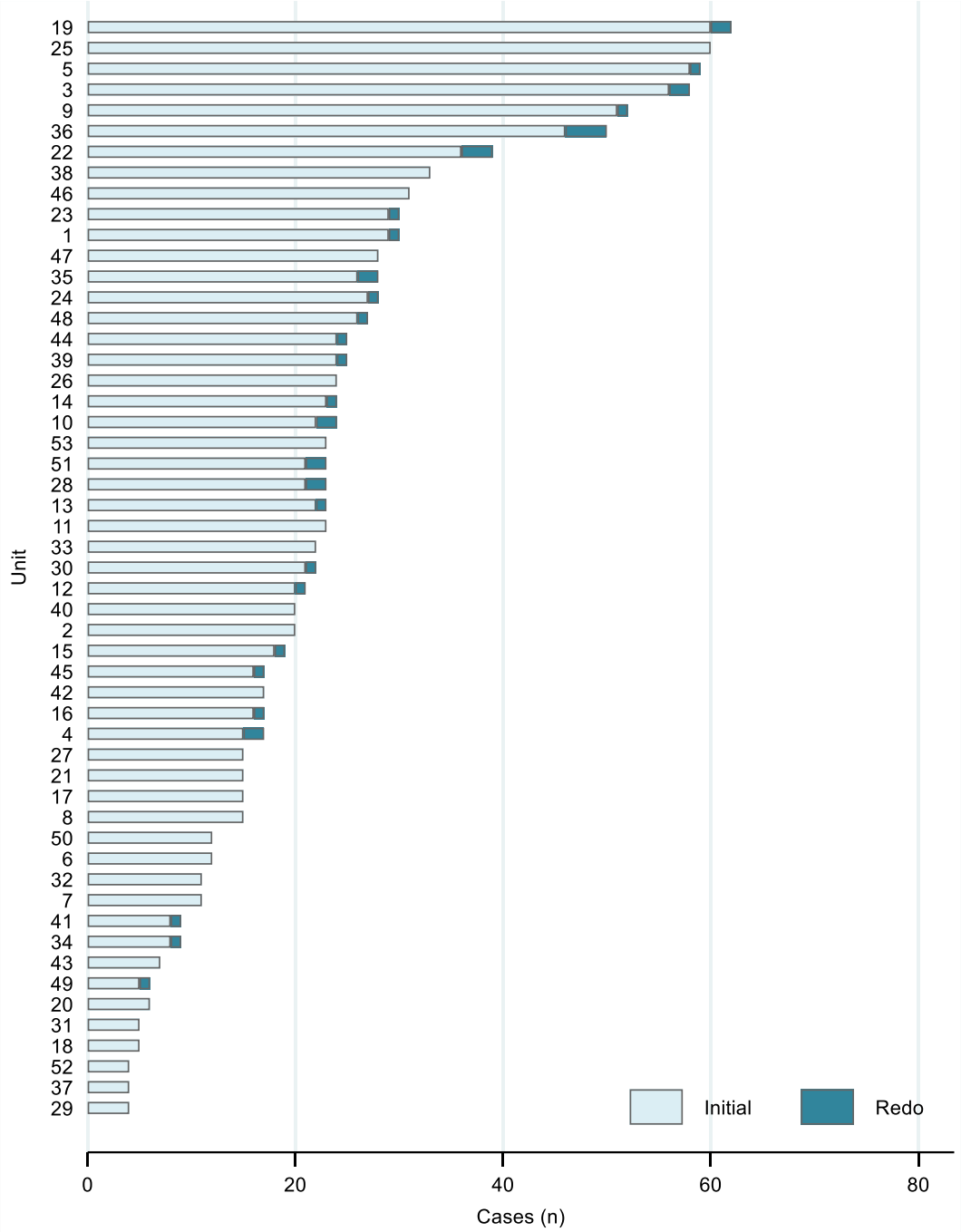
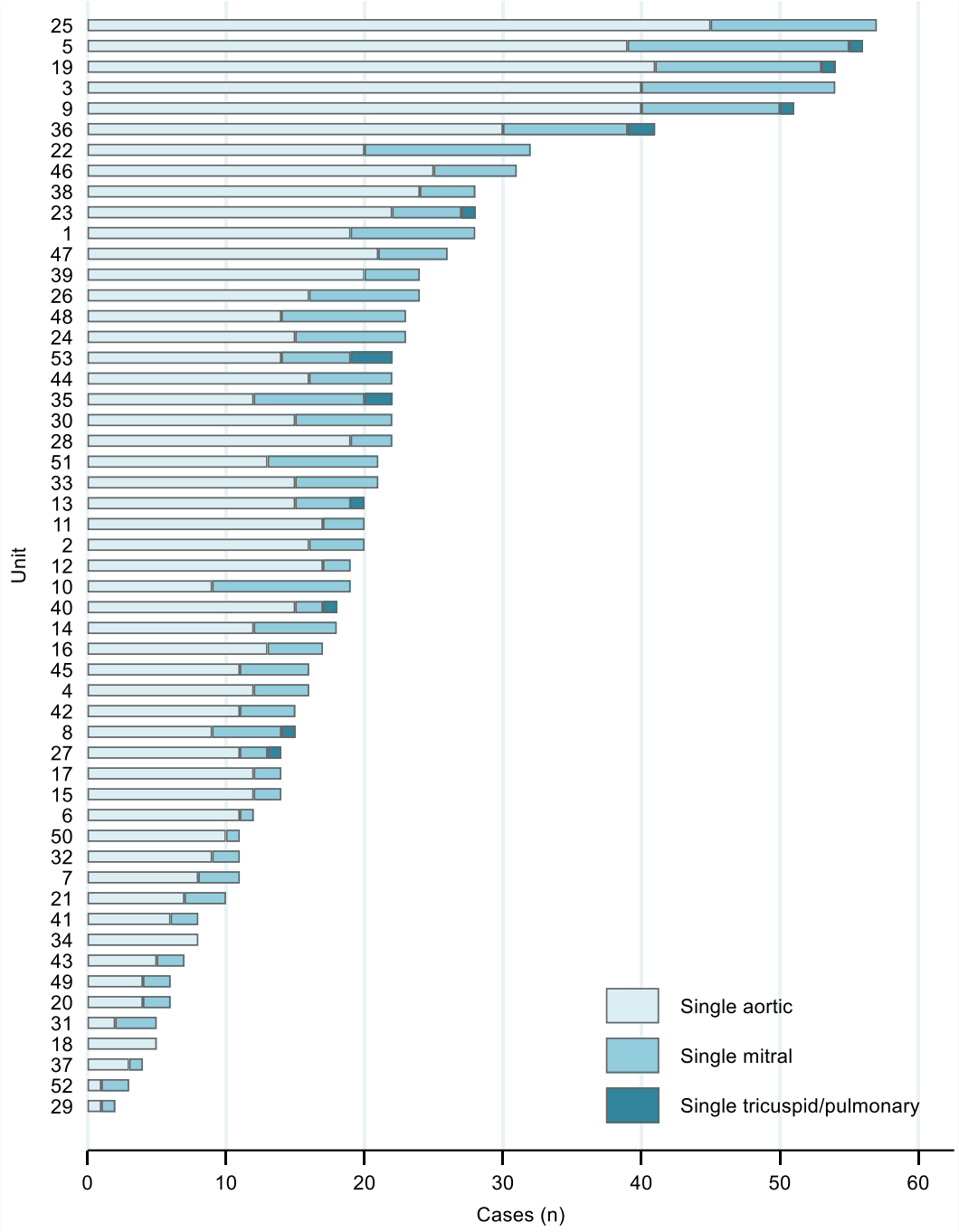


Figure S35. Types of combined single valve and CABG surgery performed by unit, 2025



Unit level outcomes

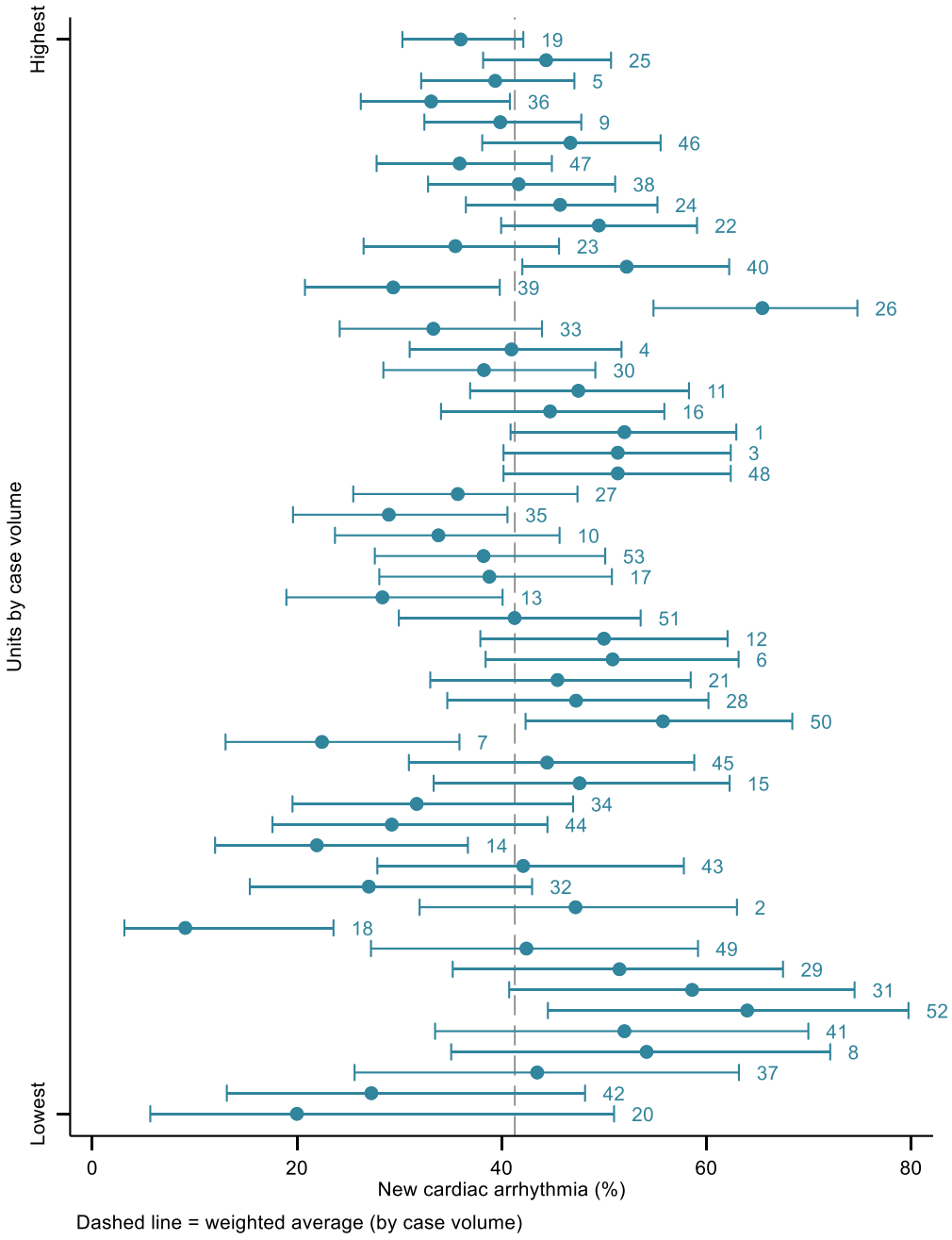
Table S4. Outcomes for combined AVR and CABG surgery by unit, 2021-2025

	n	OM (%)	RA-OM (%)	dNRI (%)	RA-dNRI (%)	Permanent Stroke (%)	DSWI (%)	RTT for bleeding (%)
Unit 1	78	2.7	1.6	4.1	3.6	2.7	1.3	5.3
Unit 2	36	2.9	1.6	2.8	2.4	8.3	0.0	2.8
Unit 3	75	4.0	2.9	5.4	4.9	1.4	4.1	4.1
Unit 4	83	1.2	1.3	2.4	1.5	0.0	0.0	2.4
Unit 5	161	5.0	3.8	9.5	8.6	1.9	2.5	1.9
Unit 6	59	0.0	0.0	3.4	3.3	1.7	0.0	3.4
Unit 7	49	4.4	5.2	0.0	0.0	2.0	0.0	4.1
Unit 8	24	12.5	13.7^	8.7	14.2	8.3	0.0	8.3
Unit 9	153	2.6	2.0	4.1	4.4	1.3	0.0	9.8
Unit 10	68	1.5	1.4	1.5	1.7	0.0	0.0	4.4
Unit 11	80	6.3	4.5	16.5^	13.2	2.5	0.0	3.8
Unit 12	62	1.6	1.8	1.6	1.8	1.6	0.0	1.6
Unit 13	67	0.0	0.0	3.0	2.9	0.0	0.0	3.0
Unit 14	41	0.0	0.0	0.0	0.0	0.0	2.4	12.2
Unit 15	42	0.0	0.0	7.1	9.6	0.0	2.4	0.0
Unit 16	76	4.1	4.9	1.3	1.5	0.0	0.0	6.6
Unit 17	67	0.0	0.0	3.0	3.5	0.0	0.0	6.0
Unit 18	33	0.0	0.0	6.1	5.0	0.0	0.0	6.1
Unit 19	250	3.6	2.8	4.0	4.1	2.0	3.2	8.8
Unit 20	10	0.0	0.0	30.0	27.1	0.0	0.0	0.0
Unit 21	55	0.0	0.0	0.0	0.0	0.0	0.0	3.6
Unit 22	101	1.0	1.1	5.0	6.0	1.0	0.0	1.0
Unit 23	93	5.4	4.1	9.9	9.5	3.2	1.1	6.5
Unit 24	105	1.0	0.7	3.9	3.5	1.0	1.9	8.6
Unit 25	239	2.9	2.3	5.9	5.6	1.7	1.7	5.4
Unit 26	84	2.4	2.1	11.0	9.0	2.4	0.0	8.3
Unit 27	70	2.9	1.9	13.2	11.9	2.9	0.0	7.1
Unit 28	55	1.8	1.8	7.3	7.1	0.0	0.0	0.0
Unit 29	33	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unit 30	81	1.3	1.4	2.5	2.3	3.7	1.3	2.5
Unit 31	30	6.7	5.7	3.6	2.7	0.0	0.0	10.3
Unit 32	37	0.0	0.0	10.8	12.0	2.7	0.0	5.4
Unit 33	86	3.5	3.7	2.4	2.4	2.4	1.2	2.4
Unit 34	41	0.0	0.0	7.3	7.0	2.4	0.0	2.4
Unit 35	69	1.5	0.9	5.1	5.3	1.4	1.4	2.9
Unit 36	157	1.9	1.5	1.9	1.8	0.6	0.0	4.5
Unit 37	23	0.0	0.0	0.0	0.0	4.3	0.0	0.0
Unit 38	108	2.8	2.0	3.9	4.5	0.9	3.7	11.1
Unit 39	85	4.8	3.8	6.0	6.0	2.4	1.2	4.7
Unit 40	90	1.1	0.9	5.6	4.6	1.1	2.2	4.4
Unit 41	25	0.0	0.0	8.0	5.1	4.0	0.0	0.0
Unit 42	22	0.0	0.0	0.0	0.0	0.0	0.0	4.5
Unit 43	38	5.3	6.2	5.3	5.0	2.6	0.0	0.0
Unit 44	41	0.0	0.0	4.9	4.4	4.9	2.4	7.3
Unit 45	45	0.0	0.0	4.5	4.3	0.0	2.2	0.0
Unit 46	122	1.7	1.4	10.1	7.5	0.8	2.5	6.6
Unit 47	117	0.9	0.7	9.5	7.8	1.7	2.6	3.4
Unit 48	74	8.2	4.5	6.8	5.9	1.4	0.0	2.7
Unit 49	33	0.0	0.0	0.0	0.0	3.0	3.2	3.0
Unit 50	52	3.8	2.5	5.9	5.0	5.8	0.0	3.8
Unit 51	63	0.0	0.0	8.3	7.1	1.6	0.0	7.9
Unit 52	25	0.0	0.0	12.0	11.6	12.0^	0.0	8.0
Unit 53	68	0.0	0.0	2.9	2.7	0.0	1.5	7.4

^ unit is above the upper 99.7% control limit on the corresponding funnel plot

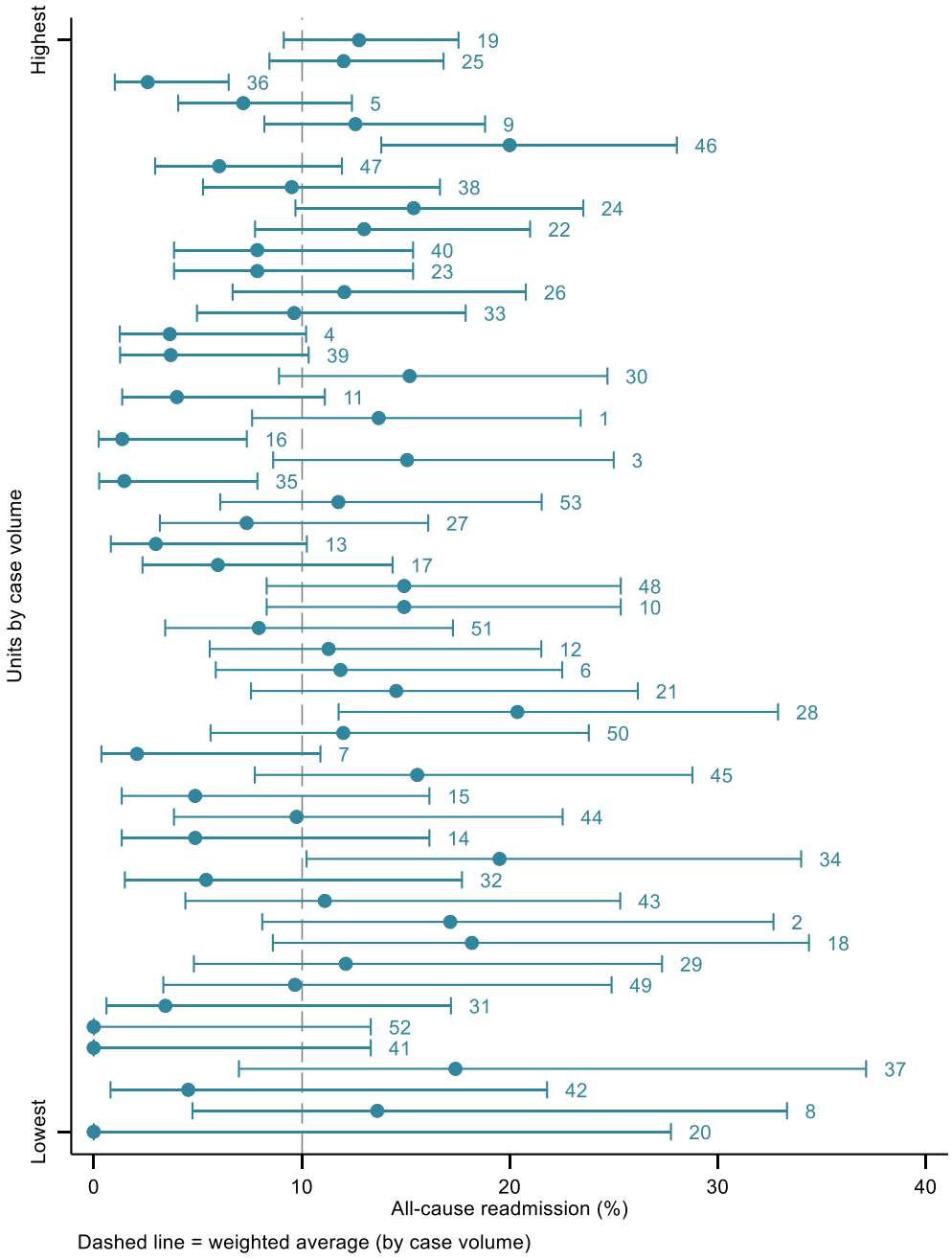
ᵛ unit is below the lower 99.7% control limit on the corresponding funnel plot

Figure S36. New cardiac arrhythmia for combined AVR and CABG surgery by unit, 2021-2025



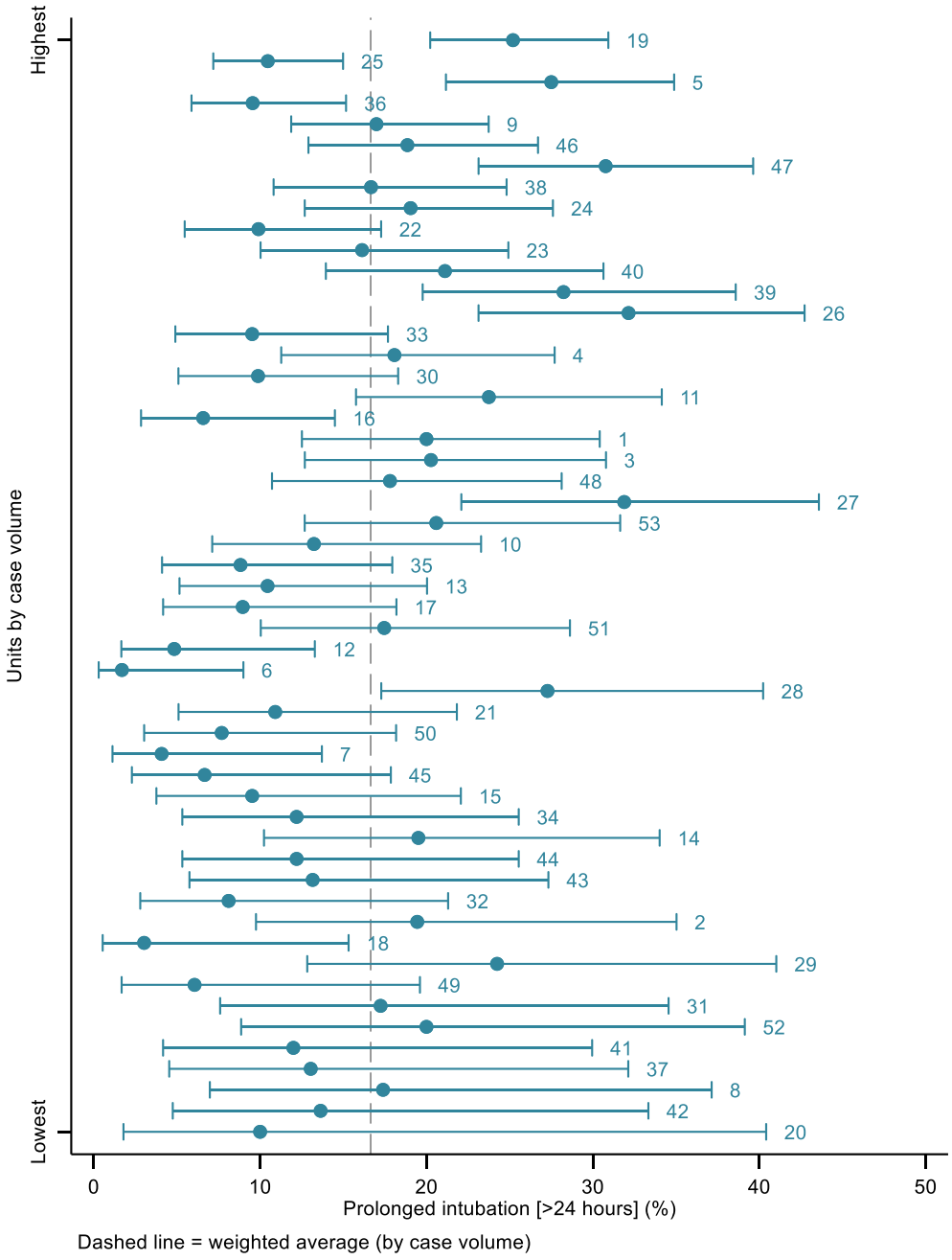
Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for new cardiac arrhythmia

Figure S37. All-cause readmission for combined AVR and CABG surgery by unit, 2021-2025



Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for all-cause readmission

Figure S38. Prolonged intubation for combined AVR and CABG surgery by unit, 2021-2025

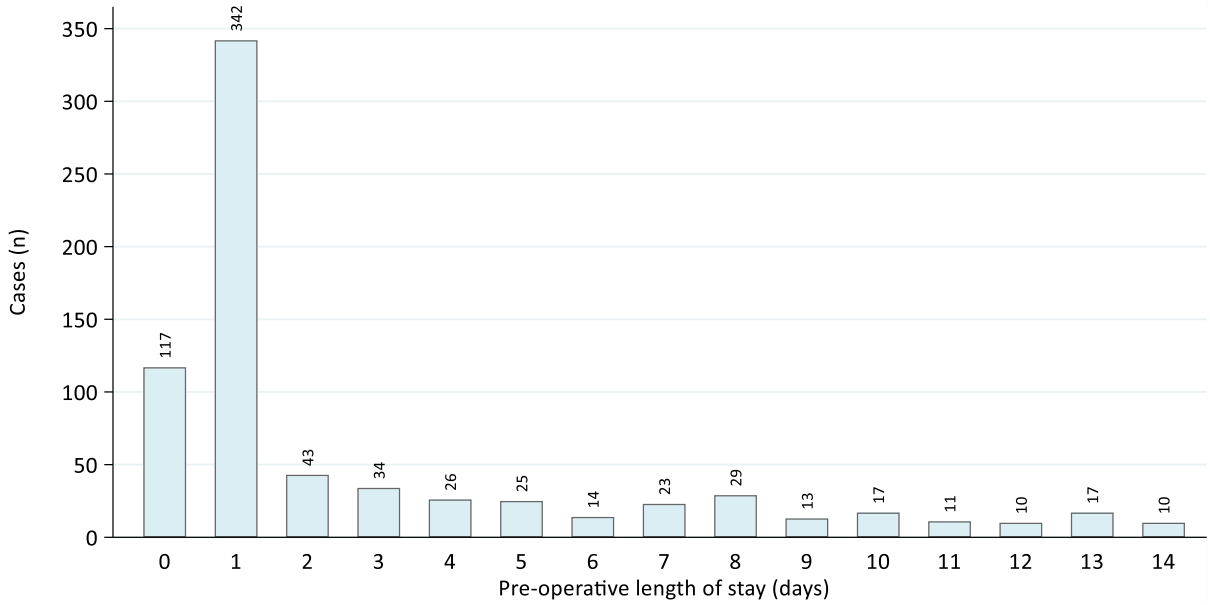


Note: Dots indicate the unit average; bars represent the 95% confidence interval. The ANZSCTS Database does not benchmark unit outcomes for prolonged intubation

Resource utilisation

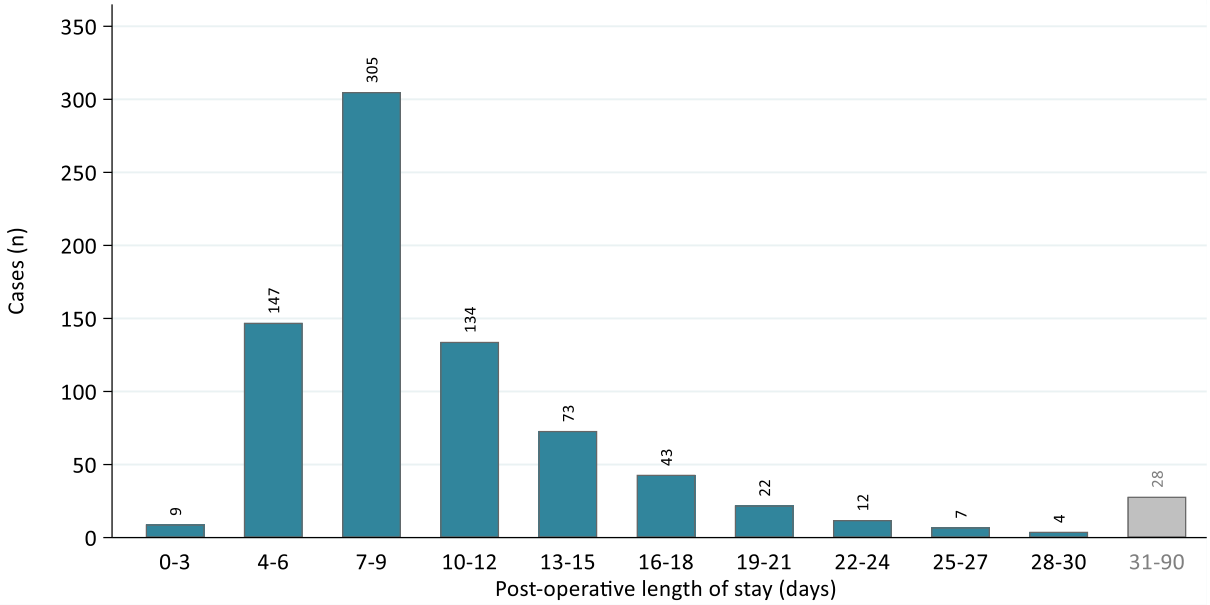
Cases with a pre-operative LOS of more than 14 days were classified as clinical outliers and excluded from the analysis.

Figure S39. Distribution of pre-operative LOS for combined AVR and CABG patients, 2025



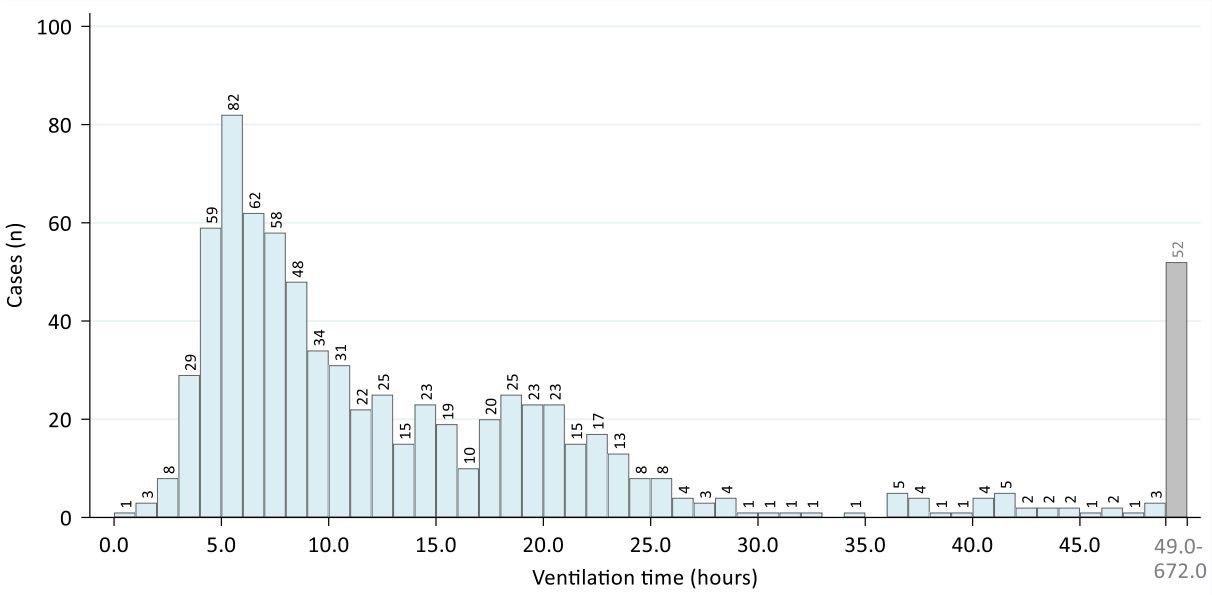
Cases with a post-operative LOS of more than 90 days were classified as clinical outliers and excluded from the analysis.

Figure S40. Distribution of post-operative LOS for combined AVR and CABG patients, 2025



Cases with a ventilation time of more than four weeks (672 hours) were classified as clinical outliers and excluded from the analysis.

Figure S41. Distribution of initial post-operative ventilation time for combined AVR and CABG patients, 2025



Cases with an ICU LOS of more than six weeks (1,008 hours) were classified as clinical outliers and excluded from the analysis.

Figure S42. Distribution of ICU LOS for combined AVR and CABG patients, 2025

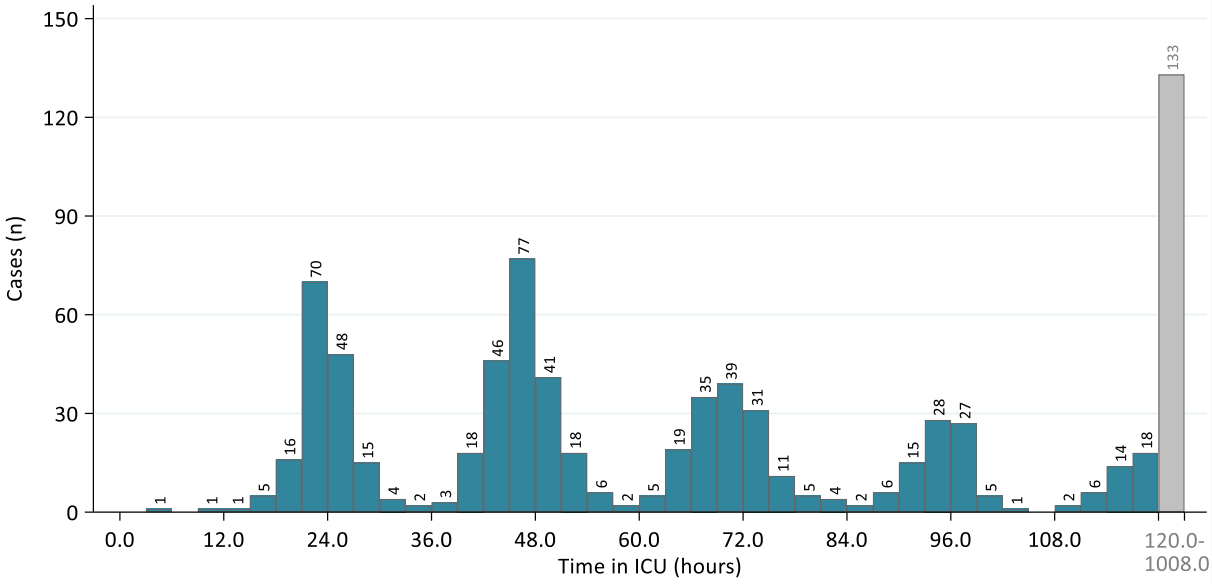
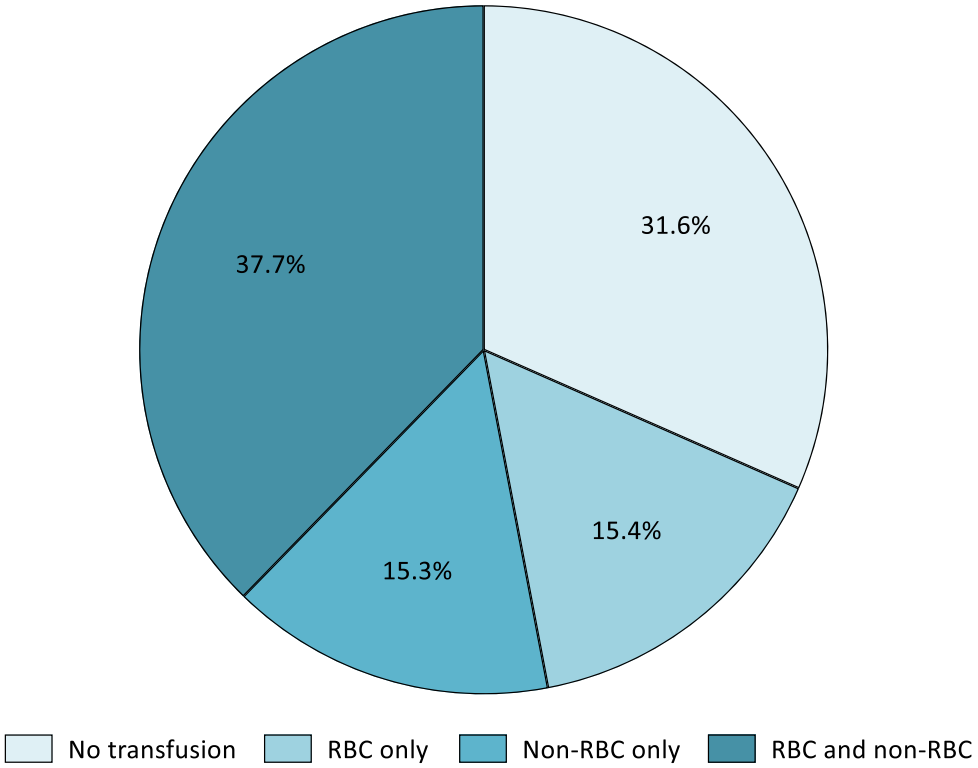


Figure S43. Blood product usage for combined AVR and CABG patients, 2025



Note: non-RBC consists of platelets, Novo 7, cryoprecipitate and fresh frozen plasma, prothrombinex and fibrinogen

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