

Equinox®/Equinox® Total Stemmed Reverse Shoulder Investigation

Note: This analysis compares the Equinox®/Equinox® humeral stem/glenoid combination with all other total stemmed reverse shoulder prostheses.

This combination has been identified as having a significantly higher rate of revision. For a detailed explanation of the process used by the Registry that results in identification of prostheses that have a higher than anticipated rate of revision please refer to the Prostheses with Higher than Anticipated Rates of Revision chapter of the most recent AOANJRR Annual Report, <https://aoanjrr.sahmri.com/annual-reports-2026>.

Note: Procedures using prostheses with no recorded use in 2025 are excluded from the comparator.

TABLE 1

Revision Rate of Primary Total Stemmed Reverse Shoulder Replacement

The revision rate of the Equinox®/Equinox® total stemmed reverse shoulder combination is compared to all other total stemmed reverse shoulder prostheses.

Table 1: Revision Rates of Primary Total Stemmed Reverse Shoulder Replacement

Component	N Revised	N Total	Obs. Years	Revisions/100 Obs. Yrs (95% CI)
Equinox®/Equinox®	336	8272	29754	1.13 (1.01, 1.26)
Other Total Stemmed Reverse Shoulder	2403	66447	305452	0.79 (0.76, 0.82)
TOTAL	2739	74719	335206	0.82 (0.79, 0.85)

Note: Prostheses no longer used in 2025 are excluded from the comparator.

TABLE 2**Yearly Cumulative Percent Revision of Primary Total Stemmed Reverse Shoulder Replacement**

The yearly cumulative percent revision of the Equinox/Equinox total stemmed reverse shoulder combination is compared to all other total stemmed reverse shoulder prostheses.

Table 2: Yearly Cumulative Percent Revision (95% CI) of Primary Total Stemmed Reverse Shoulder Replacement

CPR	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs
Equinox/Equinox	2.3 (2.0, 2.6)	3.1 (2.8, 3.5)	3.5 (3.1, 4.0)	4.3 (3.8, 4.8)	4.7 (4.2, 5.3)	5.5 (4.8, 6.2)
Other Total Stemmed Reverse Shoulder	2.2 (2.1, 2.3)	2.9 (2.8, 3.1)	3.4 (3.2, 3.5)	3.7 (3.5, 3.9)	3.9 (3.8, 4.1)	4.2 (4.1, 4.4)

CPR	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs
Equinox/Equinox	6.1 (5.3, 6.9)	7.2 (6.2, 8.4)	8.0 (6.6, 9.7)	9.5 (7.2, 12.5)		
Other Total Stemmed Reverse Shoulder	4.4 (4.2, 4.6)	4.7 (4.5, 4.9)	4.9 (4.7, 5.1)	5.2 (5.0, 5.5)	5.5 (5.2, 5.8)	5.8 (5.5, 6.2)

CPR	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs
Equinox/Equinox						
Other Total Stemmed Reverse Shoulder	6.0 (5.6, 6.4)	6.2 (5.8, 6.7)	6.5 (5.9, 7.1)	6.6 (6.0, 7.3)	7.3 (6.2, 8.5)	7.3 (6.2, 8.5)

Note: Prostheses no longer used in 2025 are excluded from the comparator.

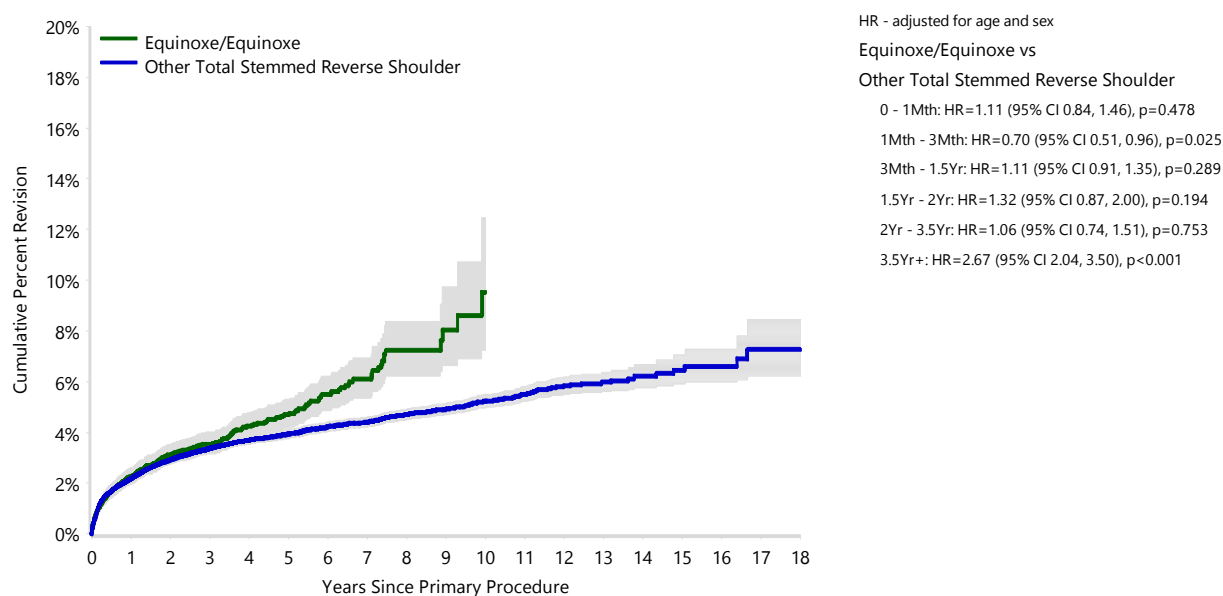
FIGURE 1

Yearly Cumulative Percent Revision of Primary Total Stemmed Reverse Shoulder Replacement

The yearly cumulative percent revision of the Equinox/Equinox total stemmed reverse shoulder combination is compared to all other total stemmed reverse shoulder prostheses. In addition, hazard ratios are reported.

Hazard ratios are reported for specific time periods during which the hazard ratio is constant. This is done to enable more specific and valid comparisons of the risk of revision over time. The pattern of variation in risk has important implications with respect to the underlying reasons for any difference.

Figure 1: Cumulative Percent Revision of Primary Total Stemmed Reverse Shoulder Replacement



Number at Risk	0 Yr	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs
Equinox/Equinox	8272	7096	5694	4309	3221	2281	1473	892	475	216
Other Total Stemmed Reverse Shoulder	66447	55444	46510	38754	32404	26252	21019	16142	11968	8579

Number at Risk	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs	19 Yrs
Equinox/Equinox	91	29	7	2	0	0	0	0	0	0
Other Total Stemmed Reverse Shoulder	6047	4156	2710	1636	984	639	425	188	56	10

Note: Prostheses no longer used in 2025 are excluded from the comparator.

TABLE 3**Primary Diagnosis for Revised Primary Total Stemmed Reverse Shoulder Replacement**

This table identifies the diagnosis of the primary procedure which was subsequently revised. This information is provided as there is a variation on outcome depending on the primary diagnosis. It is therefore important when considering the reasons for a higher than anticipated rate of revision that there is identification of the primary diagnosis. This information should be compared to the primary diagnosis for the revisions of all other total stemmed reverse shoulder prostheses.

Table 3: Primary Diagnosis for Revised Primary Total Stemmed Reverse Shoulder Replacement

Primary Diagnosis	Equinoxe/Equinoxe		Other Total Stemmed Reverse Shoulder	
	Number	Percent	Number	Percent
Rotator Cuff Arthropathy	119	35.4	927	38.6
Osteoarthritis	153	45.5	879	36.6
Fracture	45	13.4	420	17.5
Rheumatoid Arthritis	8	2.4	53	2.2
Instability	4	1.2	45	1.9
Tumour	4	1.2	35	1.5
Osteonecrosis	2	0.6	31	1.3
Other Inflammatory Arthritis	1	0.3	11	0.5
Other			2	0.1
TOTAL	336	100.0	2403	100.0

Note: Prostheses no longer used in 2025 are excluded from the comparator.

TABLE 4

Reasons for Revision

This is reported in two ways: a percentage of primary procedures revised and as a percentage of all revision procedures.

% Primaries Revised: This shows the proportional contribution of each revision diagnosis as a percentage of the total number of primary procedures. This percentage can be used to approximate the risk of being revised for that diagnosis. Differing percentages between groups, with the same distribution of follow up time, may identify problems of concern.

% Revisions: The number of revisions for each diagnosis is expressed as a percentage of the total number of revisions. This shows the distribution of reasons for revision within a group but cannot be used as a comparison between groups.

Table 4: Primary Total Stemmed Reverse Shoulder Replacement - Reason for Revision (Follow-up Limited to 13.9 Years)

Revision Diagnosis	Equinoxe/Equinoxe			Other Total Stemmed Reverse Shoulder		
	Number	% Primaries Revised	% Revisions	Number	% Primaries Revised	% Revisions
Instability/Dislocation	93	1.1	27.7	748	1.1	31.2
Infection	107	1.3	31.8	605	0.9	25.2
Loosening	48	0.6	14.3	389	0.6	16.2
Fracture	35	0.4	10.4	261	0.4	10.9
Dissociation	15	0.2	4.5	85	0.1	3.5
Pain	5	0.1	1.5	56	0.1	2.3
Arthrofibrosis	2	0.0	0.6	28	0.0	1.2
Lysis	5	0.1	1.5	28	0.0	1.2
Malposition	4	0.0	1.2	22	0.0	0.9
Incorrect Sizing	2	0.0	0.6	21	0.0	0.9
Implant Breakage Glenoid				19	0.0	0.8
Metal Related Pathology	1	0.0	0.3	15	0.0	0.6
Heterotopic Bone	3	0.0	0.9	11	0.0	0.5
Wear Humeral Cup	1	0.0	0.3	9	0.0	0.4
Implant Breakage Humeral	2	0.0	0.6	8	0.0	0.3
Rotator Cuff Insufficiency	1	0.0	0.3	8	0.0	0.3
Tumour				6	0.0	0.3
Implant Breakage Glenoid Insert	3	0.0	0.9	3	0.0	0.1
Glenoid Erosion				2	0.0	0.1
Wear Glenoid Insert				2	0.0	0.1
Prosthesis Dislocation				1	0.0	0.0
Other	9	0.1	2.7	71	0.1	3.0
N Revision	336	4.1	100.0	2398	3.6	100.0
N Primary	8272			66447		

Note: This table is restricted to revisions within 13.9 years for all groups to allow a time-matched comparison of revisions.

Note: Prostheses no longer used in 2025 are excluded from the comparator.

FIGURE 2**Cumulative Incidence Revision Diagnosis of Primary Total Stemmed Reverse Shoulder Replacement**

This figure details the cumulative incidence of the most common reasons for revision. The five most common reasons for revision are included as long as each of these reasons account for more than 10 procedures or at least 5% of all revisions for the Equinox/Equinox total stemmed reverse shoulder combination. A comparative graph is provided of the cumulative incidence for the same reasons for revisions for all other total stemmed reverse shoulder prostheses.

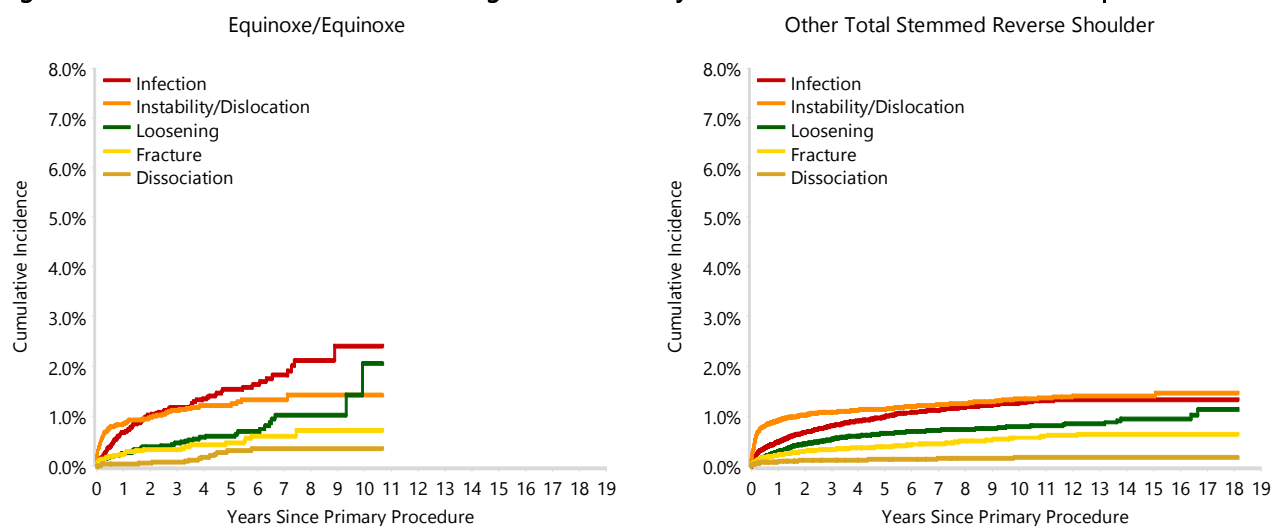
Figure 2: Cumulative Incidence Revision Diagnosis for Primary Total Stemmed Reverse Shoulder Replacement

TABLE 5

Type of Revision Performed for Primary Total Stemmed Reverse Shoulder Replacement

This analysis identifies the components used in the revision of the Equinox/Equinox total stemmed reverse shoulder combination and compares it to the components used in the revision of all other total stemmed reverse shoulder prostheses.

The reason this analysis is undertaken is to identify whether there is one or more components which are being replaced that differ from the components replaced for revisions of all other total stemmed reverse shoulder prostheses i.e. is there a difference in the type of revision undertaken for the Equinox/Equinox total stemmed reverse shoulder combination compared to all other total stemmed reverse shoulder prostheses.

Table 5: Primary Total Stemmed Reverse Shoulder Replacement - Type of Revision (Follow-up Limited to 13.9 Years)

Type of Revision	Equinox/Equinox		Other Total Stemmed Reverse Shoulder	
	Number	Percent	Number	Percent
Humeral Component	150	44.6	606	25.3
Humeral/Glenoid	29	8.6	268	11.2
Cement Spacer	43	12.8	208	8.7
Glenoid Component	3	0.9	188	7.8
Removal of Prostheses	3	0.9	42	1.8
Reinsertion of Components	1	0.3	3	0.1
N Major	229	68.2	1315	54.8
Cup/Head	36	10.7	474	19.8
Cup Only	48	14.3	355	14.8
Head Only	17	5.1	216	9.0
Minor Components	5	1.5	14	0.6
Cement Only	1	0.3	11	0.5
Reoperation			11	0.5
Head/Insert			2	0.1
N Minor	107	31.8	1083	45.2
TOTAL	336	100.0	2398	100.0

Note: This table is restricted to revisions within 13.9 years for all groups to allow a time-matched comparison of revisions.

Note: Prostheses no longer used in 2025 are excluded from the comparator.

TABLE 6**Revision Rates of Equinox®/Equinox® Primary Total Stemmed Reverse Shoulder Replacement by Fixation**

This analysis is provided as some prostheses have more than one fixation option. Additionally there are prostheses where an alternative to the recommended approach to fixation was used e.g. a cementless prosthesis that has been cemented or vice-versa.

Table 6: Revised Number of Equinox®/Equinox® Primary Total Stemmed Reverse Shoulder Replacement by Fixation

Fixation	N Revised	N Total
Cemented	3	34
Cementless	283	7090
Hybrid (Glenoid Cemented)	3	26
Hybrid (Glenoid Cementless)	47	1122
TOTAL	336	8272

TABLE 7**Revision Rates of Equinox®/Equinox® Primary Total Stemmed Reverse Shoulder Replacement by Bearing Surface**

This analysis is provided as some prostheses are combined with a variety of bearing surfaces. All bearing surfaces used with this combination are listed.

Table 7: Revised Number of Equinox®/Equinox® Primary Total Stemmed Reverse Shoulder Replacement by Bearing Surface

Bearing Surface	N Revised	N Total
Non XLPE/Metal	335	8262
Unknown	1	10
TOTAL	336	8272

TABLE 8

Revision Rates of Primary Total Stemmed Reverse Shoulder Replacement by State

This enables a state by state variation to be identified for the Equinox/Equinox total stemmed reverse shoulder combination and provides the comparative data for each of the states for all other total stemmed reverse shoulder prostheses.

The purpose of this analysis is to determine if the higher than anticipated rate of revision has widespread distribution between states. If there is widespread distribution then the reason for the higher than anticipated rate of revision is unlikely to be surgeon specific. If the prosthesis has been used in only a small number of states it is not possible to distinguish if the higher than anticipated rate of revision is related to the prosthesis, surgeon, technique or patient.

Table 8: Revised Number of Primary Total Stemmed Reverse Shoulder Replacement by State

Component	State	N Revised	N Total
Equinox/Equinox	NSW	103	1898
	VIC	69	1659
	QLD	81	2397
	WA	66	1900
	SA	13	350
	TAS	4	66
	ACT/NT	0	2
Other Total Stemmed Reverse Shoulder	NSW	705	21575
	VIC	474	12731
	QLD	555	14274
	WA	323	8303
	SA	225	5824
	TAS	52	1749
	ACT/NT	69	1991
TOTAL		2739	74719

Note: Prostheses no longer used in 2025 are excluded from the comparator.

TABLE 9**Number of Revisions of Equinox/Equinox Primary Total Stemmed Reverse Shoulder Replacement by Year of Implant**

This analysis details the number of prostheses reported each year to the Registry for the Equinox/Equinox total stemmed reverse shoulder combination. It also provides the subsequent number of revisions of the primaries reported in that year.

Primary procedures performed in later years have had less follow up time therefore the number revised is expected to be less than the number revised in earlier years. For example, a primary procedure performed in 2025 has a maximum of one year to be revised, whereas a primary procedure performed in 2023 has a maximum of three years to be revised.

Table 9: Number of Revisions of Equinox/Equinox Primary Total Stemmed Reverse Shoulder Replacement by Year of Implant

Year of Implant	Number Revised	Total Number
2011	0	1
2012	1	9
2013	2	14
2014	4	32
2015	4	103
2016	11	168
2017	27	332
2018	29	495
2019	33	675
2020	49	855
2021	39	955
2022	42	1059
2023	49	1352
2024	36	1290
2025	10	932
TOTAL	336	8272

TABLE 10

Revision Rates of Equinox/Equinox Primary Total Stemmed Reverse Shoulder Replacement by Catalogue Number Range

Many prostheses have a number of catalogue ranges. The catalogue range is specific to particular design features; more than one catalogue range usually indicates a minor difference in design in a particular Equinox/Equinox prosthesis.

This analysis has been undertaken to determine if the revision rate varies according to the catalogue number range.

Model	Catalogue Range	Catalogue Description	Cement	Material	Stem Type
Humeral Stem					
Equinox	3000107-3000117	PRESSFIT PRIMARY HUMERAL STEM	NO	METAL	
Equinox	3003006-3003014	EQUINOX PRESERVE HUMERAL STEM PRESS FIT PLASMA COATED	NO	METAL	
Equinox	3042107-3042407	PLATFORM FRACTURE HUMERAL STEM	YES	METAL	FRACTURE
Equinox	3060108-3060212	LONG HUMERAL STEM	YES	METAL	
Equinox	3080106-3080308	HUMERAL RECONSTRUCTION PROSTHESIS DISTAL STEM CEMENTED	YES		
Glenoid					
Equinox	3201501-3201508	REVERSE GLENOID PLATE	NO	METAL	
Equinox	3203501-3203508	SMALL REVERSE GLENOID BASEPLATE	NO		

Table 10: Revised Number of Equinox/Equinox Primary Total Stemmed Reverse Shoulder Replacement by Catalogue Number Range

Humeral Stem Range	Glenoid Range	N Revised	N Total
3000107-3000117	3201501-3201508	275	6206
	3203501-3203508	15	705
3003006-3003014	3201501-3201508	14	485
	3203501-3203508	5	120
3042107-3042407	3201501-3201508	18	552
	3203501-3203508	1	118
3060108-3060212	3201501-3201508	1	13
	3203501-3203508	0	2
3080106-3080308	3201501-3201508	6	50
	3203501-3203508	1	21
TOTAL		336	8272