

Legion Revision Tibial Baseplate Total Knee Investigation

Note: This analysis compares the Legion Revision Tibial Baseplate tibial prosthesis with all other total knee prostheses.

This prosthesis 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 Knee Replacement

The revision rate of the Legion Revision Tibial Baseplate total knee prosthesis is compared to all other total knee prostheses.

Table 1: Revision Rates of Primary Total Knee Replacement

Component	N Revised	N Total	Obs. Years	Revisions/100 Obs. Yrs (95% CI)
Legion Revision Tibial Baseplate	89	1581	8776	1.01 (0.81, 1.25)
Other Total Knee	27197	789859	5137258	0.53 (0.52, 0.54)
TOTAL	27286	791440	5146034	0.53 (0.52, 0.54)

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

TABLE 2

Yearly Cumulative Percent Revision of Primary Total Knee Replacement

The yearly cumulative percent revision of the Legion Revision Tibial Baseplate total knee prosthesis is compared to all other total knee prostheses.

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

CPR	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs
Legion Revision Tibial Baseplate	2.6 (1.9, 3.5)	3.4 (2.6, 4.5)	4.4 (3.5, 5.6)	4.8 (3.8, 6.1)	5.4 (4.3, 6.8)	6.2 (4.9, 7.8)
Other Total Knee	1.0 (1.0, 1.0)	1.8 (1.8, 1.8)	2.4 (2.3, 2.4)	2.8 (2.7, 2.8)	3.1 (3.0, 3.1)	3.4 (3.4, 3.5)

CPR	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs
Legion Revision Tibial Baseplate	6.5 (5.2, 8.2)	7.2 (5.7, 9.1)	7.5 (5.9, 9.4)	7.8 (6.2, 9.9)	8.6 (6.7, 11.0)	9.5 (7.3, 12.2)
Other Total Knee	3.7 (3.7, 3.8)	4.0 (3.9, 4.1)	4.3 (4.3, 4.4)	4.6 (4.6, 4.7)	4.9 (4.9, 5.0)	5.3 (5.2, 5.3)

CPR	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs
Legion Revision Tibial Baseplate	9.5 (7.3, 12.2)	10.2 (7.7, 13.5)	10.2 (7.7, 13.5)	10.2 (7.7, 13.5)		
Other Total Knee	5.6 (5.5, 5.7)	5.9 (5.8, 6.0)	6.3 (6.2, 6.4)	6.7 (6.6, 6.8)	7.2 (7.0, 7.3)	7.5 (7.4, 7.7)

CPR	19 Yrs	20 Yrs	21 Yrs	22 Yrs	23 Yrs	24 Yrs	25 Yrs
Legion Revision Tibial Baseplate							
Other Total Knee	7.8 (7.7, 8.0)	8.1 (7.9, 8.3)	8.5 (8.2, 8.7)	8.7 (8.4, 9.0)	8.8 (8.5, 9.1)	9.1 (8.7, 9.5)	9.5 (8.8, 10.2)

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

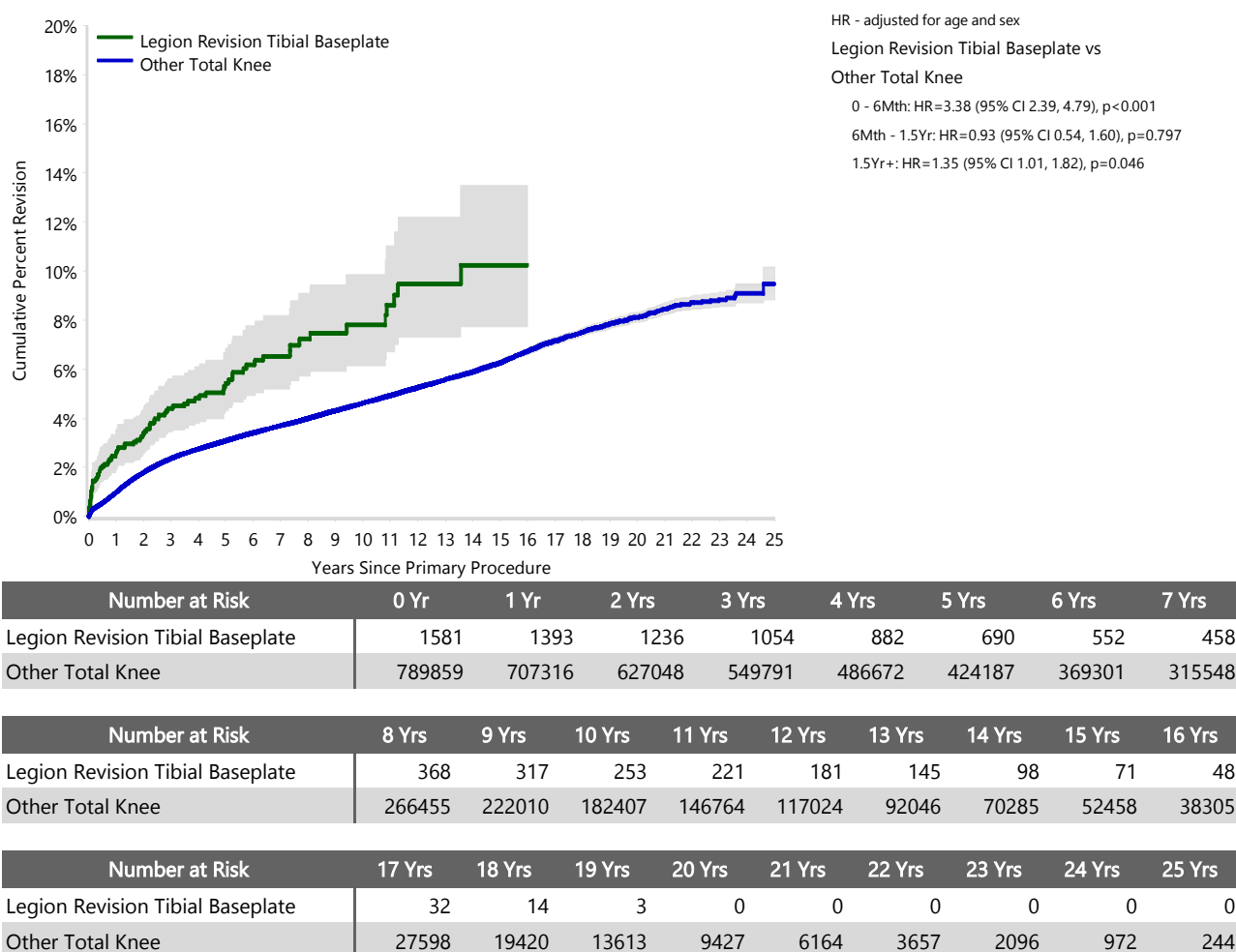
FIGURE 1

Yearly Cumulative Percent Revision of Primary Total Knee Replacement

The yearly cumulative percent revision of the Legion Revision Tibial Baseplate total knee prosthesis is compared to all other total knee 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 Knee Replacement



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

TABLE 3

Primary Diagnosis for Revised Primary Total Knee 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 knee prostheses.

Table 3: Primary Diagnosis for Revised Primary Total Knee Replacement

Primary Diagnosis	Legion Revision Tibial Baseplate		Other Total Knee	
	Number	Percent	Number	Percent
Osteoarthritis	78	87.6	26316	96.8
Rheumatoid Arthritis	3	3.4	327	1.2
Tumour			199	0.7
Other Inflammatory Arthritis	1	1.1	176	0.6
Osteonecrosis	2	2.2	102	0.4
Fracture	2	2.2	53	0.2
Other	3	3.4	23	0.1
Chondrocalcinosis			1	0.0
TOTAL	89	100.0	27197	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 Knee Replacement - Reason for Revision (Follow-up Limited to 19.5 Years)

Revision Diagnosis	Legion Revision Tibial Baseplate			Other Total Knee		
	Number	% Primaries Revised	% Revisions	Number	% Primaries Revised	% Revisions
Infection	37	2.3	41.6	7845	1.0	28.9
Loosening	14	0.9	15.7	5733	0.7	21.1
Instability	8	0.5	9.0	2861	0.4	10.5
Patella Erosion	3	0.2	3.4	2024	0.3	7.5
Pain	7	0.4	7.9	1857	0.2	6.8
Patellofemoral Pain	2	0.1	2.2	1553	0.2	5.7
Arthrofibrosis	2	0.1	2.2	1179	0.1	4.3
Fracture	5	0.3	5.6	1128	0.1	4.2
Malalignment				511	0.1	1.9
Wear Tibial Insert				370	0.0	1.4
Lysis				288	0.0	1.1
Implant Breakage Tibial Insert				252	0.0	0.9
Incorrect Sizing				218	0.0	0.8
Patella Maltracking	2	0.1	2.2	190	0.0	0.7
Implant Breakage Patella				147	0.0	0.5
Bearing Dislocation	7	0.4	7.9	143	0.0	0.5
Metal Related Pathology				114	0.0	0.4
Prosthesis Dislocation	1	0.1	1.1	77	0.0	0.3
Synovitis				64	0.0	0.2
Wear Patella				52	0.0	0.2
Osteonecrosis				51	0.0	0.2
Implant Breakage Femoral				48	0.0	0.2
Implant Breakage Tibial	1	0.1	1.1	38	0.0	0.1
Tumour				36	0.0	0.1
Heterotopic Bone				16	0.0	0.1
Progression Of Disease				8	0.0	0.0
Wear Tibial				6	0.0	0.0
Patella Dislocation				3	0.0	0.0
Incorrect Side				1	0.0	0.0
Wear Femoral				1	0.0	0.0
Other				313	0.0	1.2
N Revision	89	5.6	100.0	27127	3.4	100.0
N Primary	1581			789859		

Note: This table is restricted to revisions within 19.5 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 Knee 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 Legion Revision Tibial Baseplate total knee prosthesis. A comparative graph is provided of the cumulative incidence for the same reasons for revisions for all other total knee prostheses.

Figure 2: Cumulative Incidence Revision Diagnosis for Primary Total Knee Replacement

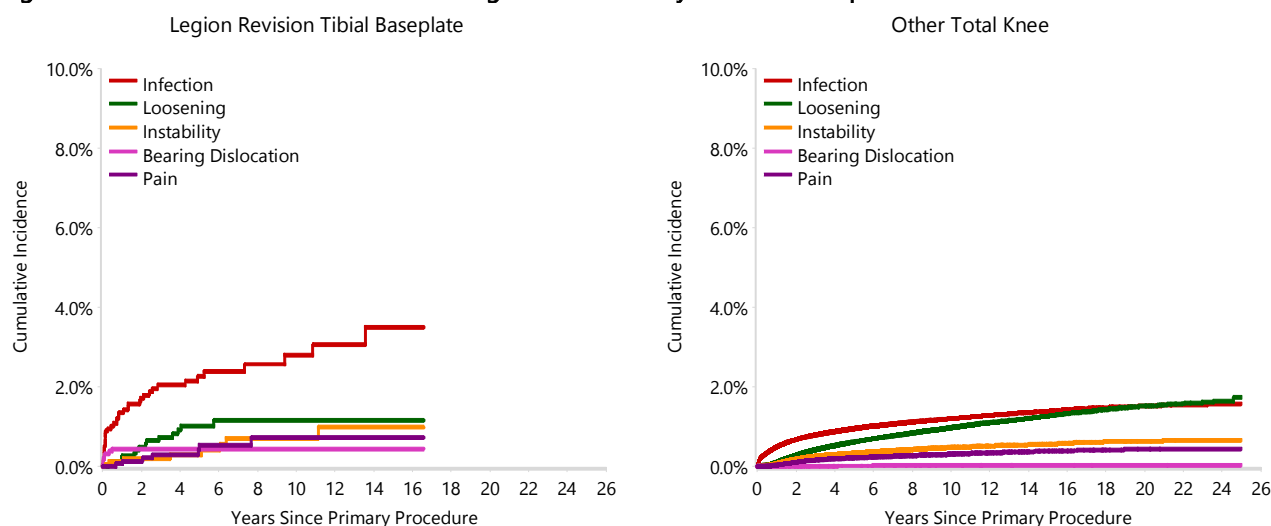


TABLE 5

Type of Revision Performed for Primary Total Knee Replacement

This analysis identifies the components used in the revision of the Legion Revision Tibial Baseplate total knee prosthesis and compares it to the components used in the revision of all other total knee 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 knee prostheses i.e. is there a difference in the type of revision undertaken for the Legion Revision Tibial Baseplate total knee prosthesis compared to all other total knee prostheses.

Table 5: Primary Total Knee Replacement - Type of Revision (Follow-up Limited to 19.5 Years)

Type of Revision	Legion Revision Tibial Baseplate		Other Total Knee	
	Number	Percent	Number	Percent
TKR (Tibial/Femoral)	11	12.4	6633	24.5
Tibial Component	7	7.9	1900	7.0
Femoral Component	6	6.7	1307	4.8
Cement Spacer	3	3.4	1134	4.2
Removal of Prostheses	1	1.1	133	0.5
Total Femoral			23	0.1
Reinsertion of Components			8	0.0
N Major	28	31.5	11138	41.1
Insert Only	46	51.7	8516	31.4
Patella Only	9	10.1	4481	16.5
Insert/Patella	5	5.6	2916	10.7
Minor Components	1	1.1	65	0.2
Cement Only			11	0.0
N Minor	61	68.5	15989	58.9
TOTAL	89	100.0	27127	100.0

Note: This table is restricted to revisions within 19.5 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 Legion Revision Tibial Baseplate Primary Total Knee 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 Legion Revision Tibial Baseplate Primary Total Knee Replacement by Fixation

Fixation	N Revised	N Total
Cemented	78	982
Cementless	5	491
Hybrid (Tibial Cemented)	2	28
Hybrid (Tibial Cementless)	4	80
TOTAL	89	1581

TABLE 7**Revision Rates of Legion Revision Tibial Baseplate Primary Total Knee 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 prosthesis are listed.

Table 7: Revised Number of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Bearing Surface

Bearing Surface	N Revised	N Total
Non XLPE	64	725
XLPE	24	853
Unknown	1	3
TOTAL	89	1581

TABLE 8**Revision Rates of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Bearing Mobility**

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

Table 8: Revised Number of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Bearing Mobility

Bearing Mobility	N Revised	N Total
Fixed	88	1578
Unknown	1	3
TOTAL	89	1581

TABLE 9**Revision Rates of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Stability**

This analysis is provided as some prostheses are combined with a variety of stabilities. All stabilities used with this prosthesis are listed.

Table 9: Revised Number of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Stability

Stability	N Revised	N Total
Fully Stabilised	39	426
Minimally Stabilised	13	648
Posterior Stabilised	36	504
Unknown	1	3
TOTAL	89	1581

TABLE 10

Revision Rates of Primary Total Knee Replacement by State

This enables a state by state variation to be identified for the Legion Revision Tibial Baseplate total knee prosthesis and provides the comparative data for each of the states for all other total knee 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 10: Revised Number of Primary Total Knee Replacement by State

Component	State	N Revised	N Total
Legion Revision Tibial Baseplate	NSW	12	204
	VIC	14	210
	QLD	49	965
	WA	10	116
	SA	2	72
	TAS	0	3
	ACT/NT	2	11
Other Total Knee	NSW	7538	259297
	VIC	6006	163355
	QLD	5742	166284
	WA	3590	92725
	SA	3218	73042
	TAS	475	15072
	ACT/NT	628	20084
TOTAL		27286	791440

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

TABLE 11**Number of Revisions of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Year of Implant**

This analysis details the number of prostheses reported each year to the Registry for the Legion Revision Tibial Baseplate total knee prosthesis. 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 11: Number of Revisions of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Year of Implant

Year of Implant	Number Revised	Total Number
2006	2	16
2007	3	33
2008	5	48
2009	3	40
2010	6	56
2011	8	47
2012	5	63
2013	7	54
2014	2	47
2015	3	38
2016	2	50
2017	3	50
2018	12	87
2019	5	93
2020	5	129
2021	4	173
2022	6	147
2023	7	152
2024	1	127
2025	0	131
TOTAL	89	1581

TABLE 12

Revision Rates of Legion Revision Tibial Baseplate Primary Total Knee 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 Legion Revision Tibial Baseplate 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
Tibial				
Legion	71424001-71424018	REVISION TIBIAL BASEPLATE	YES	METAL
Legion	71425300-71425326	POROUS TIBIA BASEPLATE WITH JRNY LOCK	NO	
Legion	71934162-71934174	TIBIAL BASE W/O HOLES POROUS HA COATED	NO	

Table 12: Revised Number of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Catalogue Number Range

Tibial Range	N Revised	N Total
71424001-71424018	81	1001
71425300-71425326	0	11
71934162-71934174	8	569
TOTAL	89	1581

TABLE 13**Revision Rates of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Component**

A prosthesis may be combined with multiple components. This analysis has been undertaken to determine if the revision rate varies according to the component with which it is combined.

Table 13: Revised Number of Legion Revision Tibial Baseplate Primary Total Knee Replacement by Femoral Component

Femoral Component	N Revised	N Total
Genesis II CR	4	268
Genesis II FS	0	5
Genesis II Oxinium CR	0	22
Genesis II Oxinium PS	7	61
Genesis II PS	6	82
Journey Oxinium	2	4
Legion CR	6	274
Legion FS	0	1
Legion Oxinium CR	3	88
Legion Oxinium FS	42	428
Legion Oxinium PS	16	256
Legion PS	3	92
TOTAL	89	1581