

BSR ANNUAL REPORT 2022

Aims of the Registry

The BSR has been collecting data on spinal surgery in the United Kingdom since 2012.

Submitting data to the registry was mandated by specialist commissioning since 2016 and has been subject to a Best Practice Tariff since April 2019.

The aims of the registry are to improve patient care and the understanding of spinal surgery through the collection of clinical data. The specific aims remain:

1. To quality assure surgery at unit and surgeon level.
2. To perform clinical research
3. To assess and monitor device performance

Registry Usage data

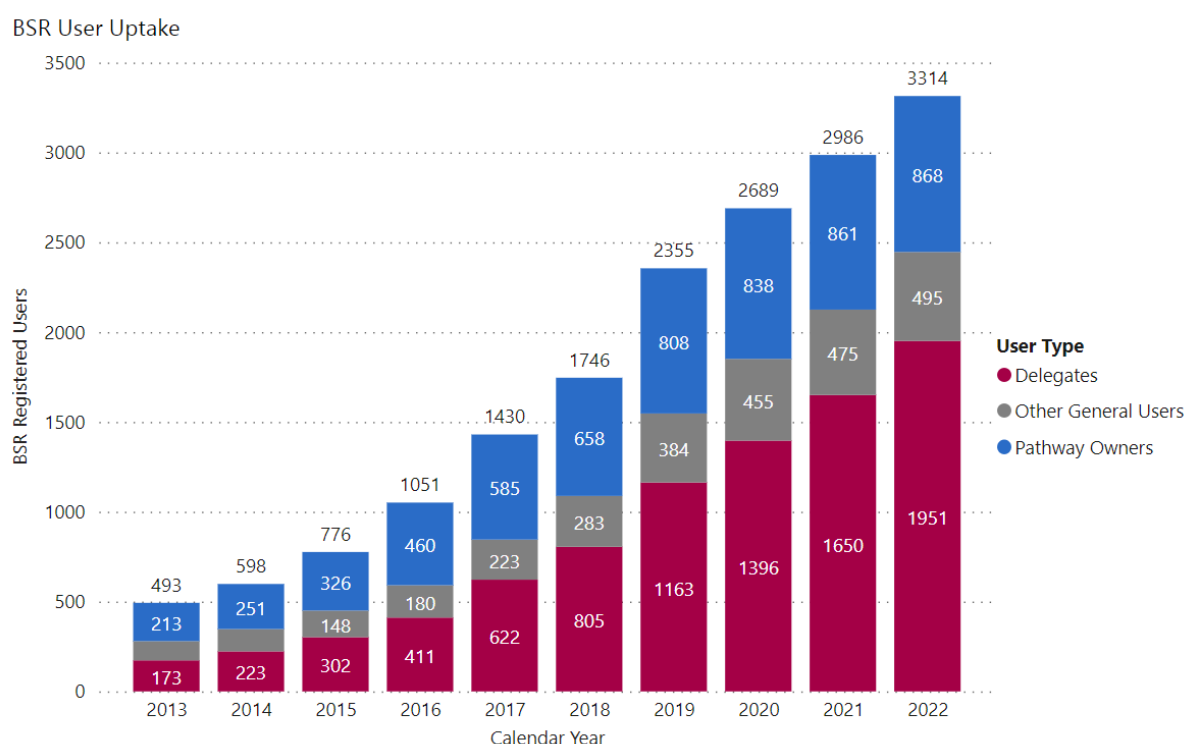
Total Number of Users – 3314 (11% increase from last year)

Active Pathway Owners – 555

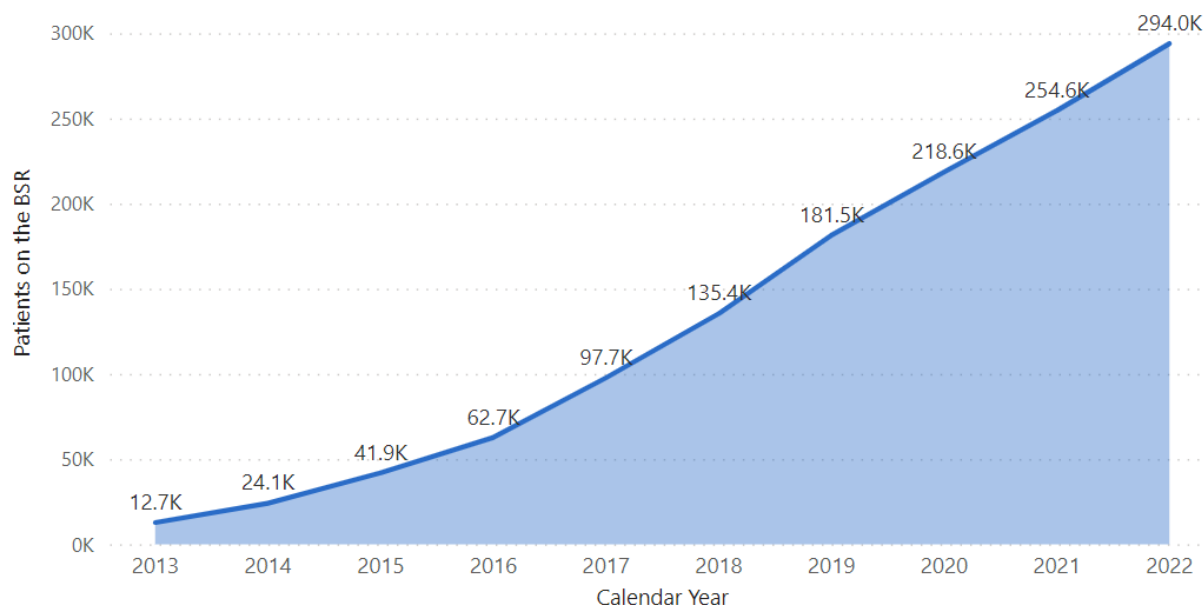
Active Delegates – 890 (adding data into BSR)

Total patient count—over 294,000

(Active is defined as users that have logged into the BSR at least once in the past 2 years).



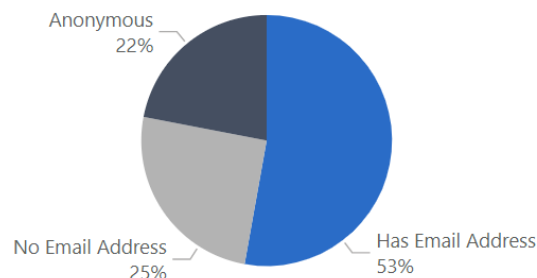
Patient Count Year-on-Year



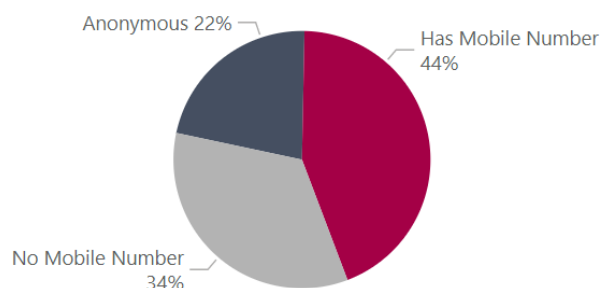
Data Collection Consent Compliance per Pathway

Pathway Type	Consent Given	Consent Not Given	Consent Not Yet Recorded
Spinal (Cervicothoracic Degenerative) Pathway (BSR)	81.9%	1.6%	16.5%
Spinal (Deformity) Pathway (BSR)	70.4%	1.0%	28.5%
Spinal (Infection) Pathway (BSR)	67.1%	3.3%	29.6%
Spinal (Intradural) Pathway (BSR)	77.4%	1.3%	21.3%
Spinal (Lumbar Degenerative) Pathway (BSR)	78.7%	1.8%	19.5%
Spinal (Night Bracing) Pathway (BSR) (BASIS)	93.3%	0.7%	5.9%
Spinal (Trauma) Pathway (BSR)	62.0%	2.0%	36.0%
Spinal (Tumour) Pathway (BSR)	71.8%	1.7%	26.5%
Total	77.6%	1.7%	20.6%

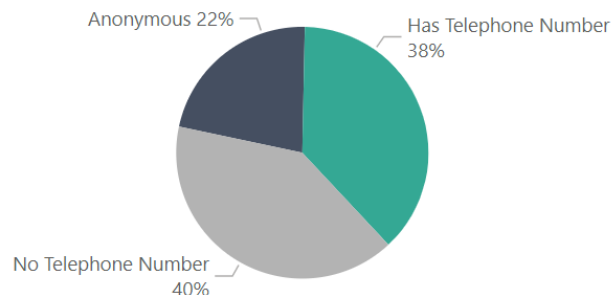
Email Address Present



Mobile Number Present



Telephone Number Present

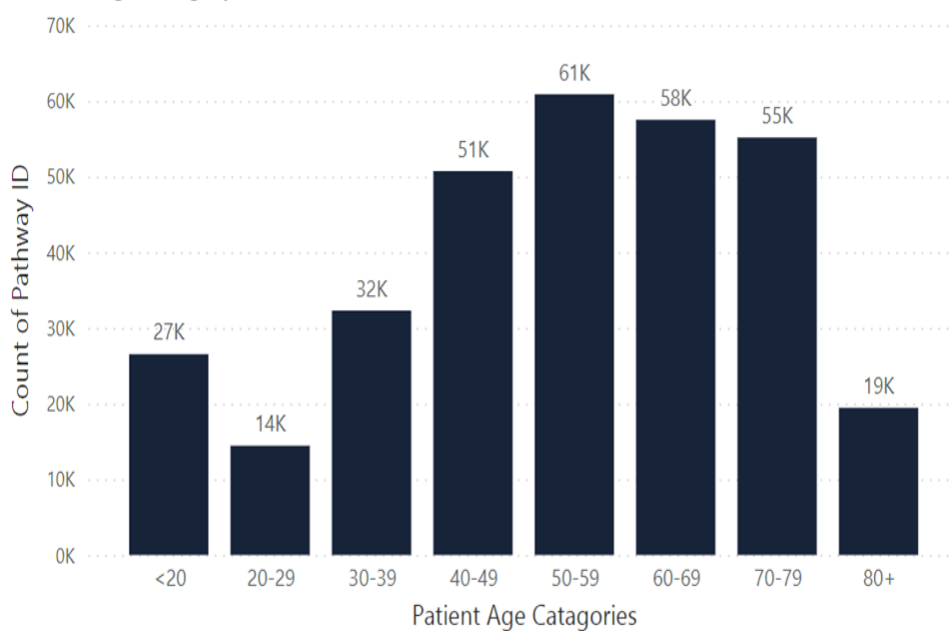


Patient's Age at Time of Treatment

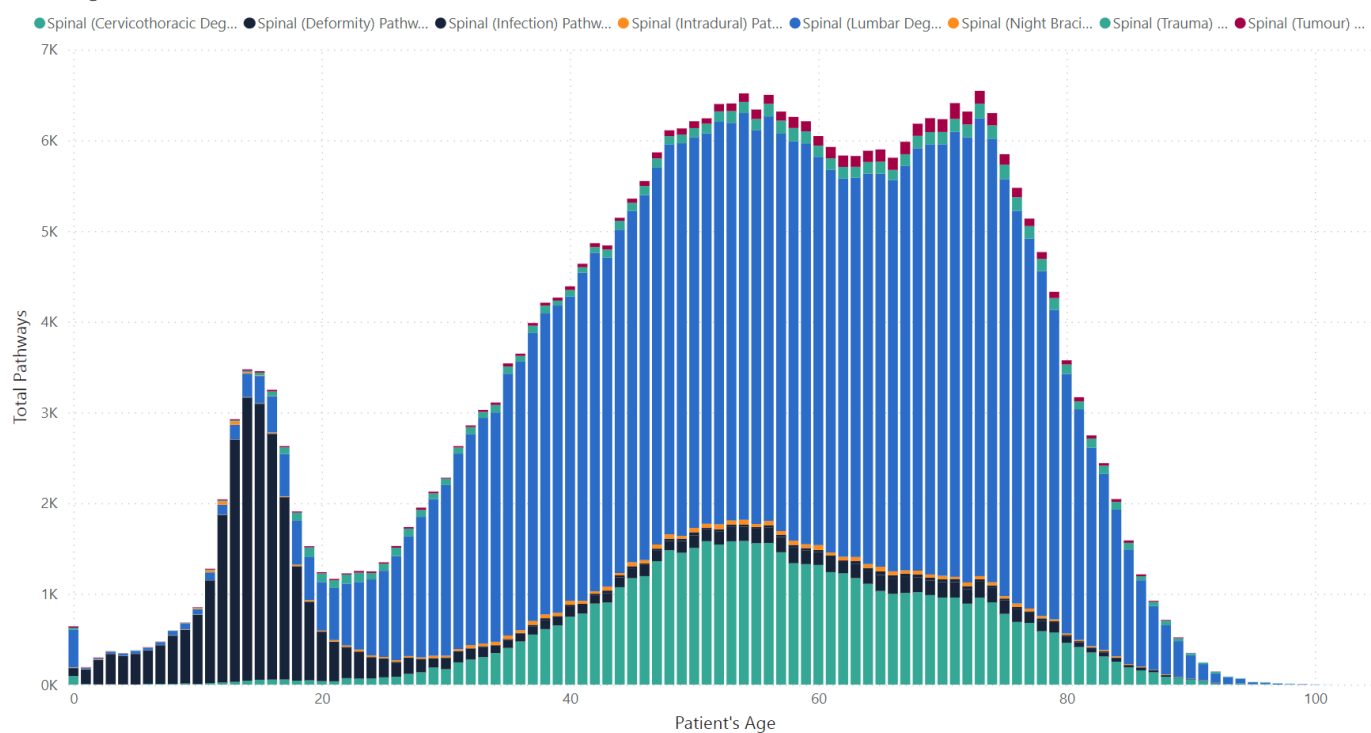
Patient's Age at Time of Treatment - Categorised and Shown as a Percentage of the Whole Registry

Pathway Type	<20	20-29	30-39	40-49	50-59	60-69	70-79	80+
Spinal (Cervicothoracic Degenerative) Pathway (BSR)	0.16%	0.28%	1.27%	3.45%	4.68%	3.48%	2.50%	0.81%
Spinal (Deformity) Pathway (BSR)	6.91%	0.82%	0.32%	0.34%	0.47%	0.48%	0.44%	0.13%
Spinal (Infection) Pathway (BSR)	0.02%	0.01%	0.03%	0.06%	0.08%	0.10%	0.08%	0.02%
Spinal (Intradural) Pathway (BSR)	0.03%	0.05%	0.10%	0.12%	0.14%	0.13%	0.10%	0.03%
Spinal (Lumbar Degenerative) Pathway (BSR)	1.08%	3.10%	8.25%	11.74%	13.29%	13.29%	13.59%	4.86%
Spinal (Night Bracing) Pathway (BSR) (BASIS)	0.04%							
Spinal (Trauma) Pathway (BSR)	0.14%	0.27%	0.23%	0.27%	0.40%	0.40%	0.45%	0.25%
Spinal (Tumour) Pathway (BSR)	0.05%	0.05%	0.08%	0.15%	0.29%	0.41%	0.37%	0.08%
Total	8.44%	4.59%	10.27%	16.12%	19.35%	18.28%	17.54%	6.18%

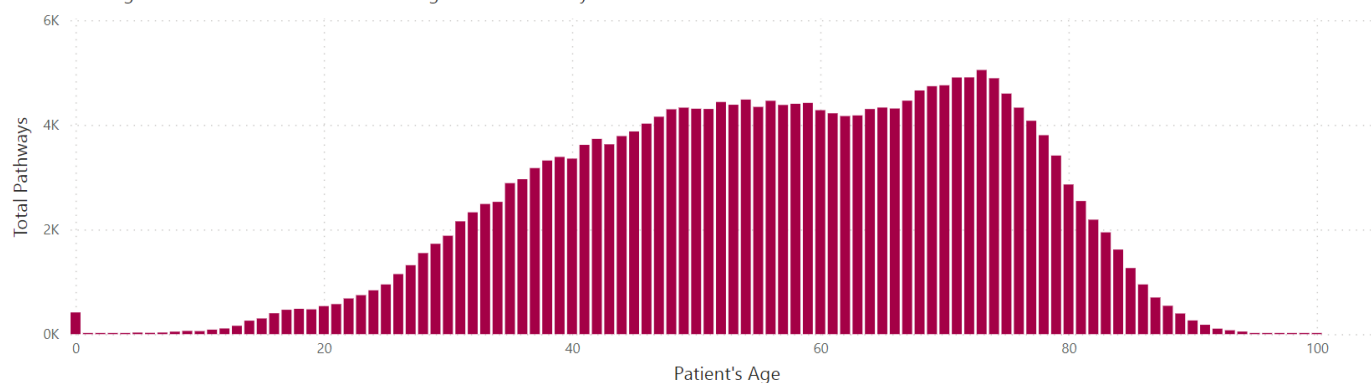
Patient's Age Category at Time of Treatment



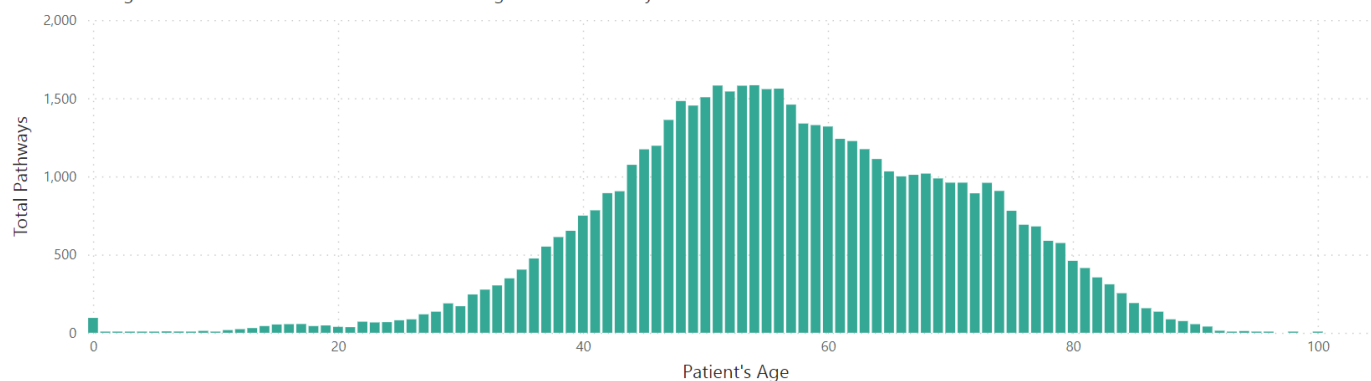
Patient Age at Time of Treatment



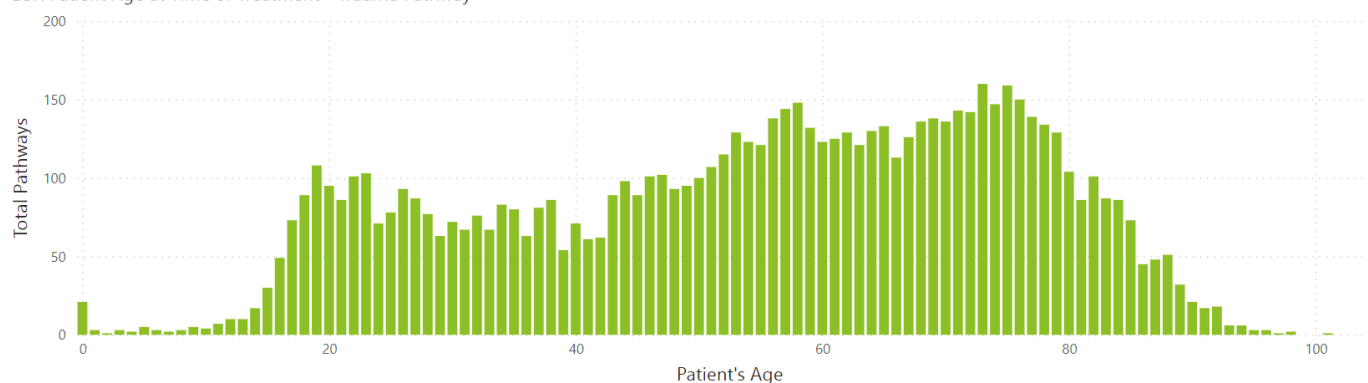
BSR Patient Age at Time of Treatment - Lumbar Degenerative Pathway



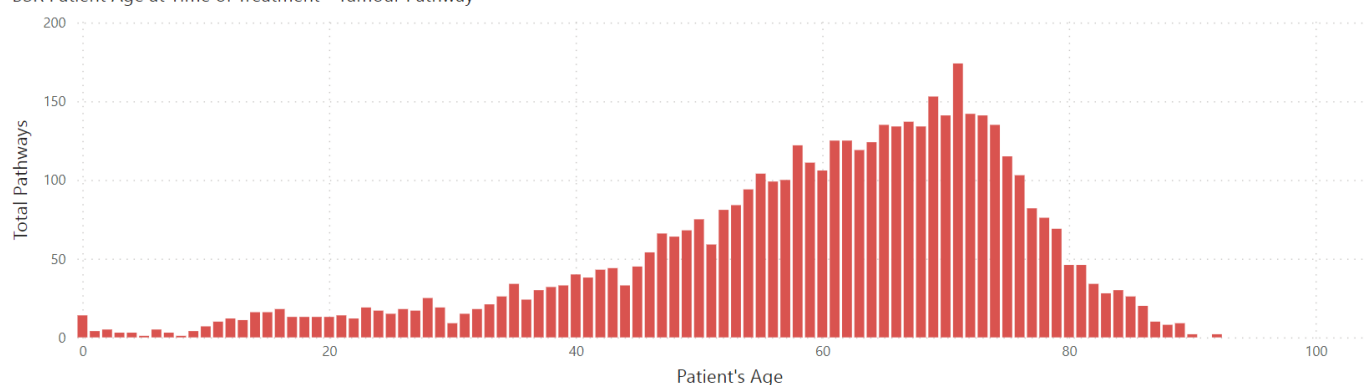
BSR Patient Age at Time of Treatment - Cervicothoracic Degenerative Pathway



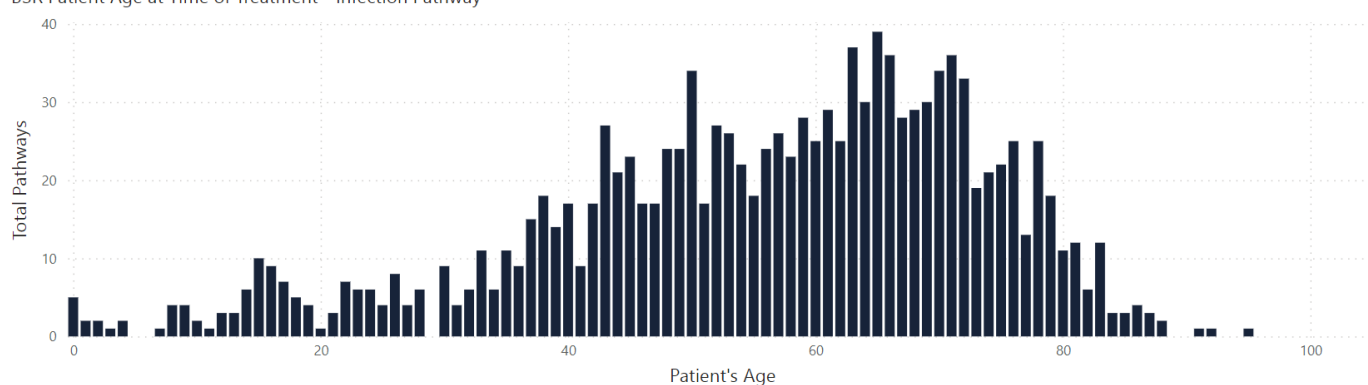
BSR Patient Age at Time of Treatment - Trauma Pathway



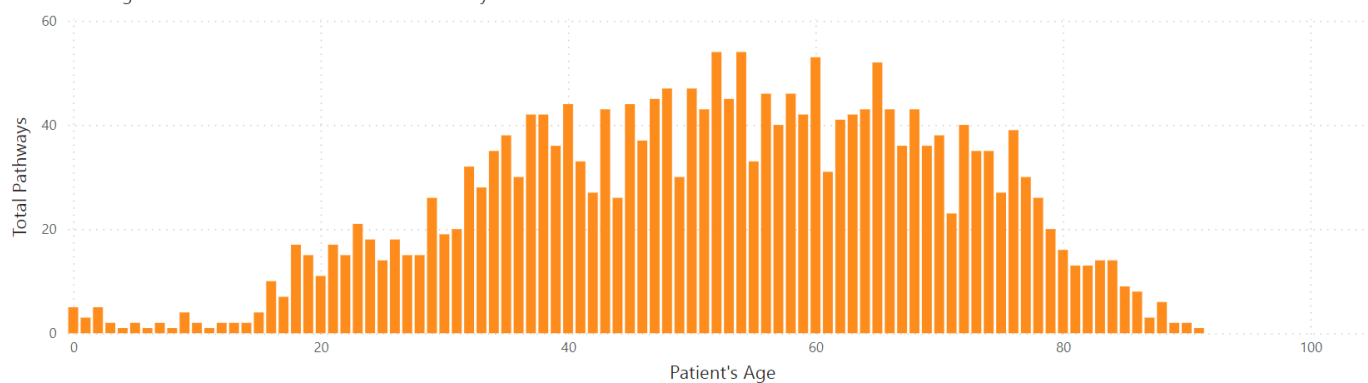
BSR Patient Age at Time of Treatment - Tumour Pathway



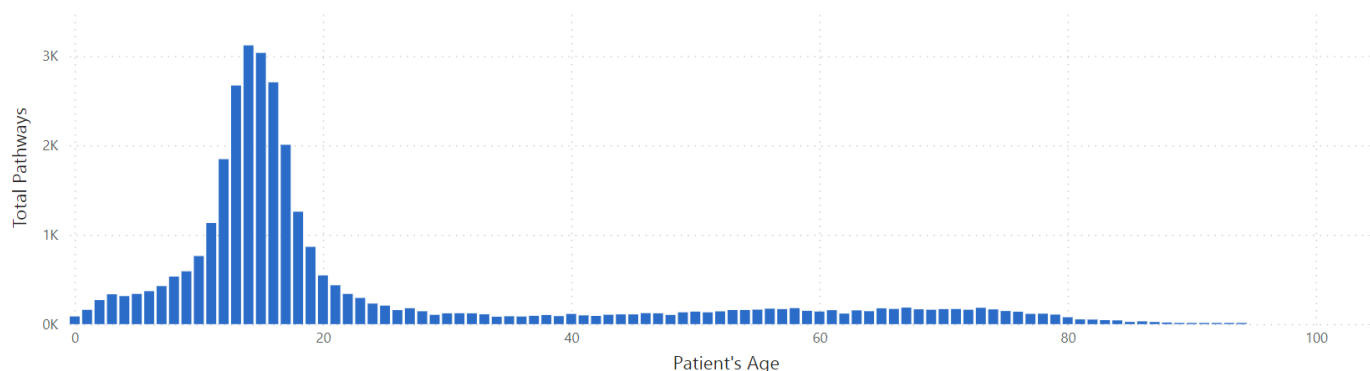
BSR Patient Age at Time of Treatment - Infection Pathway



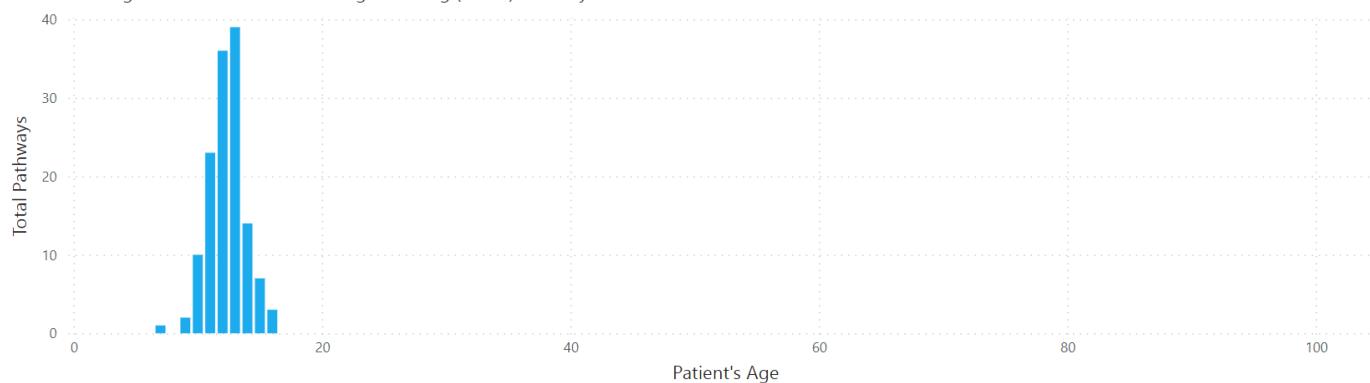
BSR Patient Age at Time of Treatment - Intradural Pathway



BSR Patient Age at Time of Treatment - Deformity Pathway

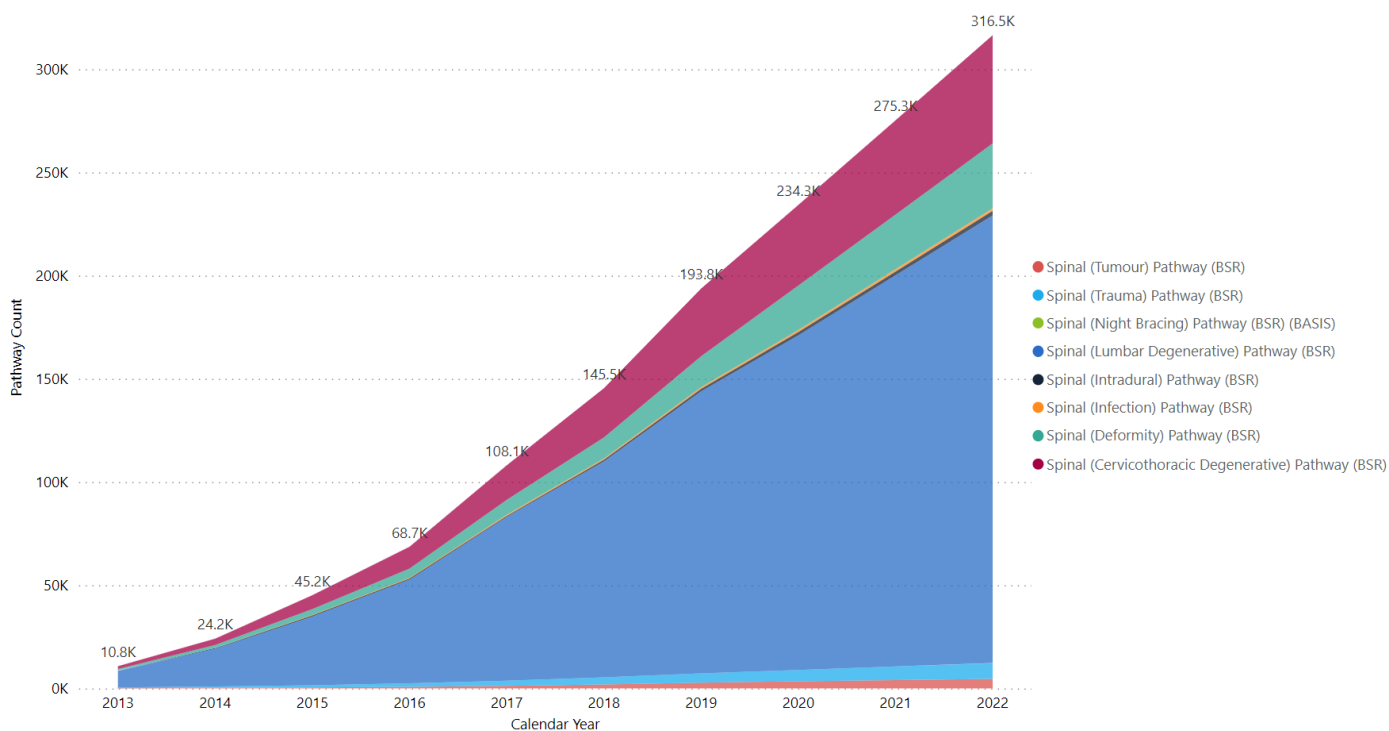


BSR Patient Age at Time of Treatment - Night Bracing (BASIS) Pathway

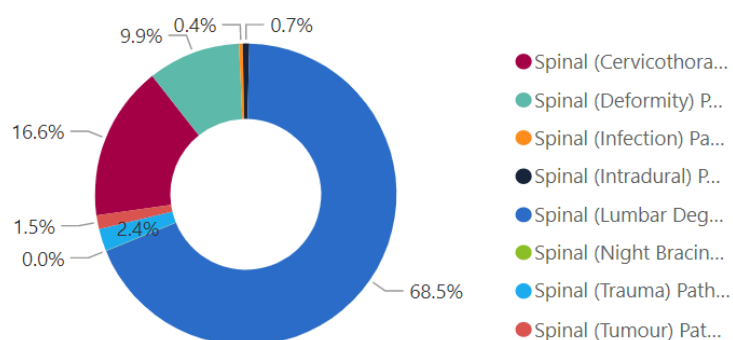


BSR Pathway Numbers

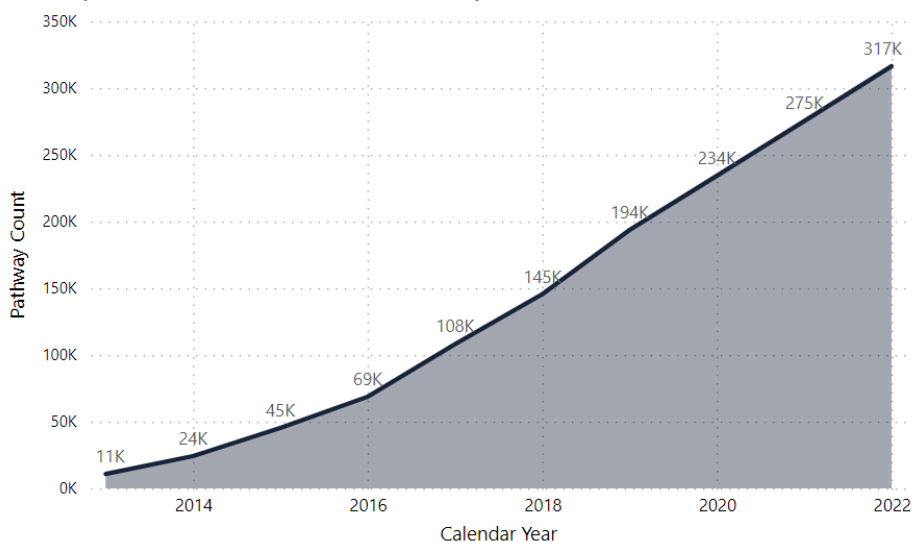
Pathway Count Year-on-Year by Type



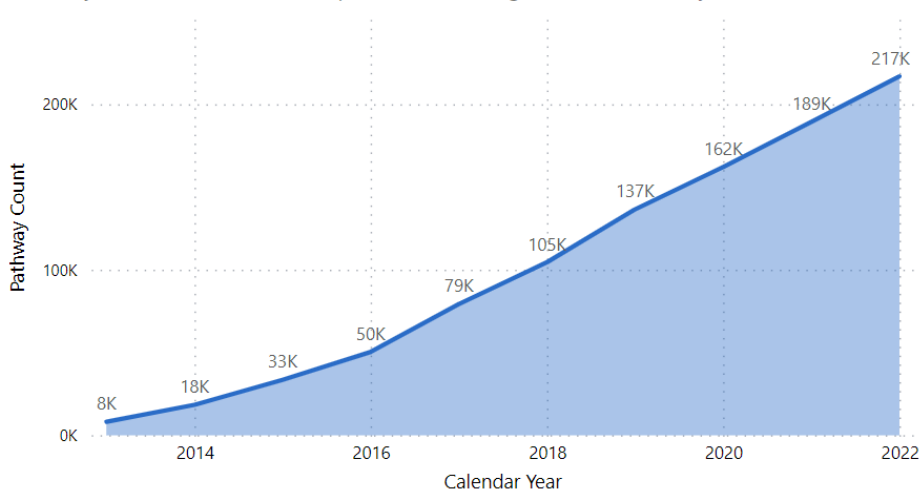
BSR Pathways by Type



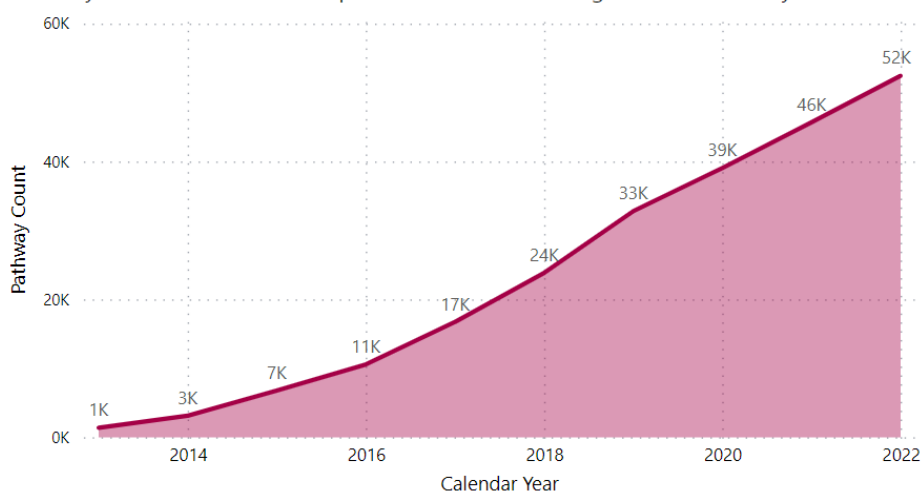
Pathway Count Year-on-Year - All BSR Pathways



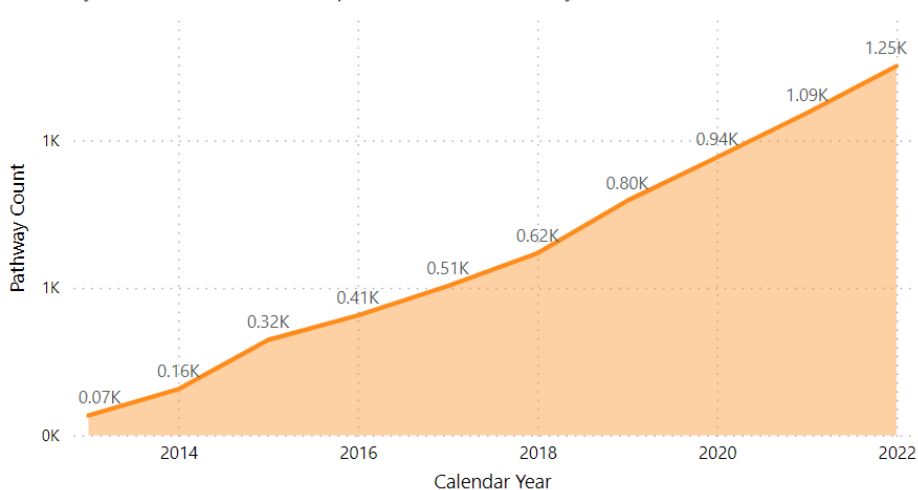
Pathway Count Year-on-Year - Spinal Lumbar Degenerative Pathway



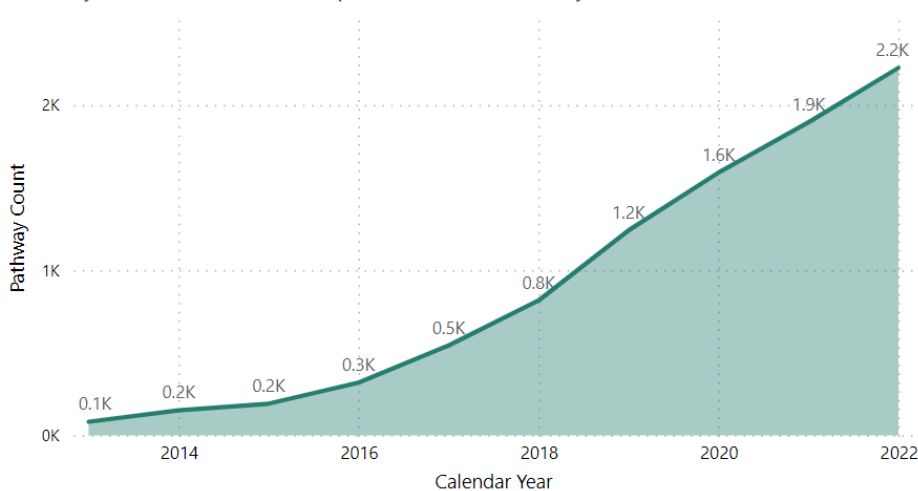
Pathway Count Year-on-Year - Spinal Cervicothoracic Degenerative Pathway



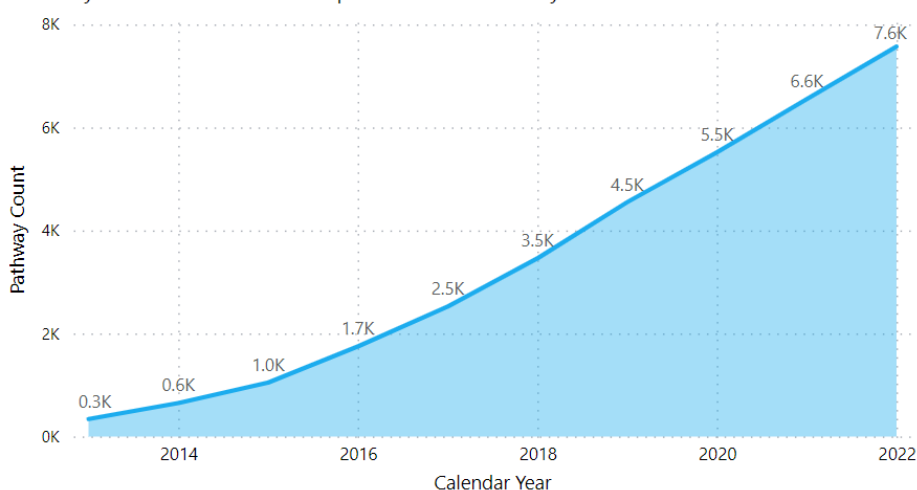
Pathway Count Year-on-Year - Spinal Infection Pathway



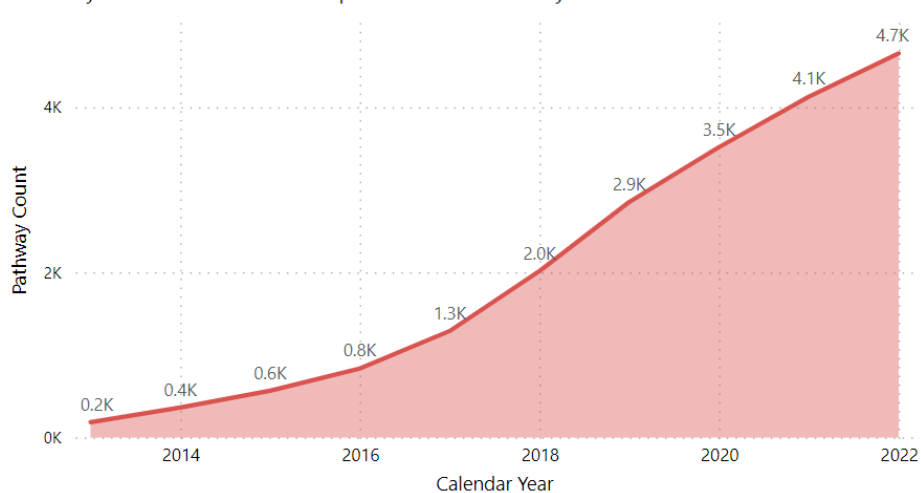
Pathway Count Year-on-Year - Spinal Intradural Pathway



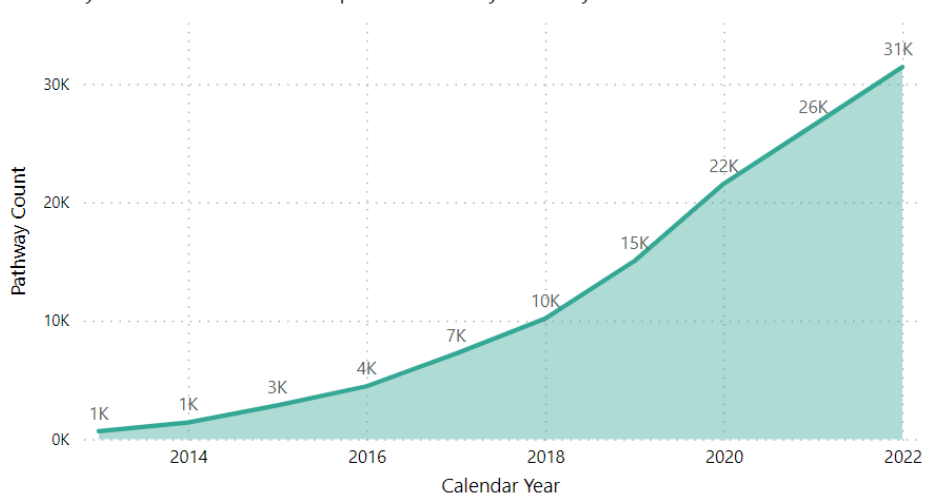
Pathway Count Year-on-Year - Spinal Trauma Pathway



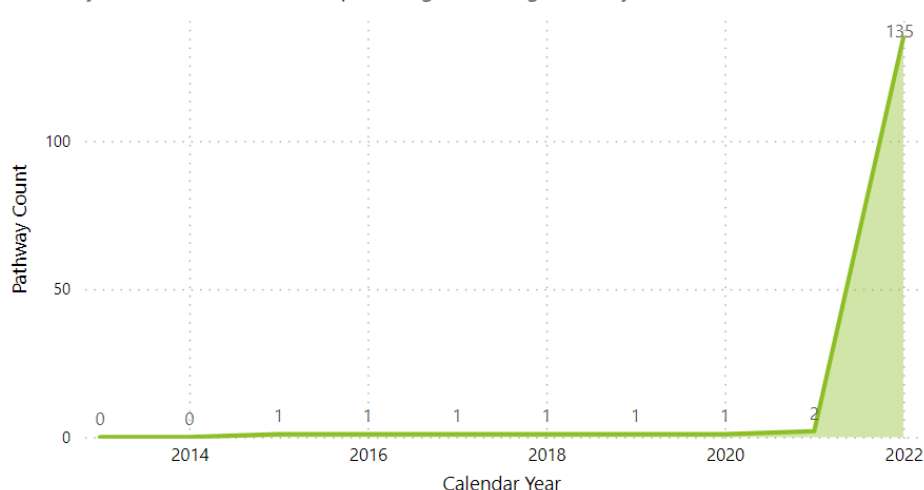
Pathway Count Year-on-Year - Spinal Tumour Pathway



Pathway Count Year-on-Year - Spinal Deformity Pathway



Pathway Count Year-on-Year - Spinal Night Bracing Pathway



Clinical Data

As of January 2023, there are 86,437 Primary Lumbar Decompressions recorded on the BSR, of those 44,158 include a Discectomy. The complication rate for Primary Lumbar Decompressions on the BSR is 5.64%.

Clinician Completable Forms on the BSR

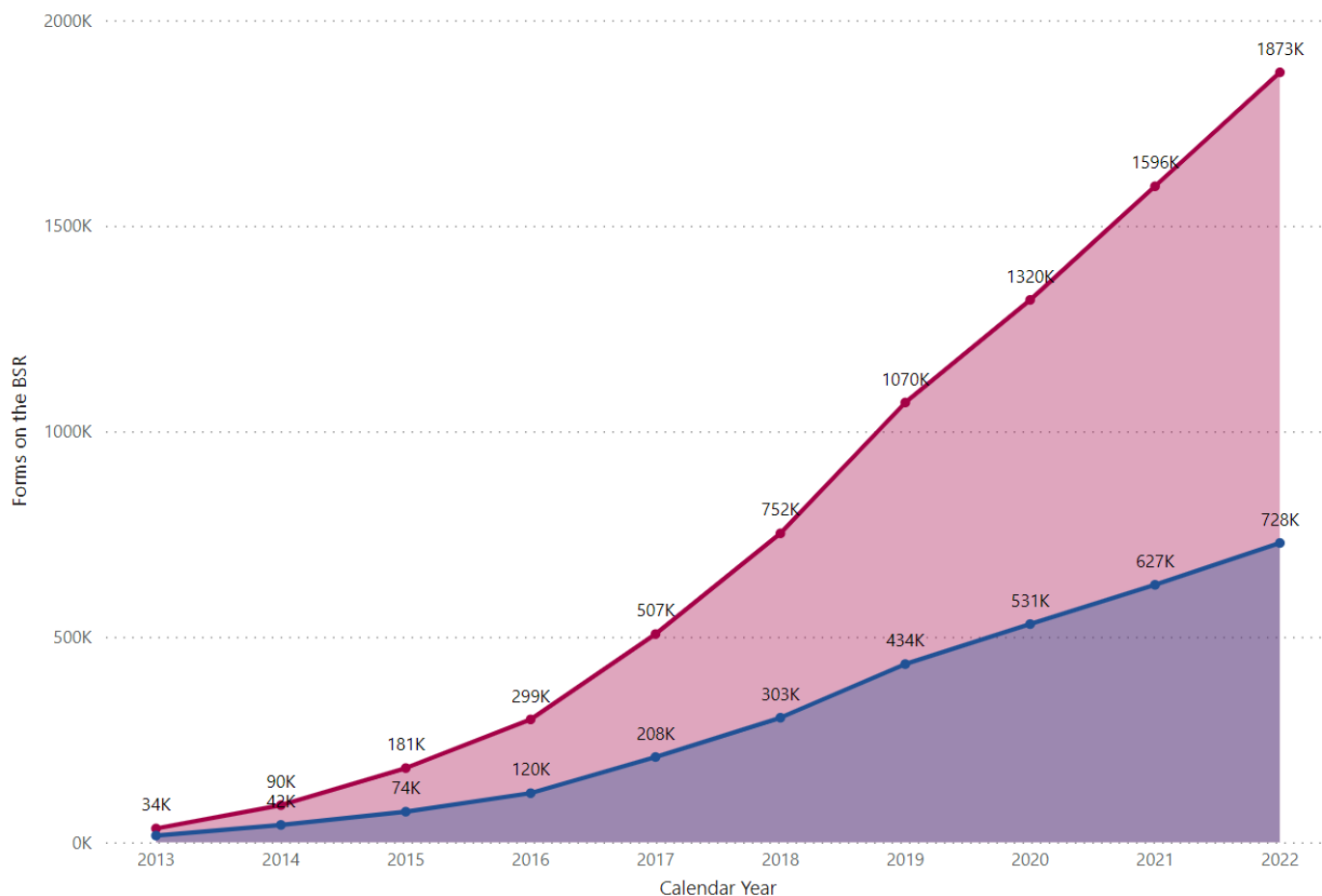
Form Category	Total Completed
Assessment	43452
Assessment With Score	167560
Classification	2
Complication Record	214232
Diagnosis Recorded	8337
End Point	2136
Non-operative Intervention	170
Notes	29408
Other	558
Procedure	210231
Review	52223
Treatment	8
Total	728317

Patient Completable Forms on the BSR

Form Category	Total Completed
Assessment	88302
Assessment With Score	104504
Complication Record	5
Diagnosis Recorded	53108
Outcome Score	1531623
y. Friends and Family	95855
Total	1873397

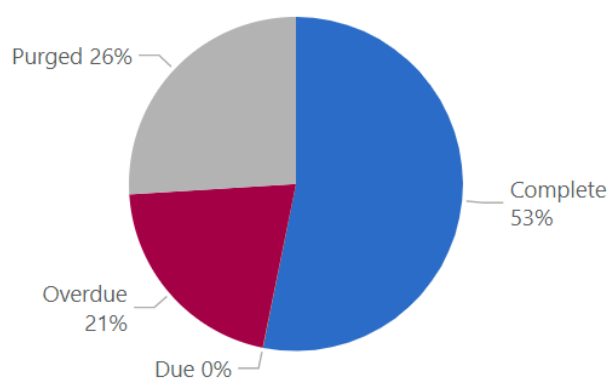
Completed Forms on the BSR

● Patient Completable Forms on the BSR ● Clinician Completable Forms on the BSR

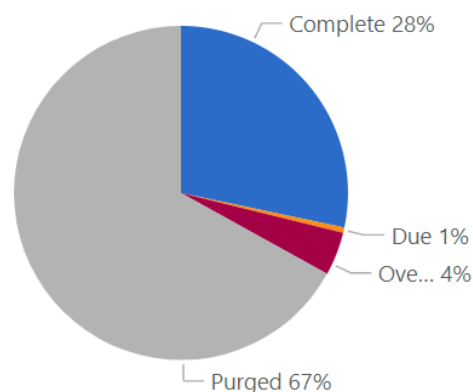


PROMs

Pre-Op Compliance



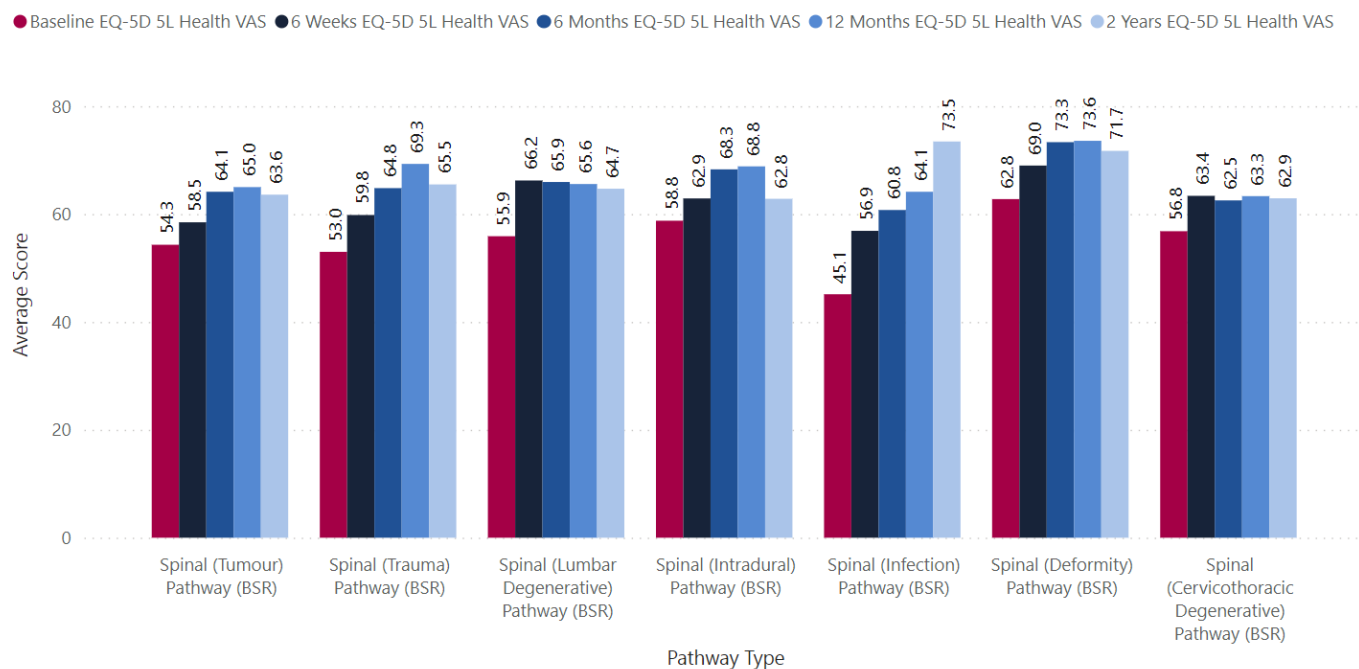
Post-Op Compliance



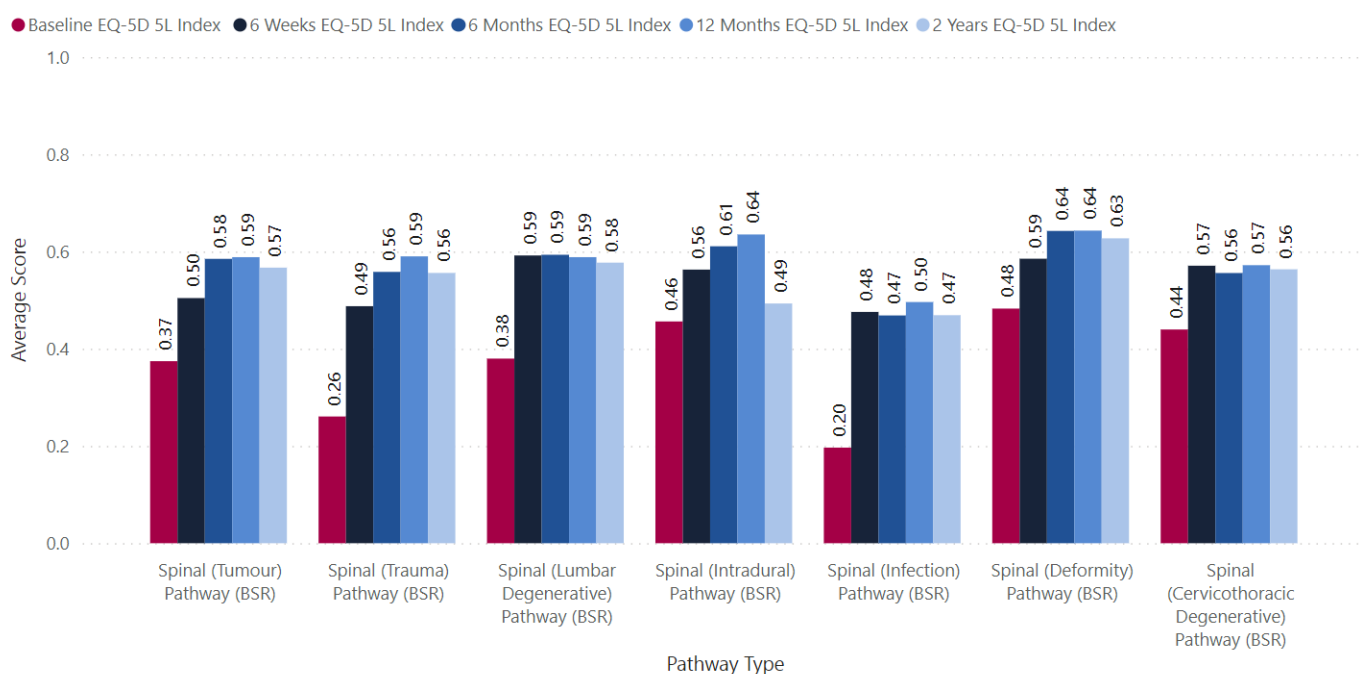
Graphs show an average compliance for all BSR pathways,
Percentages are of the total number of forms due or past due date i.e. excludes those which are not yet due.

The EQ-5D 5L score is used to determine compliance as this is a universal measure used on all pathways at all timepoints.

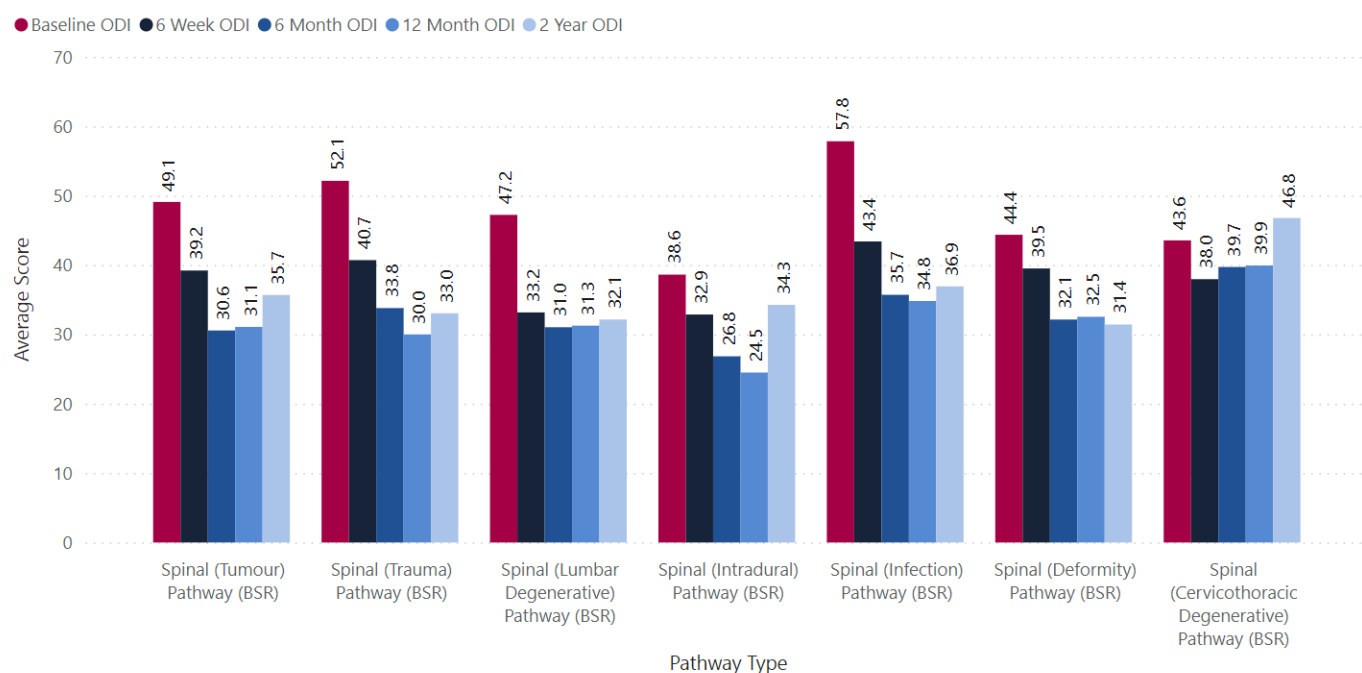
Average of EQ-5D 5L Health VAS per Pathway Type



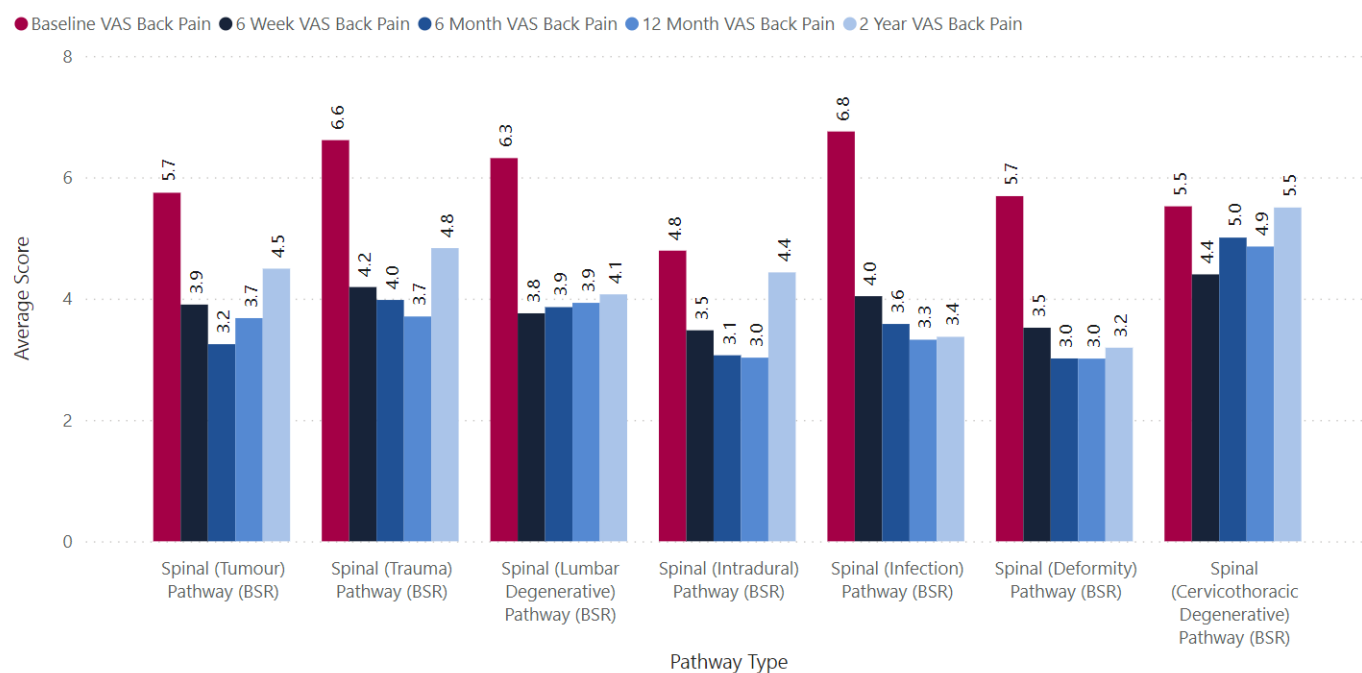
Average of EQ-5D 5L Index per Pathway Type



Average Oswestry Disability Index per Pathway Type

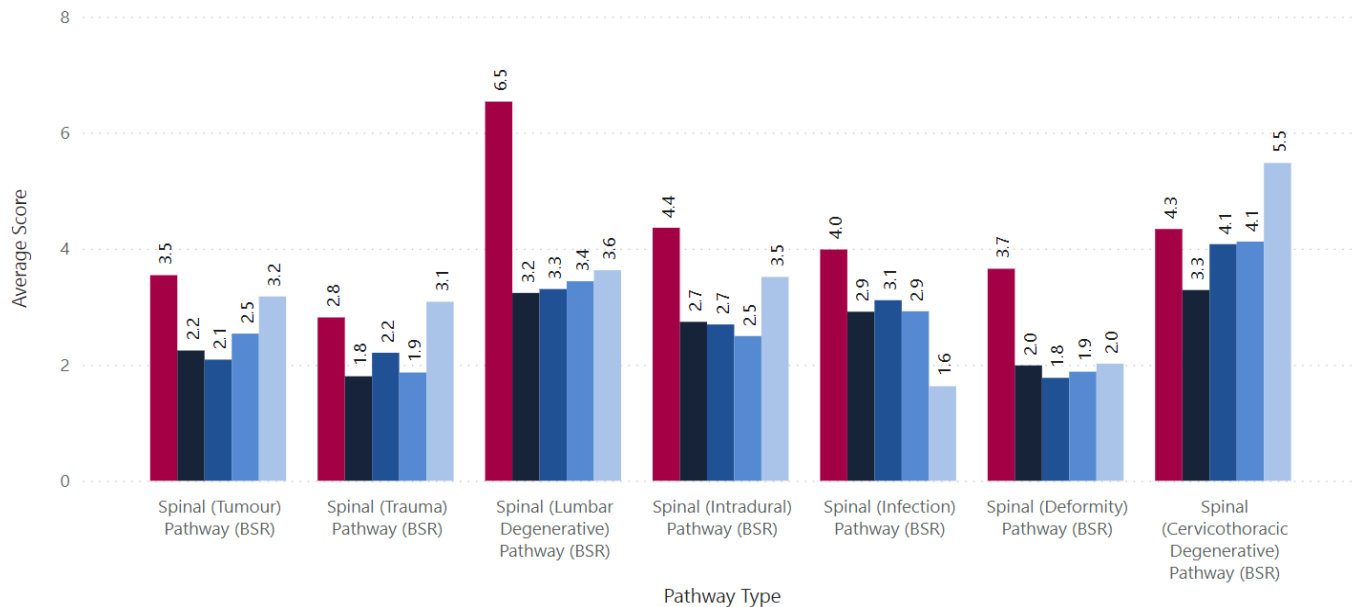


Average VAS (Back & Leg) - Back Pain per Pathway Type

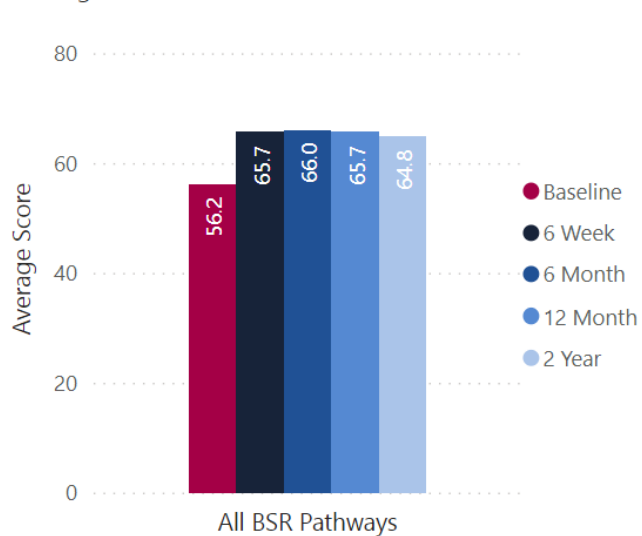


Average VAS (Back & Leg) - Leg Pain (Worst) per Pathway Type

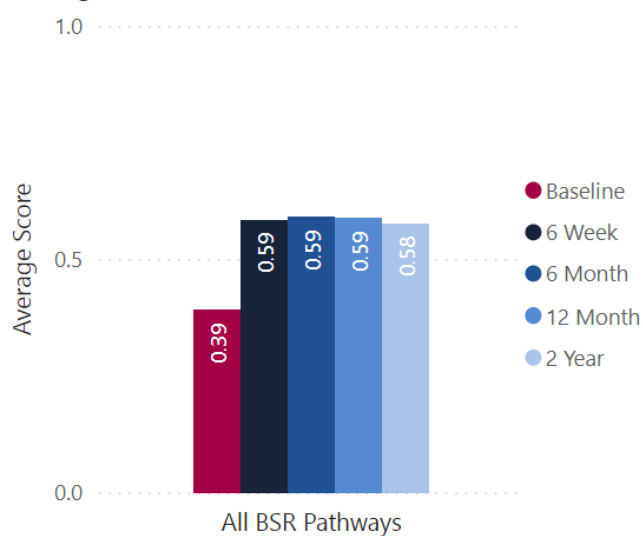
● Baseline VAS Leg Pain (Worst) ● 6 Week VAS Leg Pain (Worst) ● 6 Month VAS Leg Pain (Worst) ● 12 Month VAS Leg Pain (Worst) ● 2 Year VAS Leg Pain (Worst)



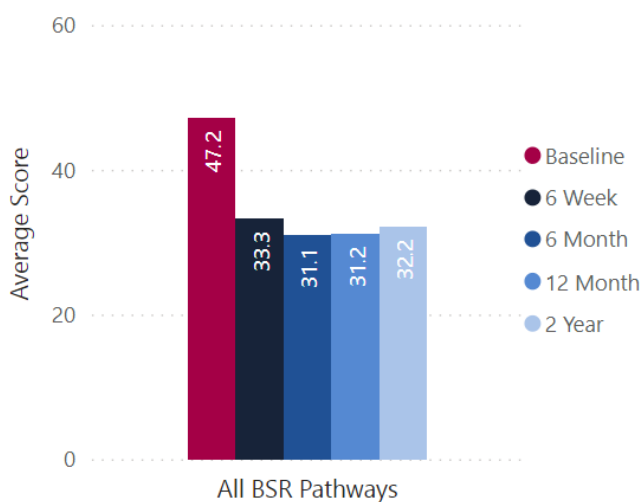
Average of EQ-5D 5L Health VAS



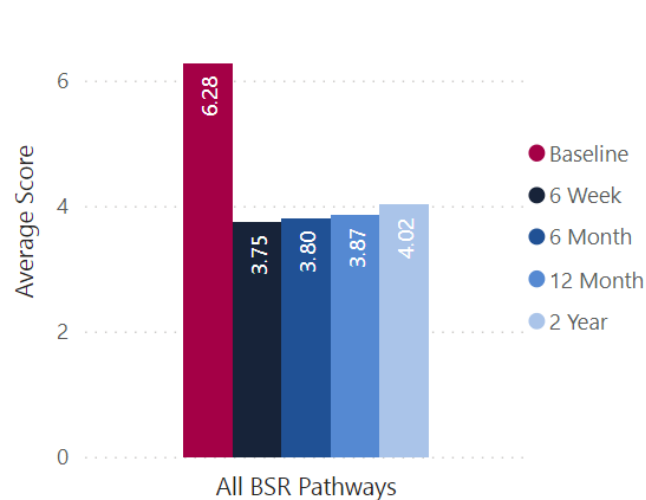
Average of EQ-5D 5L Index



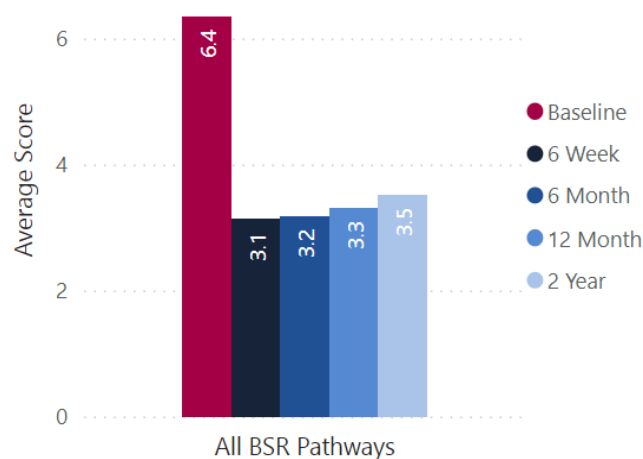
Average Oswestry Disability Index



Average VAS (Back & Leg) - Back Pain



Average VAS (Back & Leg) - Leg Pain (Worst)



Best Practice Tariff (BPT)

In 2019/20, NHS England and NHS Improvement introduced a BPT to improve the proportion of spinal surgery cases entered into the BSR. This BPT aims to support meaningful comparison and analysis of spinal surgery and help to reduce variation in the treatment and outcomes for patients. The BPT price is made up of two components: a base price and a BPT price (based on a conditional top-up payment added to the base price). The base price is payable for all activity, irrespective of whether the provider has met best practice characteristics. The BPT conditional top-up price is payable only if the provider meets the 50% case ascertainment rate.

The introduction of BPT has improved the compliance of data collection for BSR because of the financial incentive. This was temporarily halted during the COVID time but reintroduced now.

Provider performance is calculated and published quarterly for each centre providing spinal service. This was done by matching individual records in BSR with corresponding records of patient spells in SUS (Secondary Uses Service). The total number of matched records was divided by the total number of relevant spells in SUS to derive the ascertainment rate.

There were issues around consent. So, NHS England and NHS Improvement have decided to change the basis on which the ascertainment rate is calculated. This means that only patients who have actively given consent, recorded correctly in BSR, for their data to be used will be counted in the numerator. All patient spells in SUS will continue to be counted in the denominator.

British Spine Registry & Industry

The relationship between BSR (British Spine Registry) & the Association of British Healthcare Technology Industries (ABHI) did not progress further. The registry has independently developed relationship with different device companies. BSR has sold anonymised dataset regarding the outcome of devices to various companies. This was useful to get some revenue, which helps BASS with the annual expenses for maintenance of the registry.

BSR is also developing collaboration with NEC (Software Company) to provide useful data to industry to support their application for ODEP rating for spinal implants.

Thanks to Amplitude and in particular to Rhiannon Hornett for the data provided in this report.