



## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

**Registry name:** Australian Orthopaedic Association National Joint Replacement

### Registry

**Country/Region:** Australia

**Total population of area covered by the registry:** 26 268 359

**Scope of registry:** National

**Website:** <https://aoanjrr.sahmri.com/>

**Year started:** 1999

**Which joints does the registry cover:** Hip, Knee, Shoulder, Ankle, Elbow, Spinal Disc Replacement; Wrist

**Data owners:** Australian Orthopaedic Association

**Preferred contact:** [admin@aoanjrr.org.au](mailto:admin@aoanjrr.org.au)

### Registry input

#### *General*

**Funding:** Government

**Patient consent:** Opt-out

#### *Data collection*

**Patient identifier:** Name/birthday/postal code

**Possibility for linkage** to other data sources: Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes, only de-identified

Aggregate data: Yes, only de-identified

**Source of implant details:** Catalogue number

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

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**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 99

### Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2021

**Completeness of procedure registration (%)**, (N procedures captured in registry/total N of procedures):

Primary hip procedures (%):	99.2	Revision hip procedures (%):	99.2
Primary knee procedures (%):	99.2	Revision knee procedures (%):	99.2
Shoulder procedures (%):	99.2	Revision shoulder procedures (%):	99.2
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** Comparison to state and territory health records (hospital and patient identity numbers with subsequent verification undertaken using procedure codes and admission dates)

**Proportion successful linkage revision-primary (%):** 99

**Response rates PROs hip elective procedures (%):** Before surgery: 84.67; 1 year after surgery: 74.12 (six months post op); Both:

**Response rates PROs knee elective procedures (%):** Before surgery: 83.17; 1 year after surgery: 72.3 (six months post op); Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: 72.6; 1 year after surgery: 55.74 (six months post op); Both:

### Registry output

#### Outcomes reported

**Definition of revision that the registry applies:** Removal, exchange or addition of one or more components

**All-cause revision:** Yes      **Specific causes of revision assessed:**

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*):

**Definition of reoperation that the registry applies:** An additional procedure on a joint that has previously received a prosthesis, but it does not involve removal, exchange or addition of component.

**Reoperation:** Yes      **Specific causes of reoperation assessed:**

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Public report

### Reports/Publications

**Annual report website:** <https://aoanjrr.sahmri.com/annual-reports-2022>

**Link to website with registries' publications:** <https://aoanjrr.sahmri.com/home>

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**Registry name:** Canadian Joint Replacement Registry (CJRR)

**Country/Region:** Canada

**Total population of area covered by the registry:** 38250000

**Scope of registry:** National

**Website:** [www.cihi.ca/cjrr](http://www.cihi.ca/cjrr)

**Year started:** 2001

**Which joints does the registry cover:** Hip;Knee

**Data owners:** Public authority

**Preferred contact:** [cihi@cihi.ca](mailto:cihi@cihi.ca)

### Registry input

#### *General*

**Funding:** Government

**Patient consent:** Data providers must meet their own jurisdiction's applicable laws and policies.

#### *Data collection*

**Patient identifier:** Jurisdiction health card number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode ;Catalogue number

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 65.90

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## Completeness

**Definition:** Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2022-2023

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	71.6	Revision hip procedures (%):	67.3
Primary knee procedures (%):	73.3	Revision knee procedures (%):	65.4
Shoulder procedures (%):	N/A	Revision shoulder procedures (%):	N/A
Completeness other joints:	N/A		

**Data source(s) for assessment of coverage and completeness:** National hospitalization and ambulatory care databases (Discharge Abstract Database-Hospital Morbidity Database (DAD-HMDB), National Ambulatory Care Reporting System (NACRS))

**Proportion successful linkage revision-primary (%):** 100% (all primaries in CJRR can be linked to corresponding revision in DAD-HMDB and NACRS)

**Response rates PROs hip elective procedures (%):** Before surgery: Not part of CJRR but collected in other jurisdictions.; 1 year after surgery: Not part of CJRR but collected in other jurisdictions.; Both: Not part of CJRR but collected in other jurisdictions.

**Response rates PROs knee elective procedures (%):** Before surgery: Not part of CJRR but collected in other jurisdictions.; 1 year after surgery: Not part of CJRR but collected in other jurisdictions.; Both: Not part of CJRR but collected in other jurisdictions.

**Response rates PROs shoulder elective procedures (%):** Before surgery: N/A; 1 year after surgery: N/A; Both: N/A

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Hip or knee replacement surgery following primary replacement surgery on same joint and joint side where at least one component is involved.

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** N/A

**Definition of reoperation that the registry applies:** Any subsequent joint-related intervention performed on the same joint and joint side (as part of inpatient stay or outpatient visit).

**Reoperation:** No      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** No      If Yes:

## Reports/Publications

**Annual report website:** <https://www.cihi.ca/en/cjrr-annual-report-hip-and-knee-replacements-in-canada-series>

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**Link to website with registries' publications:** [https://www.cihi.ca/en/canadian-joint-replacement-registry-cjrr#cjrr\\_annual\\_report\\_and\\_other\\_analyses](https://www.cihi.ca/en/canadian-joint-replacement-registry-cjrr#cjrr_annual_report_and_other_analyses)

**Other (if any):** <https://www.cihi.ca/en/canadian-joint-replacement-registry-metadata>



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### **Registry name:** Danish Hip Arthroplasty Register

**Country/Region:** Denmark

**Total population of area covered by the registry:** 6000000

**Scope of registry:** National

**Website:** [Www.dhr.dk](http://www.dhr.dk)

**Year started:** 1995

**Which joints does the registry cover:** Hip

**Data owners:** Public authority

**Preferred contact:** [Soeren.overgaard@regionh.dk](mailto:Soeren.overgaard@regionh.dk)

### Registry input

#### *General*

**Funding:** Government

**Patient consent:** Registration mandatory

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Pre-specified list of implants

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%), (N participating/total N of hospitals):** 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** Yearly 2022

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	98	Revision hip procedures (%):	95
Primary knee procedures (%):	N/A	Revision knee procedures (%):	N/A
Shoulder procedures (%):	N/A	Revision shoulder procedures (%):	N/A
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** Hip Register and national register

**Proportion successful linkage revision-primary (%):** Hip Register and national register

**Response rates PROs hip elective procedures (%):** Before surgery: No; 1 year after surgery: No; Both:

**Response rates PROs knee elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Revision and DAIR

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):**

**Definition of reoperation that the registry applies:** Implant removal and DAIR

**Reoperation:** Yes      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** Yes      If Yes: Public report

### Reports/Publications

**Annual report website:** DHR.dk

**Link to website with registries' publications:** Dhr.dk

**Other (if any):**



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### **Registry name:** Danish Knee Arthroplasty Registry

**Country/Region:** Denmark

**Total population of area covered by the registry:** 5800000

**Scope of registry:** National

**Website:** <https://www.rkkp.dk/kvalitetsdatabaser/databaser/dansk-knaealloplastik-register/>

**Year started:** 1997

**Which joints does the registry cover:** Knee

**Data owners:** Public authority

**Preferred contact:** chairman Martin Lindberg-Larsen (ao@knee.dk)

### Registry input

#### *General*

**Funding:** Public institution

**Patient consent:** Registration mandatory

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Pre-specified list of implants

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%), (N participating/total N of hospitals):** 100 (42/42)

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2021

**Completeness of procedure registration (%)**, (N procedures captured in registry/total N of procedures):

Primary hip procedures (%):	Revision hip procedures (%):
Primary knee procedures (%): 97	Revision knee procedures (%): 96
Shoulder procedures (%):	Revision shoulder procedures (%):
Completeness other joints:	

**Data source(s) for assessment of coverage and completeness:** Danish National Patient Registry

**Proportion successful linkage revision-primary (%):** 100

**Response rates PROs hip elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs knee elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** removal, exchange or addition of whole or entire total or partial arthroplasty

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 3

**Definition of reoperation that the registry applies:** Only revision defined in point 38 are included in registry

**Reoperation:** No      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** Yes      If Yes: Public report

### Reports/Publications

**Annual report website:** <https://www.sundhed.dk/sundhedsfaglig/kvalitet/kliniske-kvalitetsdatabaser/planlagt-kirurgi/knaealloplastikregister/>

**Link to website with registries' publications:** <https://www.rkkp.dk/data-til-forskning/projektoversigt-og-publikationer/#Knaealloplastik>

**Other (if any):**



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### **Registry name:** Egyptian Community Arthroplasty Registry

**Country/Region:** Egypt

**Total population of area covered by the registry:** 109 000 000

**Scope of registry:** National;Regional

**Website:** <http://emra-eg.org/>

**Year started:** 2006

**Which joints does the registry cover:** Hip;Knee

**Data owners:** Health care provider

**Preferred contact:** Prof. Mahmoud Hafez, mhafez@msn.com

### Registry input

#### *General*

**Funding:**

**Patient consent:**

#### *Data collection*

**Patient identifier:** Name/birthday/postal code

**Possibility for linkage to other data sources:** Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode

**Unique Device Identifier (UDI) recorded:**

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals):

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:**

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	Revision hip procedures (%):
Primary knee procedures (%):	Revision knee procedures (%):
Shoulder procedures (%):	Revision shoulder procedures (%):
Completeness other joints:	

**Data source(s) for assessment of coverage and completeness:**

**Proportion successful linkage revision-primary (%):**

**Response rates PROs hip elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs knee elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:**

**All-cause revision:**                      **Specific causes of revision assessed:**

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:**

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*):

**Definition of reoperation that the registry applies:**

**Reoperation:**                      **Specific causes of reoperation assessed:**

**Patient-reported outcomes:** Generic: , Joint-specific: , Satisfaction:

**Implant outlier identification:** If Yes:

### Reports/Publications

**Annual report website:**

**Link to website with registries' publications:**

**Other (if any):**



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### **Registry name:** German Arthroplasty Registry (EPRD)

**Country/Region:** Germany

**Total population of area covered by the registry:** 84270625

**Scope of registry:** National

**Website:** <https://www.eprd.de>

**Year started:** 2012

**Which joints does the registry cover:** Hip, Knee

**Data owners:** Orthopaedic society

**Preferred contact:** [info@eprd.de](mailto:info@eprd.de)

### Registry input

#### *General*

**Funding:** German Society of Orthopaedics and Orthopaedic Surgery, Public Healthcare Insurance, Government, Industry

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** Pseudonymisation by insurance number and date of (patients) birthday

**Possibility for linkage** to other data sources: Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Catalogue number, Implant barcode, Pre-specified list of implants

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 68

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2022

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	70	Revision hip procedures (%):	n.a.
Primary knee procedures (%):	70	Revision knee procedures (%):	n.a.
Shoulder procedures (%):	n.a.	Revision shoulder procedures (%):	n.a.
Completeness other joints:	n.a.		

**Data source(s) for assessment of coverage and completeness:** National coverage: Institut für Qualitätssicherung und Transparenz im Gesundheitswesen (IQTIG), Completeness of revision (data linkage) Public Health Insurance companies AOK and vdek

**Proportion successful linkage revision-primary (%):** 99

**Response rates PROs hip elective procedures (%):** Before surgery: n.a.; 1 year after surgery: n.a.; Both: n.a.

**Response rates PROs knee elective procedures (%):** Before surgery: n.a.; 1 year after surgery: n.a.; Both: n.a.

**Response rates PROs shoulder elective procedures (%):** Before surgery: n.a.; 1 year after surgery: n.a.; Both: n.a.

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Revision is defined as removal or exchange of components, including complementary surgery such as secondary patella resurfacing.

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 300 cases from at least 3 hospitals

**Definition of reoperation that the registry applies:** Same as revision.

**Reoperation:** Yes      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: No, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Internal report

### Reports/Publications

**Annual report website:** <https://www.eprd.de/en/downloads/reports>

**Link to website with registries' publications:** <https://www.eprd.de/en/downloads/papers>

**Other (if any):**



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### **Registry name:** Finnish Arthroplasty Register

**Country/Region:** Finland

**Total population of area covered by the registry:** 5 500 000

**Scope of registry:** National

**Website:** [www.thl.fi/far](http://www.thl.fi/far)

**Year started:** 1980

**Which joints does the registry cover:** Hip;Knee;Shoulder;Ankle;Elbow;Spine

**Data owners:** Public authority

**Preferred contact:** [jutta.jarvelin@thl.fi](mailto:jutta.jarvelin@thl.fi)

### Registry input

#### *General*

**Funding:** Government;Industry

**Patient consent:** No patient consent needed

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%), (N participating/total N of hospitals):** 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:**

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	98	Revision hip procedures (%):	88
Primary knee procedures (%):	99	Revision knee procedures (%):	92
Shoulder procedures (%):	53	Revision shoulder procedures (%):	67
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** Administrative data

**Proportion successful linkage revision-primary (%):** 100

**Response rates PROs hip elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs knee elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Revision is defined as any surgery that involves the addition, removal, or replacement of one or more components of the prosthetic hip or knee

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*):

**Definition of reoperation that the registry applies:** Reoperation is defined as any surgery to the prosthetic hip or knee that does not involve the addition, removal, or replacement of any components of the prosthetic hip, such as osteosynthesis for periprosthetic fracture, reinsertion of the abductor muscle, lavage-debridement for prosthetic joint infection or arthrolysis for arthrofibrosis.

**Reoperation:** Yes      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** No      If Yes:

## Reports/Publications

**Annual report website:** [www.thl.fi/far](http://www.thl.fi/far)

**Link to website with registries' publications:** [www.thl.fi/far](http://www.thl.fi/far)

**Other (if any):**



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**Registry name:** Function and Outcomes Research for Comparative Effectiveness in Total Joint Replacement (FORCE-TJR)

**Country/Region:** United States of America

**Total population of area covered by the registry:** 30 000

**Scope of registry:** National

**Website:** <https://www.force-tjr.org>

**Year started:** 2010

**Which joints does the registry cover:** Hip;Knee

**Data owners:** University of Massachusetts Chan Medical School

**Preferred contact:** David.Ayers@umassmemorial.org

### Registry input

#### *General*

**Funding:** Government

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** FORCE ID

**Possibility for linkage** to other data sources: Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Catalogue number

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

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**Coverage of hospital registration (%), (N participating/total N of hospitals): >90%**

### *Completeness*

**Definition:** Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

**Reference:** United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2015

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	>90%	Revision hip procedures (%):
Primary knee procedures (%):	>90%	Revision knee procedures (%):
Shoulder procedures (%):		Revision shoulder procedures (%):
Completeness other joints:		

**Data source(s) for assessment of coverage and completeness:** Medical records from practices

**Proportion successful linkage revision-primary (%):**

**Response rates PROs hip elective procedures (%):** Before surgery: 95; 1 year after surgery: 85; Both: 80

**Response rates PROs knee elective procedures (%):** Before surgery: 95; 1 year after surgery: 85; Both: 80

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

### **Registry output**

#### *Outcomes reported*

**Definition of revision that the registry applies:** Revision is defined as any surgery that involves the addition, removal, or replacement of one or more components of the prosthetic hip or knee.

**All-cause revision:** Yes                      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*):

**Definition of reoperation that the registry applies:** FORCE-TJR does not contain reoperation.

**Reoperation:** No                                      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** No              If Yes:

#### *Reports/Publications*

**Annual report website:** Available upon request.

**Link to website with registries' publications:** <https://www.force-tjr.org/research/research/other-projects2/>

**Other (if any):**



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### **Registry name:** Geneva Arthroplasty Registry (GAR)

**Country/Region:** Geneva, Switzerland

**Total population of area covered by the registry:** 500 000

**Scope of registry:** Hospital

**Website:** None currently

**Year started:** 1996

**Which joints does the registry cover:** Hip;Knee;

**Data owners:** Hospital

**Preferred contact:** christophe.barea@hcuge.ch

### Registry input

#### *General*

**Funding:** Public institution;Research foundation;

**Patient consent:** Yes for data re-use for research projects

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode ;

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2022

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	100	Revision hip procedures (%):	>98
Primary knee procedures (%):	100	Revision knee procedures (%):	>97
Shoulder procedures (%):		Revision shoulder procedures (%):	
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** Administrative data

**Proportion successful linkage revision-primary (%):** 100

**Response rates PROs hip elective procedures (%):** Before surgery: 78; 1 year after surgery: 72; Both: 61

**Response rates PROs knee elective procedures (%):** Before surgery: 78; 1 year after surgery: 68; Both: 58

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Revision is defined as any surgery that involves the addition, removal, or replacement of one or more components of the prosthetic hip or knee.

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 50

**Definition of reoperation that the registry applies:** Reoperation is defined as any surgery to the prosthetic hip or knee that does not involve the addition, removal, or replacement of any components of the prosthetic hip, such as osteosynthesis for periprosthetic fracture, reinsertion of the abductor muscle, lavage-debridement for prosthetic joint infection or arthrolysis for arthrofibrosis.

**Reoperation:** Yes      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** No      If Yes:

## Reports/Publications

**Annual report website:** None currently. Available upon request (christophe.barea@hcuge.ch)

**Link to website with registries' publications:** <https://archive-ouverte.unige.ch/authors/view/1459>

**Other (if any):** Lessons learned from 25 years of an institutional hip and knee arthroplasty registry

<https://pubmed.ncbi.nlm.nih.gov/34910401/>

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## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

**Registry name:** Indian Society Of Hip & Knee Surgeons

**Country/Region:** India

**Total population of area covered by the registry:** 1.2 billion

**Scope of registry:** National

**Website:** www.ishks.com

**Year started:** 2007

**Which joints does the registry cover:** Hip;Knee

**Data owners:** Hospital

**Preferred contact:** Dr J A Pachore

### Registry input

#### *General*

**Funding:** Private institution

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** Name/birthday/postal code

**Possibility for linkage to other data sources:** Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: No

Aggregate data: No

**Source of implant details:** Implant barcode

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 20

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to: 2022**

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	95	Revision hip procedures (%):	12
Primary knee procedures (%):		Revision knee procedures (%):	
Shoulder procedures (%):		Revision shoulder procedures (%):	
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:**

**Proportion successful linkage revision-primary (%):** We still have not exercise

**Response rates PROs hip elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs knee elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Any Exchange of Implant is considered as revision

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** Not Done

**Definition of reoperation that the registry applies:** Not Done

**Reoperation:** No      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** No      If Yes: Internal report

### Reports/Publications

**Annual report website:** [www.ishks.com](http://www.ishks.com)

**Link to website with registries' publications:** <https://doi.org/10.1007/s43465-020-00251-y>

**Other (if any):** This Registry is on a voluntary basis. The estimated joint replacement by various sources is Knee replacement of around 3 hundred thousand and hip replacement of around 2 hundred thousand. We are able to capture around 15 to 20% of this data in the knee



## ISAR template short registry description

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### **Registry name:** Italian Arthroplasty Registry (RIAP)

**Country/Region:** Italy

**Total population of area covered by the registry:** 59 641 488 on 1 January 2020

**Scope of registry:** National

**Website:** <https://riap.iss.it/riap/en/>

**Year started:** 2006

**Which joints does the registry cover:** Hip;Knee;Shoulder;Ankle

**Data owners:** Public authority

**Preferred contact:** marina.torre@iss.it

### Registry input

#### *General*

**Funding:** Public institution;Government

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** pseudonymised personal ID (from all the participating regions but Lombardy)

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: No

Aggregate data: Yes

**Source of implant details:** Pre-specified list of implants;

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 32.5% at the national level

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2020

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	31.9	Revision hip procedures (%):	22.5
Primary knee procedures (%):	29.3	Revision knee procedures (%):	20.2
Shoulder procedures (%):	9.8	Revision shoulder procedures (%):	not available
Completeness other joints:	0		

**Data source(s) for assessment of coverage and completeness:** National database of Hospital Discharge Records

**Proportion successful linkage revision-primary (%):** Not calculated yet. We plan to perform this analysis for the next report for the regions providing the pseudonymised ID code (PA Bolzano, PA Trento, Campania, Puglia, Sicilia)

**Response rates PROs hip elective procedures (%):** Before surgery: 0; 1 year after surgery: 0; Both: 0

**Response rates PROs knee elective procedures (%):** Before surgery: 0; 1 year after surgery: 0; Both: 0

**Response rates PROs shoulder elective procedures (%):** Before surgery: 0; 1 year after surgery: 0; Both: 0

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Surgery in which an element or all the elements of the prosthesis are removed and replaced

**All-cause revision:** No                      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** not applicable yet

**Definition of reoperation that the registry applies:** Reoperations are not captured

**Reoperation:** No                                      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** No              If Yes:

### Reports/Publications

**Annual report website:** <https://riap.iss.it/riap/en/activities/reports/> (last report refers to data collected in 2020)

**Link to website with registries' publications:** <https://riap.iss.it/riap/en/activities/publications/>

**Other (if any):**



## ISAR template short registry description

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**Registry name:** Japanese Orthopaedic Association National Registry/Japan Arthroplasty Register

**Country/Region:** Japan

**Total population of area covered by the registry:** 120 000 000

**Scope of registry:** National

**Website:** <https://www.joanr.org/> <https://jsra.info/>

**Year started:** 2006~ as JAR, 2020~ as JOANR

**Which joints does the registry cover:** Hip;Knee;Shoulder;

**Data owners:** Orthopaedic society

**Preferred contact:** Haruhiko Akiyama ([akiyama.haruhiko.m3@f.gifu-u.ac.jp](mailto:akiyama.haruhiko.m3@f.gifu-u.ac.jp))

### Registry input

#### *General*

**Funding:** The Japanese Orthopaedic Association, The Japanese Society for Replacement Arthroplasty;

**Patient consent:** Opt-out

#### *Data collection*

**Patient identifier:** Anonymization by hash value

**Possibility for linkage** to other data sources: No

**Possibility to share data for research with external parties:**

Individual data: No

Aggregate data: No

**Source of implant details:** Implant barcode ;Catalogue number ;Pre-specified list of implants;

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

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**Coverage of hospital registration (%)**, (N participating/total N of hospitals): more than 90%

### Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:**

**Completeness of procedure registration (%)**, (N procedures captured in registry/total N of procedures):

Primary hip procedures (%):	96.1	Revision hip procedures (%):
Primary knee procedures (%):	88.8	Revision knee procedures (%):
Shoulder procedures (%):	Reverse TSA : 94.5	Revision shoulder procedures (%):
Completeness other joints: Anatomical TSA:	unknown yet	

**Data source(s) for assessment of coverage and completeness:** Yano Research Institute Ltd.

**Proportion successful linkage revision-primary (%):**

**Response rates PROs hip elective procedures (%)**: Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs knee elective procedures (%)**: Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs shoulder elective procedures (%)**: Before surgery: ; 1 year after surgery: ; Both:

### Registry output

#### Outcomes reported

**Definition of revision that the registry applies:**

**All-cause revision:** Yes                      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*):

**Definition of reoperation that the registry applies:**

**Reoperation:** Yes                                      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** No              If Yes:

#### Reports/Publications

**Annual report website:** <https://jsra.info/>                      <https://www.joa.or.jp/>

**Link to website with registries' publications:**

**Other (if any):**



## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

**Registry name:** Kaiser Permanente Medical Device Surveillance and Assessment / National Implant Registries

**Country/Region:** United States of America

**Total population of area covered by the registry:** 787 000 patients in 18 specialties

**Scope of registry:** Regional

**Website:** <https://national-implantregistries.kaiserpermanente.org/>

**Year started:** 2001

**Which joints does the registry cover:** Hip, Knee, Shoulder, Elbow, Spine

**Data owners:** Health care provider

**Preferred contact:** Liz.W.Paxton@kp.org, Senior Director, Kaiser Permanente Medical Device Surveillance & Assessment

### Registry input

#### *General*

**Funding:** Private institution

**Patient consent:** consent not required

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage** to other data sources: Yes routinely

**Possibility to share data for research with external parties:**

Individual data: No

Aggregate data: Yes

**Source of implant details:** Catalogue number, Implant barcode

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

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**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 80%+ participation for all respective procedures; 787,000 patients in 18 specialties; 81 medical centers in 8 U.S. regions

### Completeness

**Definition:** Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2022

**Completeness of procedure registration (%)**, (N procedures captured in registry/total N of procedures):

Primary hip procedures (%):	80%+ participation (159,705 procedures)	Revision hip procedures (%):	80%+ participation (1,857 procedures)
Primary knee procedures (%):	80%+ participation (283,418 procedures)	Revision knee procedures (%):	80%+ participation (1,366 procedures)
Shoulder procedures (%):	80%+ participation (28,886 procedures)	Revision shoulder procedures (%):	80%+ participation (869 procedures)

Completeness other joints: 80%+ participation; Hip Fracture (75,765); ACL Reconstruction (64,931); Spine (88,782)

**Data source(s) for assessment of coverage and completeness:** 80%+ participation (Electronic Health Record, Outside Utilization Records, & Mortality records)

**Proportion successful linkage revision-primary (%):** 100% of internal system revision-primary procedures captured for patient life or membership

**Response rates PROs hip elective procedures (%):** Before surgery: NA; 1 year after surgery: NA; Both: NA

**Response rates PROs knee elective procedures (%):** Before surgery: NA; 1 year after surgery: NA; Both: NA

**Response rates PROs shoulder elective procedures (%):** Before surgery: NA; 1 year after surgery: NA; Both: NA

### Registry output

#### Outcomes reported

**Definition of revision that the registry applies:** Replacement, exchange, or removal of any index implant

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):**  $\geq 250$

**Definition of reoperation that the registry applies:** capture/collect all reoperations with same site/side and include or exclude based on codes for reporting reoperation and/or revision as needed for each registry

**Reoperation:** Yes      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** Yes      If Yes: Internal report

### Reports/Publications

**Annual report website:** <https://annualreport.kpimplantregistries.org/annual-report/>

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**Link to website with registries' publications:** <https://national-implantregistries.kaiserpermanente.org/research-journal-articles-acl-reconstruction>

**Other (if any):** NA



## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

### **Registry name:** Dutch Arthroplasty Register (LROI)

**Country/Region:** The Netherlands

**Total population of area covered by the registry:** 17 530 000

**Scope of registry:** National

**Website:** [www.lroi.nl](http://www.lroi.nl) / [lroi-report.nl](http://lroi-report.nl)

**Year started:** 2007

**Which joints does the registry cover:** Hip;Knee;Shoulder;Ankle;Elbow;Wrist;Finger;

**Data owners:** Health care provider

**Preferred contact:** [lroi@orthopeden.org](mailto:lroi@orthopeden.org)

### Registry input

#### *General*

**Funding:** not specified

**Patient consent:** Opt-out

#### *Data collection*

**Patient identifier:** LROI patient number

**Possibility for linkage to other data sources:** Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode ;Catalogue number ;

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to: 2022**

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	99	Revision hip procedures (%):	97
Primary knee procedures (%):	99	Revision knee procedures (%):	98
Shoulder procedures (%):	97	Revision shoulder procedures (%):	95
Completeness other joints: Ankle:	96%;		
Elbow:	85%		
Wrist:	59%		
Finger:	60%		

**Data source(s) for assessment of coverage and completeness:** Hospital information system, VEKTIS

**Proportion successful linkage revision-primary (%):** 100

**Response rates PROs hip elective procedures (%):** Before surgery: 67; 1 year after surgery: ; Both: 43

**Response rates PROs knee elective procedures (%):** Before surgery: 58; 1 year after surgery: ; Both: 37

**Response rates PROs shoulder elective procedures (%):** Before surgery: 47; 1 year after surgery: ; Both: 26

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** A revision is defined as any procedure where a component of the prosthesis is revised, added or removed.

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 250

**Definition of reoperation that the registry applies:** The LROI does not contain reoperation.

**Reoperation:** No      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Internal report

### Reports/Publications

**Annual report website:** [www.lroi-report.nl](http://www.lroi-report.nl)

**Link to website with registries' publications:** [www.lroi.nl](http://www.lroi.nl)

**Other (if any):**



## ISAR template short registry description

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**Registry name:** Michigan Arthroplasty Registry Collaborative Quality Initiative  
(MARCQI)

**Country/Region:** Michigan, United States of America (USA)

**Total population of area covered by the registry:** 10 000 000

**Scope of registry:** Regional

**Website:** marcqi.org

**Year started:** 2012

**Which joints does the registry cover:** Hip;Knee;

**Data owners:** Hospital

**Preferred contact:** MARCQI.cc@umich.edu; taekk@med.umich.edu

### Registry input

#### *General*

**Funding:** Private institution

**Patient consent:** none - Non-regulated/no consent

#### *Data collection*

**Patient identifier:** MARCQI Case ID

**Possibility for linkage to other data sources:** Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: No

Aggregate data: Limited

**Source of implant details:** Catalogue number

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

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**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 60% (65/109) (many small hospitals which do not participate in MARCQI have a very low case volume)

### Completeness

**Definition:** Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2022

**Completeness of procedure registration (%)**, (N procedures captured in registry/total N of procedures):

Primary hip procedures (%):	96% (17,720/18,400)	Revision hip procedures (%):	96% (2470/2510)
Primary knee procedures (%):	96% (26,832/27,790)	Revision knee procedures (%):	96% (2226/2260)
Shoulder procedures (%):	0	Revision shoulder procedures (%):	0
Completeness other joints:	0		

**Data source(s) for assessment of coverage and completeness:** Medical Record abstraction, hospital surgery billing and statewide hospital discharge database

**Proportion successful linkage revision-primary (%):**

**Response rates PROs hip elective procedures (%):** Before surgery: ~80%; 1 year after surgery: ~23%; Both: ~23%

**Response rates PROs knee elective procedures (%):** Before surgery: ~80%; 1 year after surgery: ~23%; Both: ~23%

**Response rates PROs shoulder elective procedures (%):** Before surgery: 0; 1 year after surgery: 0; Both: 0

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Any addition or exchange of bone fixed components

**All-cause revision:** Yes                      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*): 500

**Definition of reoperation that the registry applies:** We do not use this terminology

**Reoperation:** No                                      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: No

**Implant outlier identification:** No              If Yes:

### Reports/Publications

**Annual report website:** <https://marcqi.org/marcqi-registry-reports-marcqi-annual-reports/>

**Link to website with registries' publications:** Appendix of each MARCQI Annual Report: <https://marcqi.org/marcqi-registry-reports-marcqi-annual-reports/>

**Other (if any):**





## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

**Registry name:** The Norwegian Arthroplasty Register (NAR)

**Country/Region:** Norway

**Total population of area covered by the registry:** 5300000

**Scope of registry:** National

**Website:** <https://helse-bergen.no/nrl>

**Year started:** 1987

**Which joints does the registry cover:** Hip, Knee, Shoulder, Ankle, Elbow, Spine, Wrist, Finger

**Data owners:** Hospital and public authority

**Preferred contact:** [ove.furnes@helse-bergen.no](mailto:ove.furnes@helse-bergen.no)

### Registry input

#### *General*

**Funding:** Government

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Catalogue number, Implant barcode

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100% (60/60 in 2022)

Version: 07.06.2024 08:41:00

## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** Coverage 2022, completeness for years 2019-2020

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	97	Revision hip procedures (%):	90.8
Primary knee procedures (%):	96.5	Revision knee procedures (%):	93
Shoulder procedures (%):	90.8	Revision shoulder procedures (%):	84.6
Completeness other joints:	77.6		

**Data source(s) for assessment of coverage and completeness:** Linkage NAR and Norwegian Patient Register (NPR)

**Proportion successful linkage revision-primary (%):** 100% (using the unique patient identification number)

**Response rates PROs hip elective procedures (%):** Before surgery: 41.4; 1 year after surgery: 63; Both:

**Response rates PROs knee elective procedures (%):** Before surgery: 46.2; 1 year after surgery: 65; Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: 35.7; 1 year after surgery: 58.8; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Revision is defined as inset, removal or exchange of the whole or part of the prosthesis.

**All-cause revision:** Yes                      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 500 or more operations and in at least 50 left at risk.

**Definition of reoperation that the registry applies:** Since 2011 we include reoperations eg. isolated soft tissue debridement without the exchange of implant parts, osteosynthesis for fracture or muscle re-insertion.

**Reoperation:** Yes                                      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** No              If Yes:

### Reports/Publications

**Annual report website:** <https://helse-bergen.no/nrl>

**Link to website with registries' publications:** <https://helse-bergen.no/nrl>

**Other (if any):** <https://www.kvalitetsregistre.no/register/muskel-og-skjelett/nasjonalt-register-leddproteser>



## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

### **Registry name:** New Zealand Joint Registry

**Country/Region:** New Zealand

**Total population of area covered by the registry:** 5 199 100 as of 31 March 2023

**Scope of registry:** National

**Website:** <https://www.nzoa.org.nz/nzoa-joint-registry>

**Year started:** 1998

**Which joints does the registry cover:** Hip;Knee;Shoulder;Ankle;Elbow;Spine;Wrist;Finger

**Data owners:** Orthopaedic society

**Preferred contact:** [jinny.willis3@cdhb.health.nz](mailto:jinny.willis3@cdhb.health.nz)

### Registry input

#### *General*

**Funding:** Government;Public institution;Participating Surgeons

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2022

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	100	Revision hip procedures (%):	100
Primary knee procedures (%):	100	Revision knee procedures (%):	100
Shoulder procedures (%):		Revision shoulder procedures (%):	
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** National Minimum Dataset - Ministry of Health

**Proportion successful linkage revision-primary (%):** 100% if primary was captured by registry

**Response rates PROs hip elective procedures (%):** Before surgery: Not currently collecting pre-op PROs; 1 year after surgery: 20; Both: N/A

**Response rates PROs knee elective procedures (%):** Before surgery: Not currently collecting pre-op PROs; 1 year after surgery: 20; Both: N/A

**Response rates PROs shoulder elective procedures (%):** Before surgery: Not currently collecting pre-op PROs; 1 year after surgery: 20; Both: N/A

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Revision is defined by the Registry as a new operation in a previously replaced knee joint, during which one or more of the components is exchanged, removed, manipulated or added. Procedures where all components are removed (e.g., Girdlestone, ankle fusio

**All-cause revision:** Yes                      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 1

**Definition of reoperation that the registry applies:** Reoperation is defined by the Registry as a new operation in a previously replaced joint, that does not involve the addition, removal, or replacement of any components, such as soft tissue procedures or bony debridement.

**Reoperation:** Yes                                      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: No, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes              If Yes: Public report

## Reports/Publications

**Annual report website:** <https://www.nzoa.org.nz/nzoa-joint-registry>

**Link to website with registries' publications:**

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## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

### **Registry name:** National Joint Registry (NJR)

**Country/Region:** England, Wales, Northern Ireland, Isle of Man and Guernsey

**Total population of area covered by the registry:** 62 million

**Scope of registry:** National

**Website:** [www.njrcentre.org.uk](http://www.njrcentre.org.uk)

**Year started:** 2003

**Which joints does the registry cover:** Hip;Knee;Shoulder;Ankle;Elbow

**Data owners:** Public authority

**Preferred contact:** [njr@njr.org.uk](mailto:njr@njr.org.uk)

### Registry input

#### *General*

**Funding:** Public institution;Private institution;Industry

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode ;Catalogue number ;Pre-specified list of implants

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%), (N participating/total N of hospitals):** 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** April 2021 to March 2022

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	100.7%*	Revision hip procedures (%):	97.5
Primary knee procedures (%):	100.5%*	Revision knee procedures (%):	101.5%*
Shoulder procedures (%):	96.8	Revision shoulder procedures (%):	156.0%*

Completeness other joints: Elbow primary 81.3%, Elbow revision 97.5%, Ankle primary 95.3%, Ankle revision 79.3%

\*In some circumstances more cases of a certain type are recorded in the NJR than in the comparator which results in a compliance rate greater than 100%. This is a consequence of variability of coding in the national administrative data.

**Data source(s) for assessment of coverage and completeness:** Hospital Episode Statistics (national administrative dataset).

**Proportion successful linkage revision-primary (%):** 97.8% of NJR cases are able to be linked

**Response rates PROs hip elective procedures (%):** Before surgery: These data are not reported by NHS England who manage national PROMs for hip and knee rather than the NJR; 1 year after surgery: There is not a 12 month PROM collected. 6 month PROMs returns are 32.3%; Both: There is not a 12 month PROM collected. 6 month PROMs returns are 28.3%

**Response rates PROs knee elective procedures (%):** Before surgery: These data are not reported by NHS England who manage national PROMs for hip and knee rather than the NJR; 1 year after surgery: There is not a 12 month PROM collected. 6 month PROMs returns are 20.2%; Both: There is not a 12 month PROM collected. 6 month PROMs returns are 27.1%

**Response rates PROs shoulder elective procedures (%):** Before surgery: 23.3; 1 year after surgery: There is not a 12 month PROM collected. 6 month PROMs returns are 23.3%; Both: There is not a 12 month PROM collected. 6 month PROMs returns are 24.5%

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** A revision is defined as any operation where one or more components are added to, removed from or modified in a joint replacement or if a Debridement And Implant Retention (DAIR) with or without modular exchange is performed. Capturing DAIR with or without modular exchange commenced with the introduction of MDSv7. Prior to this DAIR with modular exchange was included as a single-stage revision but DAIR without modular exchange was not captured. Within the annual report, each of these procedure types is included in the analyses as a revision episode. This is distinct from the analyses in the surgeon, unit, and implant performance work streams where DAIR without modular exchange is not currently included as a revision outcome.

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 2,500 (1,000 for resurfacing hips and dual mobility hips)

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**Definition of reoperation that the registry applies:** NJR does not currently report non-revision re-operation. We started collecting this in June 2023.

**Reoperation:** No

**Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Public report

*Reports/Publications*

**Annual report website:** <https://reports.njrcentre.org.uk/>

**Link to website with registries' publications:** <https://www.njrcentre.org.uk/research/njr-research-publications-and-outputs/>

**Other (if any):**



## ISAR template short registry description

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### **Registry name:** Register of Orthopaedic Prosthetic Implants (R.I.P.O.)

**Country/Region:** Italy - Emilia-Romagna region

**Total population of area covered by the registry:** approx. 4 million inhabitants

**Scope of registry:** Regional

**Website:** <http://ripo.cineca.it/authzssl/index.htm>

**Year started:** 1990 at the Istituto Ortopedico Rizzoli, 2000 in the Emilia-Romagna region

**Which joints does the registry cover:** Hip;Knee;Shoulder;

**Data owners:** Public authority

**Preferred contact:** [barbara.bordini@ior.it](mailto:barbara.bordini@ior.it)

### Registry input

#### *General*

**Funding:** Public institution

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes routinely

**Possibility to share data for research with external parties:**

Individual data: No

Aggregate data: Yes

**Source of implant details:** Implant barcode ;Catalogue number

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2021

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	99	Revision hip procedures (%):	97
Primary knee procedures (%):	99	Revision knee procedures (%):	98
Shoulder procedures (%):	98	Revision shoulder procedures (%):	97
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** SDO (hospital discharge forms)

**Proportion successful linkage revision-primary (%):** 100

**Response rates PROs hip elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs knee elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** A revision is defined as any procedure where a component of the prosthesis is replaced or removed.

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 300

**Definition of reoperation that the registry applies:** Not recorded

**Reoperation:** No      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** Yes      If Yes: Internal report

### Reports/Publications

**Annual report website:** <http://ripo.cineca.it/authzssl/Reports.html>

**Link to website with registries' publications:** <http://ripo.cineca.it/authzssl/Publications.html>

**Other (if any):** Available upon request



## ISAR template short registry description

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### **Registry name:** Romanian Arthroplasty Register

**Country/Region:** Romania

**Total population of area covered by the registry:** 19 200 000

**Scope of registry:** National;

**Website:** [www.rne.ro](http://www.rne.ro)

**Year started:** 2001

**Which joints does the registry cover:** Hip;Knee;Spine;

**Data owners:** Hospital

**Preferred contact:** Dan Dragomirescu - Technical Coordinator

### Registry input

#### *General*

**Funding:** Public institution;

**Patient consent:** Registration mandatory

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage** to other data sources: Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode ;Catalogue number ;

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100% - all hospitals - reporting is mandatory

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2021

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	98	Revision hip procedures (%):	95
Primary knee procedures (%):	98	Revision knee procedures (%):	95
Shoulder procedures (%):	0	Revision shoulder procedures (%):	0
Completeness other joints: -			

**Data source(s) for assessment of coverage and completeness:** National insurance house data - National Program for Prevention in Orthopedics

**Proportion successful linkage revision-primary (%):** 60

**Response rates PROs hip elective procedures (%):** Before surgery: n/a; 1 year after surgery: n/a; Both: n/a

**Response rates PROs knee elective procedures (%):** Before surgery: n/a; 1 year after surgery: n/a; Both: n/a

**Response rates PROs shoulder elective procedures (%):** Before surgery: n/a; 1 year after surgery: n/a; Both: n/a

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** A revision is defined as any procedure where a component of the prosthesis is revised, added or removed.

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 200

**Definition of reoperation that the registry applies:** Unless the component/implant is revised, any re-intervention is considered a Soft tissue form (lavage, etc). Other reoperations are not recorded.

**Reoperation:** No      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: No, Joint-specific: No, Satisfaction: No

**Implant outlier identification:** No      If Yes: Internal report

## Reports/Publications

**Annual report website:** [www.rne.ro](http://www.rne.ro)

**Link to website with registries' publications:**

**Other (if any):**



## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

### **Registry name:** Swedish Arthroplasty Register

**Country/Region:** Sweden

**Total population of area covered by the registry:** 10500000

**Scope of registry:** National

**Website:** <https://sar.registercentrum.se/>

**Year started:** 1975

**Which joints does the registry cover:** Hip;Knee;

**Data owners:** Public authority

**Preferred contact:** slr@registercentrum.se

### Registry input

#### *General*

**Funding:** Government;

**Patient consent:** Opt-out

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage** to other data sources: Yes routinely

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Catalogue number ;

**Unique Device Identifier (UDI) recorded:** Yes

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to: 2022**

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	97.9 (total hip)	97.2 (hemiarthroplasty)	Revision hip procedures (%):	93.4
Primary knee procedures (%):	97.5		Revision knee procedures (%):	85.4
Shoulder procedures (%):	N/A		Revision shoulder procedures (%):	N/A
Completeness other joints:	N/A			

**Data source(s) for assessment of coverage and completeness:** National Patient Register (National Board of Health and Welfare)

**Proportion successful linkage revision-primary (%):**100

**Response rates PROs hip elective procedures (%):** Before surgery: 76 (in 2021); 1 year after surgery: 80; Both: 63

**Response rates PROs knee elective procedures (%):** Before surgery: 65 (in 2021); 1 year after surgery: 80; Both: 53

**Response rates PROs shoulder elective procedures (%):** Before surgery: N/A; 1 year after surgery: N/A; Both: N/A

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** Exchange, addition or extraction of one or more inserted prosthesis components (including arthrodesis and amputation).

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** N/A

**Definition of reoperation that the registry applies:** Reoperation includes all kinds of surgical intervention that can be directly related to an inserted hip/knee arthroplasty irrespective of whether the prosthesis or one of its parts has been exchanged, removed or left untouched. For knee replacements this also includes mobilisation under anaesthesia.

**Reoperation:** Yes      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Public report

### Reports/Publications

**Annual report website:** <https://sar.registercentrum.se/about-the-registry/annual-reports/p/SJW4-ZGyo>

**Link to website with registries' publications:** <https://slr.registercentrum.se/forskning/publikationer/p/SyWz2ZDvu>

**Other (if any):**



## ISAR template short registry description

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### **Registry name:** SIRIS - Swiss national joint registry hip & knee

**Country/Region:** Switzerland / Liechtenstein

**Total population of area covered by the registry:** 8.8 million

**Scope of registry:** National

**Website:** [www.siris-implant.ch](http://www.siris-implant.ch)

**Year started:** 2012

**Which joints does the registry cover:** Hip;Knee

**Data owners:** SIRIS foundation

**Preferred contact:** Prof Dr Martin Beck, [martin.beck@okl.ch](mailto:martin.beck@okl.ch)

### Registry input

#### *General*

**Funding:** Registration fee, paid by clinics

**Patient consent:** Opt-in

#### *Data collection*

**Patient identifier:** Name/birthday/postal code

**Possibility for linkage** to other data sources: Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Catalogue number ;Pre-specified list of implants;Implant barcode

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to: 2022**

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	98.68	Revision hip procedures (%):	>98%
Primary knee procedures (%):	98.44	Revision knee procedures (%):	>98%
Shoulder procedures (%):		Revision shoulder procedures (%):	
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** federal health authority data

**Proportion successful linkage revision-primary (%):** in 2021 51.6% of hip revisions and 62.5% of knee revisions were linked to primary procedures already registered in SIRIS (the remainder representing mostly revisions of pre-2012 implants)

**Response rates PROs hip elective procedures (%):** Before surgery: 73.2% (2022 figures from Kanton ZH PROMs pilot project); 1 year after surgery: 49.6 (2021-2022 figures from Kanton ZH PROMs pilot project); Both: 49.6 (2021-2022 figures from Kanton ZH PROMs pilot project)

**Response rates PROs knee elective procedures (%):** Before surgery: 71.7% (2022 figures from Kanton ZH PROMs pilot project); 1 year after surgery: 42.4 (2021-2022 figures from Kanton ZH PROMs pilot project); Both: 42.4 (2021-2022 figures from Kanton ZH PROMs pilot project)

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** "component revision"; any removal, change or addition of implant

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** 50

**Definition of reoperation that the registry applies:** prosthesis preserving reoperation / osteosynthesis

**Reoperation:** Yes      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Public report

### Reports/Publications

**Annual report website:** [www.siris-implant.ch/](http://www.siris-implant.ch/)

**Link to website with registries' publications:** [www.siris-implant.ch/](http://www.siris-implant.ch/)



## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

### **Registry name:** JointCare Registry

**Country/Region:** South Africa

**Total population of area covered by the registry:** 62.03 million

**Scope of registry:** National but limited to provider network

**Website:** <https://joint-care.co.za>

**Year started:** 2015

**Which joints does the registry cover:** Knee;Hip

**Data owners:** Health care provider

**Preferred contact:** Dr Antoine Dymond, [antoine@joint-care.co.za](mailto:antoine@joint-care.co.za)

### Registry input

#### *General*

**Funding:** Part of quality assurance programme - funded by medical providers

**Patient consent:** Registration mandatory

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Catalogue number ;Implant barcode

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%), (N participating/total N of hospitals):** 12

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## Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2023

**Completeness of procedure registration (%), (N procedures captured in registry/total N of procedures):**

Primary hip procedures (%):	16	Revision hip procedures (%):	0
Primary knee procedures (%):	16	Revision knee procedures (%):	0
Shoulder procedures (%):	0	Revision shoulder procedures (%):	0
Completeness other joints:	0		

**Data source(s) for assessment of coverage and completeness:** Crude estimate

**Proportion successful linkage revision-primary (%):** JointCare only performs primary surgeries. We only capture revisions when following up on the outcome of one of our surgeons ends in a failure. The revision is reported to use by the patient. JointCare does not perform the revision surgery.

**Response rates PROs hip elective procedures (%):** Before surgery: 60; 1 year after surgery: 24; Both: 24

**Response rates PROs knee elective procedures (%):** Before surgery: 61; 1 year after surgery: 24; Both: 24

**Response rates PROs shoulder elective procedures (%):** Before surgery: 0; 1 year after surgery: 0; Both: 0

## Registry output

### Outcomes reported

**Definition of revision that the registry applies:** A revision is defined as any operation where one or more components are added to, removed from or modified in a joint replacement, or if a Debridement And Implant Retention (DAIR) with or without modular exchange is performed

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report (for cumulated risk of revision):** Annual report does not ordinarily report such specific information. Specific information is available upon request.

**Definition of reoperation that the registry applies:** N/A

**Reoperation:** No      **Specific causes of reoperation assessed:** No

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Internal report

## Reports/Publications

**Annual report website:** <https://joint-care.co.za>

**Link to website with registries' publications:** <https://joint-care.co.za>

**Other (if any):**

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## ISAR template short registry description

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### **Registry name:** American Joint Replacement Registry

**Country/Region:** United States of America

**Total population of area covered by the registry:** 334 000 000

**Scope of registry:** National;

**Website:** aaos.org

**Year started:** 2010

**Which joints does the registry cover:** Hip;Knee;

**Data owners:** Orthopaedic society

**Preferred contact:** Reagan Bayer

### Registry input

#### *General*

**Funding:** Industry;Research grants;Private institution;Public institution;

**Patient consent:** Opt-out

#### *Data collection*

**Patient identifier:** Name/birthday/postal code

**Possibility for linkage** to other data sources: Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Implant barcode ;Catalogue number ;

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 1400 hospitals and ambulatory surgery centers (@ 40% of all TJAs annually)

### Completeness

**Definition:** Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2012-2022

**Completeness of procedure registration (%)**, (N procedures captured in registry/total N of procedures):

Primary hip procedures (%):	@ 40%	Revision hip procedures (%):	@ 40%
Primary knee procedures (%):	@40%	Revision knee procedures (%):	@40%
Shoulder procedures (%):		Revision shoulder procedures (%):	
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** Medicare claims

**Proportion successful linkage revision-primary (%):** unknown

**Response rates PROs hip elective procedures (%):** Before surgery: @ 10%; 1 year after surgery: @ 10%; Both: @ 2.5%

**Response rates PROs knee elective procedures (%):** Before surgery: @ 10%; 1 year after surgery: @ 10%; Both: @ 2.5%

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

### Registry output

#### Outcomes reported

**Definition of revision that the registry applies:** reoperation were any part of prosthesis was changed

**All-cause revision:** Yes      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** Yes

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*):

**Definition of reoperation that the registry applies:** any return to operating room

**Reoperation:** Yes      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** Yes      If Yes: Public report

#### Reports/Publications

**Annual report website:** [aaos.org/registries](https://aaos.org/registries)

**Link to website with registries' publications:** [aaos.org/registries](https://aaos.org/registries)

**Other (if any):**



## ISAR template short registry description

This short registry description - to be published at the beginning of the annual report or on the registry website - gives an overview of the registry in English. It is intended to inform users of registry data (in particular regulatory agencies, notified bodies, health technology assessment agencies, clinicians, industry and others) about the type and structure of the registry, the quality of the registration and the outputs provided.

**Registry name:** Hospital for Special Surgery

**Country/Region:** United States of America

**Total population of area covered by the registry:** 331 million

**Scope of registry:** Hospital

**Website:**

**Year started:** 2006

**Which joints does the registry cover:** Hip;Knee

**Data owners:** Hospital

**Preferred contact:** Vinicius Antao (antaov@hss.edu), Amethia Joseph (josepham@hss.edu), Johnny Chan (chanjoh@hss.edu)

### Registry input

#### *General*

**Funding:** Private institution

**Patient consent:** Opt-out

#### *Data collection*

**Patient identifier:** Personal identity number

**Possibility for linkage to other data sources:** Yes occasionally

**Possibility to share data for research with external parties:**

Individual data: Yes

Aggregate data: Yes

**Source of implant details:** Catalogue number ;Implant barcode ;Pre-specified list of implants;

**Unique Device Identifier (UDI) recorded:** No

#### *Coverage*

**Definition:** Coverage is a measure of the population that the registry system serves.

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**Coverage of hospital registration (%)**, (N participating/total N of hospitals): 100

### Completeness

Definition: Completeness is a measure of how well the event(s) of interest in the population are captured. Content completeness is a measure of how well the individual data fields are captured.

Reference: United Nations. A review of key concepts: Coverage & completeness. 2016

**Year or period latest coverage and completeness applies to:** 2023

**Completeness of procedure registration (%)**, (N procedures captured in registry/total N of procedures):

Primary hip procedures (%):	100	Revision hip procedures (%):	100
Primary knee procedures (%):	100	Revision knee procedures (%):	100
Shoulder procedures (%):		Revision shoulder procedures (%):	
Completeness other joints:			

**Data source(s) for assessment of coverage and completeness:** Administrative

**Proportion successful linkage revision-primary (%):**

**Response rates PROs hip elective procedures (%):** Before surgery: 80; 1 year after surgery: 50; Both: 41

**Response rates PROs knee elective procedures (%):** Before surgery: 80; 1 year after surgery: 45; Both: 40

**Response rates PROs shoulder elective procedures (%):** Before surgery: ; 1 year after surgery: ; Both:

### Registry output

#### Outcomes reported

**Definition of revision that the registry applies:**

**All-cause revision:** Yes                      **Specific causes of revision assessed:** Yes

**Reporting of cumulative incidence of revision (95%CI) by implant/implant combination:** No

**Minimum N of procedures per specific implant to be reported in annual report** (*for cumulated risk of revision*):

**Definition of reoperation that the registry applies:**

**Reoperation:** Yes                                      **Specific causes of reoperation assessed:** Yes

**Patient-reported outcomes:** Generic: Yes, Joint-specific: Yes, Satisfaction: Yes

**Implant outlier identification:** If Yes:

#### Reports/Publications

**Annual report website:**

**Link to website with registries' publications:**

**Other (if any):**