



National Joint Registry

www.njrcentre.org.uk

Working for patients, driving forward quality

National Joint Registry for England, Wales Northern Ireland and the Isle of Man



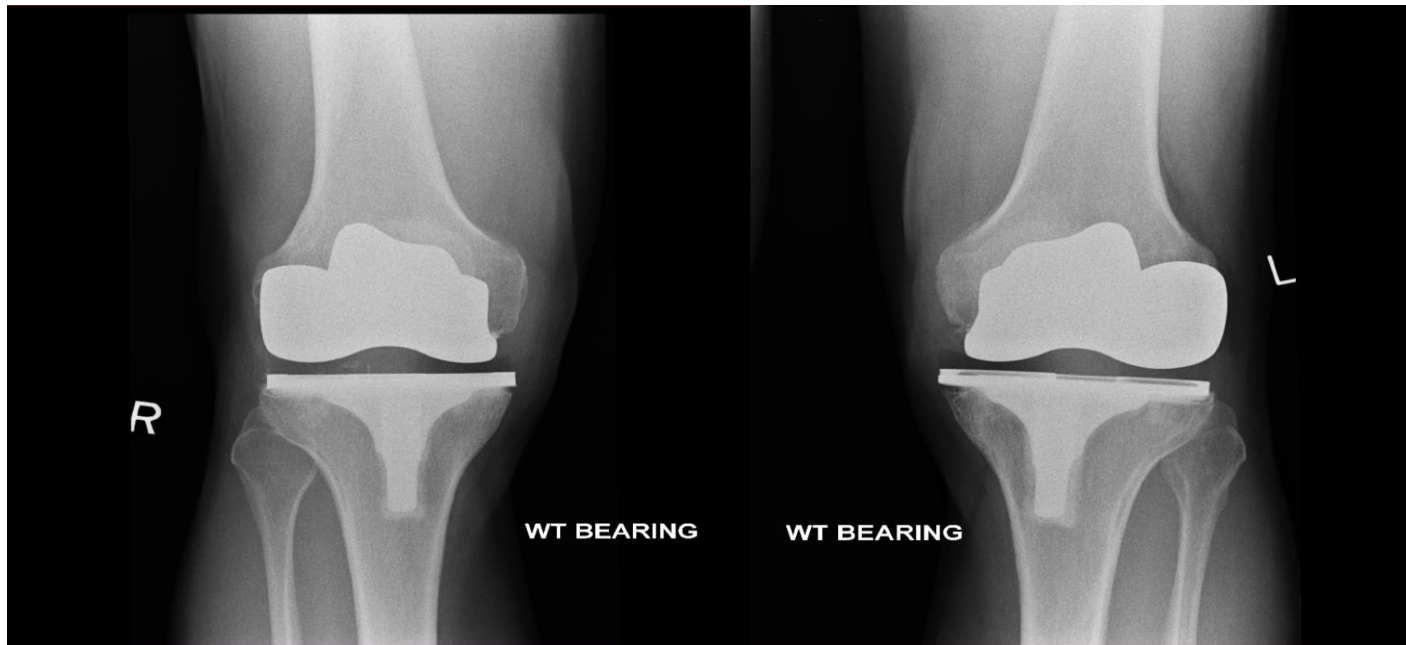
National Joint Registry

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Working for patients, driving forward quality

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Northgate Public Services





NJR - Background

- Established in 2002 following 3M hip
- Healthcare Quality Information Partnership
- Collects data about
 - Hips
 - Knees
 - Shoulder
 - Elbows
 - Ankles
- NHS and Independent Sector Healthcare
- Large register - 2.8 million records



NJR - Data Entry

- **Via a web-based data entry application or Bulk Upload**
- **Primary and revision procedures include:**
 - **Patient demographics and identifiers**
 - **Operation details**
 - **Surgeon Details**
 - **Procedure details, e.g. side, indications for surgery**
 - **Surgical approach**
 - **Thromboprophylaxis**
 - **Untoward events**
 - **Details of all major components used**



Underpinning Component Database

- A management system directly accessible by industry
- Industry upload, review, and amend all their own data
- NJR retains brand assignment
- Approximately 80,000 components, 40,000 GTIN
- Classification - Not a simple 'library' or catalogue
- Use by other registries 'Internationalisation'

Component Maintenance - Edit

Total Component Completed Status ✖ Last Updated - 25-04-2016 LeeSupplier1

Catalogue Number: 010.6050 Group: Hip ODEP Unclassified Cerafit Cementless Cup

Description: CeraFit Acetabular Cup Cementless 50mm diameter Sub Group: Acetabular Component Manufacturer: Corin

GTIN: Type: Dual mobility Distributor: Corin

GMDN Code: Status: On The Market

Notes

Primary Fixation Method: Cementless

Texture: Satin (Ra >0.4 to <=1.0um)

Secondary Fixation Method: With optional screw holes

- Pressfit
- With open screw holes
- With closable screw holes
- With optional screw holes
- Threaded Cup
- Stemmed
- Pegs
- Flange and/or Hook
- Other
- None

Glossary

Fixation

The Fixation Tab is used to record details about any Primary or Secondary fixation provisions as well as any relevant texture information, depending on which are relevant to the selected implant. Each of these attributes is described in greater detail with its own Glossary entry.

Delete Component

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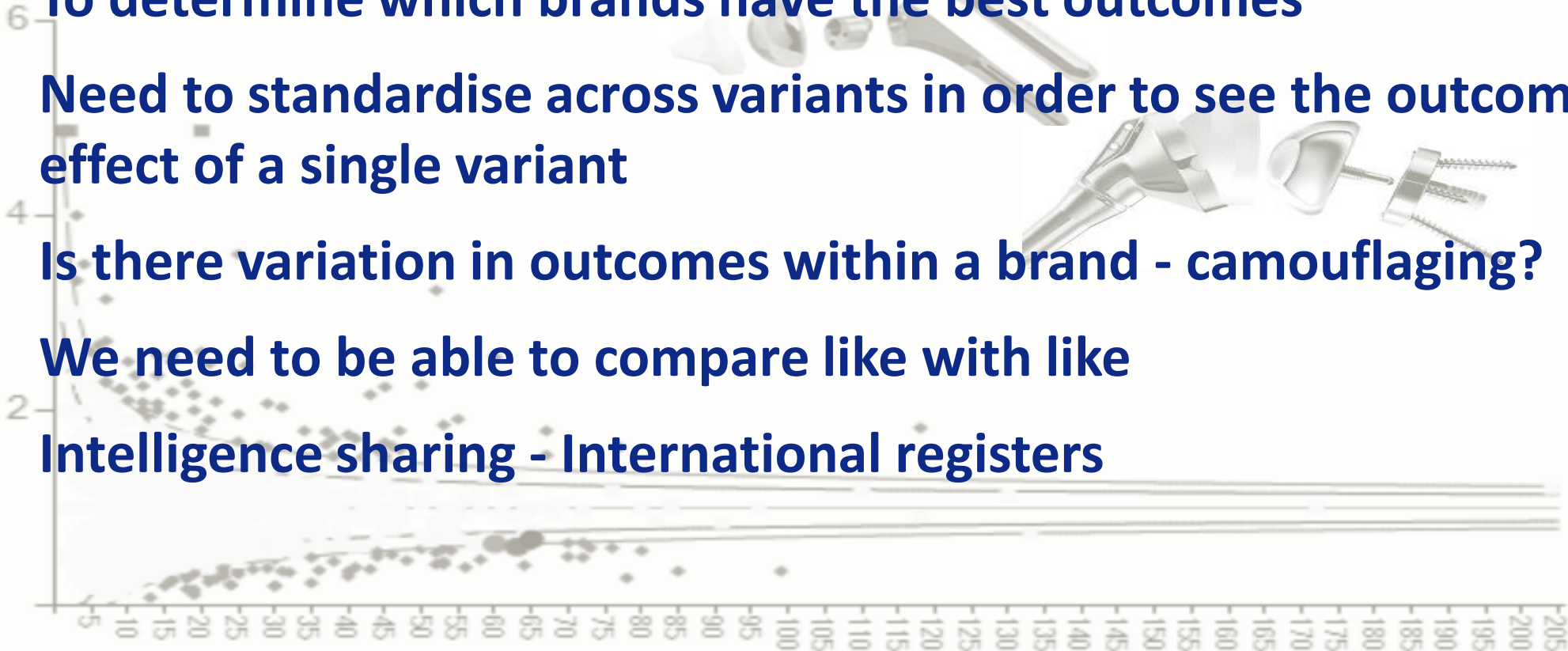
Component Classification

Component Group	Component Type	Composition	Fixation Method	Implant Type
Humeral Stem	Modular Monobloc			Shoulder - Stem
Humeral Component	Unipolar Head	Polyethylene, Metal, Ceramic		Shoulder - Humeral
	Bipolar Head Liner Proximal Section	Polyethylene, Metal, Ceramic Metal Polyethylene, Combination		
	Resurfacing	Metal, Ceramic		
Glenoid Component	Standard Plate	Metal, Polyethylene, Metal Polyethylene Combination	Cemented Cementless HA Cementless Non HA	Shoulder - Glenoid
	Liner	Metal, Polyethylene		
	Head	Metal, Polyethylene, Ceramic		

Why the need for detailed classification?

- Traceability - Patient Recall (metal on metal)
- To determine which brands have the best outcomes
- Need to standardise across variants in order to see the outcome effect of a single variant
- Is there variation in outcomes within a brand - camouflaging?
- We need to be able to compare like with like
- Intelligence sharing - International registers

Standardised Revision Ratio





Data Entry - Components



NJR Number: 4032514

Component Selection

- Patient Details ✓
- Patient Identifiers ✓
- Operation Details ✓
- Surgeon Details ✓
- H1: Hip Primary (Left) ✓
- Procedure Details ✓
- Surgical Approach
 - Page 1 ✓
 - Page 2 ✓
 - Page 3 ✓
- Intra-Operative Event ✓
- Component Selection ✗
- Edit Procedures

Find Components

Selected Components (0)

Request Components (0)

Please select one of the following options:-

Search by Reference Number:

REF: Lot Number: Exact match Partial match

Barcode Search:

Product: Lot:

Advanced Search:

Supplier Component Group Component Type Lot Number
Fixation Method Size





Data Entry - Ensuring Data Quality

- Business Rules based on classification - Unique to NJR
- Clinical, statistical, and implant expertise required

The component validation advice must be addressed before this surgery record can be completed. If the advice is incorrect in this case, please tick this box.

Component Combination Validation Comments

Please include a Bone Substitute and Cement - Bone cement component to complete the full set of components required

Please include a Femoral group component to complete the full set of components required

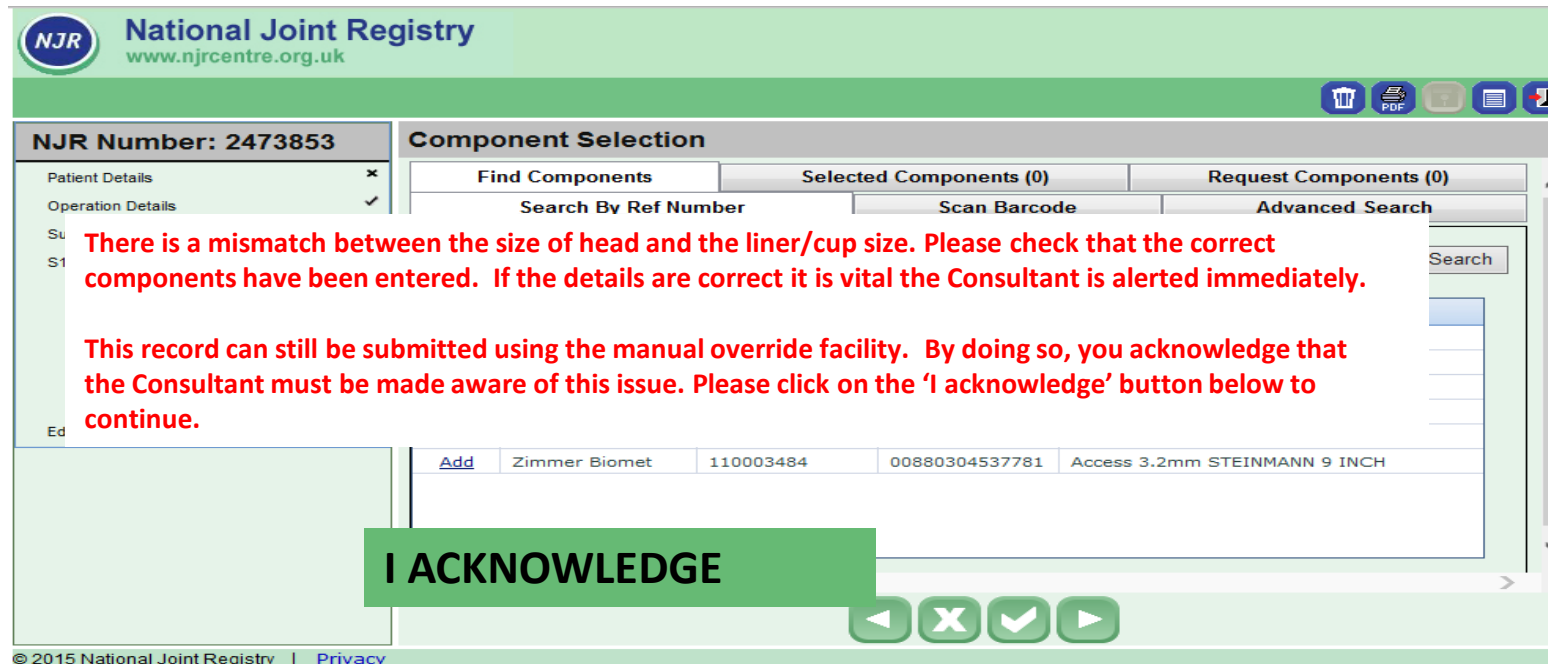
Please include TibialTrayIncludingMonobloc - Total modular to complete the full set of components required

Check with the operating surgeon that the patient procedure and implants used are correct. If correct, contact your NJR Regional Co-ordinator.

Data Compatibility - Mismatched Component

- Mismatches

- Hip - Stem and cup/liner; Mix and Match
- Knee - Knee (left/right) and sided implant



The screenshot shows the National Joint Registry web application interface. At the top left, the NJR logo and website name are visible. The main header displays the NJR Number: 2473853. Below this, there are tabs for Patient Details and Operation Details. The central area is titled 'Component Selection' and contains three columns: 'Find Components', 'Selected Components (0)', and 'Request Components (0)'. Under 'Find Components', there are search options: 'Search By Ref Number', 'Scan Barcode', and 'Advanced Search'. A search box is present on the right. A red warning message is displayed in the center: 'There is a mismatch between the size of head and the liner/cup size. Please check that the correct components have been entered. If the details are correct it is vital the Consultant is alerted immediately. This record can still be submitted using the manual override facility. By doing so, you acknowledge that the Consultant must be made aware of this issue. Please click on the 'I acknowledge' button below to continue.' Below the warning, a table lists a component: 'Zimmer Biomet', '110003484', '00880304537781', and 'Access 3.2mm STEINMANN 9 INCH'. At the bottom, there is a green button labeled 'I ACKNOWLEDGE' and a set of navigation controls (back, close, confirm, forward). The footer shows '© 2015 National Joint Registry | Privacy'.

Never Events - How Many

Component Validation Error

There is a mismatch between the size of head and the liner/cup size. Please check that the correct components have been entered. If the details are correct then a 'NEVER EVENT' may have occurred and it is vital the Consultant is alerted immediately.

This record can still be submitted using the manual override facility. By doing so, you acknowledge that the Consultant must be made aware of this issue. Please click on the 'I Acknowledge' button below to continue.

I Acknowledge

- 'Never events' to date:
 - Hips - 26 (6)
 - Knees - 11
- Post Operative - too late

Component Validation Error

There is a mismatch between the side of operation selected in the 'Procedure Details' screen and the side that the implant is designed to be used on. If the details are correct then a 'NEVER EVENT' may have occurred and it is vital the Consultant is alerted immediately.

This record can still be submitted using the manual override facility. By doing so, you acknowledge that the Consultant must be made aware of this issue. Please click on the 'I Acknowledge' button below to continue.

I Acknowledge



HSIB Report

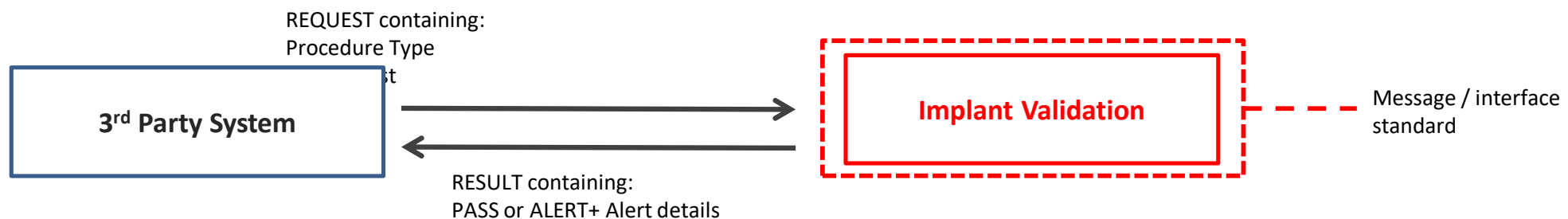


4. **Recommendation 2018/004:** The [Department of Health and Social Care](#) expands the remit of the working group consisting of Derby Teaching Hospitals NHS Foundation Trust's Scan4Safety Programme, the National Joint Registry, and the Medicines Healthcare products Regulatory Agency to include alerts to identify wrong prostheses prior to implantation.
5. **Recommendation 2018/005:** The [Department of Health and Social Care](#) commissions the development and implementation of an interim basic scanning system to identify wrong prostheses prior to implantation.

Scan4Safety and Third Party Systems (004)



- **Develop an API**
 - **De-Couple implant validation from NJR Data Entry**
 - **‘Testing’ of implant combination both post and pre-operatively**





Standalone Interface (005)

Implant Validation

Supporting Patient Safety

Home ? Search

SELECT PROCEDURE TYPE

- PRIMARY HIP
- PRIMARY KNEE

Disclaimer



Standalone Interface

Implant Validation

Supporting Patient Safety



SELECT SIDE :

TOTAL KNEE

UNICONDYLAR KNEE

LEFT SIDE

RIGHT SIDE



Add new item

CHECK IMPLANT COMBINATION



Standalone Interface

Implant Validation

Supporting Patient Safety



Back

SCAN or ENTER PRODUCT REFERENCE NUMBER:

PRODUCT NOT FOUND?



Standalone Interface

Implant Validation

Supporting Patient Safety



TOTAL KNEE		LEFT SIDE		RIGHT SIDE	
Tibia	Gene Tibial Implant	LEFT	4	In date	
Femur	Legion PS Oxinium	LEFT	6	In date	
Patella	Genesis II Resurfacing Patella	Universal	32	In date	
<u>Tibial</u> Insert	Genesis II High Flexion PS Insert	Universal	3-4	In date	
Add new item					

To Review an Item

CHECK IMPLANT COMBINATION



Standalone Interface - Desired Result

Implant Validation

Supporting Patient Safety



TOTAL KNEE

LEFT SIDE

RIGHT SIDE

Tibia	smith&nephew Genesis II NP <u>Tibial</u> Implant	LEFT	4	In date	<input checked="" type="checkbox"/>
Femur	smith&nephew Legion PS <u>Oxinium</u>	LEFT	6	In date	<input checked="" type="checkbox"/>
Patella	smith&nephew Genesis II Resurfacing Patella	Universal	32	In date	<input checked="" type="checkbox"/>
<u>Tibial</u> Insert	smith&nephew Genesis II High Flexion PS Insert	Universal	3-4	In date	<input checked="" type="checkbox"/>

OK



Disclaimer

Validation has been applied to check side and lot expiry dates. Use this tool as a guide only. Do not rely on this tool for clinical decision making. NJR/ NPS accept no responsibility etc.

Disclaimer



Standalone Interface - Never Event Avoided

Implant Validation

Supporting Patient Safety



TOTAL KNEE		LEFT SIDE		RIGHT SIDE	
Tibia	Genesis II NP Tibial Implant	LEFT	4	In date	
Femur	Legion PS Oxinium	RIGHT	6	In date	

STOP

Error Report

- Wrong Side Femur implant** – Right side femur selected for a left side procedure.

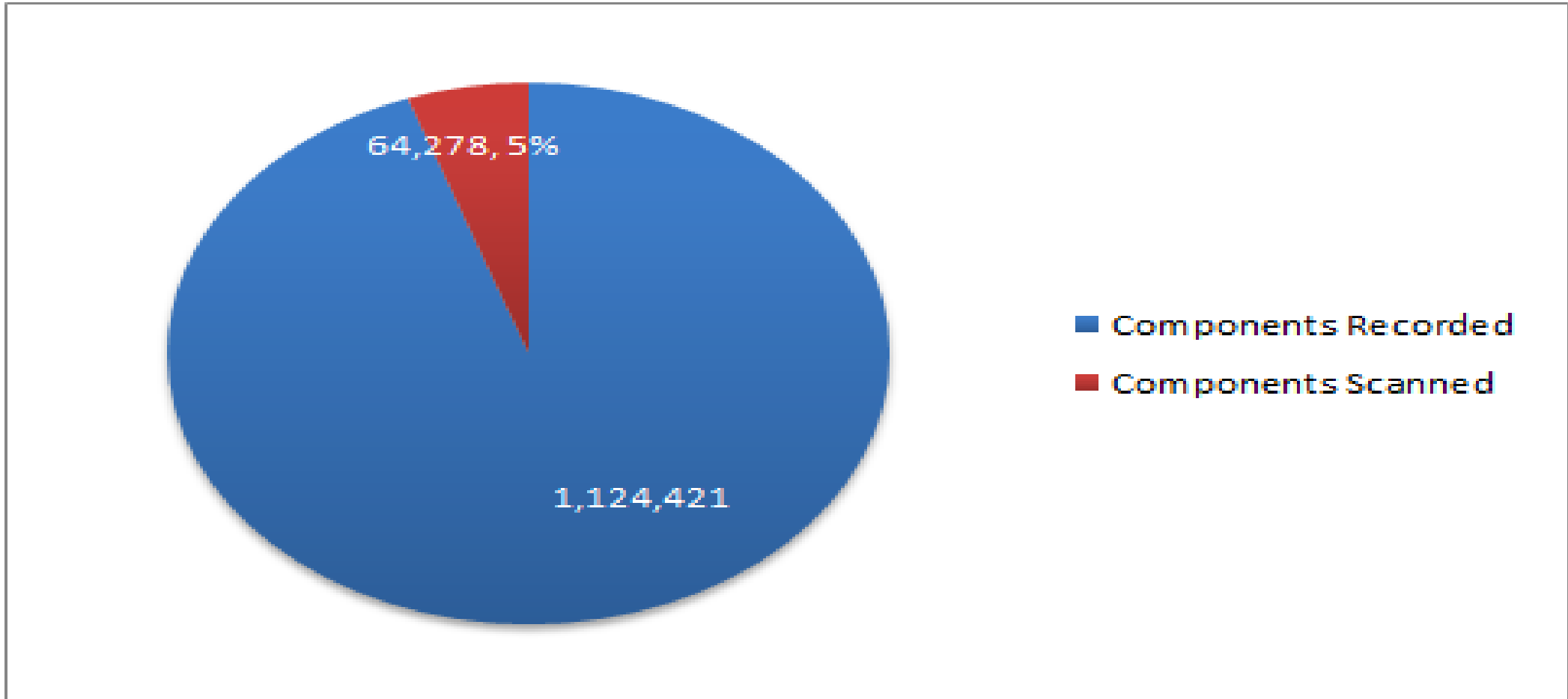


Barcode Scanning

- **Pre-UDI**
 - **Unmanageable - Multiplicity of barcode standards**
 - **'All too difficult' - Multiplicity of processes**
 - **'Too expensive' - Barcode scanners too expensive**
- **Post-UDI**
 - **More manageable - Fewer standards (GTIN)**
 - **'All too difficult' - Still no common processes**
 - **'Barcode scanners don't work' - 3D Barcodes**
 - **'Too expensive' - £30-40 for a 3D scanner**



Barcode Scanning Rates 2018 - 5%





How to improve scanning rates?

- **Development and support of interfaces for pre-operative implant validation**
- **Data Quality Programme - increasing awareness**
- **Awareness of frequency of Never Events**
- **Support to develop interfaces**
- **Linkage to procurement systems?**