List of papers, publications, and research requests using NJR data to March 2016

Appendix 4
### NJR Research Fellows – 2011 to 2016

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Term</th>
<th>Host Institution</th>
<th>Area of Study</th>
<th>Study Title</th>
<th>Thesis Title/Date of Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJR/RCS Surgical Research Fellow</td>
<td>Tanvir Khan</td>
<td>August 2015 – ongoing</td>
<td>University of Nottingham</td>
<td>Revision arthroplasty surgery</td>
<td>‘Periprosthetic Fractures around the hip and knee: Predictors, outcomes of surgical treatment and socioeconomic impact’.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>MRC/NJR Research Fellow</td>
<td>Adrian Sayers</td>
<td>August 2014 – ongoing</td>
<td>University of Bristol</td>
<td>Improvement to patient outcomes after joint replacement surgery</td>
<td>‘Femoral: Factors affecting mortality, morbidity and patient outcomes after joint replacement surgery’.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>NJR Research Fellow</td>
<td>Simon Jameson</td>
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<tr>
<td>Term</td>
<td>16 months (18 April 2011 – 31 July 2012)</td>
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<tr>
<td>Host institution</td>
<td>Durham University</td>
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</table>
| Area of study            | Risk of revision following different types of primary hip replacement  
Patient reported outcomes measures following different types of primary hip replacement  
Effect of BMI on patient reported outcomes  
Effect of surgical approach on patient reported outcomes  
Comparison of statistical models for implant survival analyses |
| Thesis title/Date of award | PhD (Durham University - Awarded December 2015)  
Thesis title: ‘Rationalisation of primary hip replacement using evidence from linked national databases’. |

<table>
<thead>
<tr>
<th>NJR Research Fellow</th>
<th>Paul Baker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
<td>12 months (18 April 2011 – 17 April 2012)</td>
</tr>
<tr>
<td>Host institution</td>
<td>Health Education North East (HENE)</td>
</tr>
</tbody>
</table>
| Area of study            | Patient reported outcome measures (PROMS) and reason for revision following total knee replacement and unicondylar knee replacement procedures  
Analysis of revision knee arthroplasty in England and Wales  
Assessment of dissatisfaction following primary knee arthroplasty |
| Thesis title/Date of award | MD (Newcastle University – Awarded March 2014)  
Thesis Title ‘Analysis of knee replacements using data from the National Joint Registry for England and Wales’. |
Cumulative longlist of published papers and data releases

This appendix provides details of published analyses and data releases that have been sanctioned by the NJR Research Sub-committee between April 2010 and March 2016. NJR data is available for research purposes following approval by the NJR Research Sub-committee. For further details please visit the NJR website at www.njrcentre.org.uk.

Published papers (April 2015 – March 2016)

**Good outcome of total hip replacement in patients with cerebral palsy.**

**Cost-Effectiveness of Five Commonly Used Prosthesis Brands for Total Knee Replacement in the UK: A Study Using the NJR Dataset.**

**Comparative Results From a National Joint Registry Hip Data Set of a New Cross-Linked Annealed Polyethylene vs Both Conventional Polyethylene and Ceramic Bearings.**

**Analysis of causative microorganism in 248 primary hip arthroplasties revised for infection: a study using the NJR dataset.**

**Effect of Surgical Caseload on Revision Rate Following Total and Unicompartmental Knee Replacement.**

**Are all metal-on-metal hip revision operations contributing to the National Joint Registry implant survival curves?: a study comparing the London Implant Retrieval Centre and National Joint Registry datasets.**

**Deep prosthetic joint infection: a qualitative study of the impact on patients and their experiences of revision surgery.**
Does pre-operative sampling predict intra-operative cultures and antibiotic sensitivities in knee replacements revised for infection?: a study using the NJR dataset.

Implant Optimisation for Primary Hip Replacement in Patients over 60 Years with Osteoarthritis: A Cohort Study of Clinical Outcomes and Implant Costs Using Data from England and Wales.

Optimal usage of unicompartmental knee arthroplasty: a study of 41,986 cases from the National Joint Registry for England and Wales.

Mixing of components from different manufacturers in total hip arthroplasty: prevalence and comparative outcomes.

Patient-reported outcomes following total and unicompartmental knee replacement: a study of 14,076 matched patients from the National Joint Registry for England and Wales.

Lifetime cost effectiveness of different brands of prosthesis used for total hip arthroplasty: a study using the NJR dataset.

Published papers (April 2014 – March 2015)

Setting benchmark revision rates for total hip replacement: analysis of registry evidence.

Microorganisms responsible for periprosthetic knee infections in England and Wales.
No functional benefit of larger femoral heads and alternative bearings at 6 months following primary hip replacement.

Have cementless and resurfacing components improved the medium-term results of hip replacement for patients under 60 years of age?

Total hip replacement and surface replacement for the treatment of pain and disability resulting from end-stage arthritis of the hip (review of technology appraisal guidance 2 and 44): systematic review and economic evaluation.

Validation of primary metal-on-metal hip arthroplasties on the National Joint Registry for England, Wales and Northern Ireland using data from the London Implant Retrieval Centre: a study using the NJR dataset.

Adverse outcomes after total and unicompartmental knee replacement in 101,330 matched patients: a study from data of the National Joint Registry for England and Wales.

45-day mortality after 467,779 knee replacements for osteoarthritis from the National Joint Registry for England and Wales: an observational study.

The impact of body mass index on patient reported outcome measures (PROMs) and complications following primary hip arthroplasty.

Mortality following hip arthroplasty – inappropriate use of National Joint Registry (NJR) data.

Determinants of revision and functional outcome following unicompartmental knee replacement.
Published papers (April 2013 – March 2014)

Patient satisfaction with total knee replacement cannot be predicted from pre-operative variables alone: A cohort study from the National Joint Registry for England and Wales.

90-day mortality after 409,096 total hip replacements for osteoarthritis, from the National Joint Registry for England and Wales: a retrospective analysis.

Functional outcome, revision rates and mortality after primary total hip replacement – a national comparison of nine prosthesis brands in England.

Patterns of Risk of Cancer in Patients with Metal-on-Metal Hip Replacements versus Other Bearing Surface Types: A Record Linkage Study between a Prospective Joint Registry and General Practice Electronic Health Records in England.

Early PROMs Following Total Knee Arthroplasty – Functional Outcome Dependent on Patella Resurfacing.

A Comparison of Surgical Approaches for Primary Hip Arthroplasty: A Cohort Study of Patient Reported Outcome Measures (PROMs) and Early Revision Using Linked National Databases.

Published papers (April 2012 – March 2013)


Cemented, cementless and hybrid prostheses for total hip replacement: a cost-effectiveness analysis.

Mid-term survival following primary hinged total knee replacement is good irrespective of the indication for surgery.
Mid-term equivalent survival of medial and lateral unicompartmental knee replacement: an analysis of data from a National Joint Registry.

The design of the acetabular component and size of the femoral head influence the risk of revision following 34,721 single-brand cemented hip replacements: a retrospective cohort study of medium-term data from a National Joint Registry.

Failure rates of metal-on-metal hip resurfacings: analysis of data from the National Joint Registry for England and Wales.

Patient and implant survival following 4323 total hip replacements for acute femoral neck fracture: a retrospective cohort study using National Joint Registry data.

Revision following patello-femoral arthroplasty.

Revision for unexplained pain following unicompartmental and total knee replacement.

The association between body mass index and the outcomes of total knee arthroplasty.

Reason for revision influences early patient outcomes after aseptic knee revision.

The effect of surgical factors on early patient-reported outcome measures (PROMs) following total knee replacement.


Comparison of patient-reported outcome measures following total and unicompartmental knee replacement.
Patient Reported Outcome Measures after revision of the infected TKR: Comparison of single versus two-stage revision.

Independent predictors of revision following metal-on-metal hip resurfacing: A retrospective cohort study using National Joint Registry data.

Risk of cancer in first seven years after metal-on-metal hip replacement compared with other bearings and general population: Linkage study between the National Joint Registry for England and Wales and hospital episode statistics.

Total hip replacement for the treatment of acute femoral neck fractures: results from the National Joint Registry of England and Wales at 3-5 years after surgery.

Published papers (April 2011 – March 2012)

Indications for early hip revision surgery in the UK – a re-analysis of NJR data.

Failure rates of stemmed metal-on-metal hip replacements: Analysis of data from the National Joint Registry of England and Wales.

Reason for Revision Influences Early Patient Outcomes After Aseptic Knee Revision.

Revision following patello-femoral arthroplasty.

The Safety and Efficacy of Large-Diameter Metal-on-Metal Total Hip Arthroplasty.
Published papers prior to March 2011

Can choices between alternative hip prostheses be evidence based? A review of the economic evaluation literature.

Which prostheses are cost-effective?

Revision rates after primary hip and knee replacement in England between 2003 and 2006.

The role of pain and function in determining patient satisfaction after total knee replacement.
Research requests sanctioned by RSC using NJR data

Research requests (April 2015 – March 2016)

National Revision rates of the Corail/Pinnacle 36mm metal on metal total hip replacements – Aetiology of failure, risk factors and recommendations for ongoing surveillance programmes.
Ben Bolland, Musgrove Park Hospital, Somerset
March 2016

How reliable is the NJR retrospective dataset for tracking the outcomes of hip and knee replacement: A comparison of 12 years of the NJR and HES/PEDW.
Adrian Sayers, University of Bristol
March 2016

A comparison of revision rates of Smith & Nephew manufactured cobalt chrome and oxidised zirconium bicondylar knee prostheses.
Andrew Weymann, Smith & Nephew
February 2016

The effect of antibiotic-loaded bone cement on risk of revision following primary knee replacement.
Simon Jameson, South Tees Hospitals NHS Foundation Trust
December 2015

Safety and Feasibility Evaluation of Tourniquets for Total Knee Replacement (SAFE TKR) Study – A Retrospective Cohort Study.
Peter Wall, University of Warwick
December 2015

Does laminar airflow make a difference to the infection rates for lower limb arthroplasty: A study using the England & Wales National Joint Registry and local surgical site infection data for two hospitals with and without laminar airflow.
Raj Shrivastava, William Harvey Hospital, Kent
December 2015

Using electronic health records and distance recruitment to unravel the genetics of common disease.
Mark Wilkinson and Eleftheria Zeggini, University of Sheffield and Wellcome Trust Sanger Institute
September 2015

Primary hip replacement within NJR/HES – 10 year validation using Exeter hip unit database.
Simon Jameson, Princess Elizabeth Orthopaedic Centre, Exeter
September 2015
Hip replacement in patients under 40: Trends, functional outcomes and survivorship in England and Wales.
Simon Jameson, Princess Elizabeth Orthopaedic Centre, Exeter
September 2015

Periprosthetic Fractures around the hip and knee: Incidence, Predictors, Outcomes of Surgical Treatment and Socioeconomic Impact.
Tanvir Khan, University of Nottingham
August 2015

Research requests (April 2014 – March 2015)

Systemic effects of metal exposure after metal-on-metal hip resurfacing and replacement.
Alister Hart and Mark Wilkinson, University College London and University of Sheffield
March 2015

Is it safe to completely disinvest in TJR follow-up or will this expose people to harm?
Philip Conaghan, Leeds University
March 2015

Failure rates of ceramic-on-ceramic bearings.
Peter Wall, University of Warwick
March 2015

The choice between hip prosthetic bearing surfaces in total hip replacement: Evidence synthesis, statistical analysis and decision modelling to evaluate the effectiveness and cost-effectiveness of prosthetic implants for the NHS.
Elsa Marques, University of Bristol
January 2015

Development of a personalised health forecasting tool for patients undergoing hip or knee replacement.
Mark Wilkinson, University of Sheffield
January 2015

Development of efficient computer based solutions for data linkage, real time outcome assessment and surveillance in the UK National Joint Registry: A proof of concept study.
Alex Macgregor, University of East Anglia
January 2015

Post-surgical predictors of chronic pain after total knee replacement.
Andrew Judge, University of Oxford
December 2014

Outcomes following revision of metal-on-metal hip replacements.
David Murray, University of Oxford
December 2014
Analysis of factors associated with intraoperative complications during shoulder replacement and their subsequent effects on revision rates and patient reported outcomes.
Paul Cowling, University of York
December 2014

Comparative Results of a New Crosslinked Annealed Polyethylene versus both Conventional Polyethylene and Ceramic Bearings in Hip Arthroplasty, Based upon a 45,877 Trident Acetabular Components Series.
Jean Alain Epinette, Clinique Médico-Chirurgicale, Bruay-La-Buissiere, France
October 2014

Best Practice in Total Hip Arthroplasty: Review of surgical practice based on the Standardised Revision Ratio (SRR).
William Manning and Paul Baker, Northern Deanery
October 2014

Analysis of alternative bearings in Total Knee Replacement. A comparison of the revision rate with alternative surface bearings including highly cross linked polyethylene (HXLPE) and oxidised zirconium with cobalt chromium on conventional polyethylene.
Thomas Partridge and James Mason, Durham University
October 2014

Outcomes of constrained TKR in Primary and Revision situations.
Naomi Gibbs and Benjamin Parkinson et al, University Hospitals Coventry and Warwickshire
October 2014

Total Hip Arthroplasty in the Young Adult: A National Joint Registry based analysis of implant usage.
Hiren Divecha, North West Deanery
July 2014

Explore the outcomes of total hip replacement (THR) in patients with Cerebral Palsy.
Ashley Blom, University of Bristol
April 2014

Factors affecting mortality, morbidity and patient outcomes after joint replacement surgery.
Adrian Sayers, University of Bristol
April 2014

Epidemiological analysis of the infecting organism in first time revision hip and knee replacements.
Paul Baker, Northern Deanery
April 2014

The effect of femoral stem design on the incidence of periprosthetic fractures following primary total hip replacement.
Jeya Palan, University of Leicester
April 2014
Research requests (April 2013 – March 2014)

An exploration of the association between high BMI and the incidence and prevalence of arthroplasty of the weight bearing joints.
A MacGregor, University of East Anglia
February 2014

UK Inflammatory Arthritis Arthroplasty Project.
A MacGregor, University of East Anglia
February 2014

Stem fracture following primary hip arthroplasty: Comparison of different stems, stem lengths and fixation methods from Joint Registries in Australia, Sweden and UK.
AJ Timperley, Princess Elizabeth Orthopaedic Centre, Exeter
February 2014

An evaluation of constrained condylar revision knee systems used in England and Wales.
N Caplan, D Kader, Northumbria University
February 2014

The epidemiological and financial burden of revision total knee arthroplasty in England and Wales. Are current published U.S projections compatible?
A Toms, Royal Devon and Exeter Hospitals Trust
February 2014

Jeya Palan, University of Leicester
January 2014

Polyethylene treatments and their effect on total hip replacement survival. Analysis of data from the National Joint Registry from England and Wales.
E Davies, Royal Orthopaedic Hospital, Birmingham
January 2014

NHS Reform and Private Healthcare Activity.
R Disney, University College London
December 2013

Infection after hip and knee replacement.
Ashley Blom, Bristol University
August 2013

A clinical evaluation to determine metal ion release from 4th generation metal on metal articulating surfaces in cementless total hip arthroplasty.
E Smith, Avon Orthopaedic Centre, Bristol
July 2013

Registry-retrieval linkage study of 1000 metal-on-metal hip arthroplasties.
Alister Hart, John Skinner and Gordon Blunn UCL and RNOH
April 2013
Research requests (April 2012 – March 2013)

Rate of venous Thromboembolism in total ankle arthroplasty.
Zaidi R, Royal National Orthopaedic Hospital NHS Trust, Stanmore
February 2013

Does the type of venous thromboembolism (VTE) chemoprophylaxis influence the rate of revision for infection following primary hip and knee replacement?
Baker P, Health Education North East
January 2013

Total hip replacement and surface replacement for the treatment of pain resulting from end stage arthritis of the hip (Review of technology appraisal guidance 2 and 44).
Clarke A, University of Warwick
December 2012

Understanding failure in unicompartmental knee arthroplasty.
Murray DW, University of Oxford
November 2012

Revision rates by prosthesis type: Parametric survival analysis to inform a model of cost-effectiveness.
Ms V Danielson, Johnson & Johnson Medical
November 2012

Research requests (April 2011 – March 2012)

Comparison of the cost-effectiveness of the most commonly used types and brands of prosthesis in total hip and knee replacement.
R Grieve and M Pennington, London School of Hygiene and Tropical Medicine
March 2012

Relative revision rates by cement type in cemented and hybrid total hip replacement in England and Wales.
J Webb, Bristol
December 2011

Using evidence to reduce risk of healthcare acquired infection following primary total hip replacement.
N Graves, Queensland University of Technology, Australia
November 2011

True Mortality Rates after Total Hip Arthroplasty by method of fixation after adjustment for confounding factors: Results from the NJR in England & Wales (7th Edition).
J Timperley, Exeter
September 2011

A retrospective cohort study comparing the relative risks of revision or mortality at one and five years inpatients undergoing total hip replacement.
R Field, Epsom
August 2011
Research requests (April 2010 – March 2011)

Orthopaedic Intervention in Rheumatoid Arthritis: A retrospective analysis of cumulative incidence, prognostic markers, outcomes and cost effectiveness over a 20 year period.
A Young and E Nikiphorou, University of East Anglia
March 2011

Current trends in primary hip arthroplasty: Influence of these trends and associated factors on survival and revision rates.
J Timperley, Exeter
June 2010