THE IMPACT OF WAITING FOR HIP AND KNEE ARTHROPLASTY IN PEOPLE OF WORKING AGE: AN EVALUATION OF THE WORKFORCE PRODUCTIVITY AND MACROECONOMIC EFFECTS IN PATIENTS UNDER 65 YEARS

S.R. Morrison [a, b, c], B. Lim [d], A.J. Hall [a, b, c], N.D. Clement [a, b, e], C. Gee [a, c, f], P. Walmsley [a, b, d]
[a] SCOTTISH Network, Golden Jubilee University National Hospital, Clydebank, U.K.
[b] School of Medicine, University of St Andrews, St Andrews, U.K.
[c] Department of Orthopaedics, Golden Jubilee University National Hospital, Clydebank, U.K.
[d] Department of Trauma and Orthopaedic Surgery, Victoria Hospital, Kirkcaldy, U.K.
[e] Edinburgh Orthopaedics, Royal Infirmary of Edinburgh, Edinburgh, U.K.
[f] University of Strathclyde, Glasgow, U.K.
E-Mail: scott.x.morrison@nhs.scot

Hip and knee arthroplasty are increasingly performed in working-age individuals. This study assessed the effect of waiting for surgery on ability to work, return-to-work (RTW), and the associated economic impact.

This retrospective cohort included patients aged ≤65 years who underwent total hip (THA) or total knee arthroplasty (TKA) between April 2023 and March 2025 at a UK orthopaedic national treatment centre. Participants completed outcome measures and a RTW questionnaire. Economic analysis incorporated national salary and productivity data.

Of 92 patients, 73.9% RTW post-operatively, with higher rates in those aged <50 years (>90% RTW) and among THA recipients (85.1%) compared to TKA (62.2%). Median RTW time was 2.5 months; 67.6% required work modifications. Pre-operative work cessation (n=34) correlated with failure to RTW (p=0.004). Longer waits increased pre-operative work cessation but did not affect post-operative RTW rates. 4.3% of those waiting 3 months stopped work pre-operatively, rising to 28.3% at 12 months, and 33.7% at 24 months. A three-month wait corresponded to a mean pre-operative work cessation cost per patient of £1,496 compared to £9,724 for a 12 month wait, with this difference costing the Scottish economy over £44.5 million annually. Overall employment time-loss related to OA requiring arthroplasty in Scotland cost approximately £373 million annually.

Most patients under 65 years RTW, often requiring temporary modifications. Younger age and THA were associated with higher RTW rates, while pre-operative work cessation predicted non-return. These findings demonstrate the substantial financial impact of OA on individuals and the wider economy, exacerbated by longer waiting times.

FIFTEEN-YEAR SURVIVORSHIP OF PRIMARY TOTAL ANKLE ARTHROPLASTY: A NATIONAL REGISTRY STUDY

PJ Porter, MJ Kennedy, ACC Brunt, L Davidson, M Stafford, JV Clarke, P Walmsley, B Jamal
Department of Trauma and Orthopaedic Surgery, Queen Elizabeth University Hospital, Glasgow, G51 4TF, United Kingdom
Corresponding author: patrick.porter@nhs.scot

Total Ankle Arthroplasty (TAA) is a definitive treatment for end-stage ankle arthritis. Its use has become increasingly popular, however, there is limited long-term evidence on implant survivorship. The aims of this study were to determine fifteen-year survivorship of primary TAA in Scotland, compare different implants, and assess patient characteristics associated with failure.

This study comprised multicentre data from the Scottish Arthroplasty Project between 2000 and 2023, linked with national morbidity and mortality national records. Survivorship was defined as retention of all primary components without removal, exchange, or conversion to arthrodesis. Life tables and Kaplan-Meier survival curves were generated, and Cox proportional hazards regression models were fitted to identify independent associations with failure.

There were 1,262 primary TAAs. Overall survivorship was 98.9% (95% CI 98.4-99.5) at one year, 96.5% at five years (95% CI 95.3-97.6), 90.9% at ten years (95% CI 88.5-93.4), and 81.9% at fifteen years (95% 77.5-86.5). Survivorship differed significantly between implant designs, with Mobility demonstrating higher failure rates (19%) compared with Infinity (7%) and STAR (7%). Median length of stay decreased over the study period (2 days, (IQR 1-4). There were no differences in outcomes by age, sex, or socioeconomic deprivation.

Total ankle arthroplasty in Scotland demonstrates good long-term survivorship, with over 80% of implants surviving at fifteen years. Implant design was the principal determinant of failure, underscoring the importance of ongoing evaluation of implant performance in national registries.

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THE ABERDEEN EXPERIENCE OF LEAN AND GREEN WARD-BASED CARPAL TUNNEL SURGERY: A SAFETY AND EFFICIENCY AUDIT

A. Mohammad, H. Moffat, D. Lawrie, A. Riemen, D. Neilly, C. Miller
Woodend General Hospital, Aberdeen AB15 6XS, UK
Email: ali.mohammad3@nhs.scot

Carpal Tunnel Decompression (CTD) is the most performed hand surgery in the UK. Increasing demand, limited theatre access, and NHS sustainability goals have led to the adoption of ward- based CTDs. This audit aimed to evaluate the safety, efficiency, and environmental impact of CTDs performed in theatre versus the ward (Department of Scheduled Admissions, DOSA) in NHS Grampian.

279 patients underwent CTD under local anaesthetic between August 2023 and April 2025 (150 in theatre, 129 on DOSA). Infection rates were analysed across all patients. Additional evaluations included operative time (n=38 DOSA, n=41 theatre), staffing (n=91), adherence to BSSH out-of-theatre guidelines (n=40), patient questionnaires (n=27), and waste output (n=4 cases).

Infection rates were low and not significantly different between cohorts: 2% (3/150) in theatre vs 1.6% (2/129) in DOSA (p=0.95). All infections were either superficial or suture abscesses. Patients in DOSA had shorter hospital stays (mean 2.2 vs 4.4 hours), lower staff numbers (mean 3 vs 9 per procedure), and equivalent operative duration (13.6 vs 15.3 minutes). Questionnaire feedback (n=16 DOSA, n=11 theatre) showed greater patient satisfaction with lower wait times in DOSA. Waste produced per case was lower in DOSA (2.1kg vs 3kg). Full compliance with BSSH safety standards was achieved on ward-based lists.

In conclusion, ward-based CTDs are safe, efficient, and align with environmental sustainability targets. Comparable infection outcomes, shorter stays, reduced staffing needs, and positive patient feedback support expanding ward-based CTD as a viable alternative to theatre-based CTD.

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"WAITING POORLY" FOR HIP AND KNEE ARTHROPLASTY: DECLINING QUALITY OF LIFE AND A PERCEIVED LACK OF SUPPORT - FINDINGS OF THE MULTICENTRE WAIT-DATA STUDY

C. McCann[1], N. D. Clement[2], C. W. Gee[1], J. V. Clarke[1], P. J. Walmsley,[3] N. E. Ohly[1], D. Deehan[4], D. Kader[5], C. Stevenson[6], A. J. Hall[1], on behalf of the WAIT-DATA Collaborative group
1: Golden Jubilee National Hospital, Clydebank G81 4DY
2: Royal Infirmary of Edinburgh, Edinburgh, EH16 4SA
3: Fife Orthopaedics National Treatment Centre, Kirkcaldy, KY2 5AH
4: Freeman Hospital, Newcastle upon Tyne NE7 7DN
5: South West London Elective Orthopaedic Centre, Surrey, KT18 7EG
6: Musgrave Park Hospital, Belfast, BT12 6BA
Email: conor.mccann@nhs.scot

Prolonged waiting times for hip and knee arthroplasty are associated with deterioration in health-related quality of life. The lived experience of waiting for arthroplasty remains poorly characterised. This study evaluated patients' experiences of preoperative information, advice, and support, and identified groups reporting the lowest satisfaction.

The `*What Are the Implications to Delayed Access to Arthroplasty*?` (WAIT-DATA) study was a prospective multicentre audit of patients awaiting elective hip or knee arthroplasty across 14 UK hospitals. Participants completed a standardised questionnaire assessing satisfaction with nine domains of preoperative information and support, each rated on a five-point Likert scale. Composite "Information and Advice" and "Support" scores were derived, and associations with demographic, clinical, and psychosocial factors were examined using multivariable linear regression.

Among 851 respondents (mean age 69; 57.7% female), overall satisfaction was moderate. Patients were generally well informed about their condition (mean 4.14±0.92) and operation (4.34±0.88), but less satisfied with support for weight management (3.49±0.98), general health (3.54±1.01), and mental wellbeing (3.46±1.02) ($p < 0.001$). Older age, obesity, deprivation, and new physical or mental diagnoses were associated with lower satisfaction, although effect sizes were small. Poorer self-reported health and quality-of-life change showed stronger links with dissatisfaction, particularly regarding waiting time. Almost half reported opioid use, and most described deteriorating function and activity while waiting.

Patients awaiting arthroplasty experience significant physical and psychological decline yet receive inconsistent support. The waiting period should be reframed as an active phase of preparation, with proactive multidisciplinary support helping patients to "wait well" rather than "wait poorly."

OUTCOMES OF POSTERIOR MALLEOLUS FRACTURES

NR. Heinz, S. Fredrick, AK. Amin, AD. Duckworth, TO. White
Edinburgh Orthopaedics, Royal Infirmary of Edinburgh, 51 Little France Crescent; Old Dalkeith Road, Edinburgh, EH16 4SA
Email: nicholas.heinz@doctors.org.uk

The aim of this study was to evaluate clinical outcomes and complication rates of patients who had sustained an unstable ankle fracture with a posterior malleolus fracture (PMF) and without (N-PMF).

Adult patients (> 16 years) presenting to a single large academic trauma centre between 2009 – 2012 with an unstable ankle fracture requiring surgery were identified. Data collected were patient demographics, fracture classification and clinical outcomes.

There were 675 patients in the study cohort. The mean age was 48.5 years (range, 16–92) and 59% (n=395/675) were female. Of the total cohort, 63.9% (n=431/675) had an associated PMF. Of those fractures with an associated PMF, 85% (n=367/431) did not undergo fragment specific fixation. There were no statistically significant differences between groups with regards further surgery secondary to complication (N-PMF 5.7%% [n=14/244] vs PMF 7.5% [n=32/431]; p=0.403) or infection (N-PMF 7.8% [n=19/244] vs PMF 8.4% [n=36/431]; p=0.796). Patients with a PMF were significantly more likely to develope PTOA (N-PMF 27.0% [n=66/244] vs PMF 54.5% [n=235/431]; p<0.001). However, only 1.2% (n=3/244) of patients in the N-PMF group versus 3.0% (n=13/431) in the PMF group required an ankle fusion (p=0.190).

In this large cohort of patients, a PMF did not increase the risk of further surgery secondary to a complication despite 85% not undergoing fragment specific fixation. Although patients with an associated PMF were twice as likely to acquire post-traumatic osteoarthritis, this did not equate to an increased rate of late intervention in terms of ankle fusion, which was overall very low (3.0%).

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PATIENT PERSPECTIVES ON CONSENT FOLLOWING HIP FRACTURE: A MIXED-METHODS STUDY

T. Feng, A.D. Ablett, C. Mccann, C. E. H. Scott, N.D. Clement
Trauma and Orthopaedic department, Edinburgh, EH16 4SA
Email: tony.feng@nhs.scot

Informed consent in hip fracture patients remains challenging due to pain, analgesia effects, and psychological distress.

In this multi-centre mixed-methods study we explored patients' ability to retain information as well as their perceptions of the consent process. Patients with hip fractures completed structured questionnaires within 36-hours of admission assessing recall of risks. Seventeen patients underwent semi-structured interviews post-operatively. Thematic analysis followed grounded theory methodology.

Forty patients with hip fractures (median age: 77 years, female: 73%, n=29/40) completed structured questionnaires. While 93% (n=37/40) reported satisfaction with consent and 90% (n=36/40) could describe their operation, unprompted risk recall was poor: death (28%, n=11/40), stroke/myocardial infarction (15%, n=6/40), infection (15%, n=6/40). Functional complications were least frequently documented on consent forms (limp 15% (n=6/40), chronic pain 43% (n=17/40), leg length discrepancy 50% (n=20/40) despite being patients' primary concerns. Three themes emerged from interviews: (1) **Loss of agency**: patients viewed consent as formality with no reasonable alternative, stating "I had a broken hip...of course I was going to have it done"; (2) **Personalised risk**: functional outcomes carried greater significance than medical complications, with expectations shaped by prior experiences of family/friends; (3) **Information timing**: written materials were deemed unhelpful pre-operatively due to pain and distress but highly valued post-operatively for managing recovery expectations and addressing symptoms.

Rather than viewing consent as unidirectional and knowledge as static and transferable, hip fracture patients interpret medical information in a fluid and contextual manner, which is co-constructed throughout their encounter with their surgical team.

INVESTIGATING THE RELATIONSHIP BETWEEN PRE-OPERATIVE ANATOMY, IMPLANT POSITIONING, AND PATIENT-REPORTED OUTCOMES IN ROBOTIC ARM-ASSISTED TOTAL KNEE ARTHROPLASTY

L. Farrow, S, Stewart, A. Kemayou, R.Carrino, A. Johnston.
Grampian Orthopaedics, Woodend Hospital, Eday Road, Aberdeen, AB15 6XS
Email: luke.farrow@nhs.scot

Despite growing utilisation of Robotic arm-assisted total knee arthroplasty (RA-TKA), there remains a limited understanding of how individual patient anatomy and the resulting intraoperative decisions influence patient-reported outcome measures (PROMs).

A retrospective cohort study was undertaken with relevant perioperative data collected from patients undergoing RA-TKA at a large University teaching hospital between 2022-2024. Outcomes were 6 week and 1-year Oxford Knee Scores (OKS) Minimum Clinically Important Difference (MCID) attainment. Multivariable logistic regression (adjusting for age, sex, baseline OKS, and pre-operative Coronal Plane Alignment of the Knee (CPAK) classification) was performed to assess the relationship between OKS MCID attainment and: (1) Change in CPAK classification (2) Implant positioning outside industry defined radiological parameters, and (3) Degree of coronal deformity correction. Statistical significance was set at $p \leq 0.05$.

A total of 374 patients (mean age 72, 56% female) were included, of which 229 and 142 had 6 week and 1-year OKS available respectively. 82% patients changed CPAK classification post-op, with no significant association with 6 week / 1-year MCID attainment. Femoral or tibial coronal alignment outside the recommended parameters was however associated with significantly greater 1-year MCID attainment (OR 4.57 (1.09-24.35, $p = 0.05$). Every 1 degree of alignment correction towards neutral was also associated with 3% greater chance of 1-year PROMs MCID attainment (Coefficient 0.03 0.01 to 0.06, $p = 0.012$).

Patient anatomy and implant positioning do appear to influence PROMs following RA-TKA. Further work is required to understand optimal implant placement for specific anatomical knee phenotypes at an individual patient level.

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DEFINING THE OXFORD HIP SCORE MEANINGFUL VALUES FOLLOWING ASEPTIC REVISION TOTAL HIP ARTHROPLASTY: A PROSPECTIVE COHORT STUDY

TR Williamson[1,2], ND Clement[1,2]
Edinburgh Orthopaedics, Royal Infirmary of Edinburgh, Edinburgh, UK
Usher Institute, School of Population Health Sciences, University of Edinburgh, UK
Email: tom.r.williamson@outlook.com

This study aimed to define and predict achievement of the minimal important change (MIC) and patient acceptable symptom state (PASS) score for the Oxford hip score (OHS) following revision total hip arthroplasty (rTHA) at 1- and 2-year follow-up.

A prospective cohort of 157 aseptic rTHA cases were included, (83 female [52.9%], mean age 71.0 [SD 13.5] years). MIC and PASS were calculated using receiver operator curve analysis. A logistic regression model predicted threshold achievement.

The MIC was 8.5 (95% confidence interval [CI] 3.0 to 13.5, area under the curve [AUC] 0.875) and 5 (95% CI -2.0 to 9.5, AUC 0.83) at 1 and 2 years postoperatively respectively. Preoperative OHS was independently associated with 1- and 2-year MIC achievement (odds ratio [OR] 0.905, 95% CI 0.839 to 0.963, p=0.003), with scores below 31.5 most likely to attain MIC at both 1 and 2 years respectively (AUC 0.541).

The PASS was 31.5 (95% CI 22.5 to 42.5, AUC 0.891) at 1 year and 32.5 (95% CI 23.5 to 40.5, AUC 0.931) at 2 years postoperatively. No factors were independently associated with 1 year PASS attainment, and patients with ASA grade 3 was less likely to achieve 2-year PASS (OR 14.756, 95% CI 1.708 to 127.489, p=0.014).

This is the first report of OHS MIC and PASS following aseptic rTHA. Preoperative function and ASA were independently associated with PASS and MIC achievement postoperatively.

PERIPROSTHETIC FEMORAL FRACTURES AND REOPERATION WITH THE EXETER V40 STEM IN TOTAL HIP ARTHROPLASTY (THA) USING NATIONAL DATA-LINKAGE: A 22-YEAR REVIEW OF 17,197 CASES FROM A NATIONAL TREATMENT CENTRE

M.J. Kennedy,[1,2] S. Chopra,[1] D. MacLeod,[1] J. McGlynn,[1] P. Walmsley,[2,3] D. Wallace,[1] F. Mahmood,[1] J.V. Clarke,[1] N.D. Clement,[2,4] N. Holloway[1]
1 Golden Jubilee National Hospital, Clydebank, G81 4DY, UK
2 University of St. Andrews, St. Andrews, KY16 9TF, UK
3 National Treatment Centre-Fife Orthopaedics, Kirkcaldy, KY1 2HL, UK
4 Royal Infirmary of Edinburgh, Edinburgh, EH16 4SA, UK
Email: matthewjkennedy@doctors.org.uk

Polished taper slip (PTS) stems are widely used in THA, though concerns persist about an increased risk of periprosthetic femoral fractures (PFF). This study aimed to establish the incidence of intraoperative (IO) and postoperative (PO) PFF with the Exeter V-40 cemented stem in primary THA.

This retrospective cohort study included consecutive patients undergoing elective primary THA with the Exeter V-40 stem at a single centre (2002–2024). Demographics, implant details, ASA grade, and reoperation data were collected. Data linkage with national registries identified potential IOPFF, POPFF, and all-cause reoperations using ICD-10 and OPCS-4 codes. Electronic health records (EHR) were reviewed to confirm true fracture incidence.

17,197 Exeter THAs were performed (61% female, median age 70 years [IQR 63–76]). Full EHR review was required for 1,901 patients (11.1%); 1,013 patients (5.9%) with coding suggestive of PFF, and failure in data-linkage for 888 (5.1%) patients. Twenty-three IOPFFs (0.1%) were identified, 56.5% involving the calcar. Overall, 357 patients (2.1%) underwent reoperation (person-time incidence rate [PTIR] 2.83 per 1,000 person-years, 95% CI 2.6–3.1), including 73 reoperations for POPFF (PTIR 0.58 per 1,000 person-years). Older age independently predicted all-cause reoperation (adjusted HR 1.03). Male sex (aHR 2.77) and higher ASA grade (aHR 2.37) independently predicted reoperation for POPFF.

Exeter V-40 stems demonstrated excellent long-term performance with low rates of IOPFF, POPFF, and reoperation when rigorous interrogation of coding is performed. This work raises questions regarding the accuracy of registry-derived estimations of PFF incidence and highlights the need for further work to validate PFF coding.

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PREOPERATIVE TIRZEPATIDE THERAPY IN OBESE TOTAL HIP ARTHROPLASTY CANDIDATES: A MODELLING STUDY OF COST AND COMPLICATION REDUCTION

F. Thomson, K. White, P. Robinson, P. Gaston, N. Clement
Edinburgh Orthopaedics, Royal Infirmary of Edinburgh, EH16 4SA
Email: fraser.thomson2@nhs.scot

Obesity is a well-established risk factor for complications following total hip arthroplasty (THA), yet achieving significant pre-operative weight reduction through lifestyle modification alone remains challenging. This study modelled the potential clinical and economic implications of pre-operative Tirzepatide therapy in obese THA candidates. Complication rates and associated costs were derived from published datasets, including 891,567 THA procedures stratified by body mass index (BMI). Venous thromboembolism (VTE) and all-cause revision surgery were included as primary outcomes. Weight reduction data from the SURMOUNT-5 trial were applied to each BMI category to generate adjusted complication and cost profiles.

The model demonstrated a progressive increase in mean complication cost from £900 per patient (BMI 20–29 kg/m²) to £2,639 per patient (BMI ≥50 kg/m²). Simulated Tirzepatide-associated weight loss was projected to yield mean savings of £437, £538, and £717 per patient within the BMI 30–39, 40–49, and ≥50 kg/m² groups, respectively, primarily through reductions in VTE and revision rates.

Pre-operative Tirzepatide therapy may therefore offer a cost-effective means of optimising obese patients prior to THA, with potential to reduce peri-operative complications and improve surgical access among previously ineligible candidates. Prospective clinical studies are required to confirm these theoretical findings.