National Office of Clinical Audit

Irish Hip Fracture Database IHFD

IRISH HIP FRACTURE DATABASE
NATIONAL REPORT 2024
APPENDICES

ACCESSING REPORT APPENDICES

APPENDIX 1: GLOSSARY OF TERMS AND ACROYMS AND INITIALISMS

ABBREVIATION	DEFINITION
4AT	4 'A's Test - a rapid clinical test for delirium
AMRIC	Antimicrobial Resistance and Infection Control
AMT	Abbreviated Mental Test
ANP	Advanced nurse practitioner/candidate advanced nurse practitioner
ASA	American Society of Anesthesiologists
BIU	Business Intelligence Unit
BPT	Best Practice Tariff
cANP	candidate Advanced Nurse Practitioner
CAS	Cumulated Ambulation Score
CFS	Clinical Frailty Scale
CHG	chlorhexidine gluconate
DEXA	dual-energy X-ray absorptiometry
DHS	dynamic hip screw
DVR	data validation report
ECDC	European Centre for Disease Prevention and Control
ED	emergency department
EQ-5D-5L	Descriptive system of five health dimensions
FFN	Fragility Fracture Network
GA	general anaesthetic
HipFORESST	Hip Fracture Outcome Recording – Empowering, Supporting and Sustaining Teams
HFGC	hip fracture governance committee
HIPE	Hospital In-Patient Enquiry
HPO	Healthcare Pricing Office
HRB	Health Research Board
HSE	Health Service Executive
IGS	Irish Gerontological Society
IHFD	Irish Hip Fracture Database
IHFD FI	Irish Hip Fracture Database Frailty Index
IHFS	Irish Hip Fracture Standards
IITOS	Irish Institute for Trauma and Orthopaedic Surgery
IM	intramedullary
IQR	interquartile range
LTC	Long-term care
MDT	multidisciplinary team
MRSA	methicillin-resistant Staphylococcus aureus
MSSA	methicillin-susceptible Staphylococcus aureus
NH	Nursing Home
NHSN	National Healthcare Safety Network
NMS	New Mobility Score
NOCA	National Office of Clinical Audit
PPI	Public and Patient Interest
QI	quality improvement
RCSI	Royal College of Surgeons in Ireland
SA	spinal anaesthetic
SAP	surgical antibiotic prophylaxis

SHO	Senior House Officer
SpR	Specialist Registrar
SSI	surgical site infection
THR	total hip replacement

APPENDIX 2: HOSPITALS AND PEOPLE THAT WE WORK WITH

Hospital	Clinical Lead(s)	Audit Coordinator(s)
Midland Regional Hospital Tullamore	Ms Dorothy Niall	Orla Morris Allison Burke
St James's Hospital	Mr Tom McCarthy Prof. C. Geraldine McMahon	Abigail Mendoza
Tallaght University Hospital	Prof. Tara Coughlan Mr Nail Mc Goldrick	Ann Dwyer
Mater Misericordiae University Hospital	Mr Sven O'hEireamhoin Prof. Joe Duggan	Yomi Waya Mary Mullen
St Vincent's University Hospital	Mr Conor Hurson Dr Rachael Doyle	Ursula Kelleher John Paulo Reyes
Connolly Hospital	Mr Paddy Kenny	Sandra Connelly Shiprah Samuel Karen Gantley
Our Lady of Lourdes Hospital Drogheda	Mr Aaron Glynn Dr Helen O'Brien	Orla Cooney
Beaumont Hospital	Dr Linda Brewer	Anthony O'Loughlin Ruth Kavanagh
Letterkenny University Hospital	Mr Tony Shaju	Carole Mc Fadden
Sligo University Hospital	Mr William Gaine	Regina Mitchell Michelle Gilroy
University Hospital Galway	Mr Colin Murphy	Anne Moran
Mayo University Hospital	Mr Derek Bennett	Ciara Griffen
University Hospital Waterford	Mr Terence Murphy Dr Niamh O'Regan	Gavin Egan
Cork University Hospital	Dr Emer Ahern Mr Shane Guerin	Toni O'Keeffe
University Hospital Kerry	Mr John Rice	Esther O'Mahony
University Hospital Limerick	Dr Jude Ryan Mr Matthew Nagel	Sarah Maher Adrienne Cronolly

APPENDIX 3: DATA COLLECTION CALENDAR 2024

Data collection period	Closure date for data entry	Date data is received	Date data is reported
01/10/2024-31/12/2024	31/03/2025	8th April 2025	3rd week in April 2025 Q4 May extend for validation
01/01/2025-31/03/2025	30/06/2024	5th July 2024	3rd week July 2024 Q1
01/04/2025-30/06/2025	30/09/2024	4th of October	3rd week in October 2024 Q2
01/07/2024-30/09/2024	31/12/2024	4th January 2025	3rd week in January 2025 Q3

APPENDIX 4: IHFD DATASET – HIP FRACTURE ADMISSION

HIPE Portal Data Entry / Hip Fracture Admission (V12.0.1) 01 Jan 2024 Data Validation Rules		
Question	Options	Show / Hide
1. Date of trauma causing hip fracture		
1A. Time of trauma causing hip fracture		
2. Type of trauma	1 High energy trauma, 2 Low energy trauma 8 Unknown, 9 Not documented	
3. Place of injury	1 Home, 2 Public area or road 3 Institution (nursing home) 4 Farm, 5 Industrial; 8 Other	
3A. Place of injury, other (please specify)		
4. Date of arrival at first presenting hospital		
4A. Time of arrival at first presenting hospital		
5. Admission via ED in operating hospital	1 Yes, 2 No	
5A. Date of arrival in ED of operating hospital		Adm Via ED = 1 Yes
5B. Time of arrival in ED of operating hospital		Adm Via ED = 1 Yes
5C. Date left ED in operating hospital		Adm Via ED = 1 Yes
5D. Time left ED in operating hospital		Adm Via ED = 1 Yes
5E. Did patient go directly to theatre from ED	1 Yes, 2 No	Adm Via ED = 1 Yes
5F. Date seen by orthopaedic team in operating hospital (if not admitted via ED)		Adm Via ED = 2 No
5G. Time seen by orthopaedic team in operating hospital (if not admitted via ED)		Adm Via ED = 2 No
5H. Did patient fall during an existing inpatient admission in operating hospital	1 Yes, 2 No	Adm Via ED = 2 No
6. Type of ward admitted to in operating hospital	1 Orthopaedic Ward 2 Never Admitted to Orthopaedic Ward 9 Not Documented	
6A. Date of admission to orthopaedic ward		Ward Type = 1 Orthopaedic Ward
6B. Time of admission to orthopaedic ward		Ward Type = 1 Orthopaedic Ward
7. Is pre-fracture mobility documented?	1 Yes, 2 No	
7A. Pre-fracture Indoor Walking	0 Unable 1 Assistance of one person 2 With an aid 3 Independent	Pre Fx = 1 Yes
7B. Pre-fracture Outdoor Walking	0 Unable 1 Assistance of one person 2 With an aid 3 Independent	Pre Fx = 1 Yes
7C. Pre-fracture Shopping	0 Unable 1 Assistance of one person 2 With an aid 3 Independent	Pre Fx = 1 Yes
7D. Pre-fracture New Mobility Score (Sum A+B+C)		Pre Fx = 1 Yes
8A. Delirium assessment 4AT Day 1 (day of admission)	1 Yes, 2 No 3 Unable to score / advanced dementia 9 Not Documented	AMT Per = 1 Yes
8A2. If yes, enter score	0 - 12	4AT D1 = 1 Yes
8B. Delirium assessment 4AT Day 3	1 Yes, 2 No	AMT Per = 1 Yes
8B2. If yes, enter score	0 - 12	4AT D3 = 1 Yes
8C. Delirium assessment 4AT any other time	1 Yes, 2 No	AMT Per = 1 Yes
8C2. If yes, enter score	0 - 12	4AT DX = 1 Yes
9. Side of fracture	**1** Left, 2 Right, 3 Both	
9A. Type of fracture	1 Intracapsular - displaced 2 Intracapsular - undisplaced 3 Intertrochanteric 4 Subtrochanteric 5 Periprosthetic 6 Other 7 Not documented 8 Other	
9B. Type of fracture (Other, please specify)		Fracture = 8 Other
9C. Type of fracture (Right)	See Q&A	Side = 3 Both
9D. Type of fracture (Right, Other, please specify)		Fracture 2 = 8 Other
10. Pathological	1 Atypical, 2 Malignancy 3 No, 9 Not documented	
11. History of previous fragility fracture(s)	1 Yes, 2 No, 9 Not documented	
12. Pre-op medical assessment	1 Routine by geriatrician 2 Routine by medical physician 6 None 7 Ger review following request 8 Med physician review following request 9 Not documented	
12A. Assessed by Geriatrician during this acute admission	1 Yes, 2 No, 9 Not documented	
12B. Geriatrician Assessment Date		

12C. Geriatrician Assessment Time		
12D. Geriatrician Grade	1 Consultant 2 SpR 3 Registrar 8 Other 9 Not documented	
12E. Assessed by a cANP/ANP gerontology/orthopaedics	1 Yes, 2 No, 9 Not documented	
13. Nutritional risk assessment performed on admission	0 No 1 Indicates malnourished 2 Indicates risk of malnutrition 3 Indicates normal	
14. Nerve block in ED or ward before arrival in theatre suite	1 Yes, 2 No, 9 Not documented	
15. Operation	00 no oper. performed 01 int fix DHS 02 int fix Screws 03 int fix IM nail long 04 int fix IM nail short 05 art uni-p hemi uncem uncoated 06 art uni-p hemi uncem coated 07 art uni-p hemi cem 08 art bi-p hemi uncem uncoated 09 art bi-p hemi uncem coated 10 art bi-p hemi cem 11 art THR uncem uncoated 12 art THR uncem coated 13 art THR cem 88 other 99 not documented	
15A. ASA Grade	1 Normal healthy individual 2 Mild systemic disease -does not limit activity 3 Severe systemic disease that limits activity but is not incapacitating 4 Incapacitating systemic disease which is constantly life-threatening 5 Moribund - not expected to survive 24 hours with or without surgery 9 Not documented	Operation = 01 - 88
15B. Type of Anaesthesia	1 GA only 2 GA + nerve block 3 GA + spinal anaesthesia 4 GA + epidural anaesthesia 5 SA only 6 SA + nerve block 7 SA + epidural (CSE) 8 Other 9 Not documented	Operation = 01 - 88
15C. Surgeon Grade	1 Consultant 2 Specialist Registrar 3 Registrar 4 SHO 8 Other 9 Not documented	Operation = 01 - 88
15C2. Was consultant orthopaedic surgeon present in the operating room	1 Yes 2 No 9 Not documented	Surgeon Grade Not Consultant
15D. Anaesthetist Grade	1 Consultant 2 Specialist Registrar 3 Registrar 4 SHO 8 Other 9 Not documented	Operation = 01 - 88
15D2. Was consultant anaesthetist present in the operating room	1 Yes 2 No 9 Not documented	Anaesthetist Grade Not Consultant
15E. Date of primary surgery (induction of anaesthesia)		Operation = 01 - 88
15F. Time of primary surgery (induction of anaesthesia)		Operation = 01 - 88
15F1. Time of knife to skin		Operation = 01 - 88
15F2. Date surgery finished		Operation = 01 - 88
15F3. Time surgery finished		Operation = 01 - 88
15G1. Skin preparation used in theatre	0 None 1 Iodine with alcohol 3 iodine without alcohol 2 Chlorohexidine/Alcohol (CHLORAPREP) 7 Unknown 8 Other 9 Not documented	Operation = 01 - 88
15G2. Skin preparation used in theatre (Other)		Skin Prep = 8 Other

15G3. Wound contamination classification	1 Clean 2 Clean-contaminated 3 Contaminated 4 Dirty/Infected 7 Unknown 9 Not documented	Operation = 01 - 88
15H. Reason if delay >48 hours	0 No delay - surgery < 48 hours; 1 Awaiting orthopaedic diagnosis or investigation 2 Awaiting medical review investigation or stabilisation; 3 Awaiting inpatient or high dependency bed; 4 Awaiting space on theatre list; 5 Problem with theatre/equipment; 6 Problem with theatre/surgical/anaesthetic staff cover 7 Cancelled due to list over-run; 8 Other 9 Not documented 10 Issues due to anticoagulation	Operation = 01 - 88
15H2. Other Reason if delay >48 hours		Reason if delay = Not 0 No Delay
15I1. Were prophylactic antibiotics administered	1 Yes 2 No 7 Unknown 9 Not documented	Operation = 01 - 88
15I2. If yes, which prophylactic antibiotics were administered	1 Cefuroxime (Zinacef) 2 Teicolplanin 3 Co-amoxiclav (Augmentin) 4 Other 5 Not documented	Prophylactic Antib = 1 Yes
15I2.1 If other, please state		
15I3. Is the patient currently receiving antibiotics for another reason	1 Yes 2 No 7 Unknown 9 Not documented	Operation = 01 - 88
15I4. If yes, which antibiotics	1 Nitrofurantoin (Macrodantin) 2 Trimethoprim 3 Co-amoxiclav (Augmentin) 4 Cefuroxime (Zinacef) 5 Piperacillin-Tazobactam (Tazocin) 8 Other 9 Not Documented	Other Antib = 1 Yes
15I4.1If other, please state		
15I5. Surgical Skin Closure type	1 Sutures 2 Staples (Clips) 3 Glue 7 Combination of above 8 Other 9 Not documented	Operation = 01 - 88
15I6. Surgical Skin Closure type (Other)		Skin Closure = 8 Other
15I7. Dressing type applied	1 Aquacel 2 Dry Dressing (ie mepore) 3 Jubilee method 4 Mepilex 5 Opsite 6 Pressure Dressing 7 Negative Pressure Dressing 8 No dressing applied 9 Not documented 10 Other	Operation = 01 - 88
15I7.1 If Other, please state		
15J. Mobilised on day of, or day after surgery	1 Yes, 2 No, 9 Not documented	Operation = 01 - 88
15J2. Mobilised by	1 Physiotherapist 8 Other, 9 Not documented	Mobilised = 1 Yes
15J3. If no, reason why	1 Pain 2 Confusion/agitation/delirium 3 Patient declined 4 Medically not fit 5 Not mobile pre-fracture 6 Physio staffing issues 7 Other staffing	Mobilised = 2 No

	8 Other 9 Not documented	
15J4. If no, reason why (other, please specify)		Mobilised = 2 No
15K. Physiotherapy Assessment on day of, or day after surgery	1 Yes, 2 No, 9 Not documented	Operation = 01 - 88
15L. Cumulated Ambulatory Score - day after surgery (0 - 6)		Operation = 01 - 88
15M. Re-operation within 30 days	0 None 1 Reduction of dislocated prosthesis 2 Washout or debridement 3 Implant removal 4 Revision of internal fixation 5 Conversion to Hemiarthroplasty 6 Conversion to THR 7 Girdlestone/excision arthroplasty 8 Surgery for periprosthetic fracture 9 Not documented	Operation = 01 - 88
16. Operation (Right)	See Q9	Side = 3 Both
17. Pressure ulcers	1 Yes, 2 No, 9 Not documented	
18. Specialist Falls Assessment	0 No, 1 Yes - performed on this admission 2 Yes - awaits further out-patient assessment	
19. Bone protection medication	0 No assessment 1 Started on this admission 2 Continued from pre-admission 3 Awaits DXA scan 4 Awaits out-patient assessment 5 Assessed - no bone protection medication needed/appropriate	
19A. If medication type changed during admission please document	Yes, 2 No, 9 Not documented	Bone protection medication = 2 Continued from pre- admission
19B. Type of bone protection medication prescribed		Bone protection medication = 1 Started on this admission, OR 2 Continued from pre- admission
20. Multidisciplinary rehabilitation team assessment	1 Yes, 2 No, 9 Not documented	
21. Did patient have an occupational therapy assessment during admission	1 Yes, 2 No, 9 Not documented	
22. Cumulated Ambulatory Score - day of acute hospital discharge (0 - 6)	9 Not documented	
23. Where was the patient discharged to following the acute hospital spell?	1 Home 2 On-site rehab unit 3 Off-site rehab unit 4 Convalescence care 5 New adm to nursing home or long-stay care 6 Return adm to nursing home or long-stay care 8 Other	
23A. Discharged to (Other, please specify)		Dis To = 8 Other
24. Surgical site infection diagnosis documented	1 Yes 2 No 7 Unknown	
24A. Date Surgical Site Infection diagnosis first documented		Site Infect Dx = 1 Yes
24B. Type of Surgical Site Infection	1 Superficial 2 Deep 3 Organ space	Site Infect Dx = 1 Yes
24C. Was a swab / sample taken for culture	1 Yes 2 No 7 Unknown 9 Not documented	Site Infect Dx = 1 Yes
24D. Is a swab / sample result available	1 Yes 2 No 7 Unknown 9 Not documented	Site Infect Dx = 1 Yes
24D2. If yes, swab / sample result (free text)		Site Infect Dx = 1 Yes Sample Res Av = 1 Yes
24E. Was the patient treated with antibiotics specifically for an SSI	1 Yes 2 No 7 Unknown 9 Not documented	Site Infect Dx = 1 Yes
24E2. If yes, which type of antibiotic was given (free text)		Site Infect Dx = 1 Yes Antib SSI = 1 Yes

24F. Type of wound treatment	1 Primary Dressing 2 Antimicrobial Dressing 3 PICO Negative pressure dressing 4 Vac Dressing 5 Surgical Intervention 8 Other 9 Not documented	Site Infect Dx = 1 Yes
24F2. Type of wound treatment (Other)		Site Infect Dx = 1 Yes Type Wound Treat = 8 Other
24G. Was Normothermia Maintained 1 hr post primary surgery	1 Yes 2 No 7 Unknown 9 Not documented	Site Infect Dx = 1 Yes
24H. Date of last inpatient hip fracture surgery wound review		Site Infect Dx = 1 Yes
25. Is admission data entry complete for this episode?	1 Yes, 2 No	

APPENDIX 5: IHFD DATASET – HIP FRACTURE FOLLOW-UP

HIPE Portal Data Entry / Hip Fracture Follow-Up (V3.0.1) 01 Jan 2025	
Question	**Options**
1. Date of 30 day follow-up	
2. Data reported by	1 patient-reported 2 proxy-reported 3 retrieved from
3. Residential status at 30 days	**0** Inpatient **1** Home **2** On-site rehab unit **3** Off-site rehab unit **4** Convalescence **5** New adm NH or LTC **6** Return adm NH or LTC **7** Other **8** Died
3A. Date of first discharge to home	
3. B Date of Death	
4. New Mobility Score 30 Day Indoor walking	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
4A. 30 Day Outdoor walking	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
4B. 30 Day Shopping	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
4C. 30 days New Mobility Score (Sum A+B+C)	
5. Hip related readmission within 30 days	1 Yes 2 No
6. Re-operation within 30 days of admission	**0** None **1** Reduction of dislocated prosthesis **2** Washout and debridement **3** Implant removal **4** Revision of internal fixation **5** Conversion to hemiarthroplasty **6** Conversion to THR **7** Girdlestone/excision arthroplasty **8** Surg for periprosthetic fracture **9** Not documented
7. Diagnosed with surgical site infection (within 30 days)	1 Yes 2 No 9 Not documented
7A. Date Surgical site infection diagnosed (within 30 days)	
7B. Type of Surgical site infection diagnosed (within 30 days)	1 Superficial 2 Deep 3 Organ/Space
8. Bone protection 30 days	1 Yes 2 No 9 Unknown
9A. QOL mobility at 30 days	**0** No Problems **1** Slight problems **2** Moderate problems **3** Severe problems **4** Unable
9B. QOL self care at 30 days	**0** No Problems **1** Slight problems **2** Moderate problems **3** Severe problems **4** Unable
9C. QOL activities at 30 days	**0** No Problems **1** Slight problems **2** Moderate problems **3** Severe problems **4** Unable
9D. QOL pain at 30 days	**0** No pain

	1 Slight pain 2 Moderate pain 3 Severe pain 4 Extreme pain
9E. QOL anxiety / depression at 30 days	0 None 1 Slight 2 Moderate 3 Severe 4 Extreme
9F. QOL score at 30 days (0-100)	
10. Date of 120 day follow-up	
11. Data reported by	1 patient-reported 2 proxy-reported 3 retrieved from records
12. Residential status at 120 days	0 Inpatient 1 Home 2 On-site rehab unit 3 Off-site rehab unit 4 Convalescence 5 New adm NH or LTC 6 Return adm NH or LTC 7 Other 5 Died
12A. Date of first discharge to home if since 30 days	
12B . Date of Death	
13. New Mobility Score 120 day Indoor walking	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
13A. 120 day Outdoor walking	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
13B. 120 day Shopping	0 Unable 1 Assistance of one person 2 With an aid 3 independent
13C. 120 days New Mobility Score (Sum A+B+C)	
14. Hip related readmission within 120 days	1 Yes 2 No
15. Re-operation within 120 days of admission	0 None 1 Reduction of dislocated prosthesis 2 Washout and debridement 3 Implant removal 4 Revision of internal fixation 5 Conversion to hemiarthroplasty 6 Conversion to THR 7 Girdlestone/excision arthroplasty 8 Surg for periprosthetic fx Not documented
16. Diagnosed with surgical site infection (within 120 days)	1 Yes 2 No 9 Not documented
16A. Date Surgical site infection diagnosed (within 120 days)	
16B. Type of Surgical site infection diagnosed (within 120 days)	1 Superficial 2 Deep 3 Organ/Space
17. Bone protection 120 days	1 Yes 2 No 9 Unknown
18A. QOL mobility at 120 days	0 No Problems 1 Slight problems 2 Moderate problems 3 Severe problems 4 Unable
18B. QOL self care at 120 days	0 No Problems 1 Slight problems 2 Moderate problems 3 Severe problems 4 Unable
18C. QOL activities at 120 days	0 No Problems

	1 Slight problems 2 Moderate problems 3 Severe problems 4 Unable
18D. QOL pain at 120 days	0 No pain 1 Slight pain 2 Moderate pain 3 Severe pain 4 Extreme pain
18E. QOL anxiety / depression at 120 days	0 None 1 Slight 2 Moderate 3 Severe 4 Extreme
18F. QOL score at 120 days (0-100)	
19. Date of 1 year follow-up	
20. Data reported by	1 patient-reported 2 proxy-reported 3 retrieved from
21. Residential status at 1 year	1 Home 2 On-site rehab unit 3 Off-site rehab unit 4 Convalescence 5 New adm NH or LTC 6 Return adm NH or LTC 7 Other 8 Died
21A. Date of first discharge to home if since 120 days	
21B . Date of Death	
22. Indoor Walking at 1 year	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
22A. Outdoor Walking at 1 year	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
22B. Shopping at 1 year	0 Unable 1 Assistance of one person 2 With an aid 3 Independent
22C. 1 year New Mobility Score (Sum A+B+C)	
23. Hip related readmission within 1 Year	1 Yes 2 No
24. Re-operation within 1 Year of admission	0 None 1 Reduction of dislocated prosthesis 2 Washout and debridement 3 Implant removal 4 Revision of internal fixation 5 Conversion to hemiarthroplasty 6 Conversion to THR 7 Girdlestone/excision arthroplasty 8 Surg for periprosthetic fx 9 Not documented
25. Diagnosed with surgical site infection (within 1 year)	1 Yes 2 No 9 Not documented
25A. Date Surgical site infection diagnosed (within 1 year)	
25B. Type of Surgical site infection diagnosed (within 1 year)	1 Superficial 2 Deep 3 Organ/Space
26. Bone protection medication at 1 year	1 Yes 2 No 9 Unknown
27A. QOL mobility at 1 year	0 No Problems 1 Slight problems 2 Moderate problems 3 Severe problems 4 Unable
27B. QOL self care at 1 year	0 No Problems 1 Slight problems

	2 Moderate problems 3 Severe problems 4 Unable
27C. QOL activities at 1 year	0 No Problems 1 Slight problems 2 Moderate problems 3 Severe problems 4 Unable
27D. QOL pain at 1 year	0 No pain 1 Slight pain 2 Moderate pain 3 Severe pain 4 Extreme pain
27E. QOL anxiety / depression at 1 year	0 None 1 Slight 2 Moderate 3 Severe 4 Extreme
27F. QOL score at 1 year (0-100)	

APPENDIX 6: IHFD FREQUENTLY ASKED QUESTIONS

Question	Answer
What does IHFD stand for?	Irish Hip Fracture Database
How do I get access to the IHFD?	Contact the Audit Programme Managers, Trauma & Surgery (Pamelahickey@noca.ie) (marvewalsh@noca.ie), who will then arrange access via the HPO.
What do I do if I forget my username and password?	Contact ihfd@noca.ie
Can I view anyone else's data?	No; each hospital is registered separately and can only view its local data.
Can more than one person in a hospital be given access to the database for data entry?	Yes, as many as you wish; however, the request must come from the clinical lead.
How long will it take to enter data?	Entering the data takes less than 15 minutes per patient entry, but time must be factored in for collection of the data (i.e. sourcing notes, access to IT systems, and administrative duties). There are two options for data entry, which will vary according to experience, but will usually consist of the following: 1. Pre-discharge a. Type in the Medical Record Number, e.g. 1234567. b. Click on 'New Case'. c. Enter the hip fracture data. d. Click on 'Store'. Note: Only select the option 'Store as Non-Admitted Episode' if you are sure the patient was not admitted during this episode of care. If you choose to enter pre-discharge data, the system will automatically merge the hip fracture data and the HIPE data after the patient has been discharged. 2. Post-discharge a. Type in the Medical Record Number, e.g. 1234567. b. Click on the relevant discharge date. c. Enter the hip fracture data under the 'Optional' tab. d. Click on 'Store'.
Once submitted, can I retrieve records to edit content?	Yes, at any time.
What if date of trauma is not documented?	If unknown, enter '99-99-9999' for date and time fields only; otherwise, select the option 'Not documented'. Where possible, do not leave any question unanswered.
What if the patient is transferred from another hospital?	Document the hospital the patient first presents at, for example if the patient presents at a hospital with no orthopaedic service and has to be transferred to an operating hospital. The clock starts ticking from the time of presentation at the first ED; or, if it is a transfer from within a hospital with no orthopaedic service to an operating hospital, enter the date and time the patient was seen by an orthopaedic team, as this was the most likely time the diagnosis was made. In most cases, the first presenting hospital will be the same as the operating hospital. This should still be documented.
If the patient is admitted from within hospital, how do I record this?	We recognise that some patients may sustain a hip fracture while already in hospital or may require acute medical management (i.e. they are not admitted primarily due to a fractured hip). In this case, complete Q5H.
What constitutes admission to orthopaedic ward?	Includes dedicated orthopaedic/trauma wards or dedicated geriatrician-staffed hip fracture wards. Enter 'orthopaedic ward' if the patient was an inpatient on an orthopaedic ward at any time during the acute hip fracture spell.
What is the 4AT?	The 4AT is a simple, quick (<2 minutes) and effective bedside tool which helps practitioners to detect delirium in their day-to-day practice. You can download the app below. https://www.the4at.com/
What fracture type is classed as intertrochanteric?	Basal and basicervical fractures are to be classed as intertrochanteric.

Question	Answer
What fracture types are recorded in the IHFD?	Hip fracture cases either identified as a HIPE Injury Diagnosis Code S72.00 to S72.2 OR with a specified type of fracture (e.g. intracapsular – displaced, intracapsular – undisplaced, intertrochanteric, or subtrochanteric) are recorded in the IHFD.
What is arthroplasty?	Any replacement of the upper femur, including unipolar and bipolar hemiarthroplasties and total hip replacements.
What is a pathological fracture?	A broken bone, caused not by trauma alone, but so weakened by disease as to break with abnormal ease. Pathological fractures are characteristic of primary and metastatic malignant disease and myeloma. Answer 'malignancy' only if a primary or secondary malignancy is present at the fracture site.
What is an atypical fracture?	Atypical fractures are transverse femoral fractures with an unusual cortical spike medially which occur in the subtrochanteric and shaft regions (you should only enter subtrochanteric fractures to the database). They follow low-trauma injuries and patients may report pre-injury pain.
What are normal working hours?	The National Confidential Enquiry into Perioperative Deaths reports from 1997 and 2003 define 'out of hours' as any time outside of 8.00am to 5.59pm on weekdays, and any time on a Saturday or Sunday.
When is considered the time of primary surgery?	The time of primary surgery is taken from the time of induction of anaesthesia. The time is shown in hours to two decimal places, e.g. 1.25 = 1 hour 15 minutes, 3.50 = 3 hours 30 minutes, and 2.67 = 2 hours 40 minutes.
When does the clock start ticking?	As soon as the patient arrives in an ED or is seen by the orthopaedic team in the operating hospital following an inpatient fall.
What is an ASA grade?	The American Society of Anesthesiologists (ASA) devised a pre-operative risk grade based on the presence of comorbidities at the time of surgery. The ASA's (Dripps, 1963) physical status classification is: 1. Healthy person. 2. Mild systemic disease. 3. Severe systemic disease. 4. Severe systemic disease that is a constant threat to life. 5. A moribund person who is not expected to survive with or without the operation. This grading does not take into account acute illness, hence a patient can be ASA 1 and 'unfit'.
What is meant by 'Routine by geriatrician'?	Review by a geriatrician at the registrar level or above.
What is meant by 'Review by ANP'?	A review by an advanced nurse practitioner (ANP) is considered the same as a review by a geriatrician.
What is meant by 'Medical review following request'?	Review by a member of the medical team at the registrar level or above following a request from the orthopaedic service or ED.
Reasons for delay to surgery	Please document only the main reason for delay. Options are: • Medically unfit – awaiting orthopaedic diagnosis/investigation: this means waiting for a magnetic resonance imaging scan or other confirmation of diagnosis. • Medically unfit – awaiting medical review, investigation or stability: this means waiting for a medical review, as the patient remains medically unfit for surgery/anaesthetic. (If this option is selected, a free text box will appear on the database to be populated with a brief description of the medical issues.) • Administrative/logistic – awaiting inpatient or high-dependency bed. • Administrative/logistic – awaiting space on theatre list. • Administrative/logistic – problem with theatre/equipment. • Administrative/logistic – problem with theatre/surgical/anaesthetic staff cover. • Cancelled due to theatre overrun: this option is to be used when the patient has been allocated a theatre slot, but for some reason the list has overrun. • Issues due to anticoagulation • Other: any reason other than those given in the list above. If you select 'Other', an empty box will appear so you can populate it with the reason for delay. • No operation performed.
What definition of pressure ulcer is used for the IHFD?	Did the patient acquire a new pressure ulcer (Grade 2 or above) during the acute admission? • This should be answered as 'yes' only if the patient has developed a Grade 2 pressure ulcer or above during their acute orthopaedic admission. • Ignore ulcers acquired during an acute stay but which were acquired more than 120 days after admission. • If nothing is documented and the patient has left the hospital, 'not documented' must be recorded.
What is the definition of a ward round?	The ward round is a parade through the hospital of professionals where most decisions concerning patient care are made. The round provides an opportunity for the multidisciplinary team to listen to the patient's narrative and jointly interpret their concerns. From this unfold diagnosis, management plans, prognosis formation, and the opportunity to explore social, psychological, rehabilitation and placement issues. Physical examination of the patient at the bedside remains important (O'Hare, 2008).

<table>
<tr><th>Question</th><th>Answer</th></tr>
<tr><td>What is the definition of mobilised?</td><td>Mobilised means that, at a minimum, the patient has stood up from the bed. To meet IHFS 7, mobilisation must be done by a physiotherapist on the day of or the day after surgery.</td></tr>
<tr><td>What is a specialist falls assessment?</td><td>A systematic assessment by a suitably trained person, e.g. a geriatrician or a specialist assessment trained nurse, which must cover the following domains:
• falls history (noting previous falls)
• cause of index fall (including medication review)
• risk factors for falling and injury (including fracture)
• medication review.
From this information, the assessor must formulate and document a plan of action to prevent further falls.</td></tr>
<tr><td>What is the definition of multidisciplinary rehabilitation assessment team?</td><td>A group of people of different professions (and including, at a minimum, a physiotherapist, occupational therapist, nurse and doctor) with job plan responsibilities for the assessment and treatment of hip fracture patients, and who convene (including face to face or via a virtual ward round) regularly (and at least weekly) to discuss patient treatment and care and to plan shared clinical care goals.</td></tr>
<tr><td>What drugs constitute bone protection therapy?</td><td>Not just calcium and vitamin D:
<table>
<tr><td>1. Bisphosphonates (oral, combined with calcium/vitamin D, intravenously)
• Etidronate
• Alendronate
• Risedronate
• Ibandronate
• Zoledronate
• Pamidronate</td><td>4. Parathyroid hormone
• PTH 1-34
• PTH 1-84</td></tr>
<tr><td>2. Denosumab</td><td>5. Strontium
• Strontium ranelate</td></tr>
<tr><td>3. HRT and SERMS
• HRT (various)
• Tibolone
• Raloxifene</td><td>6. Calcium and vitamin D
• Calcitriol
• Calcium and vitamin D – various
• Alpha-calcidol (or One alpha)</td></tr>
<tr><td></td><td>7. Calcitonin</td></tr>
</table></td></tr>
<tr><td>What is the minimum age?</td><td>We collect data on all patients aged 18 years and over, but to date, we only report on those aged 60 years and over in the national report.</td></tr>
<tr><td>What is the pre-fracture New Mobility Score?</td><td>This was a new field for 2016, and there has been communication directly with physiotherapy departments regarding the collection of this score.
If you do not have a score recorded for any of Q7A, Q7B and Q7C, then leave them blank: you can link in with your physiotherapy colleagues to create an action plan for collection of these variables.</td></tr>
<tr><td>How do I calculate Q7D if not all fields are answered?</td><td>Q7D will auto-calculate.</td></tr>
<tr><td>Does the CAS need to be recorded daily?</td><td>No, just on the day after surgery and again on the day of acute hospital discharge.</td></tr>
<tr><td>In relation to the CAS, what happens if the patient is discharged at the weekend and there are no physiotherapists on duty?</td><td>Retrospectively fill it in on the following Monday based on the nursing note on the day of discharge, or the last physiotherapist's note if it was recent.</td></tr>
<tr><td>What is required for Q23 – where was the patient discharged to following the acute hospital spell?</td><td>Fill in the option which represents the reason/intent for the patient's initial care after being discharged to a location other than home.</td></tr>
</table>

Question	Answer
The next section relates to SSI additional information and resources can be found in the Framework link. https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/SSI_Framework_HSE_Final.pdf	
Was skin preparation preformed pre-op?	Skin prep is defined as the cleaning of the skin prior to incision. All incision sites should be prepared with an alcohol-based solution to reduce the risk of contaminationRemoving microorganisms that normally colonise on the skin reduces risk of contamination.
Skin preparation used	Is defined as the solution used to clean the skin prior to skin incision.
Wound classification: • Clean • Contaminated • Dirty	The degree of risk is also associated with area prior to incision and can be classified into • Clean wounds. These are not inflamed or contaminated and do not involve operating on an internal organ. • Clean-contaminated wounds. These have no evidence of infection at the time of surgery, but do involve operating on an internal organ. • Contaminated wounds. These involve operating on an internal organ with a spilling of contents from the organ into the wound. • Dirty wounds. These are wounds in which a known infection is present at the time of the surgery. • Note that no spillage, urine, etc. before closure.
Was antibiotic prophylaxis administered to reduce the risk of SSI?	These are antibiotics prophylactically administered to prevent the multiplication of micro-organisms at the operative site, which are given AT INDUCTION (WITHIN 60 MINUTES BEFORE SKIN INCISION). In surgery where a tourniquet is to be applied, a 15 minute period is required between the end of antibiotic administration, and tourniquet application. https://www.hse.ie/eng/services/list/2/gp/antibiotic-prescribing/hospital-related-guidelines/antibiotic-prophylaxis-in-surgery.html
What antibiotic prophylaxis was administered to reduce the risk of SSI?	Examples provided by AMRIC: • Cefuroxime • Co-amoxiclav • Flucloxacillin • Teicoplanin • Vancomycin • Gentamicin
Was the patient receiving any other antibiotic PATOS (present at the time of surgery)	If the patient is receiving another antibiotic, i.e. to treat a chest infection or UTI at the time of surgery only.
Skin closure type	Skin closure type is defined as the method used to complete primary closure of the skin level during the original surgery, regardless of the presence of wires, wicks, drains, or other devices or objects extruding through the incision.
Wound dressing applied	Defined as the dressing applied in the operating room to cover the surgical incision.
Finish time	The time when surgery ends is when all instruments and sponges are counted and verified as correct. Post-operative radiological studies to be done in the operating room are completed. All drains and dressings are secured. The surgeons have completed all surgical related procedures on the patient.
What is a surgical site diagnosis?	Surgical site infection is a diagnosis made by a clinician under the following criteria of superficial, deep and organ space. For more information on surgical site infection surveillance follow the Framework: https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/
What normothermia maintained?	Within 1 hour of the end of an operation, a patient's temperature is between 35.5° and 37.5° non-rectal; between 36° and 38° for a rectal measurement. Temperature should be recorded in the recovery room.
Date of hip fracture wound dressing check	The last documented wound review before discharge.
Can I enter SSI data after the patient has been discharged?	Yes. Although not mandatory, data of SSI for implant surgery can be recorded up to 90 days on implant insertion.
What is a swab/sample?	A swab/sample is a sample that is taken from a suspected surgical site infection source to obtain a culture.

APPENDIX 7: FREQUENCY TABLES

FIGURE 1.1. NUMBER OF HIP FRACTURE CASES PER HOSPITAL RECORDED ON HIPE (N=4438 AND IHFD (N=4228)

Hospital	IHFD	HIPE
	n	N
National	**4228**	**4438**
Cork	515	524
Waterford	452	458
St Vincent's	360	389
Limerick	317	328
Tullamore	314	319
Tallaght	273	277
Drogheda	272	273
Beaumont	266	271
Connolly	261	262
Galway	253	253
St James's	225	225
Mater	186	189
Kerry	167	168
Letterkenny	167	169
Sligo	104	156
Mayo	96	177

FIGURE 1.2 COVERAGE BY YEAR 2020-2024 (BASED ON HIPE)

Year	IHFD	HIPE	% Coverage
2020	3610	3642	99.1%
2021	3743	3795	98.6%
2022	3847	4105	93.7%
2023	3941	4233	93.1%
2024	4228	4438	95.3%

FIGURE 1.3 COVERAGE PERCENTAGES PER HOSPITAL IN 2024

Hospital	Coverage
	%
Galway	100%
St James's	100%
Connolly	100%
Drogheda	100%
Kerry	99%
Letterkenny	99%
Waterford	99%
Tallaght	99%
Mater	98%
Tullamore	98%
Cork	98%
Beaumont	98%
Limerick	97%
St Vincent's	93%
Sligo	67%
Mayo	54%
National	**95%**

FIGURE 2.1: PERCENTAGE OF PATIENTS NATIONALLY WHO MET EACH IRISH HIP FRACTURE STANDARD IN 2023 (N=3983) AND 2024 (N=4294)

Standard	2023			2024		
	n	N	%	n	N	%
IHFS1	1173	3983	29%	1566	4294	36%
IHFS2	2902	3845	75%	3189	4124	77%
IHFS3	135	3803	4%	150	4112	4%
IHFS4	3300	3983	83%	3705	4294	86%
IHFS5	3314	3803	87%	3692	4112	90%
IHFS6	3174	3803	83%	3586	4112	87%
IHFS7	3339	3845	87%	3520	4124	85%

FIGURE 2.2: IRISH HIP FRACTURE STANDARD 1: PERCENTAGE OF PATIENTS ADMITTED TO AN ORTHOPAEDIC WARD WITHIN 4 HOURS OF FIRST PRESENTATION OR ADMITTED TO THEATRE FROM THE EMERGENCY DEPARTMENT WITHIN 4 HOURS BY INDIVIDUAL HOSPITAL, 2023 (N=3983) AND 2024 (N=4294)

Hospital	2023			2024		
	n	N	%	n	N	%
St James's	100	161	62%	157	230	68%
Kerry	58	171	34%	108	167	65%
Drogheda	160	263	61%	159	287	55%
Mater	80	150	53%	104	192	54%
Tallaght	91	226	40%	143	273	52%
Tullamore	107	269	40%	143	315	45%
Limerick	96	330	29%	127	323	39%
Waterford	143	477	30%	168	452	37%
Beaumont	51	269	19%	94	268	35%
Cork	158	490	32%	154	531	29%
Connolly	38	271	14%	74	261	28%
St Vincent's	48	392	12%	83	363	23%
Galway	6	216	3%	14	253	6%
Letterkenny	9	159	6%	4	177	2%
National	**1173**	**3983**	**29%**	**1566**	**4294**	**36%**

FIGURE 2.3: IRISH HIP FRACTURE STANDARD 2: PERCENTAGE OF PATIENTS RECEIVING SURGERY WITHIN 48 HOURS OF FIRST PRESENTATION (AND WITHIN NORMAL WORKING HOURS) BY INDIVIDUAL HOSPITAL, 2024 (n=4124) AND 2023 (n=3845)

Hospital	2023			2024		
	n	N	%	n	N	%
Mater	106	142	75%	156	176	89%
St Vincent's	342	380	90%	317	359	88%
Tallaght	180	215	84%	226	257	88%
Galway	181	210	86%	206	240	86%
Waterford	339	466	73%	348	436	80%
St James's	130	153	85%	170	219	78%
Connolly	194	261	74%	192	250	77%
Kerry	114	161	71%	114	154	74%
Cork	335	484	69%	383	522	73%
Beaumont	187	249	75%	180	253	71%
Drogheda	188	245	77%	193	276	70%
Limerick	221	322	69%	219	315	70%
Tullamore	185	262	71%	205	297	69%
Letterkenny	101	159	64%	109	172	63%
National	**2902**	**3845**	**75%**	**3189**	**4124**	**77%**

Patients who did not have surgery have been excluded; Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

FIGURE 2.4: IRISH HIP FRACTURE STANDARD 3: PERCENTAGE OF PATIENTS WHO DEVELOPED PRESSURE ULCERS FOLLOWING ADMISSION FROM 2024 (n=4112) vs 2023 (n=3803)

Hospital	2023			2024		
	n	N	%	n	N	%
Tallaght	7	212	3%	26	260	10%
Galway	25	201	12%	17	232	7%
Mater	6	137	4%	9	182	5%
Beaumont	8	263	3%	12	247	5%
St James's	~	157	*	10	214	5%
Waterford	28	461	6%	16	439	4%
Cork	10	463	2%	16	506	3%
Tullamore	9	264	3%	8	302	3%
Kerry	~	165	*	~	162	*
Connolly	~	265	*	6	255	2%
Limerick	12	315	4%	7	313	2%
Letterkenny	~	152	*	~	170	*
Drogheda	7	253	3%	~	277	*
St Vincent's	6	365	2%	~	354	*
National	**135**	**3803**	**4%**	**150**	**4112**	**4%**

Patients who died have been excluded; Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

~ Denotes five cases or fewer.

* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 2.5: IRISH HIP FRACTURE STANDARD 4: PERCENTAGE OF PATIENTS SEEN BY A GERIATRICIAN OR ADVANCED NURSE PRACTITIONER 2024 (N=4294) vs 2023 (N=3983)

Hospital	2023			2024		
	n	N	%	n	N	%
Mater	149	150	99%	190	192	99%
Cork	481	490	98%	516	531	97%
St Vincent's	383	392	98%	352	363	97%
St James's	156	161	97%	223	230	97%
Tallaght	208	226	92%	261	273	96%
Connolly	259	271	96%	245	261	94%
Waterford	459	477	96%	423	452	94%
Drogheda	117	263	44%	268	287	93%
Galway	207	216	96%	233	253	92%
Beaumont	176	269	65%	244	268	91%
Tullamore	235	269	87%	263	315	83%
Letterkenny	124	159	78%	135	177	76%
Kerry	130	171	76%	118	167	71%
Limerick	103	330	31%	97	323	30%
National	**3300**	**3983**	**83%**	**3705**	**4294**	**86%**

Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

FIGURE 2.6: IRISH HIP FRACTURE STANDARD 5: PERCENTAGE OF PATIENTS WHO RECEIVED A BONE HEALTH ASSESSMENT, BY INDIVIDUAL HOSPITAL IN 2023 (n=3803) AND 2024 (n=4112)

Hospital	2023			2024		
	n	N	%	n	N	%
Cork	463	463	100%	503	506	99%
St James's	155	157	99%	212	214	99%
Letterkenny	151	152	99%	167	170	98%
St Vincent's	360	365	99%	346	354	98%
Connolly	251	265	95%	244	255	96%
Galway	189	201	94%	221	232	95%
Tallaght	186	212	88%	245	260	94%
Waterford	446	461	97%	412	439	94%
Drogheda	201	253	79%	259	277	94%
Beaumont	162	263	62%	228	247	92%
Tullamore	240	264	91%	275	302	91%
Mater	133	137	97%	164	182	90%
Kerry	155	165	94%	133	162	82%
Limerick	112	315	36%	110	313	35%
National	**3314**	**3803**	**87%**	**3692**	**4112**	**90%**

Patients who died have been excluded; Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

FIGURE 2.7: IRISH HIP FRACTURE STANDARD 6: PERCENTAGE OF PATIENTS WHO RECEIVED A SPECIALIST FALLS ASSESSMENT, BY INDIVIDUAL HOSPITAL IN 2023 (n=3803) AND 2024 (n=4112)

Hospital	2023			2024		
	n	N	%	n	N	%
St James's	156	157	99%	211	214	99%
Mater	135	137	99%	179	182	98%
Cork	460	463	99%	497	506	98%
St Vincent's	362	365	99%	345	354	97%
Drogheda	97	253	38%	260	277	94%
Tallaght	197	212	93%	244	260	94%
Connolly	248	265	94%	238	255	93%
Galway	180	201	90%	216	232	93%
Waterford	446	461	97%	408	439	93%
Kerry	160	165	97%	150	162	93%
Tullamore	236	264	89%	277	302	92%
Beaumont	159	263	60%	225	247	91%
Letterkenny	127	152	84%	121	170	71%
Limerick	98	315	31%	87	313	28%
National	**3174**	**3803**	**83%**	**3586**	**4112**	**87%**

Patients who died have been excluded; Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

FIGURE 2.8: IRISH HIP FRACTURE STANDARD 7: PERCENTAGE OF PATIENTS MOBILISED BY A PHYSIOTHERAPIST ON THE DAY OF SURGERY OR THE DAY AFTER SURGERY, BY INDIVIDUAL HOSPITAL 2024 (n=4124) AND 2023 (n=3845)

Hospital	2023			2024		
	n	N	%	n	N	%
Cork	453	484	94%	498	522	95%
Tullamore	235	262	90%	273	297	92%
Connolly	237	261	91%	227	250	91%
Galway	199	210	95%	215	240	90%
St James's	143	153	93%	192	219	88%
Mater	123	142	87%	153	176	87%
Tallaght	164	215	76%	217	257	84%
Drogheda	197	245	80%	229	276	83%
Waterford	432	466	93%	359	436	82%
Limerick	253	322	79%	258	315	82%
Letterkenny	148	159	93%	136	172	79%
St Vincent's	322	380	85%	283	359	79%
Kerry	128	161	80%	119	154	77%
Beaumont	189	249	76%	186	253	74%
National	**3339**	**3845**	**87%**	**3520**	**4124**	**85%**

Patients who did not have surgery have been excluded; Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

FIGURE 2.10: TOTAL BEST PRACTICE TARIFFS PAYMENTS BY HOSPITAL IN 2024 (in 1,000 Euro)

Hospital	BPT
Letterkenny	€1
Mayo	€2
Sligo	€5
Galway	€9
Limerick	€23
Kerry	€45
Connolly	€48
Beaumont	€49
St Vincent's	€60
Tullamore	€70
Mater	€72
Tallaght	€91
Drogheda	€94
Waterford	€102
St James's	€105
Cork	€115

FIGURE 4.1: PLACE OF INJURY

Place of Injury	n	%
Home	2647	66%
Institution	591	15%
Public area	495	12%
Other	219	5%
Farm	27	1%
Industrial	6	0%
Total	**3985**	**100%**

FIGURE 4.2: NUMBER OF HIP FRACTURES SUSTAINED AS AN INPATIENT BY YEAR 2020-2024

Year	n	Total	%
2020	73	3666	2%
2021	73	3806	2%
2022	59	3909	2%
2023	79	3983	2%
2024	71	4294	2%
2025	20	1071	2%

FIGURE 4.3: CUMULATIVE TIME TO SURGERY 2024

TIME TO SURGERY (in hours)	%
<12	7%
<24	44%
<36	61%
<48	78%
<60	84%
<72	90%
<84	93%
<96	95%
<108	96%
<120	97%
≥120	99%

FIGURE 4.4: PERCENTAGE OF PATIENTS WHO RECEIVED A NERVE BLOCK PRE-OPERATIVELY ASSESSMENT, BY HOSPITAL

Hospital	Nerve block		No nerve block		Not known		Total
	n	%	n	%	n	%	
Cork	522	100%					522
Limerick	296	94%	*	*	~	*	315
Tullamore	277	93%	20	7%			297
Connolly	229	92%	11	4%	10	4%	250
Drogheda	241	87%	35	13%			276
Tallaght	222	86%	*	*	~	*	257
Beaumont	217	86%	22	9%	14	6%	253
Galway	197	82%	*	*	~	*	240
Mater	144	82%	15	9%	17	10%	176
St Vincent's	292	81%	21	6%	46	13%	359
Kerry	120	78%	15	10%	19	12%	154
Letterkenny	125	73%	18	10%	29	17%	172
Waterford	315	72%	113	26%	8	2%	436
St James's	158	72%	61	28%			219
National	**3480**	**84%**	**488**	**12%**	**156**	**4%**	**4124**

Patients who did not have surgery have been excluded; Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

~ Denotes five cases or fewer.

* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 4.5: PERCENTAGE OF PATIENTS BY NUTRITIONAL RISK ASSESSMENT, BY HOSPITAL 2024 (N=4294)

Hospital	Indicates normal		Indicates malnourished		Indicates risk of malnutrition		No assessment performed		Total
	n	%	n	%	n	%	n	%	
Waterford	374	83%	26	6%	44	10%	8	2%	452
Drogheda	221	77%	~	*	*	*	44	15%	287
Beaumont	201	75%			28	10%	39	15%	268
Cork	365	69%	~	*	*	*	11	2%	531
St James's	156	68%			42	18%	32	14%	230
Limerick	194	60%	16	5%	20	6%	93	29%	323
Tallaght	141	52%	19	7%	26	10%	87	32%	273
Galway	112	44%	6	2%	65	26%	70	28%	253
Letterkenny	78	44%			74	42%	25	14%	177
Kerry	69	41%	~	*	*	*	8	5%	167
Mater	52	27%	27	14%	53	28%	60	31%	192
St Vincent's	94	26%	13	4%	14	4%	242	67%	363
Connolly	48	18%			6	2%	207	79%	261
Tullamore			~	*	~	*	311	99%	315
National	**2272**	**53%**	**112**	**3%**	**658**	**15%**	**1252**	**29%**	**4294**

Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

~ Denotes five cases or fewer.

* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 4.6: PERCENTAGE OF PATIENTS RECORDED AS HAVING A 4AT DELIRIUM ASSESSMENT AT DAY 1, BY HOSPITAL, 2024. (N=4294)

Hospital	Yes		No		Unable		Not documented		Total
	n	%	n	%	n	%	n	%	
Drogheda	277	97%	7	2%	~	*	*	*	287
Cork	462	87%	*	*	~	*	57	11%	531
Tallaght	235	86%	33	12%	~	*	~	*	273
St Vincent's	287	79%	51	14%	25	7%			363
Connolly	191	73%	67	26%	~	*	~	*	261
Galway	179	71%	30	12%	10	4%	34	13%	253
Letterkenny	118	67%	28	16%	*	*	~	*	177
Mater	106	55%	62	32%	~	*	*	*	192
Waterford	207	46%	193	43%			52	12%	452
Kerry	62	37%	91	54%	~	*	*	*	167
Beaumont	27	10%	241	90%					268
St James's	9	4%	220	96%	~	*	*	*	230
Tullamore	*	*	199	63%	~	*	103	33%	315
Limerick	*	*	269	83%	40	12%	~	*	323
National	**2328**	**54%**	**1537**	**36%**	**120**	**3%**	**309**	**7%**	**4294**

Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024
~ Denotes five cases or fewer.
* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 4.7: PERCENTAGE OF PATIENTS RECORDED AS HAVING A 4AT DELIRIUM ASSESSMENT AT DAY 3, BY HOSPITAL, 2024 (N=4294)

Hospital	Yes		No		Unable		Not documented		Total
	n	%	n	%	n	%	n	%	
Drogheda	256	89%	26	9%	~	*	*	*	287
Cork	456	86%	8	2%	~	*	*	*	531
Tallaght	228	84%	40	15%	~	*	*	*	273
Galway	165	65%	38	15%	~	*	*	*	253
Mater	102	53%	64	33%	~	*	*	*	192
Limerick	165	51%	111	34%	41	13%	*	*	323
Connolly	109	42%	147	56%	2	*	~	*	261
Waterford	171	38%	*	*	~	*	271	60%	452
Kerry	48	29%	102	61%	7	4%	10	6%	167
St James's	38	17%	190	83%	~	*	*	*	230
St Vincent's	36	10%	304	84%	23	6%			363
Letterkenny	9	5%	~	*			165	93%	177
Tullamore	7	2%	204	65%	~	*	103	33%	315
Beaumont	~	*	263	98%	*	*	*	*	268
National	**1809**	**42%**	**1612**	**38%**	**99**	**2%**	**774**	**18%**	**4294**

Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024
~ Denotes five cases or fewer.
* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 4.8: PERCENTAGE OF PATIENTS RECORDED AS HAVING A 4AT DELIRIUM ASSESSMENT AT ANY OTHER TIMEPOINT, BY HOSPITAL, 2024 (N=4294)

Hospital	Yes		No		Unable		Not documented		Total
	n	%	n	%	n	%	n	%	
Cork	456	86%	8	2%	~	*	*	*	531
Kerry	127	76%	24	14%	6	4%	10	6%	167
Tallaght	183	67%	76	28%	~	*	*	*	273
Drogheda	190	66%	89	31%	~	*	~	*	287
Mater	95	49%	61	32%	~	*	*	*	192
Waterford	215	48%	3	1%	6	1%	228	50%	452
St Vincent's	160	44%	180	50%	23	6%			363
St James's	84	37%	145	63%	~	*	*	*	230
Letterkenny	59	33%	6	3%	~	*	*	*	177
Connolly	73	28%	182	70%	~	*	~	*	261
Beaumont	63	24%	205	76%					268
Tullamore	74	23%	159	50%	~	*	*	*	315
Galway	55	22%	74	29%			124	49%	253
Limerick	36	11%	237	73%	41	13%	9	3%	323
National	**1928**	**45%**	**1507**	**35%**	**98**	**2%**	**761**	**18%**	**4294**

Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024

~ Denotes five cases or fewer.

* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 4.9: PERCENTAGE OF PATIENTS GROUPED BY 4AT SCORE ON DAY 1 OF ADMISSION (N=2336), DAY 3 (N=1823), AND ANY OTHER TIME (N=1930)

Results	2024					
	At day 1		At day 3		Any other time	
	n	%	n	%	n	%
Not detected	1645	70%	1087	60%	1136	59%
Mild	409	18%	397	22%	394	20%
Strong	282	12%	339	19%	400	21%
Total	**2336**	**100%**	**1823**	**100%**	**1930**	**100%**

FIGURE 4.10. TYPE OF SURGERY IN 2024 (N=4124)

Type of Surgery	2024	
	n	%
Arthroplasty hemi cemented	1607	39%
Internal fixation IM nail (short)	811	20%
Internal fixation IM nail (long)	590	14%
Arthroplasty hemi uncemented	502	12%
Internal fixation dynamic hips screw	327	8%
Other	97	2%
Arthroplasty THR cemented	75	2%
Arthroplasty THR uncemented	71	2%
Internal fixation screws	44	1%
Total	**4124**	**100%**

FIGURE 4.11: PERCENTAGE OF PATIENTS WITH CEMENTED AND UNCEMENTED ARTHROPLASTIES BY HOSPITAL IN 2024 (N=2255)

Hospital	2024				
	Cemented		Uncemented		Total
	n	%	n	%	
Cork	305	99%	~	*	*
Letterkenny	95	99%	~	*	*
St James's	102	98%	~	*	*
Connolly	133	98%	~	*	*
Limerick	182	97%	~	*	*
Beaumont	137	96%	6	4%	143
Mater	83	93%	6	7%	89
Kerry	82	93%	6	7%	88
Waterford	225	89%	29	11%	254
Tallaght	105	85%	19	15%	124
Drogheda	98	73%	36	27%	134
St Vincent's	29	15%	160	85%	189
Tullamore	22	14%	140	86%	162
Galway	~	*	136	97%	*
National	**1682**	**75%**	**573**	**25%**	**2255**

Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024
~ Denotes five cases or fewer.
* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 4.12: PERCENTAGE OF PATIENTS BY OCCUPATIONAL THERAPY ASSESSMENT, BY HOSPITAL IN 2024 (N=3996)

Hospital	2024						
	Yes		No		Not documented		Total
	n	%	n	%	n	%	
Beaumont	189	97%	~	*	~	*	194
Mater	160	94%	~	*	~	*	170
Galway	238	94%	15	6%			253
St James's	216	94%	14	6%			230
Drogheda	246	93%	18	7%			264
Kerry	146	88%	20	12%			166
Letterkenny	134	79%	35	21%			169
Limerick	161	75%	54	25%			215
Tallaght	171	63%	101	37%			272
Tullamore	190	61%	124	39%			314
Waterford	271	60%	173	38%	6	1%	450
St Vincent's	213	60%	145	41%			358
Connolly	147	56%	114	44%			261
Cork	158	33%	321	67%			479
National	**2727**	**68%**	**1255**	**31%**	**14**	**0%**	**3996**

Sligo and Mayo are not shown in the hospital-level results as their coverage was <80% for 2024
~ Denotes five cases or fewer.
* Further suppression required to prevent disclosure of five cases or fewer.

FIGURE 5.1: COVERAGE OF FOLLOW-ON FIELDS AT 10 IHFD SITES OVER 3 YEARS

Hospital	2022			2023			2024		
	n	N	%	n	N	%	n	N	%
Connolly	138	263	52%	134	271	49%	186	261	71%
Limerick	169	345	49%	182	330	55%	195	323	60%
Waterford	415	440	94%	44	477	9%			
St James's							174	230	76%
Mater	~	178	*	98	150	65%	7	192	4%
St Vincent's	~	213	*	141	392	36%	84	363	23%
Letterkenny							69	177	39%
Cork	113	429	26%	55	490	11%			
Tallaght				~	226	*	62	273	23%
Tullamore							13	315	4%
National	845	3909	22%	657	3983	16%	792	4294	18%

Six hospitals have not recorded follow-on data and so are not included in the graph: Beaumont, Drogheda, Galway, Kerry, Sligo and Mayo.
~ Denotes five cases or fewer.
* Further suppression required to prevent disclosure of five cases or fewer.

Figure 5.2 EQ-5D-5L OUTCOME RESULTS AT 30 DAYS AFTER PRESENTATION FROM TWO HOSPITALS (% Reporting problems of each severity) - n=326, including reported deaths

Quality of Life	2024										
	No problems		Slight		Moderate		Severe/extreme /unable		Death recorded		Total known
	n	%	n	%	n	%	n	%	n	%	
Mobility	29	9%	83	26%	142	45%	48	15%	14	4%	316
Self-care	36	11%	145	46%	93	30%	27	9%	14	4%	315
Activities	33	10%	71	23%	145	46%	52	17%	14	4%	315
Anxiety/ Depression	86	28%	141	46%	67**	22%**	~	*	14	5%	308
Pain	76	24%	157	49%	61	19%	10	3%	14	4%	318

Includes 3 hospitals that recorded EQ5D data
~ Denotes five cases or fewer.
* Further suppression required to prevent disclosure of five cases or fewer.
** Aggregated value for moderate/ sever/ extreme/ unable to prevent disclosure of five cases or fewer.

APPENDIX 8: SPECIFICATIONS FOR COMPOSITE VARIABLES

See Appendix 4: IHFD Dataset for question references.

FIGURE 2.2: ADMISSION TO ORTHOPAEDIC WARD OR THEATRE WITHIN 4 HOURS FROM EMERGENCY DEPARTMENT

2.2.1. Composite variable based on Q5–Q5B, Q5F–Q5H and Q6–Q6B as follows:

Category*	Specification
Admitted to orthopaedic ward	If Q6=1
– Admitted within 4 hours	If Q6=1 and time interval is calculated as within 4 hours
– Admitted after 4 hours	If Q6=1 and time interval is calculated as more than 4 hours
– Time interval not known	If Q6=1 and time interval is not known
Patient admitted directly to theatre within 4 hours	If Q6=1 and time to surgery is calculated as within 4 hours
Never admitted to orthopaedic ward	If Q6=2
Not known	If Q6=9

* If patients go to theatre directly from ED, and within 4 hours of first presentation, they are included.

2.2.2. Time interval determination for patients admitted to orthopaedic ward (Q6=1):

(a) If admitted via ED (Q5=1), then the time interval is calculated from the date and time of arrival at the first presenting hospital (Q4–Q4A) or from the date and time of arrival at the ED of the operating hospital (Q5A–Q5B), whichever is earlier, to the date and time admitted to an orthopaedic ward (Q6A–Q6B).

(b) If not admitted via ED (Q5=2), then: (i) for inpatient fall cases (Q5H=1), the time interval is calculated from the date and time seen by an orthopaedic team in the operating hospital (Q5F–Q5G) to the date and time admitted to an orthopaedic ward (Q6A–Q6B); (ii) for other cases, the time interval is calculated from the date and time of arrival at either the first presenting hospital (Q4–Q4A) or from the date and time seen by an orthopaedic team (Q5F–Q5G), whichever is earlier, to the date and time admitted to an orthopaedic ward (Q6A–Q6B); and if the date and time of arrival at the first presenting hospital (Q4–Q4A) is not recorded, and the date and time seen by an orthopaedic team (Q5F–Q5G) postdates the date and time admitted to an orthopaedic ward (Q6A–Q6B), then the time interval is set at 0 minutes.

2.2.3. Determination of time interval categories

Category	Specification
Within 4 hours	If interval range is 0–240 minutes
After 4 hours	If interval range is 241–525,600 minutes
Not known	If relevant dates and times are missing; or the interval range is invalid, i.e. <0 minutes; or the interval is implausible, i.e. >525,600 minutes (1 year)

FIGURE 2.3: TIME TO SURGERY – 48 HOURS/WORKING HOURS

23.1. Composite variable based on Q4–Q5B, Q5F–Q5G, Q6–Q6B, Q15 and Q15E–Q15F, as follows:

Category	Specification
Within 48 hours and working hours (Monday–Sunday, 8.00am–5.59pm)	If Q15=01–88, and time interval is calculated as within 48 hours, and time of surgery is within specified working hours

Within 48 hours but out of hours (Monday–Sunday, 6.00pm–7.59am)	If Q15=01–88, and time interval is calculated as within 48 hours, and time of surgery is within specified working hours
After 48 hours	If Q15=01–88, and time interval is calculated as more than 48 hours
Not known	If Q15=01–88, and time interval is not known

2.3.2. Time interval determination for patients who had surgery (Q15=1–88):

(a) If admitted via ED (Q5=1), then the time interval is calculated from the date and time of arrival at the first presenting hospital (Q4–Q4A), or from the date and time of arrival at the ED of the operating hospital (Q5A–Q5B), whichever is earlier, to the date and time of surgery (Q15E–Q15F). If Q4–Q4A and Q5A–Q5B are missing and the patient was admitted to an orthopaedic ward (Q6=1), then the time interval is estimated by using the date and time admitted to an orthopaedic ward (Q6A–Q6B) as its starting point.

(b) If not admitted via ED (Q5=2), then: (i) for inpatient fall cases (Q5H=1), the time interval is calculated from the date and time seen by an orthopaedic team in the operating hospital (Q5F–Q5G) to the date and time of surgery (Q15E–Q15F); (ii) for other cases, the time interval is calculated from the date and time of arrival at either the first presenting hospital (Q4–Q4A) or from the date and time seen by an orthopaedic team (Q5F–Q5G), whichever is earlier, to the date and time of surgery (Q15E–Q15F); (iii) if the date and time of arrival at the first presenting hospital (Q4–Q4A) is not recorded, and the date and time seen by an orthopaedic team (Q5F–Q5G) postdates the date and time admitted to an orthopaedic ward (Q6A–Q6B), then the time interval is calculated from the date and time of admission to an orthopaedic ward to the date and time of surgery (Q15E–Q15F); and (iv) if Q4–Q4A and Q5A–Q5B are missing and the patient was admitted to an orthopaedic ward (Q6=1), then the time interval is estimated by using the date and time admitted to an orthopaedic ward (Q6A–Q6B) as its starting point.

2.3.3. Determination of time interval and working hours categories:

Category	Specification
Within 48 hours and working hours (Monday–Sunday, 8.00am–5.59pm)	If interval range is 0–2,880 minutes; and time of surgery (Q15F) range is 8.00am–5.59pm
Within 48 hours but out of hours (Monday–Sunday, 6.00pm–7.59am)	If interval range is 0–2,880 minutes; and time of surgery (Q15F) range is 6.00pm–7.59am
After 48 hours	If interval range is 2,881–525,600 minutes (1 year)
Not known	If relevant dates and times are missing; or interval is invalid, i.e. <0 minutes; or interval is implausible, i.e. >525,600 minutes (1 year)

FIGURE 2.5: PERCENTAGE OF PATIENTS REVIEWED BY A GERIATRICIAN AT ANY POINT DURING ADMISSION

2.5.1. Composite variable based on Q12A/Q12E:

Category	Specification
Assessed by a geriatrician during this acute admission	If Q12A=1
Assessed by a cANP/ANP gerontology/orthopaedics	If Q12E=1

APPENDIX 9: ADDITIONAL INFORMATION

	n	%
REASONS FOR DELAY IN TRANSFER TO AN ORTHOPAEDIC WARD*		
No bed available	541	21%
Other	405	16%
Awaiting orthopaedic diagnosis or investigation	255	10%
Medically unwell	103	4%
Polytrauma	24	1%
Not documented	1191	47%
Total	2519	100%
REASON FOR DELAY TO SURGERY		
Awaiting medical review, investigation or stabilisation	191	20%
Issues due to anticoagulation	191	20%
Not Known or no reason provided	188	20%
Other	158	17%
Awaiting space on theatre list	120	13%
Cancelled due to list over-run	29	3%
Awaiting orthopaedic diagnosis or investigation	25	3%
Problem with theatre/surgical/anaesthetic staff cover	14	1%
Problem with theatre/equipment	11	1%
Awaiting inpatient or high-dependency bed	8	1%
Total	935	100%
OPERATING SURGEON GRADE		
Consultant	2573	62%
Spr	1166	28%
Reg	364	9%
SHO	14	0%
Not documented	7	0%
Total	4124	100%
IHFS 4 Breakdown of Geriatrician Grade at Time of Assessment		
Seen by a geriatrician	3652	99%
Seen by a geriatrician and consultant	2352	63%
Seen by ANP or cANP	1060	29%
Total (achieved IHFS 4)	**3705**	**100%**
PRE-OP MEDICAL ASSESSMENT		
None	2064	50%
Routine by geriatrician	1184	29%
Routine by medical physician	416	11%
Geriatrician review following request	146	3%
Medical physician review following request	294	7%
Not documented	20	1%
Total (receiving surgery)	4124	100%
BONE HEALTH MEDICATION ASSESSMENT		
Started on this admission	2272	55%
Continued from pre-admission	550	13%
Awaits out-patient assessment	363	9%
No assessment	349	8%
Assessed - no bone protection medication needed/appropriate	258	6%
Awaits DXA scan	249	6%
Not applicable	71	2%
Total	4112	100%

REASON FOR NOT MOBILISING		
Medically not fit	236	41%
Confusion/agitation/delirium	85	15%
Other	70	12%
Pain	61	11%
Patient declined	57	10%
Physio staffing issues	33	6%
Not documented	26	4%
Not mobile pre-fracture	10	2%
Other staffing	2	0%
Total	580	100%
MODE OF ADMISSION		
Directly to ED in an operating hospital	4056	94%
Seen by an orthopaedic team	215	5%
Unknown	23	1%
Total	4294	100%
TYPE OF ANAESTHESIA		
Spinal anaesthesia	2924	71%
General anaesthesia	1048	25%
Both	89	2%
Other	63	2%
Total	4124	100%

PERCENTAGE OF PATIENTS BY FUNCTIONAL OUTCOMES: CAS**				
Score	Day after surgery		Day of discharge	
	n	%	n	%
0	124	7%	74	4%
1	113	6%	28	2%
2	195	11%	64	4%
3	1194	68%	742	42%
4	62	4%	165	9%
5	34	2%	277	16%
6	25	1%	397	23%
Total	1747	100%	1747	100%

*Two hundred and nine (n=209) patients were transferred from another hospital or had an inpatient fall and therefore, are not included in this table.

** Only includes patients with CAS score recorded at both time-points

APPENDIX 10: IHFD GOVERNANCE COMMITTEE MEETING ATTENDEES, 2024

IHFD Governance Committee Attendance 2024					
Representative	Name	22.02.24	12.06.24	29.08.24	28.11.24
IHFD Clinical Geriatrician Lead	Dr Emer Ahern	✓	R		
Health and Social Care Professions	Naomi Bates	✓	X	✓	✓
IHFD Audit Manager	Louise Brent	✓	✓	✓	✓
IHFD Clinical Geriatric Lead	Prof Tara Coughlan	X	✓	✓	✓
Healthcare Pricing Office	Brian Donovan	X	✓	X	X
Specialist in Public Health Medicine	Dr Helena Ferris	✓	✓	✓	✓
IHFD Audit Assistant Manager	Pamela Hickey	✓	✓	✓	✓
Anaesthesia Representative	Dr Patrick Higgins	X	X	X	X
Irish Institute of Trauma and Orthopaedic Surgery	Mr Conor Hurson	X	X	X	✓
IHFD Audit Coordinators	Ursula Kelleher	✓	✓	✓	✓
Senior Healthcare Manager	John Kelly	✓	X	X	X
National Clinical Programme for Trauma and Orthopaedics	Ruth Kiely	X	✓	X	X
Emergency Medicine	Dr Geraldine McMahon	X	X	X	✓
IHFD Clinical Orthopaedic Lead	Mr Terence Murphy	✓	✓	✓	✓
Public/Patient Involvement	Anne O'Shea Clarke	X	✓	X	X
Health and Social Care Professions	Shanice Vallely	X	✓	X	✓
Research Representative	Dr Mary Walsh	✓	✓	✓	✓
✓= Attended	n/a = not applicable				
X = did not attend	R = Retired				

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