Falls and Fragility Fracture Audit Programme references library

Publications based on National Hip Fracture Database (NHFD) work

Bhimjiyani A, Neuburger J, Jones T, Ben-Shlomo, Y. and Gregson C L, 2018. The effect of social deprivation on hip fracture incidence in England has not changed over 14 years: an analysis of the English Hospital Episodes Statistics (2001–2015). Osteoporosis international, 29(1), pp.115-124. https://link.springer.com/article/10.1007/s00198-017-4238-2 [Accessed July 2020]

Boulton C, Wakeman R. Lessons from the National Hip Fracture Database. Orthopaedics and Trauma 2016;4,30(2):123–7 https://linkinghub.elsevier.com/retrieve/pii/S1877132716300306 [Accessed July 2020]

Boulton C, Burgon V, Johansen A, Martin S F, Rai R, Stanley R, Wakeman R. Delivering "Best Practice" for patients with hip fracture — Does orthogeriatrician engagement with national clinical audit data improve performance? Age and Ageing 2017;46,Issue suppl_1, 1,i32—i34, https://academic.oup.com/ageing/article/46/suppl_1/i32/3828959 [Accessed July 2020]

Goubar A, Martin FC, Potter C, Jones GD, Sackley C, Ayis S, Sheehan K. The 30-day survival and recovery after hip fracture by timing of mobilization and dementia: a UK database study. The Bone & Joint Journal 2021;1-3-B:1317-24. https://online.boneandjoint.org.uk/doi/epub/10.1302/0301-620X.103B7.BJJ-2020-2349.R1 [Accessed August 2021].

Griffiths R, White SM, Moppett IK et al. Safety guideline: reducing the risk from cemented hemiarthroplasty for hip fracture 2015. Association of Anaesthetists of Great Britain and Ireland British Orthopaedic Association British Geriatrics Society. Anaesthesia 2015;70:623–6. http://doi.org/10.1111/anae.13036 [Accessed July 2020]

Griffin XL, Parsons N, Achten J, Fernandez M, Costa ML. Recovery of health-related quality of life in a United Kingdom hip fracture population. The Warwick Hip Trauma Evaluation – a prospective cohort study. The Bone & Joint Journal 2015;97-B:372–82. http://doi.org/10.1302/0301-620X.97B3.35738 [Accessed July 2020]

Griffin XL, Achten J, Parsons N, Costa ML. Does performance-based remuneration improve outcomes in the treatment of hip fracture? Results from the WHITE multicentre hip fracture cohort. The Bone & Joint Journal 2021, 103-B(5):881-887.

https://online.boneandjoint.org.uk/doi/pdf/10.1302/0301-620X.103B5.BJJ-2020-1839.R1 [Accessed August 2021].

Johansen A, Boulton C, Neuburger J. Diurnal and seasonal patterns in presentations with hip fracture-data from the national hip fracture database. Age and Ageing 2016;45(6):883–6 https://www.ncbi.nlm.nih.gov/pubmed/27496916 [Accessed July 2020]

Johansen A, Boulton C. Hip fracture presentations are less frequent at weekends. Injury: International Journal of the Care of the Injured 2017; 48(12):2885–6. https://www.injuryjournal.com/article/S0020-1383(17)30702-7/fulltext [Accessed July 2020]

Johansen A, Tsang C, Boulton C, Wakeman R, Moppett I. Understanding mortality rates © Royal College of Physicians, 2018

after hip fracture repair using ASA physical status in the National Hip Fracture Database. Anaesthesia 2017. http://onlinelibrary.wiley.com/wol1/doi/10.1111/anae.13908/full [Accessed July 2020]

Johansen A, Boulton C, Burgon V, Rai S, Ten Hove R, Wakeman R. Using the National Hip Fracture Database (NHFD) to define the impact of physiotherapist assessment on early mobilisation after hip fracture. Physiotherapy Journal 2017;103(1),e85

https://www.physiotherapyjournal.com/article/S0031-9406(17)30170-0/abstract [Accessed July 2020]

Johansen A, Boulton C, Hertz K, Ellis M, Burgon V, Rai S, Wakeman R. The National Hip Fracture Database (NHFD) – Using a national clinical audit to raise standards of nursing care. The International Journal of Orthopaedic and Trauma Nursing 2017;26:3–6
http://www.orthopaedictraumanursing.com/article/S1878-1241(17)30002-3/fulltext [Accessed July 2020]

Johansen A, Boulton C, Burgon V, Rai S, Wakeman R. Avoiding delay in surgery for hip fracture: Using the national hip fracture database (NHFD) to monitor and improve compliance with the national guidelines. Age and Ageing 2017;46,Issue suppl_1, 1,i32–i34 https://academic.oup.com/ageing/article-abstract/46/suppl_1/i32/3828960?redirectedFrom=fulltext [Accessed July 2020]

Johansen A, Boulton C, Burgon V, Rai S, Wakeman R. Cognitive impairment - Profiling its implications for patients with hip fracture. Age and Ageing 2017;46,suppl_2, 1:ii1–ii6 https://academic.oup.com/ageing/article/46/suppl_2/ii1/3950210 [Accessed July 2020]

Johansen A & Inman, D. A view of COVID-19 from the perspective of the National Hip Fracture Database. The Bone and Joint Journal 2021; 103-B(6):1007-1008.

https://online.boneandjoint.org.uk/doi/full/10.1302/0301-620X.103B6.BJJ-2021-0326 [Accessed July 2021].

McGovern PD, Albrecht M G, Belani K, Nachtsheim C, Partington PF, Carluke I and Reed M R, 2011. Forced-air warming and ultra-clean ventilation do not mix: an investigation of theatre ventilation, patient warming and joint replacement infection in orthopaedics. The Journal of bone and joint surgery. British volume, 93(11), pp.1537-1544. https://www.ncbi.nlm.nih.gov/pubmed/22058308 [Accessed July 2020]

McKee M, Bray B, Buckingham R, Boulton C. The weekend effect: now you see it, now you don't (letter). BMJ (Clinical Research Ed.) 2016;353:i2750 https://www.bmj.com/content/353/bmj.i2750.long [Accessed July 2020]

Neuburger J, Currie C, Wakeman R et al. The impact of a national clinician-led audit initiative on care and mortality after hip fracture in England: an external evaluation using time trends in non audit © Royal College of Physicians, 2018

data. Med Care 2015; 53:686–91. www.ncbi.nlm.nih.gov/pubmed/26172938 [Accessed July 2020]

Neuburger J, Currie C, Wakeman R, et al. Increased orthogeriatrician involvement in hip fracture care and its impact on mortality in England. Age and Ageing 2017;46(2):187–192. https://doi.org/10.1093/ageing/afw201 [Accessed July 2020]

Neuburger J, Currie C, Wakeman R, et al. Safe working in a 7-day service. Experience of hip fracture care as documented by the UK National Hip Fracture Database. Age and Ageing 2018 Sep 1;47(5):741–5. https://doi.org/10.1093/ageing/afy074 [Accessed July 2020]

Perry DC, Metcalfe D, Griffin XL, Costa ML. Inequalities in use of total hip arthroplasty for hip fracture: population based study. BMJ 2016; 353:i2021. http://dx.doi.org/10.1136/bmj.i2021 [Accessed July 2020]

Sayers A, Whitehouse MR, Berstock JR et al. The association between the day of the week of milestones in the care pathway of patients with hip fracture and 30-day mortality: findings from a prospective national registry – The National Hip Fracture Database of England and Wales. BMC Medicine 2017;15:62. http://bmcmedicine.biomedcentral.com/articles/10.1186/s12916-017-0825-5 [Accessed July 2020]

Sheehan KJ, Goubar A, Almilaji O, Martin FC et al. Discharge after hip fracture surgery by mobilisation timing: secondary analysis of the UK National Hip Fracture Database. Age and Ageing. afaa204. https://doi.org/10.1093/ageing/afaa204 [Accessed November 2020]

Sims A L, Parsons N, Achten J, Griffin XL, Costa ML, Reed M R and CORNET Trainee Collaborative, 2018. A randomized controlled trial comparing the Thompson hemiarthroplasty with the Exeter polished tapered stem and Unitrax modular head in the treatment of displaced intracapsular fractures of the hip: the WHiTE 3: HEMI Trial. Bone Joint Journal, 100(3), pp.352-360. https://www.ncbi.nlm.nih.gov/pubmed/29589786 [Accessed July 2020]

Stewart K, Bray B, Buckingham R, Boulton C. The weekend effect: now you see it, now you don't. Variations in care quality occur across the whole week, not just at weekends. British Medical Journal 2016;7;353 https://www.bmj.com/content/353/bmj.i3151.long [Accessed July 2020]

Taranu R, Redclift C, Williams P, Diament M, Tate A, Maddox J, Wilson F and Eardley W, 2018. Use of anticoagulants remains a significant threat to timely hip fracture surgery. Geriatric orthopaedic surgery & rehabilitation, 9, p.2151459318764150. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5871052/ [Accessed July 2020]

Thorne K, Johansen A, Akbari A, Williams J.G. and Roberts S.E, 2016. The impact of social deprivation on mortality following hip fracture in England and Wales: a record linkage study. Osteoporosis International, 27(9), pp.2727-2737. https://link.springer.com/article/10.1007/s00198-016-3608-5 [Accessed July 2020]

Tsang C, Boulton C, Burgon V, Johansen A, Wakeman R, Cromwell D. Predicting 30-day mortality after hip fracture surgery evaluation of the National Hip Fracture Database case-mix adjustment model. The British Editorial Society of Bone & Joint Surgery 2017;6:550–6. https://online.boneandjoint.org.uk/doi/full/10.1302/2046-3758.69.BJR-2017-0020.R1 [Accessed July 2020]

Whitehouse MR, Berstock JR, Kelly MB, Gregson CL, Judge A, Sayers A and Chesser TJ., 2019. Higher 30-day mortality associated with the use of intramedullary nails compared with sliding hip screws for the treatment of trochanteric hip fractures: a prospective national registry study. Bone Joint Journal, 101(1), pp.83-91. https://www.ncbi.nlm.nih.gov/pubmed/30601043 [Accessed July 2020]

Wilson H, Boulton C, Burgon V, Johansen A, Neuburger J, Rai S, Wakeman R. Using the national hip fracture database to develop a classification of models of orthogeriatric care. Age and Ageing 2017;46,Issue suppl_1, 1,i1–i22 https://academic.oup.com/ageing/article/46/suppl_1/i1/3828842 [Accessed July 2020]

Publications based on Fracture Liaison Service Database (FLS-DB) work

Hawley S, Javaid M K, Prieto-Alhambra D, Lippett J, Sheard S, Arden N K, Cooper C, Judge A, The REFReSH study group. Clinical effectiveness of orthogeriatric and fracture liaison service models of care for hip fracture patients: population-based longitudinal study. Age and Ageing 2016 March;45(2):236–42. https://academic.oup.com/ageing/article/45/2/236/2195354?searchresult=1 [Accessed July 2020]

Judge A, Javaid M K, Leal J, Hawley S, Drew S, Sheard S, Prieto- Alhambra D, Gooberman-Hill R, Lippett J, Farmer A, Arden N, Gray A, Goldacre M, Delmestri A, Cooper C. Models of care for the delivery of secondary fracture prevention after hip fracture: a health service cost, clinical outcomes and cost- effectiveness study within a region of England. Health Services and Delivery Research. 2016 Sep; 4:28. https://www.ncbi.nlm.nih.gov/books/NBK385615/ [Accessed July 2020] Leal J, Gray AM, Hawley S, Prieto-Alhambra D, Delmestri A, Arden NK, Cooper C, Javaid MK, Judge A; and the REFReSH Study Group. Cost-Effectiveness of Orthogeriatric and Fracture Liaison Service Models of Care for Hip Fracture Patients: A Population-Based Study. Journal of Bone and Mineral Research. 2017 Feb; 32(2):203–11. https://www.ncbi.nlm.nih.gov/pubmed/27632945 [Accessed July 2020]

Publications based on National Audit of Inpatient Falls (NAIF) work

Buttery AK, Husk J, Lowe D, Treml J, Vasilakis N, Riglin J. Older people's experiences of therapeutic exercise as part of a falls prevention service: survey findings from England, Wales and Northern Ireland. Age and Ageing 2014 May; 43(3):369–74.

https://www.ncbi.nlm.nih.gov/pubmed/24292239 [Accessed July 2020]

Morris R, O'Riordan S. Prevention of falls in hospital. Clin Med 2017 Jul;17(4):360–62. https://www.ncbi.nlm.nih.gov/pubmed/28765417 [Accessed July 2020]

O'Riordan S, Vasilakis N, Hussain L, Schoo R1, Whitney J, Windsor J, Horton K, Martin F. Measurement of lying and standing blood pressure in hospital. Nursing Older People 2017 Sep; 29;29(8):20–6. https://www.ncbi.nlm.nih.gov/pubmed/29124913 [Accessed July 2020]

External papers referenced in FFFAP publications

NHFD

Abbey J, Piller N, Bellis AD et al. The Abbey pain scale: a 1-minute numerical indicator for people with end-stage dementia. Int J Palliat Nurs 2004;10(1):6–13. https://www.ncbi.nlm.nih.gov/pubmed/14966439 [Accessed July 2020]

Accelerated surgery versus standard care in hip fracture (HIP ATTACK): an international, randomised, controlled trial. Lancet 2020; 395: i10225:698-708.

www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30058-1/fulltext#%20 [Accessed July 2020]

Barodawala S, Kesavan S, Young J. A survey of physiotherapy and occupational therapy provision in UK nursing homes. Clin Rehabil 2001;15(6):607–10. https://doi.org/10.1191/0269215501cr4540a [Accessed July 2020]

Bellelli et al. Validation of the 4AT, a new instrument for rapid delirium screening: a study in 234 hospitalised older people. Age Ageing 2014;43(4):496-502. https://doi.org/10.1093/ageing/afu181[Accessed July 2020]

Bottle, A., Griffiths, R., White, S., Wynn-Jones, H., Aylin, P., Moppett, I., Chowdhury, E., Wilson, H. & Davies, B. M. 2020. Periprosthetic fractures: the next fragility fracture epidemic? A national observational study. BMJ Open, 10, e042371.)

https://bmjopen.bmj.com/content/bmjopen/10/12/e042371.full.pdf [Accessed July 2021]

COVID BOAST - Management of patients with urgent orthopaedic conditions and trauma during the coronavirus pandemic. Last updated January 2021.

https://www.boa.ac.uk/uploads/assets/782e0b20-f9ce-4fc9-819f943740161405/201ebd61-5828-4c81-b45a8b80ac47fd50/COVID-19-BOASTs-Combined-v3FINAL.pdf [Accessed July 2021]

Diament et al. "Early trigger" intravenous vitamin K: optimizing target-driven care in warfarinised patients with hip fracture. Geriatric Orthopaedic Surgery & Rehabilitation 2015; (6):263-268. https://journals.sagepub.com/doi/10.1177/2151458515595669 [Accessed July 2020]

Farrow L, Ablett AD, Sargeant HW, Smith TO, Johnston AT. Does early surgery improve outcomes for periprosthetic fractures of the hip and knee? A systematic review and meta-analysis. Archives of Orthopaedic and Trauma Surgury. 2021 Aug;141(8):1393-1400.

https://link.springer.com/article/10.1007/s00402-020-03739-2 [Accessed July 2021]

Getting It Right First Time: Orthopaedic hemiarthroplasty products and Primary Femoral component dataset

Supplied exclusively to the National Hip Fracture Database - HQIP/RCP Falls & Fragility Fracture Audit Programme (FFFAP).

Judge A, Metcalfe D, Whitehouse MR, et al. How should the HEALTH trial inform clinical guidelines and surgical decision-making? Bone and Joint Journal 2020; 102-b (6) https://online.boneandjoint.org.uk/doi/abs/10.1302/0301-620X.102B6.BJJ-2020-0101.R1 [Accessed July 2020]

Leal J, Gray AM, Javaid MK et al. Impact of hip fracture on hospital care costs: a population-based study. Osteoporos Int 2016;27:549–58. https://link.springer.com/article/10.1007/s00198-015-

3277-9 [Accessed July 2020]

Lisk et al. Associations of 4AT with mobility, length of stay and mortality in hospital and discharge destination among patients admitted with hip fractures. Age Ageing 2020; 49: i3:411-417 https://pubmed.ncbi.nlm.nih.gov/31813951/ [Accessed July 2020]

Marcantonio ER, Flacker JM, Wright RJ. et al. Reducing delirium after hip fracture: a randomized trial. J AM Geriatr Soc.2001; 49(5):516-22 https://doi.org/10.1046/j.1532-5415.2001.49108.x [Accessed July 2020]

Melling AC, Ali B, Scott EM and Leaper DJ, 2001. Effects of preoperative warming on the incidence of wound infection after clean surgery: a randomised controlled trial. The Lancet, 358(9285), pp.876-880. https://www.ncbi.nlm.nih.gov/pubmed/11567703 [Accessed July 2020]

Neuburger J, Currie C, Wakeman R, et al. Increased orthogeriatrician involvement in hip fracture care and its impact on mortality in England. Age and Ageing 2017;46(2):187–192. https://doi.org/10.1093/ageing/afw201 [Accessed July 2021]

NICE National Institute for Health and Care Excellence. Clinical guideline CG124. Hip fracture: management. London: NICE, 2017. www.nice.org.uk/Guidance/CG124 [Accessed July 2020]

NICE National Institute for Health and Care Excellence. Quality Standard QS16. Hip fracture in adults. London: NICE, 2017. www.nice.org.uk/Guidance/QS16 [Accessed July 2020]

NHS England and NHS Improvement. Ref: 2017/18 and 2018/19 National Tariff Payment System: a consultation notice. Annex B6 Guidance on Best Practice Tariffs. London: NHS Improvement, 2016. https://improvement.nhs.uk/resources/national-tariff-1920-consultation/ [Accessed July 2020]

Royal College of Physicians, British Geriatrics Society and British Pain Society. The assessment of pain in older people: national guidelines. Concise guidance to good practice series, No 8. London: RCP, 2007.

https://www.britishpainsociety.org/static/uploads/resources/files/book_pain_older_people.pdf [Accessed July 2020]

Salkeld G, Ameratunga SN, Cameron ID et al. Quality of life related to fear of falling and hip fracture in older women: a time trade off study. BMJ 2000; 320(7231):341–6. https://www.ncbi.nlm.nih.gov/pubmed/10657327 [Accessed July 2020]

Taranu R, Redclift C, Williams P et al. Use of anticoagulants remains a significant threat to timely hip fracture surgery. Geriatr Orthop Surg Rehabil 2018; 9: 2151459318764150 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5871052/ [Accessed July 2020]

Tsang C, Boulton C, Burgon V et al. Predicting 30-day mortality after hip fracture surgery evaluation of the National Hip Fracture Database case-mix adjustment model. Bone & Joint Research 2017; 6 (9): 550–6. https://online.boneandjoint.org.uk/doi/full/10.1302/2046-3758.69.BJR-2017-0020.R1 [Accessed July 2020]

Total Hip Arthroplasty or Hemiarthroplasty for Hip Fracture. N Engl J Med 2019; 381:2199-2208. https://www.nejm.org/doi/full/10.1056/NEJMoa1906190 [Accessed July 2021]

Whitehouse MR, Berstock JR, Kelly MB et al. Higher 30-day mortality associated with the use of intramedullary nails compared with sliding hip screws for the treatment of trochanteric hip fractures: a prospective national registry study. Bone Joint Journal 2019; 101(1): 83-91. https://www.ncbi.nlm.nih.gov/pubmed/30601043[Accessed July 2020]

World Hip Trauma Evaluation - FRUITI: Fix or Replace Undisplaced Intracapsular fractures Trial of Interventions (WHITE 11 – FRUITI) https://www.ndorms.ox.ac.uk/clinical-trials/current-trials-and-studies/fruiti [Accessed July 2021]

NAIF

National Institute for Health and Care Excellence. Falls in older people: assessing risk and prevention. NICE clinical guideline (CG161). Manchester: NICE, 2013. www.nice.org.uk/guidance/cg161 [Accessed July 2020]

National Patient Safety Agency. The 'How to' Guide for Reducing harm from falls. London: NPSA, 2009.

https://webarchive.nationalarchives.gov.uk/20150505150051/http:/www.patientsafetyfirst.nhs.uk/ashx/Asset.ashx?path=/Intervention-support/FALLSHow-to%20Guide%20v4.pdf[Accessed July 2020]

National Institute for Health and Care Excellence. Falls in older people. NICE quality standard (QS86). Manchester: NICE, 2017. www.nice.org.uk/guidance/qs86 [Accessed July 2020]

National Institute for Health and Clinical Excellence. Delirium: prevention, diagnosis and management. NICE clinical guideline (CG103). Manchester: NICE, 2010. www.nice.org.uk/guidance/cg103 [Accessed July 2020]

National Patient Safety Agency. Slips trips and falls in hospital. London: NPSA, 2007. www.nrls.npsa.nhs.uk/resources/?entryid45=59821 [Accessed July 2020]

National Patient Safety Agency. Using bedrails safely and effectively. London: NPSA, 2007. www.nrls.npsa.nhs.uk/resources/?EntryId45=59815 [Accessed July 2020]

NHS Improvement. The incidence and costs of inpatient falls in hospitals. London: NHSI, 2017. https://improvement.nhs.uk/resources/incidence-and-costs-inpatient-falls-hospitals/ [Accessed July 2020]

NHS Improvement. Supporting NHS providers to deliver the right staff, with the right skills, in the right place at the right time. NHSI, 2019. https://improvement.nhs.uk/resources/supporting-nhs-providers-right-skills-staff-place-time/ [Accessed July 2020]

FLS-DB

British Orthopaedic Association/British Geriatrics Society. The care of patients with fragility fracture. London: BOA, 2007. https://www.bgs.org.uk/resources/care-of-patients-with-fragility-fracture-blue-book [Accessed July 2020]

Li L, Roddam A, Gitlin M et al. Persistence with osteoporosis medications among postmenopausal women in the UK General Practice Research Database. Menopause 2012;19:33–40. https://journals.lww.com/menopausejournal/Abstract/2012/01000/Persistence with osteoporo

sis medications among.8.aspx [Accessed July 2020]

National Osteoporosis Guideline Group. NOGG 2017: Clinical guideline for the prevention and treatment of osteoporosis. Sheffield: NOGG, 2017 www.sheffield.ac.uk/NOGG/ [Accessed July 2020]

National Institute for Health and Care Excellence. Falls in older people: assessing risk and prevention. NICE clinical guideline (CG161). Manchester: NICE, 2013. www.nice.org.uk/guidance/cg161 [Accessed July 2020].

National Institute for Health and Care Excellence. Falls in older people. NICE quality standard (QS86). Manchester: NICE, 2015. www.nice.org.uk/guidance/qs86 [Accessed July 2020].

National Institute for Health and Care Excellence. Alendronate, etidronate, risedronate, raloxifene, strontium ranelate and teriparatide for the secondary prevention of osteoporotic fragility fractures in postmenopausal women. NICE technology appraisal (TA161). Manchester: NICE, 2008. www.nice.org.uk/guidance/ta161 [Accessed July 2020].

National Institute for Health and Care Excellence. Osteoporosis. NICE quality standard (QS149). Manchester: NICE, 2017. www.nice.org.uk/guidance/qs149 [Accessed July 2020].

Quality and Outcomes Framework. Achievement, prevalence and exceptions data, 2012/13. www.hscic.gov.uk/catalogue/PUB12262 [Accessed July 2020].

Royal Osteoporosis Society. Benefits calculator 2016. Bath: ROS, 2016. https://benefits.theros.org.uk/ [Accessed July 2020]

Royal Osteoporosis Society. Effective secondary prevention of fragility fractures: clinical standards for fracture liaison services. Bath: ROS, 2015. https://theros.org.uk/media/1776/clinical-standards-report.pdf [Accessed July 2020].