



SOUTH TEES
**Academic Centre
for Surgery**

UK Frozen Shoulder Trial (UK FROST)

*HIN MSK Improvement Network
23rd June 2023*

Amar Rangan

Professor of Orthopaedic Surgery



Royal College
of Surgeons
of England



UNIVERSITY
of York

NHS
South Tees Hospitals
NHS Foundation Trust





Terminology

- “Frozen shoulder” - Codman 1934
- “Adhesive Capsulitis” - Neviasser 1945
- “Contracted Shoulder” - Bunker 1990

- “Capsulite Retractable” - French
- “Epaule Gelee”
- “Steiffschulter” - German



Common interventions

- NSAIDs
- Corticosteroid injections
- (Oral corticosteroids)
- Physiotherapy
- Hydrodilatation
- MUA
- Arthroscopic release

Clear need for high quality evidence



2012



*Rangan A, Hanchard N, McDaid C:
BMJ 2016*



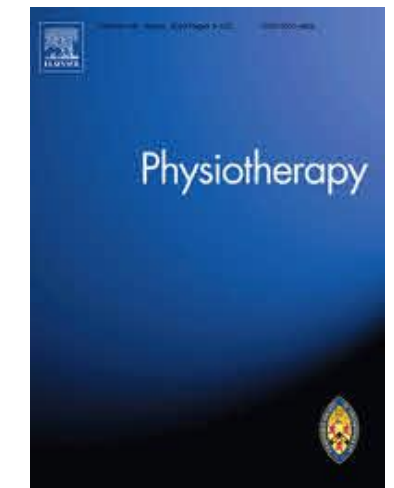
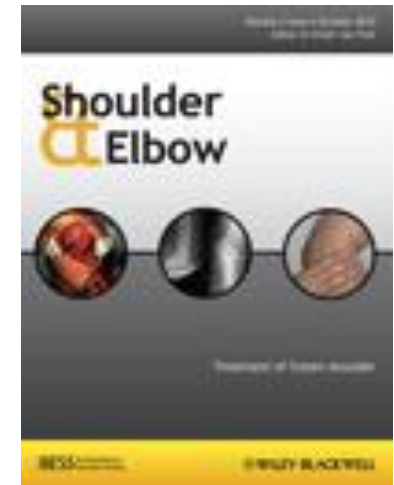
Preparation for a trial

BESS survey 2009 – three most commonly used interventions in secondary care identified:

- Physiotherapy; MUA; & ACR

Delphi consensus to define Physiotherapy pathways for the trial

- Early Structured Physiotherapy following Steroid injection (ESP)
- Post Procedural Physiotherapy (PPP) following MUA & ACR



The United Kingdom Frozen Shoulder Trial



UK FROST

Frozen Shoulder Trial



South Tees Hospitals
NHS Foundation Trust



Funding: This pragmatic multicentre randomised trial was supported by UK NIHR - Health Technology Assessment award 13/26/01

The views and opinions expressed herein are those of the authors and do not necessarily reflect those of the National Institute for Health Research, the National Health Service, or the Department of Health.

- Ethics approval: NRES North East, 14/NE/1176
- Trial registration: ISRCTN 48804508
- Trial Governance: TSC & DMEC
- Published protocol: *Trials* 2017; **18**: 614





THE LANCET

Rangan A, Brealey SD, Keding A et al. Lancet. 2020
Oct 3;396(10256):977-989

Bone & Joint
Open 

Cost-effectiveness of surgical treatments compared with early structured physiotherapy in secondary care for adults with primary frozen shoulder

an economic evaluation of the UK FROST trial

Aug 2021

NIHR | National Institute for
Health and Care Research

Journals Library

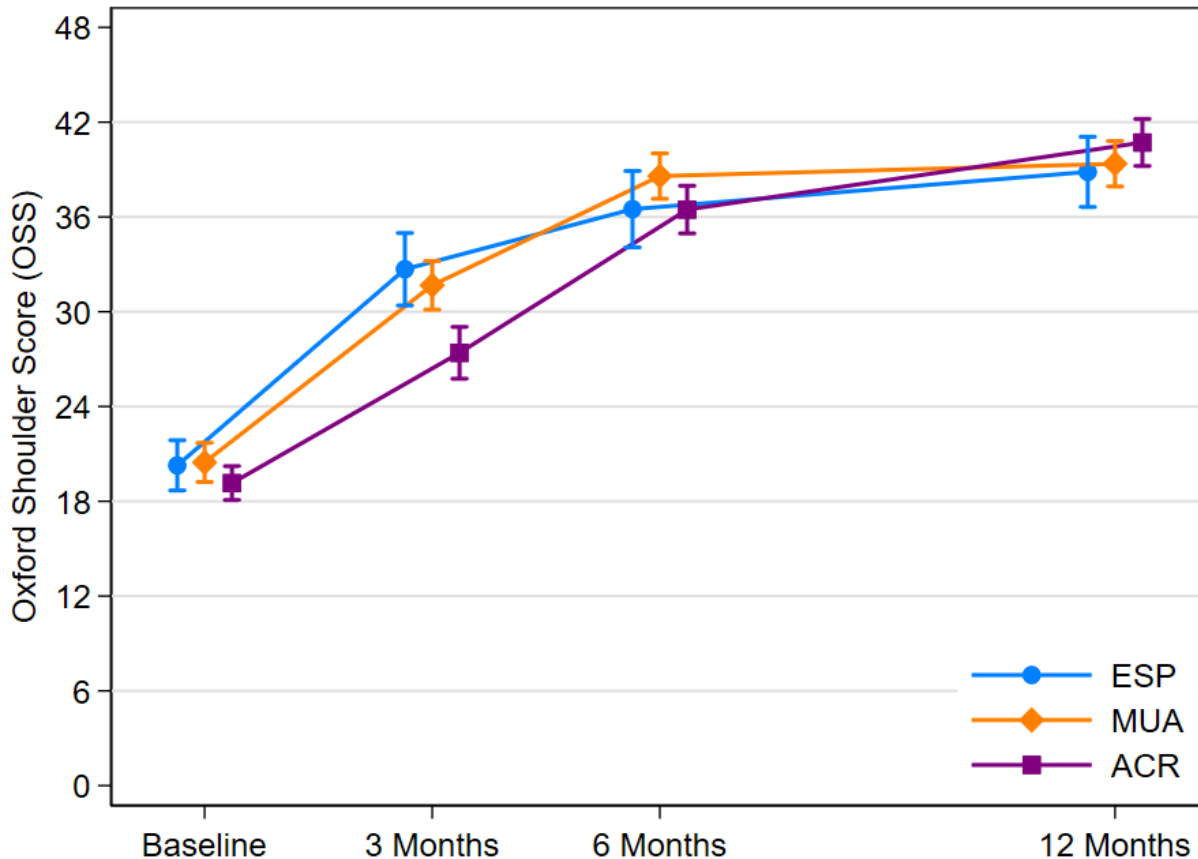
Surgical treatments compared with early structured physiotherapy in secondary care for adults with primary frozen shoulder: the UK FROST three-arm RCT

Neither early structured physiotherapy, manipulation under anaesthesia nor arthroscopic capsular release was found to be clearly superior on patient-reported shoulder pain and functioning at 12 months.





Raw OSS Means and 95% CI



Why is Physiotherapy important?

- None of the three treatments were clearly superior
- ESP trial pathway can be delivered early

Nested Qualitative Study:

- Patients want early diagnosis and early treatment
- Patients found physiotherapy very helpful in all three arms of the trial





PHYSIOTHERAPIST BOOKLET

FROZEN SHOULDER



PATIENT BOOKLET

FROZEN SHOULDER





SOUTH TEES
**Academic Centre
for Surgery**

How can we embed the results of the trial into evidence based care pathways?

Thank you



UK FROST
Frozen Shoulder Trial



Royal College
of Surgeons
of England



UNIVERSITY
of York

NHS
South Tees Hospitals
NHS Foundation Trust

