



Evidence Implementation Training Program

Movement precautions after Total Hip Replacement

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Background

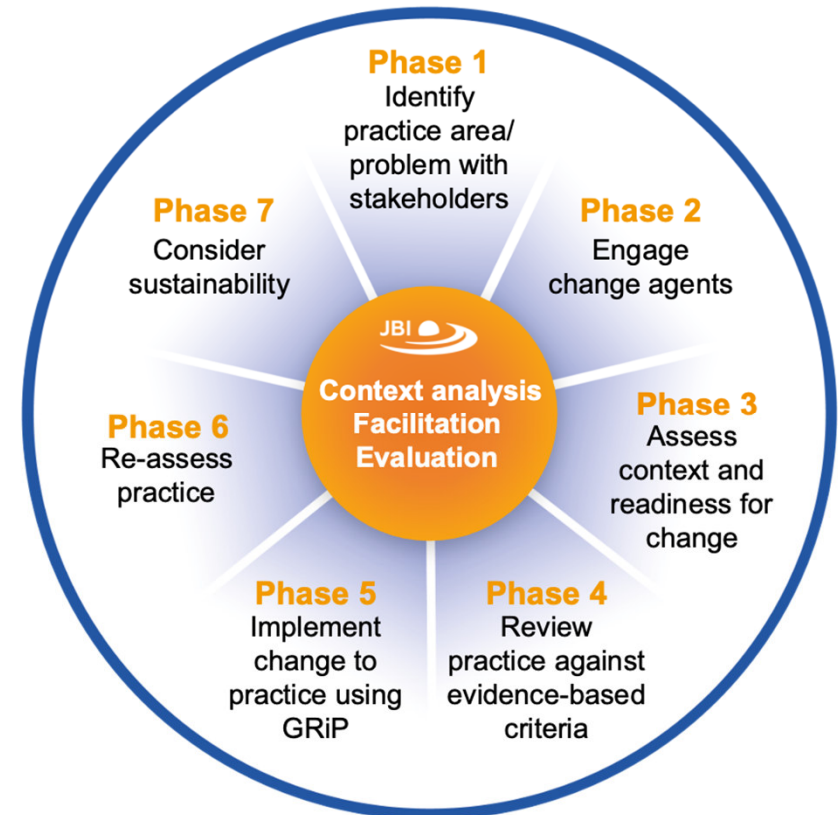
- Total hip replacement (THR) is the gold standard for end stage osteoarthritis (OA)¹ and is one of the most frequently performed surgeries in Germany (about 235,000 times per year)².
- Patients will benefit from quicker recovery and hospitals and other care givers will save resources, if the best clinical practice recommendations are followed ³⁻⁶.
- In practice, according to previous knowledge and prior operation techniques, it is still quite common that in order to prevent hip luxation, movement precautions and restrictions are given ^{4,7-10}.
- These precautions include avoidance of hip flexion greater than 90 degrees, avoidance of crossing legs, sleeping in supine with a pillow between the legs, use of an elevated toilet seat/elevated chair and avoidance of riding in a car ⁸.
- Viewing recent investigations on the topic it was shown that there is no proof that limiting range of motion can in any way prevent post operative hip luxation ^{4-8,11,12}.

Aims and Objectives

- Assess current compliance of the health care professionals at the university hospital Brandenburg/Havel with the best practice recommendation: **do not give any movement restrictions to patients undergoing THR.**
- *Improve* the compliance of the health care professionals to this best practice criteria, if necessary.
- *Understand* barriers and facilitators to implementing best practice in the university hospital Brandenburg/Havel.

Methods

- Pre-planning (Phase 1-3) 
- Base-Line audit (Phase 4) 
- Implementation workshops (Phase 5) 
- Reaudit (Phase 6) 
- Considerations (Phase 7) 



Pre-Planning



- engaging with the head of department and the head surgeon in individual interviews during autumn 2022
- setting up the project team: Diane Rosen and Robert Prill
- Engaging with the other key stakeholders (the head of the physiotherapists, the head of the physiotherapist school) in individual interviews
- Decision to intervene

Base-line Audit

Audit criterion

No movement restrictions for patients undergoing THR are given

YES or NO



I Individual interviews:

- A) Head physicians treating THR (n=2)
- B) Head physiotherapists treating THR (n=1)
- C) Head of the physiotherapy school of the hospital (n= 1)
- D) Head occupational therapist treating THR (n=1)

II Prospective questionnaire:

physiotherapists treating THR frequently (n=5)

III Retrospective questionnaire:

Occupational therapists treating THR frequently (n=2)

Results: Baseline audit



- Head physicians 2/2 = **100%**: stick (mainly) with the best practice recommendations
- Other health care professionals 0/10 = **0%** stick with the best practice recommendations

Baseline Assessment and Implementation Planning

- Base-line audit was analyzed using GRiP.
- Two additional questions helped to identify the two main barriers: lack of knowledge and lack of communication.
- Possible strategies for implementation were planned and agreed on by the project team (DR and RP).
- The educational workshops were planned and held in January 2023 and February 2023.

Implementation Workshops



- The workshops addressed mostly the barrier of lack of knowledge.
- A Power Point Presentation with studies and meta-analysis on this topic was presented by DR.
- Open discussion for strategies what to do next with the participants and the project team (DR and RP).



Cochrane Database of Systematic Reviews

2016

Ob Einschränkungen etwas bewirken, ist unsicher, da es insgesamt kaum zu Dislokationen kam

Assistive devices, hip precautions, environmental modifications and training to prevent dislocation and improve function after hip arthroplasty (Review)

Smith TO, Jepson P, Bewick A, Sands G, Drummond A, Davis ET, Sackley CM

2015

Die Luxationsrate bei H-TEPs ist inzwischen generell gering und Bewegungseinschränkungen beugen diese nicht noch besser vor

Review

Are Hip Precautions Necessary Post Total Hip Arthroplasty? A Systematic Review

Lara Barnsley, BAppSci (Occupational Therapy) Hons, BMBS¹, Leslie Barnsley, BMed (Hons), Grad Clin Epi, PhD, FRACP, FAFPH (RACP)², and Richard Page, BmedSci, MBBS, FRACS, FADOrth¹

Abstract
Purpose: Total hip arthroplasty (THA) is a common and effective treatment of hip osteoarthritis. Activity restrictions known as hip precautions are widely practiced in rehabilitation post-THA, aiming to lessen healing and prevent hip dislocation. The focused clinical question was: Does the application of hip precautions in patients post-THA versus unrestricted activities significantly decrease the risk of prosthetic dislocation? **Methods:** A comprehensive literature search was conducted for randomized controlled trials or cohort studies with a comparative group and minimum 6 months follow-up, with dislocation as an end point. Retrieved titles were assessed independently by 2 reviewers for inclusion and underwent standardized data extraction. **Results:** This search produced 80 potentially relevant articles. Five articles were retrieved for data extraction of which 2 met a priori eligibility criteria. No eligible studies were found that compared posterior approaches to hip arthroplasty, so the results of this review concern only anterolateral approaches. Neither included study showed any benefit of hip precautions in preventing dislocation. **Conclusion:** The rate of dislocation after anterolateral THA is low and is not improved by hip precautions. Hip precautions are associated with a slower return to activities, significant expense, and decreased patient satisfaction. Existing studies risk being compromised by a type II error, but a definitive study may be prohibitively large and expensive.

2016

Alltagseinschränkungen beugen die Luxation nicht vor

Article

Do lifestyle restrictions and precautions prevent dislocation after total hip arthroplasty? A systematic review and meta-analysis of the literature

Walter van der Weegen¹, Anke Kornijs² and Dirk Das¹

Abstract
Objective: A systematic literature review and meta-analysis on the effectiveness of lifestyle restrictions and precautions to prevent dislocation after total hip arthroplasty.
Data sources: MEDLINE and the Cochrane Library were searched in February 2015, with additional hand searching of systematic reviews and reference lists.
Review methods: This review was conducted in accordance with the PRISMA statement for reporting systematic reviews and meta-analysis. PubMed and the Cochrane Library were searched from their start date through to February 2015. Randomized controlled trials and comparative case series in English, Dutch or German languages were included. Only primary total hip arthroplasty procedures managed with different postoperative restrictions and precautions protocols were included. Primary outcome was the total hip arthroplasty dislocation rate, secondary outcomes were patient functioning, return to activities of daily living and patient satisfaction.
Results: A total of 119 eligible articles were identified, six were included: three randomized controlled trials, one retrospective matched cohort study, one retrospective and one prospective cohort study, describing 1122 procedures (restrictions group: n=520; no restrictions group: n=594). Both the standard posterior and anterolateral surgical approaches were included. There were eight dislocations (1.5%) in the restricted group, vs. six dislocations (1.0%) in the unrestricted group. Patients in the unrestricted group resumed activities significantly faster and were more satisfied with their pace of recovery.
Conclusion: A more liberal lifestyle restrictions and precautions protocol will not lead to worse dislocation rates after total hip arthroplasty, but will lead to earlier and better resumption of activities and higher patient satisfaction. These results appear to hold up for various surgical approaches.

Reaudit

Audit criterion

No movement restrictions for patients undergoing THR are given

YES or NO



Questionary:

A: physiotherapists treating THR frequently (n=8)

B: ergotherapists treating THR frequently (n=2)

Results:

10/10 =100% stick with the best practice recommendations

Considerations



- To address the underlying problem of lack of communication another intervention would be necessary in order to change practice also for other issues.
- To scale up, it would be interesting to do the same intervention in another facility or even broaden it up to clinical guidelines.

Conclusion

- Overall the health professionals were willing and able to change and improve practice complying more to the best practice criteria
- It is likely that this specific change to practice is sustainably implemented. To be sure, another follow up audit in a year or two would be necessary.

Thank you for your attention!



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