



Evidence Implementation Training Program (EITP)

Project Title (use PESS): Pre-operative education
of patients after knee replacement in a orthopedic
hospital ward setting: a best practice
implementation project

Participants Name: Bożena Latała

Organization: Jagiellonian University Medical
Collage, Orthopedic Hospital in Cracow

Facilitator Name: Małgorzata Bała

Audit Question:

What is the best practice in improving pre-operative education in patients after knee replacement?

- Does the hospital provide pre-operative education in patients after knee replacement based on evidence ?
- What is the current content of pre-operative education in patients after knee replacement?
- Who is involved in pre-operative education in hospital?

- Problem: There is no evidence-based education of patients in the hospital.
- Evaluation: retrospective analysis of patients' data, analysis of responses to the questionnaire provided by the medical team members and patients
- Setting: orthopedic hospital in Cracow
- Stakeholders: hospital medical director, head of rehabilitation department, head of Rehabilitation Clinic UJ, physiotherapists, doctors and the hospital quality specialist

Aims and objectives

Aims of the project:

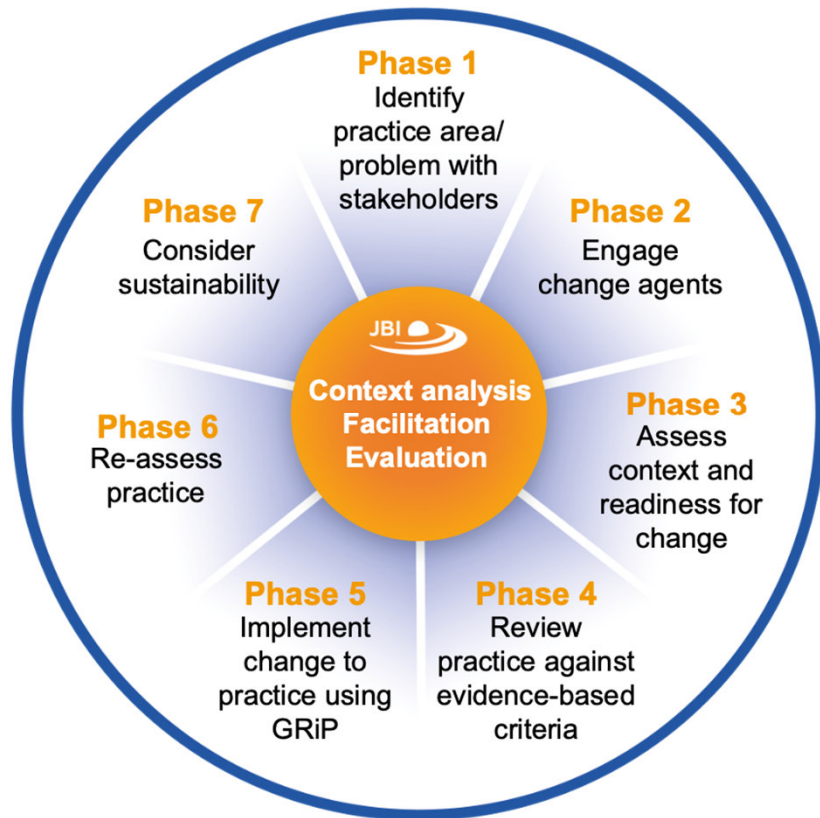
1. To determine current compliance with best practice recommendation for pre-operative education in patients after knee replacement
2. To optimize the content of pre-operative education, so it includes preparation for surgery (e.g. medical clearance, assessments, nutrition etc.), patient expectations, intra-operative care (e.g. anesthesia), discharge planning, post-operative care and recovery (e.g. rehabilitation, mobility at home, infection prevention etc.).
3. To unify the pre-operative education provided to all patients after knee replacement in hospital.

Aims and objectives

Aims of the project:

4. To identify barriers towards providing standardized pre-operative education.
5. To identify facilitators to improving compliance and develop improvement strategies
6. To evaluate changes in compliance with the evidence-based recommendations regarding pre-operative education by performing a follow-up audit.

Methods: 7 phases of Evidence Implementation



Pre-planning:

Phase 1: Identifying practice area/problem with stakeholders

Phase 2: Engagement with change agents/project team

Baseline Assessment and Implementation Planning

Phase 3: Assessment of context and readiness for change

Phase 4: Review of practice against evidence-based criteria

Phase 5: Implementation of change using GRIP

Impact Evaluation and Sustainability

Phase 6: Re-assessment of practice

Phase 7: Sustainability Interventions

Pre-planning

- Phase 1: Identify practice area
 - Due to the lack of structured education, patients received different amount and content of information
 - Prior to the start of the project, pre-operative education was conducted by physicians
 - In particular, there was a lack of information about rehabilitation and mobility at home

Pre-planning

- Phase 2: Engage change agents/project team
 - hospital medical director,
 - head of Rehabilitation Clinic UJ
 - hospital head of rehabilitation department,
 - physiotherapists,
 - physicians
 - the hospital quality specialist

Baseline Assessment and Implementation Planning

- Phase 3: Assessment of context and readiness for change
 - All members of the project team agreed that evidence-based education should be implemented

Phase 4: Review of practice against evidence-based criteria

The JBI data was searched for the best evidence. The following audit criteria have been defined:

1. Patients undergoing total knee replacement receive pre-operative education.
2. The pre-operative education includes, at minimum, preparation for surgery (e.g. medical clearance, assessments, nutrition etc.), patient expectations, intra-operative care (e.g. anesthesia), discharge planning, post-operative care and recovery (e.g. rehabilitation, mobility at home, infection prevention etc.).

Review of practice against evidence-based criteria

Audit criterion	Sample	Method used to measure percentage compliance with best practice
1. Patients undergoing total knee replacement receive pre-operative education.	Baseline: 7 medical staff Follow-up: 7 medical staff	Questionnaire 1, answers given by medical staff; % of medical staff reporting Medical staff were asked if they delivered pre-operative education. YES – they delivered NO – they didn't deliver
2. Patients undergoing total knee replacement receive pre-operative education.	Baseline: 16 patients and their medical documentation Follow-up: 23 patients and their medical documentation	Questionnaire 2, answers given by patients; % of patients reporting Patients were asked if they received pre-operative education. YES – they received information NO – they didn't receive information

Review of practice against evidence-based criteria

Audit criterion	Sample	Method used to measure percentage compliance with best practice
3. The pre-operative education includes preparation for surgery (e.g. medical clearance, assessments, nutrition etc.), patient expectations.	Baseline: 7 medical staff Follow-up: 7 medical staff	Questionnaire 1, answers given by medical staff; % of medical staff reporting Medical staff were asked if they informed patients about preparation for surgery. YES – they informed patients NO – they didn't inform patients
4. The pre-operative education includes preparation for surgery (e.g. medical clearance, assessments, nutrition etc.), patient expectations.	Baseline: 16 patients and their medical documentation Follow-up: 23 patients and their medical documentation	Questionnaire 2, answers given by patients; % of patients reporting Patients were asked if they received information's about preparation for surgery. YES – they received information NO – they didn't receive information

Review of practice against evidence-based criteria

Audit criterion	Sample	Method used to measure percentage compliance with best practice
5. The pre-operative education includes intra-operative care (e.g. anesthesia), discharge planning.	Baseline: 7 medical staff Follow-up: 7 medical staff	Questionnaire 1, answers given by medical staff; % of medical staff reporting Medical staff were asked if they informed patients about intra-operative care. YES – they informed patients NO – they didn't inform patients
6. The pre-operative education includes intra-operative care (e.g. anesthesia), discharge planning.	Baseline: 16 patients and their medical documentation Follow-up: 23 patients and their medical documentation	Questionnaire 2, answers given by patients; % of patients reporting Patients were asked if they received information's about intra-operative care. YES – they received information NO – they didn't receive information

Review of practice against evidence-based criteria

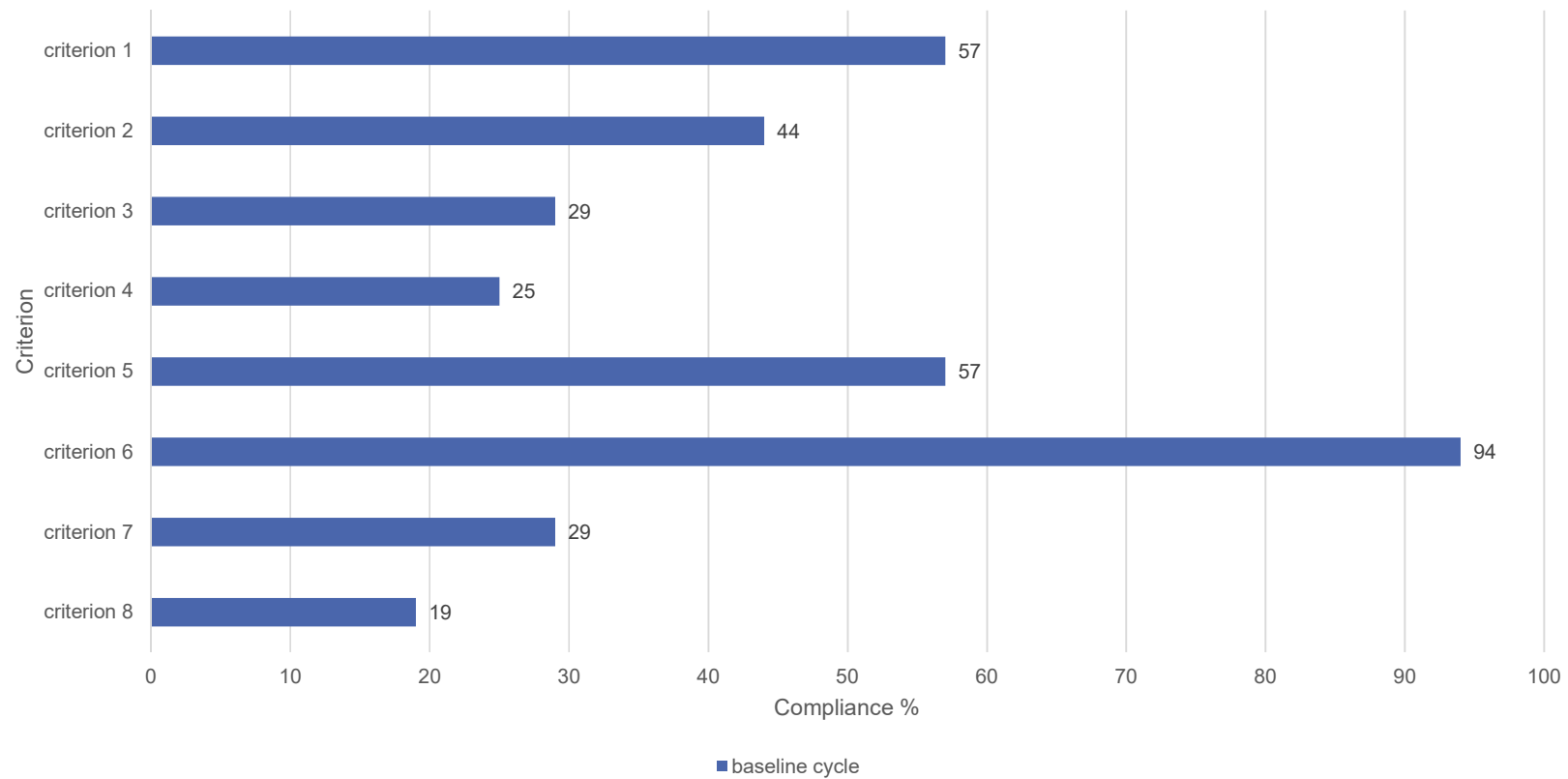
Audit criterion	Sample	Method used to measure percentage compliance with best practice
7. The pre-operative education includes, post-operative care and recovery (e.g. rehabilitation, mobility at home, infection prevention etc.)	Baseline: 7 medical staff Follow-up: 7 medical staff	Questionnaire 1, answers given by medical staff; % of medical staff reporting Medical staff were asked if they informed patients about post-operative care and recovery. YES – they informed patients NO – they didn't inform patients
8. The pre-operative education includes, post-operative care and recovery (e.g. rehabilitation, mobility at home, infection prevention etc.)	Baseline: 16 patients and their medical documentation Follow-up: 23 patients and their medical documentation	Questionnaire 2, answers given by patients; % of patients reporting Patients were asked if they received information's about post-operative care and recovery. YES – they received information NO – they didn't receive information

Phase 4: Baseline audit

- The baseline audit was conducted in August 2022.
- Sample sizes for each criteria were: 7 medical staff, 16 patients.

Phase 4: Baseline audit

Figure 1: Baseline compliance with best practice for audit criteria (%).



Phase 5: Implementation of change using GRiP

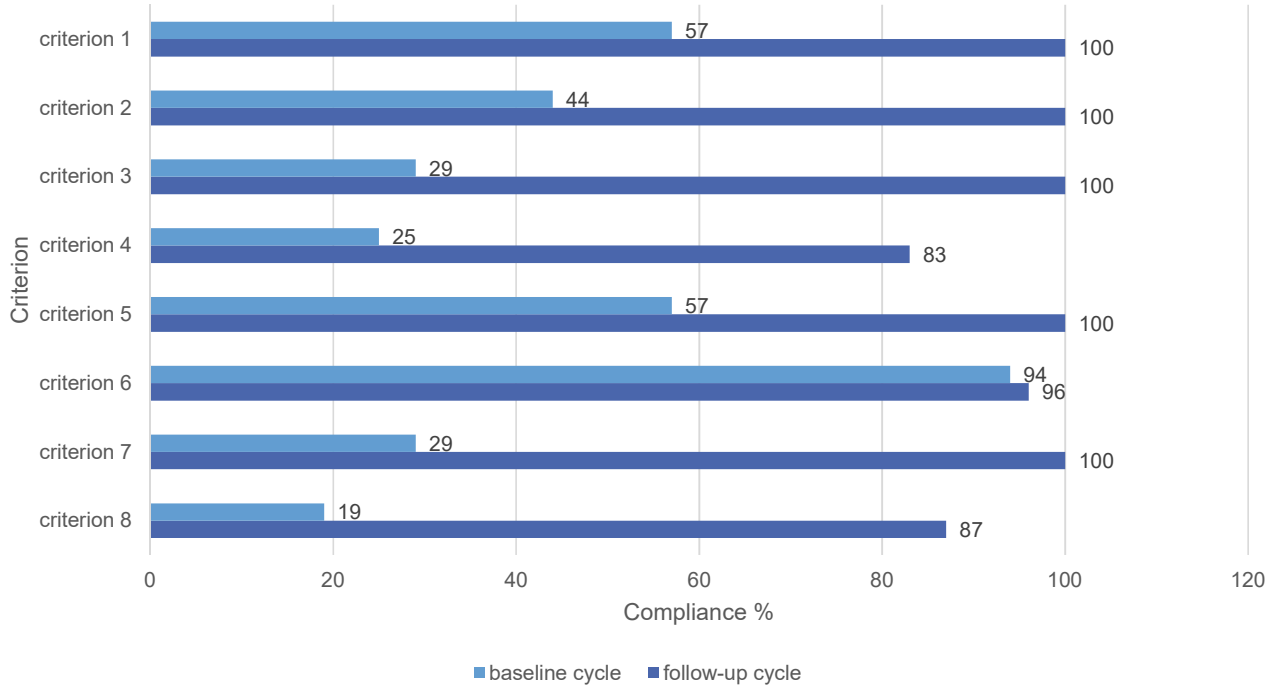
Barrier	Strategy	Resources	Outcomes
<ul style="list-style-type: none"> Lack of knowledge medical staff's about based on evidence pre-operative education of patient after TKR 	<ul style="list-style-type: none"> Increasing staff knowledge about pre-operative education Delivering educational sessions 	<ul style="list-style-type: none"> Educational meetings 	<ul style="list-style-type: none"> The medical staff knowledge about pre-operative education is in compliance with the best available evidence Patients receive based on evidence pre-operative education
<ul style="list-style-type: none"> No standardized TKR patient pre-operative educational materials 	<ul style="list-style-type: none"> In cooperation with medical team to prepare pre-operative educational materials 	<ul style="list-style-type: none"> Educational meetings Preparation of educational materials 	<ul style="list-style-type: none"> Patients receive standardized educational materials
<ul style="list-style-type: none"> Patients do not receive the information about physiotherapy and mobility 	<ul style="list-style-type: none"> To invite physiotherapists to cooperate 	<ul style="list-style-type: none"> Team meetings (physicians, physiotherapists) 	<ul style="list-style-type: none"> Patients receive information about physiotherapy and mobility after TKR surgery

Impact Evaluation and Sustainability

- Phase 6: Re-assessment of practice – Follow-up audit
 - The post-implementation was conducted in February 2023
 - Sample sizes for each criteria were: 7 staff members, 23 patients.
 - The data analysis comparing follow-up results with those of the baseline audit were undertaken to examine any change in compliance rates.
 - The objective of the post intervention follow-up audit was to assess whether any improvement in compliance with best practice had been achieved and identify any areas requiring further focus and improvements.

Phase 6: Follow-up audit

Figure 2: Compliance with best practice audit criteria in follow-up audit compared to baseline audit.



Impact Evaluation and Sustainability

Phase 7: Sustainability Interventions

- In the future we plan to conduct regular assessments of the level of education every six months.
- The results of subsequent audits, discussed during meetings with the medical team, will allow us to improve education and ensure its high quality.

Conclusion

- There was improvement in the provision of pre-operative TKR education to patients using evidence-based best practice education.
- In the future, regular assessment of education is planned. The results of subsequent audits will help to improve education and ensure its high quality.
- Pre-operative education can also be beneficial for other orthopedic conditions treated surgically.

Acknowledgements

- The author would like to thank the mentors and EICP course participants for valuable comments, support and nice atmosphere 😊
- The author wishes to acknowledge the health staff of Ortopedicum Hospital in Cracow: hospital medical director, head of Rehabilitation Clinic UJ, physicians, physiotherapists for their support, expertise and participation in this project.