

Centre universitaire
de santé McGill



McGill University
Health Centre

Technology Assessment Unit of the McGill University Health Centre (MUHC)

Recommendation checklist for:

Report number 86: Evaluating the value of a
prehabilitation clinic for surgical patients at the MUHC

DATE: November 18, 2021

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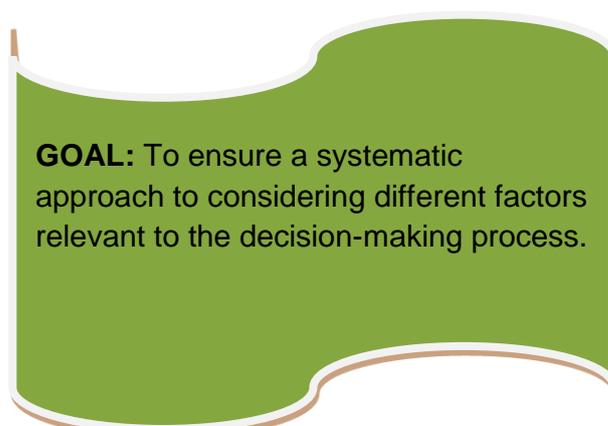
RECOMMENDATION PROCESS

TAU has developed a framework to facilitate the translation of evidence into recommendations using a structured, transparent process.

STEP 1:

- The decision-aid checklist incorporates 23 decision criteria relevant to the decision-making process ([Appendix A](#)).
- TAU research staff complete the health technology assessment and record their findings for each decision criterion in the tool.
- They also rate whether the findings were favourable for each decision criterion (see illustration). Options include Yes, No, Maybe, and Need more information.

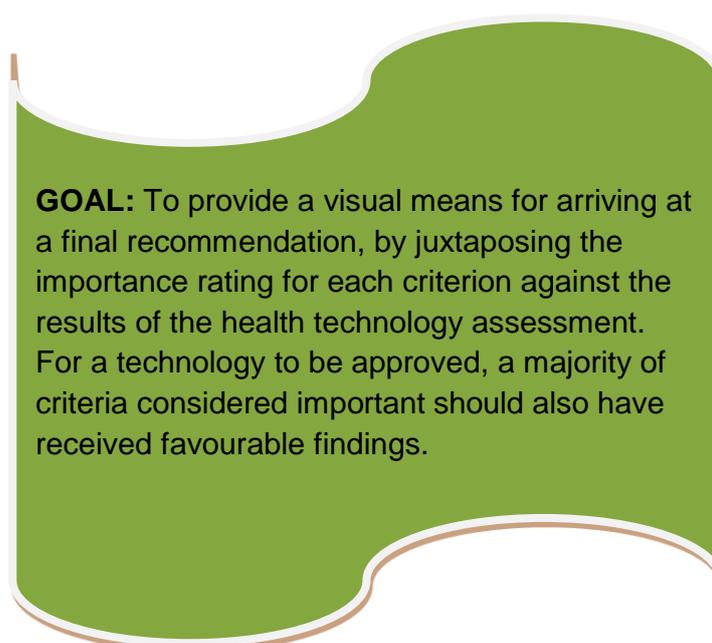
Criterion	Findings of the Health Technology Assessment Report	Do these findings favour the approval of VA-ECMO for cardiac arrest at the MUHC? [Completed by TAU]
Quality of the evidence	The quality of the evidence is low. A <u>number of propensity score adjusted studies</u> have been published, but these have several limitations.	No
Safety of the technology	No comparative studies. A meta-analysis of case series found a high rate of complications with VA-ECMO.	No



STEP 2:

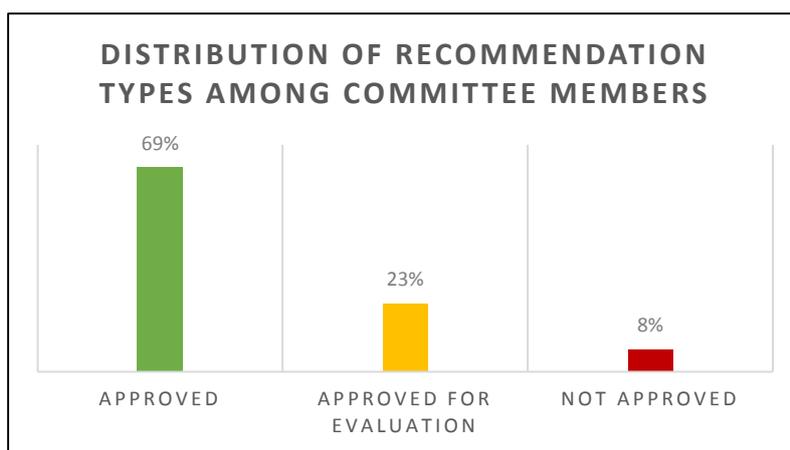
- Each committee member is sent the technology assessment report and a link to the decision-aid tool, to be completed online.
- After reading the report, each committee member rates how important they consider each criterion in shaping the final recommendation, within the context of the policy question (see illustration). Options include Very important, Somewhat important, and Not at all important.
- Committee members will then be asked to provide a recommendation and their reasons for it. **This is a tentative recommendation**; the final recommendation will be issued at the TAU Policy Committee meeting through consensus after discussion of the principal issues.

Criterion	Findings of the Health Technology Assessment Report	Do these findings favour the approval of VA-ECMO for cardiac arrest at the MUHC? [Completed by TAU]	How important is this criterion in shaping the final recommendation? [Completed by each committee member]
Quality of the evidence	The quality of the evidence is low. A number of propensity score adjusted studies have been published, but these have several limitations.	No	Very important
Safety of the technology	No comparative studies. A meta-analysis of case series found a high rate of complications with VA-ECMO.	No	Very important



STEP 3:

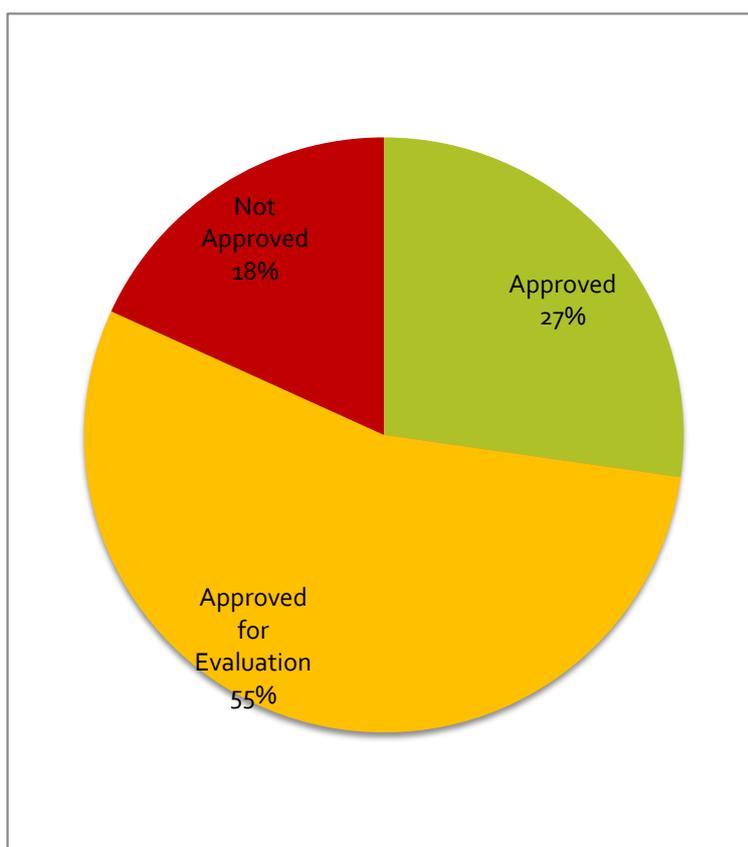
- At the meeting, the distribution of importance ratings and recommendations across the committee will be presented (see illustration).
- Committee members will have the opportunity to express their views and justify extenuating reasons, until a consensus on the final recommendation is reached.
- All reasons will be explicitly documented.



GOAL: To create a structured and transparent decision-making process.

1. PRELIMINARY RECOMMENDATION FROM CHECKLIST FOR PREHABILITATION

- The checklist used by the committee is available here:
<https://survey.alchemer.com/s3/6559151/Decision-aid-Tool-Prehabilitation>
- 11 committee members completed the decision-aid checklist. The figure below shows the distribution of preliminary recommendations.



2. DISCUSSION AT THE TAU POLICY COMMITTEE MEETING

- The meeting was attended by 10 Policy Committee members and one invited member, Dr. Franco Carli, the expert consultant and Prehabilitation Program research director at the MUHC ([Appendix C](#)).
- The main issues discussed were:
 - Large quantity of low quality data: Can we trust these results?
 - What is the added value over the existing preoperative clinic at the MUHC?
 - “Evidence of improved outcomes is largely derived from studies focused on inspiratory muscle training. The implementation of such interventions can be embedded in the preoperative clinic (does not require a prehabilitation service).”
 - Local studies (from MUHC) show no evidence of benefit.
 - Patient safety and convenience:
 - “No way my husband would do an exercise programme every day for weeks before surgery”
 - “It would make a huge difference in adherence and possible safety if the patient was expected to travel back and forth for interventions.”

3. FINAL RECOMMENDATION FOR PREHABILITATION

RECOMMENDATIONS

- The TAU Policy Committee, made up of stakeholders from across the McGill University Health Centre ([Appendix C](#)), reviewed the evidence and issued the following recommendation: [Not Approved](#)
- This recommendation was reached based on the following:

- Benefits of prehabilitation are not supported by strong, high-quality evidence. Local evidence, gathered within the context of care at the MUHC, does not support a beneficial effect of prehabilitation on patient outcomes.
- Given these findings, prehabilitation does not fit the criteria to be funded by the MUHC institutional budget. Further research is necessary to understand the comparative-effectiveness of prehabilitation (vs. standard care), as well as the relative contribution of different interventions used within prehabilitation. Several of these interventions (e.g. counseling, education, nutritional management) can be embedded with existing MUHC clinics (e.g. the preoperative clinic).
- This recommendation may be reviewed in 3 years, if new data from the literature and/or the local context become available.

RECOMMANDATIONS

- Le comité des politiques de TAU, composé d'intervenants de tout le Centre Universitaire de Santé de McGill, a examiné les preuves et a émis la recommandation suivante : [Non approuvé](#)
- Cette recommandation a été formulée sur la base des éléments suivants :
 - Les bénéfices de la préadaptation ne sont pas appuyés par des preuves solides et de haute qualité. Les preuves locales, recueillies dans le contexte des soins au CUSM, ne soutiennent pas un effet bénéfique de la préadaptation sur les événements des patients.
 - Compte tenu de ces constatations, la préadaptation ne correspond pas aux critères pour être financée par le budget institutionnel du CUSM. Des recherches supplémentaires sont nécessaires pour comprendre l'efficacité comparative de la préadaptation (par rapport aux soins standard), ainsi que la contribution relative des différentes interventions utilisées dans le cadre de la préadaptation. Plusieurs de ces interventions (ex. consultation, éducation, gestion nutritionnelle) peuvent être intégrées aux cliniques existantes du CUSM (ex. la clinique préopératoire).
- Cette recommandation pourrait être revue dans 3 ans, si de nouvelles données issues de la littérature et/ou du contexte local deviennent disponibles.

4. AGGREGATE DISTRIBUTION OF RATINGS FROM CHECKLIST

Table 1. Distribution of importance ratings for each decision criterion across the committee members (n=11)

Decision Criterion	TAU findings	Favours approval?	% considering criterion		
			Very Important	Somewhat	Not at all
Magnitude of effectiveness	<p>We identified 48 systematic reviews and meta-analyses examining the association between prehabilitation and postoperative outcomes in several surgical populations.</p> <p><u>Functional capacity:</u></p> <ul style="list-style-type: none"> • For patients scheduled for gastrointestinal, colorectal or abdominal surgery, trimodal prehabilitation improves walking capacity compared to control group. • For patients scheduled for cardiac surgery, prehabilitation improves physical function compared to control group. • For patients scheduled for cardiothoracic, knee or hip, systematic reviews and meta-analyses reported inconclusive results or no association between prehabilitation and functional capacity. <p><u>Complications or Pulmonary complications:</u></p> <ul style="list-style-type: none"> • For patients scheduled for lung or cardiac surgery, prehabilitation reduces overall and pulmonary complications compared to control group. • For patients scheduled for abdominal or cardiothoracic surgery, prehabilitation reduces pulmonary complications compared to control group. • For patients scheduled for gastrointestinal, colorectal, liver cancer, esophageal, vascular or abdominal surgery, systematic reviews and meta-analyses reported inconclusive results or no association between prehabilitation and overall complications. <p><u>Length of stay (LOS):</u></p> <ul style="list-style-type: none"> • For patients scheduled for lung, cardiac, cardiothoracic, vascular or spinal surgery, prehabilitation reduces LOS compared to control group. • For patients scheduled for gastrointestinal, colorectal, abdominal, esophageal or knee surgery, systematic reviews and meta-analyses reported no association between prehabilitation and LOS <p><u>Readmission:</u></p> <ul style="list-style-type: none"> • For patients scheduled for gastrointestinal, colorectal or knee surgery, systematic reviews and meta-analyses reported no association between prehabilitation and readmission. 	Maybe	64%	36%	0%

Decision Criterion	TAU findings	Favours approval?	% considering criterion		
			Very Important	Somewhat	Not at all
	<p><u>Mortality:</u></p> <ul style="list-style-type: none"> For patients scheduled for cardiac or cardiothoracic surgery, meta-analyses reported no association between prehabilitation and mortality. 				
Quality of evidence	<p><u>Systematic reviews and meta-analyses</u></p> <ul style="list-style-type: none"> The results reported by the systematic reviews or meta-analyses had several limitations. The majority of the primary studies had moderate to high risk of bias and small sample size. Meta-analyses were performed despite high clinical heterogeneity in the interventions for the prehabilitation or control groups. Some systematic reviews and meta-analyses used inappropriate or not robust methodology. The overlapping of primary studies across several systematic reviews and meta-analyses artificially amplified the strength of evidence on the positive association between prehabilitation and some postoperative outcomes. 	No	64%	27%	9%
Safety	<ul style="list-style-type: none"> Not evaluated. However, there shouldn't be any safety issues related to performing the prehabilitation program since it is tailored to the need and specification of the patient. 	Yes	73%	27%	0%
Patient preference	<ul style="list-style-type: none"> Not evaluated 	Need more info	30%	70%	0%
Impact on patient convenience	<ul style="list-style-type: none"> Unclear. Supervised prehabilitation requires the patients to go several times to the hospital to perform the intervention. However, home-based prehabilitation is an option, though it lacks immediate support and feedback. 	Maybe	36%	64%	0%
Patient-reported outcomes	<ul style="list-style-type: none"> For patients scheduled for cardiac, gastrointestinal, colorectal, abdominal, knee or hip surgery, systematic reviews and meta-analyses reported no association between prehabilitation and QoL. For patients undergoing knee or hip surgery, systematic reviews and meta-analyses found no association between prehabilitation and pain relief. For patients undergoing spine surgery, 1 systematic review (included 1 RCT) reported that prehabilitation reduced pain compared to standard care. 	No	55%	36%	9%
Net cost	<ul style="list-style-type: none"> The approximate cost of treating 200 patients per year, mainly based on the cost of personnel (kinesiologist, physiotherapist, nutritionist, psychologist, administrative assistant) would be \$1575 per patient (Total cost: \$315, 000) 	Yes	55%	36%	9%

Decision Criterion	TAU findings	Favours approval?	% considering criterion		
			Very Important	Somewhat	Not at all
Costs avoided (increased hospital efficiency)	<ul style="list-style-type: none"> Not measured, but we expect reduced post-operative complications and length of stay in certain surgical populations should translate into reduced hospitalisation-related cost and improved hospital efficiency 	Yes	45%	36%	18%
Impact on budget of other department	<ul style="list-style-type: none"> Potential savings for surgery if post-operative complications and length of stay are reduced 	Yes	27%	55%	18%
Cost-effectiveness	<ul style="list-style-type: none"> Not evaluated. 	Need more info	27%	64%	9%
Availability of local expertise	<ul style="list-style-type: none"> Local expertise is already available at the POP clinic for several years. 	Yes	73%	18%	9%
Disruptiveness	<ul style="list-style-type: none"> Not evaluated. However, we expect minimal disruptiveness since the prehabilitation program is already implemented at the POP clinic with their own staff members. 	Yes	36%	55%	9%
Need to generate local evidence	<ul style="list-style-type: none"> Several studies have been conducted on patients scheduled for colorectal surgery at the MUHC for over a decade. Five recent studies (3 RCTs and 2 observational studies) indicate that multimodal prehabilitation was not associated with a decrease in the risk of complication or mortality, readmission rate or LOS, nor an improved QoL in patients scheduled for abdominal (colorectal or prostate) surgery. However, there is a need for studies with larger sample size, improved analytical methodology and on other surgical populations. 	Yes	73%	9%	18%
Impact on cross-institution collaboration	<ul style="list-style-type: none"> Not evaluated 	Need more info	18%	55%	27%
Satisfaction of personnel	<ul style="list-style-type: none"> Not evaluated. However, we do not expect any major dissatisfaction since prehabilitation is already implemented the POP clinic with its own staff member 	Yes	36%	45%	18%
Impact of innovativeness of the technology	<ul style="list-style-type: none"> Not evaluated. However, we expect minimal impact since prehabilitation is already available at the POP clinic for several years 	Maybe	27%	36%	36%
Benefit of the technology to society	<ul style="list-style-type: none"> According to the systematic reviews and meta-analyses included in the report, prehabilitation seems to be effective on some postoperative outcomes (postoperative complications and LOS) and in certain surgical populations. However, a reduction in postoperative complications and LOS should be beneficial to both 	Yes	36%	64%	0%

Decision Criterion	TAU findings	Favours approval?	% considering criterion		
			Very Important	Somewhat	Not at all
	the patients and the healthcare system.				
Burden on other healthcare centres/services	<ul style="list-style-type: none"> Not evaluated. However, unlikely to negatively impact other healthcare services as prehabilitation is well established at the POP clinic 	Yes	18%	64%	18%
Need for the technology	<ul style="list-style-type: none"> Given the aging population, the increasing incidence of cancer or cardiovascular disease with age and low proportion of Canadians ≥65 years whom meet the recommend amount of weekly physical activity, the number of patients requiring prehabilitation is expected to increase with the years. 	Yes	45%	45%	9%
Ethical considerations	<ul style="list-style-type: none"> There do not appear to be a serious ethical issue at the MUHC since the patient surgery is not unnecessary delay to accommodate prehabilitation. Moreover, the prehabilitation program is tailored to the need and specification of the patient. 	Yes	36%	55%	9%
Stakeholder pressure	<ul style="list-style-type: none"> There is no particular stakeholder pressure to integrate this clinic. 	No	9%	36%	55%
Availability of external funding	<ul style="list-style-type: none"> Funding at the POP clinic is mostly from The Friends For The Cure Gala 3-year funding granted by the Director of Professional Services to set up the prehabilitation clinic at the MUHC 	Maybe	27%	64%	9%
Number of patients affected by technology	<ul style="list-style-type: none"> Given the aging population, the increasing incidence of cancer or cardiovascular disease with age and low proportion of Canadians ≥65 years whom meet the recommend amount of weekly physical activity, the number of patients requiring prehabilitation is expected to increase with the years. 	Yes	55%	45%	0%

APPENDIX

APPENDIX A: DECISION CRITERIA USED IN CHECKLIST

Domains	Criteria
Clinical benefit	Magnitude of effectiveness
	Quality of the evidence
	Safety of the technology
Impact on Patient	Patient preference
	Impact on patient convenience
	Patient-reported outcomes
Value for money	Net cost
	Costs avoided (increased hospital efficiency)
	Impact on budget of other departments
	Cost-effectiveness
Feasibility	Availability of local expertise
	Disruptiveness
	Need to generate local evidence
	Impact on cross-institution collaboration
	Satisfaction of personnel
	Impact of innovativeness of the technology
Impact on healthcare system /society	Benefit of the technology to society
	Burden on other healthcare centres/services
	Need for the technology
Ethical considerations	Ethical considerations
Strategic considerations	Stakeholder pressure
	Availability of external funding
	Number of patients affected by technology

APPENDIX B: TYPES OF RECOMMENDATIONS ISSUED BY THE TAU POLICY COMMITTEE

Type of recommendation	Explanation
Approved	<ul style="list-style-type: none"> • Evidence for relevant decision criteria, including efficacy, safety, and cost, as well as context-specific factors such as feasibility, is sufficiently strong to justify a recommendation that the technology be accepted, used and funded through the institutional operating budget
Approved for evaluation	<ul style="list-style-type: none"> • There is a <i>probability</i> that relevant decision criteria, including efficacy, safety, and cost, as well as context-specific factors such as feasibility, are favorable but the evidence is not yet sufficiently strong to support a recommendation for permanent approval. • The evidence is sufficiently strong to recommend a <i>temporary</i> approval for the purposes of evaluation, funded through the institutional operating budget.
Not approved	<ul style="list-style-type: none"> • There is insufficient evidence for the relevant decision criteria, including efficacy, safety, and cost; • The costs of any use of the technology (e.g. for research purposes) should not normally be covered by the institutional budget.

APPENDIX C: TAU POLICY COMMITTEE MEMBERS

Member Name	Position	Representing
Nisha Almeida	Manager, Health Technology Assessment Unit	Health Technology Assessment Unit
James Brophy (Chair)	Professor of Medicine & Epidemiology	Medicine
Julio Flavio Fiore Jr	Assistant Professor	Clinical Epidemiology
Rona Fleming	Patient Partner	Patient Partnership Office
Chantal Guévremont	Pharmacist and Coordinator, Pain Medication Management Program (PGTM)	Pharmacy & Therapeutics Committee
André Guigui	Financial Advisor – Coûts par parcours de soins et de service (CPSS), Financing and Budgets	Finance
Claudine Lamarre	Associate Director- Adult sites, MUHC Professional Services	Upper Administration
Jesse Papenburg	Pediatric Infectious Disease Specialist and Medical Microbiologist	Council of Physicians, Dentists and Pharmacists
William Parker	Clinical Chief, Department of Medical Physics,	Multidisciplinary Council
Kit Racette	Patient Partner	Patient Partnership Office
Invited member		
Franco Carli	Professor of Anesthesia, McGill University	Expert consultant and research director of the Prehabilitation Program