CLINICAL ALGORITHM FOR THE PHYSIOTHERAPEUTIC MANAGEMENT OF PATIENTS FOLLOWING ABDOMINAL SURGERY

Rating scale used

RATING	WORD	DESCRIPTION
1	Essential	without this element the effective functioning of the protocol would be severely impaired
2	Very important	without this element the protocol would be less effective, but not severely impaired
3	Important	this element desirable, but its absence would not make the protocol noticeably less effective for most
4	Unimportant	absence of this element would have little impact on effectiveness
5	Undesirable	presence of this element would have a detrimental effect on effectiveness

Steps rated as **ESSENTIAL** reaching CONSENSUS (SIQR < 0.5)

CLINICAL ALGORITHM STEP	SUBJECT AREA	SIQR	RANGE	AGREEMENT	ALTERNATIVE RATING BY PANELISTS	MEDIAN RATING
Strategy options that could facilitate coughing procedure. This includes deep breathing, PEP, high-pressure PEP and CPAP in combination with FET (or adjusted autogenic drainage) .	COUGHING	0.00	1	5/5	-	**ESSENTIAL (1)**
Spesification of position as stable, supported upright sitting position with a goal of positioning the patient out of bed to facilitate removal of secretions in non intubated patients following abdominal surgey	COUGHING	0.00	1	5/5	-	**ESSENTIAL (1)**
Prescription of frequent breathing exercises is important - the goal is at least five maximum breaths every waking hour.	BREATHING TECHNIQUES	0.00	1	5/5	-	**ESSENTIAL (1)**
Activities should not be limited to specific distances but rather be performed at a dispnea intensity of 6 on the MBS.	MOBILIZATION	0.00	1	5/5	-	**ESSENTIAL (1)**
An intensive mobilization protocol that includes walking and stairclimbing should be performed at least once daily with the goal of three times per day.	MOBILIZATION	0.00	1	5/5	-	**ESSENTIAL (1)**
Specify patient management of the first post operative day as sitting out of bed for a minimum of one hour twice daily AND walking of at least 5 m as the goal.	MOBILIZATION	0.00	1	5/5	-	**ESSENTIAL (1)**

Steps rated as **VERY IMPORTANT** reaching CONSENSUS (SIQR <0.5)

CLINICAL ALGORITHM STEP	SUBJECT AREA	SIQR	RANGE	AGREEMENT	ALTERNATIVE RATING BY PANELISTS	MEDIAN RATING
The inclusion of suctioning as a possible management strategy (after all else has failed) for removing secretions in non intubated patients following abdominal surgery	COUGH	0.00	2	5/5	-	**VERY IMPORTANT (2)**
Oxygenation level as indication of pulmonary reserve for mobilization. PaO2:FiO2 > 40kPa/300mmHg **Posted Comment:** can always provide oxygen	MOBILIZATION CRITERIA	0.00	2-5	4/5	5	**VERY IMPORTANT (2)**
Motor block assessment in patients receiving epidural analgesia as a criteriion to determine eligibility for mobilization **Posted Comment:** At each assessment prior to mobilising motor block needs to be looked at. I think this is an essential safety requirement	MOBILIZATION CRITERIA	0.00	1-2	4/5	1	**VERY IMPORTANT (2)**
A hierarchy of breathing technique choice should be included. DBE's followed by PEP mask or bottle; then IS and IPPB as the least likey choice. **Posted Comment:** I do not agree with the position of IS as stated hierarchy. As shown by Richsten et al IS has less effect than PEP or CPAP and I therefore think IS is similar and comparable to the use of DBE. All other techniques change pressure during expiration which causes specific respiratory physiological changes	BREATHING EXERCISES	0.13	2-3	4/5	3	**VERY IMPORTANT (2)**
Deep breathing exercises (with the addition of pursed lips breathing) are the first choice of breathing exercises to use in non intubated patients following abdominal surgery with PaO2:FiO2 > 300mmHg.	BREATHING EXERCISES	0.00	2	5/5	-	**VERY IMPORTANT (2)**
In the presence of persisitent post operative hypoxaemia (PaO2:FiO2 < 300 mmHg) initiate CPAP. **Posted Comment:** CPAP in my experience if using a full-face mask is most comfortable to the patient in cycles of 2 hours on / 2 hours off. However, I have no RCT data to prove this as "best practice", only my observations of patient tolerance	BREATHING EXERCISES	0.13	1-2	4/5	1	**VERY IMPORTANT (2)**

Steps rated as **IMPORTANT (DESIRABLE)** reaching CONSENSUS (SIQR<0.5)

CLINICAL ALGORITHM STEP	SUBJECT AREA	SIQR	RANGE	AGREEMENT	ALTERNATIVE RATING BY PANELISTS	MEDIAN RATING
Nebulization as a management option for the removal of secretions in non intubated patients following abdominal surgery **Posted Comment:** • I just do not think there is enough evidence to give clinicians the impression that using nebulisation would help remove secretions compared with the other techniques we have on offer • Clinical experience shows that nebulization loosens secretions and thereby one reduces post-operative pneumonia - prevention better than cure. Unfortunately this is all anecdotal	COUGHING	0.00	1-4	3/5	1;4	**DESIRABLE (3)**
Evaluation of patient pain level must be limited to the clinical evaluation of the patient and not on a VAS measurement of pain. **Posted Comment:** • can mobilize with significant dyspnnea	MOBILIZATION CRITERIA	0.00	3-5	4/5	5	**DESIRABLE (3)**
Specification of Dyspnea level to determine eligibility for mobilization. Suggestion that at rest dyspnea does not exceed 1 on MBS.	MOBILIZATION CRITERIA	0.00	1-3	4/5	1	**DESIRABLE (3)**)

Steps rated as **UNIMPORTANT** reaching CONSENSUS (SIQR <0.5)

CLINICAL ALGORITHM STEP	SUBJECT AREA	SIQR	RANGE	AGREEMENT	ALTERNATIVE RATING BY PANELISTS	MEDIAN RATING
The inclusion of active dorsiflexion while in bed at least 20 times every waking hour into the mobilization protocol and thereby one reduces post-operative pneumonia - prevention better than cure. Unfortunately this is all anecdotal	MOBILIZATION	0.00	4	5/5	–	**UNIMPORTANT (4)**