SECTION 1: INCLUSION, EXCLUSION & RANDOMISATION INFORMATION				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

DEMOGRAPHIC INFORMATION				
Given name	|__|__|__|__|__|__|__|__|__|__|__|__|	Family name	|__|__|__|__|__|__|__|__|__|__|__|__|	
Date of birth	|__|__|/|__|__|__|/|__|__|__|__| (DD/MMM/YYYY)	Gender	Female ☐	Male ☐
Consent date	|__|__|/|__|__|__|/|__|__|__|__| (DD/MMM/YYYY)	Date of surgery	|__|__|/|__|__|__|/|__|__|__|__| (DD/MMM/YYYY)	

INCLUSION & EXCLUSION CRITERIA	YES	NO
Age ≥ 50 years	☐	☐
Planned elective major intra-peritoneal surgery using an open surgical technique	☐	☐
Inability or refusal to provide informed consent	☐	☐
Anticipated requirement for invasive or non-invasive mechanical ventilation for at least four hours after surgery as part of routine care	☐	☐
Known or suspected pregnancy or planned obstetric surgery	☐	☐
Previous enrolment in the PRISM trial	☐	☐
Current participation in another clinical trial of a treatment with a similar biological mechanism or primary outcome measure	☐	☐
Clinician refusal (concern specific to surgical procedure)	☐	☐
Clinician refusal (other)	☐	☐
Contraindication to continuous positive airway pressure (CPAP)	☐	☐

Planned level of care on the first night after surgery	Tick one
Critical care unit level 3	☐
Critical care unit level 2	☐
Post-anaesthesia care unit	☐
Surgical ward	☐

RANDOMISATION CRITERIA	Tick one	
Planned surgical procedure (single most appropriate)		
Resection of colon, rectum or small bowel	☐	
Resection of liver, pancreas or gall bladder	☐	
Resection of stomach (non-obesity surgery)	☐	
Resection of oesophagus (non-obesity surgery)	☐	
Obesity surgery	☐	
Vascular procedure	☐	
Other intra-peritoneal surgery	☐	
Planned anaesthetic technique	**YES**	**NO**
Planned use of epidural anaesthesia	☐	☐
Randomisation should only take place once it is certain that surgery will take place		

SECTION 2: BEFORE SURGERY				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

CO-MORBID DISEASE		**YES**	**NO**
1.	Chronic respiratory disease		
	Chronic obstructive pulmonary disease (COPD)	☐	☐
	Asthma	☐	☐
	Interstitial lung disease or pulmonary fibrosis	☐	☐
	Bronchiectasis	☐	☐
2.	Ischaemic heart disease	☐	☐
3.	Diabetes mellitus	☐	☐
4.	Heart failure	☐	☐
5.	Liver cirrhosis	☐	☐
6.	Active cancer	☐	☐
	If yes – is cancer the indication for surgery?	☐	☐
	If yes - is the surgery intended to be: ☐ curative or ☐ palliative		
7.	Previous stroke or transient ischaemic attack (TIA)	☐	☐
8.	Current smoker (within the last 14 days)?	☐	☐
9.	Primary respiratory infection within the previous month (including acute pulmonary tuberculosis)?	☐	☐
10.	Diagnosis of Human Immunodeficiency Virus (HIV) infection? *NB. If not tested please tick 'no'.*	☐	☐

OTHER DETAILS			
ASA (American Society of Anesthesiologists) physical status class			
Class I ☐ Class II ☐ Class III ☐ Class IV ☐ Class V ☐			
Physical measurements			
Height (cm):	|__|__|__|	Weight (kg):	|__|__|__|
Resting oxygen saturation (SpO_2):	|__|__|__| %		
Laboratory values (within 4 weeks before surgery)			Tick if NOT measured
Haemoglobin measurement	|__|__|__| g/dL		☐
Creatinine measurement	|__|__|__|__| mcmol/L		☐
Ethnicity (for eGFR)	Black or Afro-Carribean ☐		Other ☐

SECTION 3: DURING SURGERY				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

START OF SURGERY	DATE: |__|__|/|__|__|__|/|__|__|__|__| **(DD/MMM/YYYY)** TIME: |__|__| : |__|__| **(HR : MINS)**

SURGICAL PROCEDURE PERFORMED (single most appropriate)	**Tick one**	
Resection of colon, rectum or small bowel	☐	
Resection of liver, pancreas or gall bladder	☐	
Resection of stomach (non-obesity surgery)	☐	
Resection of oesophagus (non-obesity)	☐	
Obesity surgery	☐	
Vascular procedure	☐	
Other intra-peritoneal surgery	☐	
SURGICAL TECHNIQUE	**YES**	**NO**
Open surgical technique used during surgery	☐	☐
ANAESTHETIC TECHNIQUE		
General Anaesthesia	☐	☐
Epidural anaesthesia	☐	☐
Spinal anaesthesia	☐	☐
Did the patient have an endotracheal tube inserted?	☐	☐
If YES, was the patient extubated before leaving the operating room?	☐	☐
MECHANICAL VENTILATION DURING SURGERY		
Did the patient receive a recruitment manoeuvre during surgery?	☐	☐
Did the patient receive mechanical ventilation during surgery?	☐	☐
If YES, please answer the following:		
Maximum positive end-expiratory pressure (PEEP)	|__|__| cmH_2O	
Maximum set tidal volume (Vt)	|__|__|__|__| ml	
Maximum respiratory rate	|__|__| min^{-1}	
Maximum FiO_2 (excluding pre-oxygenation during induction of anaesthesia)	|__|__|__| %	
INTRAVENOUS FLUIDS DURING SURGERY		
Total volume of intravenous fluid administered excluding blood products	|__|__|__|__|__| mL	
Total volume of blood products administered	|__|__|__|__|__| mL	
Date and time of the end of surgery	|__|__|/|__|__|__|/|__|__|__|__| **(DD/MMM/YYYY)**	|__|__|:|__|__| **(HR:MINS)**

SECTION 4: TRIAL INTERVENTION PERIOD				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

CPAP AFTER SURGERY		**YES**	**NO**
Did the patient receive Continuous Positive Airway Pressure (CPAP) started within twelve hours after the end of surgery?		☐	☐
If YES, please answer the following questions. If NO, please skip to next section.			
Date and time patient started CPAP	|__|__|/|__|__|__|/|__|__|__|__| **(DD/MMM/YYYY)**	|__|__|:|__|__| **(HR:MINS)**	
Total duration of CPAP within twelve hours of the end of surgery		|__|__|__| **(MINS)**	
Maximum airway pressure received during this period		|__|__|__| cmH_2O	
Primary method of CPAP delivery (single most appropriate)			
Face mask		☐	
Helmet device		☐	
Nasal mask		☐	
		YES	**NO**
Were extra research staff present to help deliver CPAP?		☐	☐
Did the staff administering CPAP use equipment to monitor airway pressures?		☐	☐
Did the staff administering CPAP use equipment to monitor the FiO_2?		☐	☐
Did the patient have a nasogastric tube *in situ* during CPAP?		☐	☐

RESPIRATORY SUPPORT AFTER SURGERY	**YES**	**NO**
Did the patient receive any of the following within four hours of the end of surgery?		
Invasive mechanical ventilation	☐	☐
Non-invasive mechanical ventilation	☐	☐
High flow nasal oxygen therapy	☐	☐

LEVEL OF CARE ON THE FIRST NIGHT AFTER SURGERY	**Tick one**
Critical care unit level 3	☐
Critical care unit level 2	☐
Post-anaesthesia care unit	☐
Surgical ward	☐

SECTION 5: 30-DAY FOLLOW-UP				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

Date of follow-up	|__|__|/|__|__|__|/|__|__|__|__| **(DD-MMM-YYYY)**

All of the outcomes in section 5 refer to the time period within 30 days of randomisation			
Primary outcome	**YES**	**NO**	**If yes, date of event**
Pneumonia	☐	☐	|__|__|/|__|__|__|/|__|__|__|__| **(DD-MMM-YYYY)**
Endotracheal re-intubation	☐	☐	|__|__|/|__|__|__|/|__|__|__|__| **(DD-MMM-YYYY)**
Death	☐ Alive	☐ Dead	Date of death: |__|__|/|__|__|__|/|__|__|__|__| **(DD-MMM-YYYY)**

Respiratory complications	**I**	**II**	**III**	**IV**	**V**	**NONE**
Pneumonia	☐	☐	☐	☐	☐	☐
Pleural effusion	☐	☐	☐	☐	☐	☐
Pneumothorax	☐	☐	☐	☐	☐	☐
Bronchospasm	☐	☐	☐	☐	☐	☐
Aspiration pneumonitis	☐	☐	☐	☐	☐	☐
Acute Respiratory Distress Syndrome (ARDS)	☐	☐	☐	☐	☐	☐
Infective complications	**I**	**II**	**III**	**IV**	**V**	**NONE**
Surgical site infection (superficial)	☐	☐	☐	☐	☐	☐
Surgical site infection (deep)	☐	☐	☐	☐	☐	☐
Surgical site infection (organ space)	☐	☐	☐	☐	☐	☐
Urinary tract infection	☐	☐	☐	☐	☐	☐
Infection, source uncertain	☐	☐	☐	☐	☐	☐
Laboratory confirmed blood stream infection	☐	☐	☐	☐	☐	☐

Please refer to the protocol appendix for specific definitions of complications. Please grade complications using the Clavien-Dindo scale as follows:

I. Any deviation from the normal postoperative course without the need for pharmacological, surgical, endoscopic or radiological intervention. Anti-emetics, anti-pyretics, diruetics, electrolytes or physiotherapy are not considered a deviation from the normal postoperative course.
II. Requires pharmacological treatment with drugs (including blood transfusion or total parenteral nutrition) other than those excluded from grade I.
III. Requires surgical, endoscopic or radiological intervention.
IV. Life-threatening complication (including CNS complication, but excluding transient ischaemic attack) requiring critical care admission
V. Death

SECTION 5: 30-DAY FOLLOW-UP				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

Cardiac complications	**I**	**II**	**III**	**IV**	**V**	**NONE**
Myocardial infarction	☐	☐	☐	☐	☐	☐
Arrhythmia	☐	☐	☐	☐	☐	☐
Cardiogenic pulmonary oedema	☐	☐	☐	☐	☐	☐
Cardiac arrest with successful resuscitation				☐	☐	☐

Other complications	**I**	**II**	**III**	**IV**	**V**	**NONE**
Acute kidney injury	☐	☐	☐	☐	☐	☐
Pulmonary embolism	☐	☐	☐	☐	☐	☐
Stroke	☐	☐	☐	☐	☐	☐
Acute psychosis or delirium	☐	☐	☐	☐	☐	☐
Bowel infarction	☐	☐	☐	☐	☐	☐
Anastomotic leak	☐	☐	☐	☐	☐	☐
Perforation of viscus (e.g. bowel, gall bladder etc)	☐	☐	☐	☐	☐	☐
Postoperative haemorrhage						
Gastro-intestinal bleed	☐	☐	☐	☐	☐	☐
Other postoperative haemorrhage	☐	☐	☐	☐	☐	☐
Any other complication, *please give details here:*	☐	☐	☐	☐	☐	☐

Additional treatments	**YES**	**NO**
Blood transfusion	☐	☐
Parenteral (intra-venous) nutrition	☐	☐
Endoscopy or interventional radiology procedure	☐	☐
Repeat surgery	☐	☐
If YES, please indicate the reason for repeat surgery		
Infection	☐	☐
Bleeding	☐	☐
Anastomotic leak	☐	☐
Other	☐	☐
Invasive mechanical ventilation after leaving the operating room	☐	☐
If YES, what was the total duration of invasive mechanical ventilation?	|__|__|__| hours	
Non-invasive mechanical ventilation after leaving the operating room	☐	☐
If YES, what was the total duration of non-invasive mechanical ventilation?	|__|__|__| hours	

SECTION 5: 30-DAY FOLLOW-UP				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

Patients admitted to a critical care unit	**YES**	**NO**
Was the participant admitted to a critical care unit? *NB. If 'no', move to the next section.*	☐	☐
Was the critical care admission to treat a complication?	☐	☐
Was a planned critical care admission prolonged by a postoperative complication?	☐	☐
What was the total duration of the level 2 critical care stay within 30 days of randomisation?	|__|__| days	
What was the total duration of the level 3 critical care stay within 30 days of randomisation?	|__|__| days	
Details of the hospital stay	**YES**	**NO**
Duration of primary hospital admission (from randomisation)	|__|__| days	
Re-admission to hospital within 30 days of randomisation	☐	☐

Investigator self-assessment of blinding	
I was suitably blinded	☐
I may have known the study group allocation	☐
I definitely knew the study group allocation	☐

The self-assessment of blinding should be completed by the investigator that collects the 30-day follow up data. This assessment only applies to data collection at this time point

SECTION 6: ONE-YEAR FOLLOW-UP				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

Date of follow-up	|__|__|/|__|__|__|/|__|__|__|__| **(DD-MMM-YYYY)**
Patient status on date of follow-up	☐ Alive ☐ Dead: date of death: |__|__|/|__|__|__|/|__|__|__|__| **(DD-MMM-YYYY)**

SUPPLEMETARY FORM: WITHDRAWAL				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

ONLY COMPLETE THIS FORM IF THE PARTICIPANT PREMATURELY STOPPED THEIR PARTICIPATION IN THE TRIAL OR IF THEY COULD NOT BE CONTACTED

Date the patient prematurely discontinued study participation:	|__|__|/|__|__|__|/|__|__|__|__| **(DD-MMM-YYYY)**
What was the primary reason for the discontinuation of the study?	☐ Inclusion/Exclusion criteria not fulfilled ☐ Surgical procedure abandoned ☐ Adverse event related ☐ Patient initiated ☐ Other, specify: _____
In the case of patient withdrawal, please check:	☐ The participant agrees that any data collected up to the date of withdrawal can still be used. ☐ The patient would like their data removed from the database.

SUPPLEMENTARY FORM: ADVERSE EVENT DURING CPAP				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

ONLY COMPLETE THIS FORM IF THE PATIENT EXPERIENCED AN ADVERSE EVENT DURING CPAP

In the case of multiple adverse events, please complete a separate form for each one.

ADVERSE EVENT RELATED TO CPAP FORM – PAGE 1	**NO**	**YES**
Did the patient experience an adverse event related to Continuous Positive Airway Pressure (CPAP) that was delivered as part of the PRISM trial?	☐	☐
If YES, please answer the following questions.		
Date and time of onset of adverse event |__|__|/|__|__|__|/|__|__|__|__| **(DD/MMM/YYYY)**	|__|__|:|__|__| **(HR:MINS)**	
Adverse Event	**NO**	**YES**
Interface intolerance due to excessive air leak	☐	☐
Pain	☐	☐
Cutaneous pressure area	☐	☐
Claustrophobia	☐	☐
Oronasal dryness	☐	☐
Hypercapnia	☐	☐
Haemodynamic instability	☐	☐
Vomiting	☐	☐
Aspiration of gastric contents	☐	☐
Other:	☐	☐
Response to adverse event	**Tick one**	
CPAP was ***unchanged***	☐	
CPAP was ***modified***	☐	
CPAP was ***stopped***	☐	
Outcome of adverse event	**NO**	**YES**
If YES to any option below, please notify the PRISM trial coordinating centre within 24 hours by email.		
Death	☐	☐
Life-threatening complication	☐	☐
Prolonged hospital stay	☐	☐
Significant disability or incapacity	☐	☐

SUPPLEMENTARY FORM: ADVERSE EVENT DURING CPAP				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

ADVERSE EVENT RELATED TO CPAP FORM – PAGE 2	
Please describe the adverse event, including any treatment or medication required.	
Name and signature:	Date:

SUPPLEMENTARY FORM: PROTOCOL DEVIATION				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

ONLY COMPLETE THIS FORM IF THERE IS A PROTOCOL DEVIATION

Participant in the intervention group did *NOT* receive CPAP	
NB. This includes instances where CPAP is started more than twelve hours after the end of surgery. If CPAP was administered, but for only a brief duration, please record this in the next section below.	
Please indicate the reason	
CPAP was not offered	☐
Participant remained intubated after surgery	☐
Inadequate staffing or process issues	☐
Participant or clinician refusal	☐
Participant was too unwell to receive CPAP	☐
Equipment failure	☐
Other (please state):	☐

CPAP administered for less than 4 hours duration	
NB. This includes instances where CPAP was administered, but only for a brief duration	
Please indicate the reason	
Participant or clinician refusal	☐
Inadequate staffing or process issues	☐
Participant too unwell to continue with CPAP	☐
Equipment failure	☐
Other (please state):	☐

CPAP administered with significant interruption	
NB. Brief interruptions to adjust mask, or for oral/nursing care are considered part of the intervention and do not require a protocol deviation form to be completed	
Please indicate the reason	
Participant or clinician refusal	☐
Inadequate staffing or process issues	☐
Participant too unwell to continue with CPAP	☐
Equipment failure	☐
Other (please state):	☐

SUPPLEMENTARY FORM: PROTOCOL DEVIATION				
SUBJECT #	|__|__|__|-|__|__|__|__|	**SITE #**	|__|__|__|__|__|__|__|__|__|__|__|__|	

CPAP started at a dose other than 5cmH_2O	
Please indicate the reason	
Communication error	☐
Decision by clinical staff	☐
Other (please state):	☐

Participant in the usual care group *DID* receive CPAP	
Please indicate the reason	
Randomisation	☐
Communication error	☐
Decision by clinical staff	☐
Other (please state):	☐

Other protocol deviation	
Other (please state):	☐

PROTOCOL DEVIATION	
Briefly describe the protocol deviation.	
Name and signature:	Date: