**Case Report Form – online submission form**

**Demographic data**

Medical Center: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Centre Study ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Age: (year) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gender: male \_\_\_\_\_\_\_\_\_\_\_\_ female \_\_\_\_\_\_\_\_\_\_\_\_

Height: (cm) \_\_\_\_\_\_\_\_\_\_\_\_

Weight: (kg) \_\_\_\_\_\_\_\_\_\_\_\_

Randomized to: (open vs closed abdomen)

Randomization date: mm/dd/yyyy time: hh:mm \_\_\_\_:\_\_\_\_ (24 h)

Patient COOL Study Code: (generated online) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Primary Outcome Data**

Patient status at 90 days post-enrollment Alive \_\_\_\_\_\_\_\_\_\_\_ Dead \_\_\_\_\_\_\_\_\_\_\_

If deceased date and time of death mm/dd/yyyy 24 HR \_\_\_:\_\_\_

**Demographic Data**

Sabadell Score(1) should be scored if possible, after a) ICU discharge b) hospital discharge

**Upon ICU Discharge (choose one answer);**

\_\_\_\_\_\_ good prognosis with full intention for ICU re-admission and provision of life support if required (0 points)

\_\_\_\_\_\_ poor long-term prognosis (> 6 months) with unlimited ICU readmission and provision of life support (1 point)

\_\_\_\_\_\_ poor short-term prognosis (< 6 months) with debatable ICU readmission and provision of life support (2 points)

\_\_\_\_\_\_ death expected during hospitalization ICU readmission and provision of life support not recommended (3 points)

**Upon ICU Discharge (choose one answer);**

\_\_\_\_\_\_ good prognosis with full intention for ICU re-admission and provision of life support if required (0 points)

\_\_\_\_\_\_ poor long-term prognosis (> 6 months) with unlimited ICU readmission and provision of life support (1 point)

\_\_\_\_\_\_ poor short-term prognosis (< 6 months) with debatable ICU readmission and provision of life support (2 points)

\_\_\_\_\_\_ death expected during hospitalization ICU readmission and provision of life support not recommended (3 points)

 (For the purposes of COOL ICU re-admission equates to the provision of aggressive life support measures,

**Charlson Co-Morbidity score definitions (See Appendix A for Data Dictionary if required)(2)**

**Preoperative data (Data Dictionary Appendix A)**

Date (within 24 h prior to operation): (mm/dd/yyyy)

Comorbidity: (medical history)

* Myocardial infarct, (yes/no)
* congestive heart failure, (yes/no)
* Cerebrovascular disease, (yes/no)
* hemiplegia, (yes/no)
* Peripheral vascular disease, AAA (yes/no)
* Connective tissue disease, (yes/no)
* Immunosuppression/steroids use/chemotherapy, (yes/no)
* Smoking, (yes/no)
* Pulmonary disease
	+ Mild (yes/no)
	+ Moderate (yes/no)
	+ severe (yes/no)
* Diabetics (without end organ damage), (yes/no)
* Diabetics with end organ damage, (yes/no)

Cancer (without metastasis), (yes/no)

* Cancer with metastasis, (yes/no)
* Leukemia/lymphoma, (yes/no)
* Dementia, (yes/no)
* Kidney Dysfunction

Severe organ dysfunction (kidney, liver), (yes/no)

* Presence of ostomy/incisional hernia (yes/no)
* HIV infection (yes/no)
* HIV infection with complications (yes/no)
* Liver disease
	+ Mild (yes/no)
	+ Moderate (yes/no)
	+ Severe (yes/no)

ASA status**:** American Society of Anesthesiologists Physical Status Classification (select one)

1. Healthy patient
2. Mild systemic disease, no function limitation
3. Severe systemic disease, definitive function limitation
4. Severe systemic disease that is a threat to life
5. Moribund patient unlikely to survive 24 h with or without operation

**Enrollment illness severity data:**

**APACHE 2 Scoring**

**SOFA Scoring**

**SOFA score:** Sepsis related Organ Failure Assessment (record worst score by circling value at Enrollment or ICU Admission)

**SOFA score 1 2 3 4**

Respiration

PaO2/FiO2, mmHg <400 <300 <200 <100

 ---with respiratory support----

Coagulation

Platelets X 10³/mm³ <150 <100 <50 <20

Liver

Bilirubin, mg/dl 1.2-1.9 2.0-5.9 6.0-11.9 >12.0

(µmol/l) (20-32) (33-101) (102-204) (>204)

Cardiovascular

Hypertension MAP<70 mmHg Dopamine<=5 Dopamine>5 Dopamine>15

 or dobutamine or epinephrine<=0.1 or epinephrine>0.1

 (any dose) or norepinephrine<=0.1 or norepinephrine>0.1

Central nervous system

GCS 13-14 10-12 6-9 <6

Renal

Creatinine, mg/dl 1.2-1.9 2.0-3.4 3.5-4.9 >5.0

(μmol/l) (110-170) (171-299) (300-440) (>440)

**Quick-SOFA**

Patient location immediately prior to intra-operative recruitment: (Ward vs ICU or ED)

* Ward
* ICU
* ED

Enrollment APACHE II score (if admitting ICU): (Record worst score)

**Sepsis Criteria prior to enrollment (worst values within 2 hours of source control laparotomy)**

1. Quick SOFA

(Respiratory Rate \_\_\_\_\_\_ breaths/minute

(Heart Rate \_\_\_\_\_\_\_ beats/minute if not intubated or intubated ( yes/no) \_\_\_\_\_\_\_\_\_\_\_\_

(mental status) normal \_\_\_\_\_\_\_ or obtunded \_\_\_\_\_\_\_\_\_

**Sepsis scoring During Index Laparotomy**

1. Any vasopressor use during source control laparotomy yes/no \_\_\_\_\_\_\_\_\_\_

**CPIRO Scoring(3)**

**Predisposition** age (years) \_\_\_\_\_\_ years

 APACHE II(4) comorbid conditions present (yes/no)

(Heart Failure Class IV, cirrhosis, chronic lung disease, or dialysis-dependent)

**Response**

Leukopenia (Defined as WBC <4000) (yes/no)

Hypothermia (Defined as a temperature less than 36 degrees Celsius) (yes/no)

Organ Dysfunction (Defined as Cardiovascular dysfunction (defined as Mean arterial pressure < 70 mmHg OR administration of any vasopressor medications)

 (yes/no)

Respiratory Dysfunction  (Defined as PaO2/FiO2 (mmHg) <300) (yes/no)

Renal Dysfunction  Creatinine > 171 umol/L (2 mg/dl) OR < 500 ml urine day (yes/no)

CNS Dysfunction  (Defined as Glasgow Coma Scale ≤ 12 (yes/no)

**World Society of Emergency Surgery Sepsis severity score (WISS/WSES)(5):**

Clinical condition at the admission

• Severe sepsis (acute organ dysfunction) at the admission (yes/no)

(Severe sepsis was defined as sepsis-induced tissue hypoperfusion or organ dysfunction (any of the following thought to be due to the infection): hypotension (<90/60 or MAP < 65), lactate above upper limits laboratory normal, Urine output < 0.5 mL/kg/h for more than 2 h despite adequate fluid resuscitation, Creatinine > 2.0 mg/dL (176.8 μmol/L), Bilirubin > 2 mg/dL

(34.2 μmol/L), Platelet count < 100,000 μL, Coagulopathy (international normalized ratio > 1.5), Acute lung injury with Pao2/Fio2 < 250 in the absence of pneumonia as infection source. Septic shock was defined as severe sepsis associated

with refractory hypotension (BP < 90/60) despite adequate fluid resuscitation)(6, 7)

• Septic shock (acute circulatory failure characterized by persistent arterial hypotension. (yes/no)

(Septic shock was defined as severe sepsis associated with refractory hypotension (BP < 90/60) despite adequate fluid resuscitation(6, 7)

Setting of acquisition

• Healthcare associated infection (yes/no)

Origin of the IAIs

• Colonic non-diverticular perforation peritonitis (yes/no)

• Small bowel perforation peritonitis (yes/no)

• Diverticular diffuse peritonitis (yes/no)

• Post-operative diffuse peritonitis (yes/no)

Delay in source control

• Delayed initial intervention [Preoperative duration of peritonitis (localized or diffuse) > 24 h)] (yes/no)

Risk factors

• Age>70 \_\_\_\_\_\_\_ yrs

• Immunosuppression (chronic glucocorticoids, immunosuppressant agents, chemotherapy,

Lymphatic diseases, virus) (yes/no)

**Other Pre-Operative Demographic Variables**

**V) prior\_general\_surgery**

has the patient had intra-abdominal surgery before during this same admission or is this a complication of a recent intra-abdominal surgical procedure if readmitted following

 1 = prior surgery

 0 = no prior surgery (COOL enrollment at first operation)

**W) prior\_abdominal\_ Procedure**

if any prior abdominal surgery in this admission or recently for which the patient was readmitted – describe in text

**Y) prior\_hosp\_los** length of stay prior to enrollment operation in hours (days/hours)

**Z) place\_to\_OR** Where was the patient prior to being taken to the OR for (\_\_\_\_\_\_\_\_\_) the enrollment surgery

 1 = ER

 2 = ward

 3 = main ICU

 4 = CVICU (cardiovascular Intensive Care Unit)

 5 = transferred rom another hospital

**Intraoperative data**

Date of laparotomy: (mm/dd/yyyy)

Indications to the intervention:

* Intra-Abdominal source of infection (yes/no)
* Bowel ischemia (yes/no)
* Bowel obstruction/ileus (yes/no)
* Bowel perforation (yes/no)
* Abdominal traumatic injury (yes/no)
	+ Blunt (yes/no)
	+ Penetrating (yes/no)
	+ Iatrigenic (yes/no)
* Other (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Original organ of infection:

* Appendicitis (yes/no)
* Cholecystitis (yes/no)
* Post-operative (yes/no)
* Colonic non diverticular perforation (yes/no)
* Gastro-duodenal perforations (yes/no)
* Diverticulitis (yes/no)
* Small bowel perforation (yes/no)
* Others (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Unable to tell
* PID (yes/no)
* Post traumatic perforation (yes/no)
* Anastomotic breakdown; yes/no if yes – type of anastomosis \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Type of intra-operative exudate:

* Clear (yes/no)
* Cloudy, (yes/no)
* Purulent (yes/no)
* Fecal (yes/no)
* Vegetable material (yes/no)

Location of exudate/contamination (select all apply):

* Right upper quadrant (yes/no)
* Right lower quadrant (yes/no)
* Left upper quadrant (yes/no)
* Left lower quadrant (yes/no)
* Another site (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Manheim Peritonitis Score at Enrollment Laparotomy

Fluid instillation/washing: (yes or no)

Type of surgery (specify procedure performed): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Postoperative diagnosis (specify): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Temporary abdominal closure technique: Type of AbThera if used

 (Standard AbThera) (yes/no)

 (AbThera Advance) (yes/no)

Intra-operative Fluids

 Crystalloid fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Crystalloid refers to saline, Ringers lactate, Hartman’s etc.)

Hypertonic Fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Hypertonic refers to hypertonic fluids such as HTS with NaCl content > 0/9%)

Natural Colloid fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Natural Colloid refers to a colloid fluid derived from live sources such as albumen)

Synthetic Colloid fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Synthetic Colloid refers to a colloid fluid not derived from live sources such as hydroxyethyl starch (HES) solutions as well as the less commonly used dextrans or gelatins)

Packed Red Blood Cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_ units

Fresh Frozen plasma \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ml (or liters)

Prothrombin Complex \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ml (or liters)

**Vasoactive-inotropic score**(8, 9) (Use highest value at any point in the operation)

 Vasopressors given during index source control laparotomy \_\_\_\_\_\_\_\_\_ (yes/no)

 If yes;

 Dopamine \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Dobutamine \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Norepinephrine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Milrinone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Vasopressin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Neosynephrine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TOTAL ugs given during operation

 Ephedrine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TOTAL ugs given during operation

**Post-Operative Care**

**Hospitalization data (only requires completion once and not daily)**

**90-day post-operative data**

ICU discharged: (yes or no)

ICU discharge date: (mm/dd/yyyy)

Total ICU stay time: (\_\_\_\_ days and hours)

Total ventilation time: (\_\_\_\_ days and hours)

Patient died (yes/no)

If died ? date and time of death mm/dd/yr \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Withdrawal of care (yes/no)

(Withdrawal of care is defined as the discontinuation of life sustaining therapies with the expectation that the patient will die without this support)

Hospital discharged: (yes or no)

Discharge date: (mm/dd/yyyy)

Total hospital stay time: (\_\_\_\_ days)

Discharge Location home (yes/no)

 Rehab facility with the expectation of eventual home discharge (yes/no)

 Long-term care Facility with unknown expectation of eventual home discharge (yes/no)

 Palliatice care Facility with no expectation of eventual home discharge (yes/no)

**Abdominal Compartment Management**

Same Stay Fascial closure: (yes or no)

(defined as facial closure during the index hospitalization visit)

Time between open abdomen opening and definitive closure: (\_\_\_\_ days)

Negative pressure “subcutaneous therapies” used for a primary closure (yes/no) Type \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(example use of the Prevena or PICO dressings is permitted for the primary closure study arm)

Adjuncts to AbThera for Open Abdomen wound Closure

 Mesh mediated fascial traction(10) (yes/no) duration of use \_\_\_\_\_\_\_\_\_\_\_\_ hours

 ABBRA fascial traction(11) (yes/no) duration of use \_\_\_\_\_\_\_\_\_\_\_\_ hours

 Other Mechanical device - Describe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 duration of use \_\_\_\_\_\_\_\_\_\_\_\_ hours

Post-operative intra-peritoneal instillation therapy (yes/no) duration of use \_\_\_\_\_\_\_\_\_\_\_\_ days

 (example Direct Peritoneal Resuscitation of Smith(12, 13))

Renal Replacement Therapy Required (yes/no)

Renal replacement therapy time: (\_\_\_\_\_\_\_\_\_\_ days)

Any intestinal anastomosis (yes/no) \_\_\_\_\_\_\_\_\_\_\_\_\_

 If yes what type \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Any stoma (yes/no) \_\_\_\_\_\_\_\_\_\_\_\_\_

 If yes what type \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mesh used to Close Abdominal Wall (yes/no) \_\_\_\_\_\_\_\_\_\_\_\_\_

 If yes what type \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Abdominal Complications**:

Entero-atmospheric fistula: (yes or no)

This is an important complication and as much textual description should be provided including but not limited to;

1. Anatomic location \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Anastomotic related? (yes/no)
3. Fistula output? High medium low

(> 500 ml/day) (500-200 ml/day) (< 200 ml/day)

 iv) any perceived cause of the fistula?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Surgical Site Infections (See also appendix C)**

**Superficial incisional SSI (yes/no)**

Must meet the following criteria: Date of event occurs within 30 days after any NHSN operative procedure (where day 1 = the procedure date) AND involves only skin and subcutaneous tissue of the incision

AND patient has at least one of the following:

a. purulent drainage from the superficial incision. **(yes/no)**

b. organism(s) identified from an aseptically-obtained specimen from the superficial incision or subcutaneous tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing (ASC/AST)). **(yes/no)**

c. superficial incision that is deliberately opened by a surgeon, attending physician\* or other designee and culture or non-culture based testing of the superficial incision or subcutaneous tissue is not performed AND patient has at least one of the following signs or symptoms: localized pain or tenderness; localized swelling; erythema; or heat. **(yes/no)**

d. diagnosis of a superficial incisional SSI by the surgeon, attending physician\* or other designee. \* The term attending physician for the purposes of application of the NHSN SSI criteria may be interpreted to mean the surgeon(s), infectious disease, other physician on the case, emergency physician, or physician’s designee (nurse practitioner or physician’s assistant).

 **(yes/no)**

**Deep incisional SSI (yes/no)**

**Must meet the following criteria:**

The date of event occurs within 30 after the NHSN operative procedure (where day 1 = the procedure date) AND involves deep soft tissues of the incision (for example, fascial and muscle layers) AND patient has at least one of the following:

a. purulent drainage from the deep incision. **(YES/NO)**

b. a deep incision that spontaneously dehisces, or is deliberately opened or aspirated by a surgeon, attending physician\* or other designee AND organism(s) identified from the deep soft tissues of the incision by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing (ASC/AST)) or culture or non-culture based microbiologic testing method is not performed. A culture or non-culture based test from the deep soft tissues of the incision that has a negative finding does not meet this criterion. AND patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness. **(YES/NO)**

c. an abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test. **(YES/NO)**

 \* The term attending physician for the purposes of application of the NHSN SSI criteria may be interpreted to mean the surgeon(s), infectious disease, other physician on the case, emergency physic

**Organ/Space SSI (YES/NO)**

Must meet the following criteria:

Date of event occurs within 30 days after the NHSN operative procedure (where day 1 = the procedure date)

**AND** involves any part of the body deeper than the fascial/muscle layers that is opened or manipulated during the operative procedure

AND patient has at least one of the following:

a. purulent drainage from a drain that is placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, CT-guided drainage). **(YES/NO)**

b. organism(s) identified from fluid or tissue in the organ/space by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing (ASC/AST)). **(YES/NO)**

c. an abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathologic exam, or imaging test evidence suggestive of infection. AND meets at least one criterion for a specific organ/space infection site listed in Table 3. These criteria are found in the Surveillance Definitions for Specific Types of Infections chapter.

 **(YES/NO)**

**Abdominal wound Complications**

Day fascia closed yy/mm/dd \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Skin closed yes/no

Skin reopened or dehisced yes/no

Fascia dehisced yes/no

Reoperation required due to dehiscence yes/no

If YES provide date and details \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Daily Data**

**This data to be completed Daily until hospital discharge or 30 days**

**Please Complete one Form for each Hospital Day**

**Date yyyy/mm/dd \_\_\_\_\_\_\_\_\_\_\_**

**Day since Enrollment \_\_\_\_\_\_\_\_\_\_\_**

Re-operation: (yes or no)

Time of re-operation: (24:00 clock of OR start)

Reason for re-operation:

* Dressing replacement
* Open closed fascia, relook
* Definitive abdominal closure
* Other (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fascial closure closure: (yes or no)

If not closed type of Temporary Abdominal Closure replaced: (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Intra-operative findings \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Intra-abdominal hypertension**

Intra-abdominal pressure being measured by any method? **(yes/no)**

Intra-abdominal hypertension present? **(yes/no)**

(Intra-abdominal pressure > 12 mmHg(14), use highest daily measurement)

Abdominal Compartment syndrome present? **(yes/no)**

(Intra-abdominal pressure > 20 mmHg with new organ failure(14))

**Daily Fluid Balance** + / - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ml

 (overall balance of all fluids in and out)

**Fluids Administered**

Crystalloid fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Crystalloid refers to saline, Ringers lactate, Hartmans etc)

Hypertonic Fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Hypertonic refers to hypertonic fluids such as HTS with NaCL content > 0/9%)

Natural Colloid fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Natural Colloid refers to a colloid fluid derived from live sources such as albumen)

Synthetic Colloid fluids \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (liters)

(Synthetic Colloid refers to a colloid fluid not derived from live sources such as hydroxyethyl starch (HES) solutions as well as the less commonly used dextrans or gelatins)

Packed Red Blood Cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_ units

Fresh Frozen plasma \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ml (or liters)

Prothromin Complex \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ml (or liters)

**Fluid Outputs**

 Urine \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ml (or liters)

 Peritoneal fluid drainage \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ml (or liters)

 (if AbThera or a intra-perioneal drain present)

**Nutrition**

Nutrition administered (yes/no)

 Parenteral (yes/no)

 Enteral (yes/no)

 Eating (yes/no)

 Amount of nutrition \_\_\_\_\_\_\_\_\_\_\_\_\_ ml/24 hours

 Type of nutrition \_\_\_\_\_\_\_\_\_\_\_\_\_ describe generic name (eg Ensure,etc)

If eating clear fluids or full fluids or soft or full diet

 Gastric drainage if available \_\_\_\_\_\_\_\_\_\_\_\_\_ ml/24 hours

 Vomiting documented (yes/no)

 Bowel movements documented (yes/no)

 Enteral/oral feeding intolerance (

- yes (enteral/oral nutrition reduced or discontinued due to gastrointestinal symptoms)

- no, full enteral/oral nutrition administered (includes planned hypocaloric feeding during the first days after the OP / ICU admission)

- no, but enteral/oral nutrition reduced or withheld due to perceived danger from EN (e.g. fistula, severe shock), not associated with GI symptom

(from Reintam Blaser A, Malbrain ML, Starkopf J, Fruhwald S, Jakob SM, De Waele J, Braun JP, Poeze M, Spies C. Gastrointestinal function in intensive care patients: terminology, definitions and management. Recommendations of the ESICM Working Group on Abdominal Problems. Intensive Care Med. 2012 Mar;38(3):384-94. doi: 10.1007/s00134-011-2459-y.)

Post-operative Care

SOFA

 In ICU (yes/no)

 Mechanically ventilated (yes/no)

 (mechanical ventilation includes CPAP)

 Worst Pa02 \_\_\_\_\_\_\_\_\_\_ mmHg

 Worst Fi02 \_\_\_\_\_\_\_\_\_\_

 Worst platelets \_\_\_\_\_\_\_\_\_\_ 10³/µL

 [Glasgow Coma Scale](https://www.mdcalc.com/glasgow-coma-scale-score-gcs) \_\_\_\_\_\_\_\_\_\_\_ out of 15

(If on sedatives, estimate assumed GCS off sedatives)

Worst Bilirubin \_\_\_\_\_\_\_\_\_\_\_\_ μmol/L

Worst Mean arterial pressure \_\_\_\_\_\_\_\_\_\_\_\_ mmHg

OR administration of vasoactive agents required (yes/no)

Worst creatinine \_\_\_\_\_\_\_\_\_\_\_\_ μmol/L

Urine output per 24 hours \_\_\_\_\_\_\_\_\_\_\_\_ l/24 hour

Renal replacement therapy (yes/no)

**Vasoactive-inotropic score**(8, 9) (Use highest value in the 24 hour day)

 Patient received any inotropic Medication yes/no \_\_\_\_\_\_\_\_\_\_\_\_\_

 If patient received inotropic medication please complete;

 Dopamine \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Dobutamine \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Norepinephrine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Milrinone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Vasopressin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ug/kg/min

 Neosynephrine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TOTAL ugs given during operation

 Ephedrine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TOTAL ugs given during operation

* + - * +

**Post-operative management data (ICU stay)**

Daily fluid balance: (24 h input minus output, L)

SOFA score: (record worst score)

Intra-abdominal hypertension: (IAP > 12 mmHg, yes or no)

Abdominal compartment syndrome: (IAP > 20 mmHg plus new organ dysfunction, yes or no)

**Definitive abdominal closure intervention data**

Date of intervention: (mm/dd/yyyy)

Time between open abdomen opening and definitive closure: (days)

Intraoperative blood transfusion or products: (yes or no, if yes, what kinds?)

Intestinal anastomosis: (yes or no)

In case of intestinal anastomosis: (specify)

Stoma: (yes or no, specify what kind?)

Prosthesis: (yes or no)

Fascial closure: (yes or no)

Entero-atmospheric fistula: (yes or no)

Skin closure: (yes or no)

Complications: (yes or no, if yes, what kinds)

About wound: (clean or infection?)

Total ICU stay time: (days)

Total ventilation time: (days)

Perioperative death: (yes or no)

**Six month Follow-up Data**

Patient alive (yes/no)

If died date? yy/mm/dd \_\_\_\_\_\_\_\_\_

If alive ?

Living location ?

 home (yes/no)

 Rehab facility with the expectation of eventual home discharge (yes/no)

 Long-term care Facility with unknown expectation of eventual home discharge (yes/no)

 Palliative care Facility with no expectation of eventual home discharge (yes/no)

QOL Euroqol

 SF 36

**One Year Follow-up Data**

Patient alive (yes/no)

If died date? yy/mm/dd \_\_\_\_\_\_\_\_\_

If alive ?

Living location ?

 home (yes/no)

 Rehab facility with the expectation of eventual home discharge (yes/no)

 Long-term care Facility with unknown expectation of eventual home discharge (yes/no)

 Palliative care Facility with no expectation of eventual home discharge (yes/no)

QOL Euroqol

 SF 36

**Appendix Data Dictionary**

1. **Data Dictionary for Charlson Comorbidity Variables(2)**

**Myocardial infarction** - History of definite or probable MI (EKG changes and/or enzyme changes

**Congestive Heart Failure** - Exertional or paroxysmal nocturnal dyspnea and has responded to digitalis, diuretics, or afterload reducing agents

**Peripheral vascular disease** - Intermittent claudication or past bypass for chronic arterial insufficiency, history of gangrene or acute arterial insufficiency, or untreated thoracic or abdominal aneurysm (≥6 cm)

**Cerebrovascular** disease includes patients with a history of a cerebrovascular accident with minor or no residua and transient ischemic attacks

**Paralysis and Hemiplegia** includes patients with the dense hemiplegia or paraplegia, whether it occurred as a result of a cerebrovascular accident or other condition [60%

Dementia includes patients with chronic cognitive deficit

**Mild pulmonary disease** includes patients who are dyspneic with moderate activity without treatment or those who are dyspneic only with attacks (e.g. asthma)

**Moderate pulmonary disease** includes patients who are dyspneic with slight activity, with or without treatment and those who are dyspneic with moderate activity despite treatment

**Severe pulmonary disease** includes patients who are dyspneic at rest, despite treatment, those who require constant oxygen, those with CO, retention and those with a baseline PO, below 50 torr 150%

**Rheumatologic disease** includes patients with. systemic lupus erythematous, polymyositis, mixed connective tissue disease‘, polymyalgia rheumatica, and moderate to severe rheumatoid arthritis.

**Peptic ulcer disease** Any history of treatment for ulcer disease or history of ulcer bleeding

**Liver disease** Severe = cirrhosis and portal hypertension with variceal bleeding history, moderate = cirrhosis and portal hypertension but no variceal bleeding history, mild = chronic hepatitis (or cirrhosis without portal hypertension)

**Diabetes Melitus** - None or diet-controlled, Uncomplicated+1, End-organ damage. Severe diabetes includes patients with retinopathy, neuropathy, or nephropathy. Moderate diabetes includes patients who had previous hospitalizations for ketoacidosis, hyperosmolar coma, or control and those with juvenile onset or brittle diabetics. Mild diabetes includes all other diabetes treated with insulin or oral hypoglycemics, but not diet alone

**Severe renal disease** includes patients on dialysis, those who had a transplant, and those with uremia 150%.

**Moderate renal insufficiency** includes patients with serum creatinine of 23 mg% 162%. Mild renal includes those with serum creatinine of 2-3 mg%.

**Acquired immune deficiency syndrome (AIDS**) includes patients with define or probable AIDS, i.e. AIDS related complex.

**Lymphoma** includes patients with Hodgkins, lymphosarcoma, Waldenstrom’s macroglobulinemia, myeloma, and other lymphomas.

**Leukemia** includes patients with acute and chronic myelogenous leukemia, acute and chronic lymphocytic leukemia, and polycythemia vera.

**Metastatic cancer** includes patients with metastatic solid tumors, including breast, lung, colon and other tumors 185%.

**Tumor**-consists of patients ‘with ‘solid tumors without documented metastases, but initially treated in the last five years, including breast, colon, lung, and a variety of other tumors.

**Appendix B**

**Sepsis severity score (MPI): Mannheim Peritonitis Index**



Appendix C

Further Definitions of Surgical Site Infections

The following do not qualify as criteria for meeting the NHSN definition of superficial incisional SSI:

• Diagnosis/treatment of cellulitis (redness/warmth/swelling), by itself, does not meet criterion “d” for superficial incisional SSI. Conversely, an incision that is draining or that has organisms identified by culture or non-culture-based testing is not considered a cellulitis.

• A stitch abscess alone (minimal inflammation and discharge confined to the points of suture penetration).

• Circumcision is not an NHSN operative procedure. An infected circumcision site in newborns is classified as CIRC and is not an SSI.

• An infected burn wound is classified as BURN and is not an SSI.

• For an NHSN operative procedure, a laparoscopic trocar site is considered a surgical incision and not a stab wound.

• A localized stab wound or pin site infection is not considered an SSI; depending on the depth, these infections might be considered either a skin (SKIN) or soft tissue (ST) infection.

**IAB-Intraabdominal infection**,

not specified elsewhere, including gallbladder, bile ducts, liver (excluding viral hepatitis), spleen, pancreas, peritoneum, retroperitoneal, subphrenic or subdiaphragmatic space, or other intraabdominal tissue or area not specified elsewhere

January 2019 17- 22 Surveillance Definitions Intraabdominal infections must meet at least one of the following criteria:

1. Patient has organism(s) identified from an abscess or from purulent material from intraabdominal space by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).

2. Patient has at least one of the following:

 - a. abscess or other evidence of intraabdominal infection on gross anatomic or histopathologic exam.

 - b. abscess or other evidence of intraabdominal infection on gross anatomic or histopathologic exam AND organism(s) identified from blood by a culture or non-culture based microbiologic testing method, which is performed for purposes of clinical diagnosis or treatment, for example, not Active Surveillance Culture/Testing (ASC/AST). The organism(s) identified in the blood must contain at least one MBI organism. (See Appendix A of the BSI protocol)

3. Patient has at least two of the following:

 - fever (>38.0°C),

 - hypotension, nausea\*,

 - vomiting\*,

- abdominal pain or tenderness\*,

- elevated transaminase level(s)\*,

- or jaundice\*

 And at least one of the following:

 - a. organism(s) seen on Gram stain and/or identified from intraabdominal fluid or tissue obtained during invasive procedure or from an aseptically-placed drain in the intraabdominal space (for example, closed suction drainage system, open drain, T-tube drain, CT guided drainage) by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).

 b. organism(s) identified from blood by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment, for example, not Active Surveillance Culture/Testing (ASC/AST). The organism(s) identified in the blood must contain at least one MBI organism (See Appendix A of the BSI protocol) AND imaging test evidence suggestive of infection ( for example, ultrasound, CT scan, MRI, ERCP, radiolabel scans [gallium, technetium, etc.] or on abdominal x-ray), which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for intraabdominal infection.† \* With no other recognized cause

Reporting instructions • †Biliary ductal dilatation is considered an equivocal finding for cholangitis. • Do not report pancreatitis (an inflammatory syndrome characterized by abdominal pain, nausea, and vomiting associated with high serum levels of pancreatic enzymes) unless it is determined to be infectious in origin. • Eligible laboratory results that represent transaminase levels include: serum glutamic oxaloacetic transaminase (SGOT), serum glutamic pyruvic transaminase (SGPT), alanine transaminase (ALT) or aspartate transaminase (AST). Consider the requirement for elevated transaminase level(s) met if at least one is elevated as per the normal range provided by the laboratory.

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