Peri-interventional Outcome Study in the Elderly (POSE)

I. Baseline assessment (Visit 1)

Age | | | years [80-120]   Sex M F   ASA I II III IV V
Height | | | cm [120-230]   Weight | | | kg [30-250]

Referring facility [single best answer]
☐ Home/ Lives independent   ☐ Other hospital   ☐ Rehabilitation   ☐ Nursing home
☐ other, if other please specify: ________________________________

Planned kind of procedure [single best answer]
☐ Inpatient intervention [patient remains in hospital for at least one night after intervention]
☐ Outpatient intervention [patient is discharged the day of intervention]

Medical history: [single best answer]

Functional status [within 30 days before assessment]:
☐ Independent [patient does not require assistance from another person for activities of daily living]
☐ Partially dependent [The patient requires some assistance from another person]
☐ Totally dependent [The patient requires total assistance for all activities of daily living]

☐ Y ☐ N Emergency case
☐ Y ☐ N Current steroid use for chronic condition
☐ Y ☐ N Ascites within 30 days prior to intervention
☐ Y ☐ N Ventilator depended within 48h before intervention: [excludes CPAP for sleep apnoea]
☐ Y ☐ N Disseminated cancer: [includes ALL, AML, Lymphoma “IV”; excludes CLL, CML, Lymphoma I-III”]

Diabetes ☐ N ☐ Y ☐ Oral ☐ Insulin [only dietary treatment, should not be classified as ‘diabetic’ here]
☐ Y ☐ N Hypertension requiring medication: [<30d prior surgery]
☐ Y ☐ N Congestive Heart Failure: [<30d prior intervention, acute or chronic + symptoms]

Dyspnoea: ☐ N ☐ with moderate exertion ☐ at rest [<30d prior surgery]

☐ Y ☐ N Current smoker: [<1yrs prior intervention; excluding: pipes, cigars, chewing tobacco]

Alcohol: number of units per week _________ [1 unit = 0.25l beer, 0.1l wine, 0.02l shot]

☐ Y ☐ N History of severe COPD: [functional disability or chronic bronchodilator therapy or past hospitalization or FEV1 of <75%]

☐ Y ☐ N Dialysis [within 2 weeks prior to surgery]

☐ Y ☐ N Acute renal failure: [1. Increased BUN on two measurements AND two creatinine results > 3mg/dl OR 2. Surgeon or physician has documented Acute Renal Failure AND one of the following: Increased BUN on two measurements OR two Cr results > 3mg/dl]
Patient name: ____________________  Date of birth:  dd/mm/yyyy

Risk assessment [tick all that apply]

- None
- Ischemic heart disease
- Chronic heart failure or cardiomyopathy
- Hemiplegia
- Chronic respiratory failure
- Cancer
- Dementia
- Mild cognitive impairment
- Chronic renal failure
- Cardiac arrhythmia or heart blocks
- Peripheral vascular disease
- COPD
- Chronic alcohol abuse
- Transplanted organ(s)
- Chronic heart failure or cardiomyopathy
- Peripheral vascular disease
- Hemiplegia
- COPD
- Chronic alcohol abuse
- Transplanted organ(s)
- Dementia
- Cerebrovascular disease
- Mild cognitive impairment
- Other cognitive complaints __________

Most recent (within 1 month) pre-interventional blood results [optional, only if done in the clinical routine]:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Y</th>
<th>N</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin</td>
<td></td>
<td></td>
<td></td>
<td>[g/dL] 5-20.0</td>
</tr>
<tr>
<td>Haematocrit</td>
<td></td>
<td></td>
<td></td>
<td>[mmol/L] 3-14</td>
</tr>
<tr>
<td>Creatinine</td>
<td></td>
<td></td>
<td></td>
<td>[mg/dL] 0.3-10.0</td>
</tr>
<tr>
<td>Creatinine</td>
<td></td>
<td></td>
<td></td>
<td>[µmol/L] 26-900</td>
</tr>
<tr>
<td>Albumin</td>
<td></td>
<td></td>
<td></td>
<td>[g/dL] 0.5-8.0</td>
</tr>
<tr>
<td>Albumin</td>
<td></td>
<td></td>
<td></td>
<td>[g/L] 5-80</td>
</tr>
</tbody>
</table>

Chronic medication [until at least 7 days before intervention]: [tick all that apply]

- Anticoagulants  [e.g. Heparin, Warfarin, NOACs]
- Antiplatelet therapy  [e.g. Acetylsalicylic acid, Clopidogrel]
- Beta blockers
- ACE inhibitor or AT II-Receptor blocker  [e.g. Ramipril/ Candesartan]
- Antidepressants  [e.g. Haloperidol, Pipamperon, Clozapin, Risperidon, Chlorpromazin]
- Benzodiazepines
- Z-drugs  [e.g. Zolpidem, Zopiclone, Zaleplon]

Frailty Assessments:

1. History of falls during the last 6 months:
   - none
   - 1 time
   - >1 time

2. Unintentional weight loss of ≥4.5 kg in the last year:
   - Y

3. Mini Cog: Correct number of recalled words
   - [0-3]
   - Clock draw points
   - [0 or 2]
   - Total points
   - [0-5]

3. Timed up and go test [_____] seconds
   - Patient cannot perform this test at the moment
   - Not performed

Data entry staff use only
POSE patient identifier: __________  17.09.2017 Version 1.2
II. Intervention day (Visit 2)

Anaesthesia induction date: ____________ - ____________ [>=01-Apr-2017]
Anaesthesia induction time: ____________:__________ hh:mm

Premedication before intervention: none  Clonidine  Benzodiazepine

Anaesthesia technique [tick all that apply]
- General
- Spinal
- Epidural
- Other regional
- Sedation

If general anaesthesia: Main anaesthetic for maintenance: [single best answer]
- Desflurane
- Isoflurane
- Sevoflurane
- Propofol
- Other

If general anaesthesia: Main opioid for maintenance: [single best answer]
- Alfentanil
- Fentanyl
- Morphine
- Piritramide
- Remifentanil
- Sufentanil
- Other

Advanced intraoperative Monitoring [tick all that apply]
- Anaesthesia depth monitoring device [e.g. Bispectral index or EEG]
- NIRS [Near-infrared spectroscopy]
- Invasive RR
- CVP [Central venous pressure]
- TEE [Transoesophageal echocardiogram]
- Pulmonary artery catheter
- Cardiac output [via arterial wave form analysis]
- Other

Intervention/ Surgical procedure exact name:

Surgical category: [single best answer]
- Arthroplasty and spine
- Cardiac
- Ear, nose and throat (ENT)
- Endoscopic digestive
- Gastrointestinal major
- Gastrointestinal minor
- Gynaecologic
- Hepatic major
- Hepatic minor
- Interv. Cardiology [e.g. TAVI]
- Interv.cardiorhythmology
- Interv.neuroradiology
- Multiple trauma related
- Neuro
- Ophthalmologic
- Orthopaedic other
- Orthopaedic trauma
- Plastic
- Renal transplant
- Thoracic
- Transplant
- Urologic major
- Urologic minor
- Vascular major
- Vascular minor
- Other surgery

Severity of surgery/intervention
- Minor
- Intermediate
- Major

Urgency of surgery/intervention
- Elective
- Urgent
- Emergency
<table>
<thead>
<tr>
<th>Surgical wound classification</th>
<th>Clean</th>
<th>Clean-Contaminated</th>
<th>Contaminated</th>
<th>Dirty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laparoscopic surgery</td>
<td>□ Y N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-pump cardiac surgery</td>
<td>□ Y N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer surgery</td>
<td>□ Y N</td>
<td></td>
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</tbody>
</table>

**Immediately at the end of intervention:**

- Extubation: □ Y □ N □ not applicable [e.g. patient was not intubated]
- Admission to ICU: □ Y □ N [including intermediate care] If Yes, planned admission? □ Y □ N
- Admission to a unit with "geriatric support" [e.g. geriatric units, geriatric co-management models, geriatric liaison services] □ Y □ N

**Transfusion:**

- Intraoperative transfusion of packed red blood cells: □ Y □ N if yes amount: |__|__| [n]
- Intraoperative transfusion of fresh frozen plasma: □ Y □ N if yes amount: |__|__| [n]
- Intraoperative transfusion of platelets: □ Y □ N if yes amount: |__|__| [n]

**WHO-surgical checklist used?** □ Y □ N

- End of anaesthesia date: |d|d|m|m| - |2|0|y|y| [>=01-Apr-2017]
- End of anaesthesia time: |h|h|m|m| [hh:mm]

* **Definitions:**

**Severity of surgery**

- Minor: e.g. skin-lesions or small skin tumours, biopsies, draining breast abscess, brief diagnostic and therapeutic procedures like arthroscopy without intervention
- Intermediate: Primary repair of inguinal hernia, excising varicose veins in the leg, tonsillectomy or adeno-tonsillectomy, knee arthroscopy, cataract surgery, uvuloplasty, minimally invasive repair of vaginal prolapse, vaginal hysterectomy, tendon repair of hand etc.
- Major: Total abdominal hysterectomy, endoscopic resection of prostate, lumbar discectomy, thyroidectomy, total joint replacement, lung operations, colon resection, radical neck dissection etc.

**Urgency of surgery/ non-surgical intervention**

- Elective: Intervention that is scheduled in advance because it does not involve a medical emergency
- Urgent: Intervention required within < 48 hrs
- Emergency: Non-elective intervention performed when the patient's life or well-being is in direct jeopardy

**Surgical wound classification**

- Clean: Elective, not emergency, non-traumatic, primarily closed; no acute inflammation; no break in technique; respiratory, gastrointestinal, biliary and genitourinary tracts not entered.
- Clean-contaminated: Urgent or emergency case that is otherwise clean; elective opening of respiratory, gastrointestinal, biliary or genitourinary tract with minimal spillage (e.g. appendectomy) not encountering infected urine or bile; minor technique break.
- Contaminated: Non-purulent inflammation; gross spillage from gastrointestinal tract; entry into biliary or genitourinary tract in the presence of infected bile or urine; major break in technique; penetrating trauma <4 hours old; chronic open wounds to be grafted or covered.
- Dirty: Purulent inflammation (e.g. abscess); preoperative perforation of respiratory, gastrointestinal, biliary or genitourinary tract; penetrating trauma >4 hours old.
III. Follow-up on POD 30 (Visit 3)

Date of Follow-up [__ __] __. __. __ - [__ __] __. __. __ [=intervention day+30 days]

Patient status on postoperative day 30:

☐ Discharged before day 30 If yes:
  - Date of discharge: [__ __] __. __. __ - [__ __] __. __. __
  - Discharge destination: [single best answer]
    - Other hospital
    - Rehabilitation
    - Nursing home
    - Home
    - Other, please specify

☐ In hospital death If yes:
  - Was cardiopulmonary resuscitation performed ☐ Y ☐ N
  - Date of death: [__ __] __. __. __ - [__ __] __. __. __

☐ Still in hospital at day 30

Hospital length of stay after intervention until Follow-up [__ __] __. __. __ [≤ 31 days] [including day of intervention, excluding discharge day, in case of “still in hospital” please enter 31]

Total ICU length of stay after intervention [__ __] __. __. __ [≤ 31 days] [Including day of ICU admission, excluding discharge day from ICU. In case of continuous ICU stay since intervention, please enter 31]

Unplanned ICU admission at any time after intervention until day 30 ☐ Y ☐ N

Admission to a unit with "geriatric support" at any time-point until day 30 ☐ Y ☐ N [e.g. geriatric units, geriatric co-management models, geriatric liaison services]

In hospital outcome according to the ACS NSQIP® [tick all that apply]

☐ None of the mentioned
☐ Cardiac arrest

☒ DVT [deep vein thrombosis]

☐ Myocardial infarction

☒ Venous thromboembolism/ blood clot [requiring therapy]

☐ Pneumonia

☒ Superficial incisional SSI [surgical site infection]

☐ Pulmonary embolism

☒ Deep incisional SSI

☐ Unplanned intubation

☒ Organ space SSI

☐ Ventilator >48h

☒ Wound disruption

☐ Return to the operating room

☒ Systemic sepsis

☐ Stroke

☒ Urinary tract infection

☐ Acute kidney injury [creatinine increase of >2mg/dl from preoperative value or new dialysis]

☒ Discharge to post-acute care [other hospital, nursing/ rehab facility]
Visit at ward (if the patient is still in hospital) [If patient is already discharged=> perform the telephone Follow up]
Actual functional status:

- [ ] Independent [patient does not require assistance from another person for activities of daily living]
- [ ] Partially dependent [The patient requires some assistance from another person]
- [ ] Totally dependent [The patient requires total assistance for all activities of daily living]

Brief screen for cognitive impairment: Correct number of the recalled words
(Dog, Apple, House) [ ] [0-3]

Additional Telephone follow-up on day 30 (only if the patient was discharged before day 30)
Patient status on day 30
- [ ] Alive
- [ ] Dead, If yes, date of death: [dd/mm/yyyy]
- [ ] Follow-up not performed/ not available

If follow up is NOT available, specify reason: [single best answer]
- [ ] Patient’s will
- [ ] Other, please specify: ______________________________________________________

Any complications after hospital discharge: [only present if they led to hospital re-admission or death, or additionally in case of kidney injury, if it led to renal replacement therapy]
Cardiac (Cardiac arrest, myocardial infarction) [ ] [Y] [N]
Pulmonary (Pneumonia, pulmonary embolism) [ ] [Y] [N]
Stroke [ ] [Y] [N]
Acute kidney injury [ ] [Y] [N]

Actual functional status:

- [ ] Independent [patient does not require assistance from another person for activities of daily living]
- [ ] Partially dependent [The patient requires some assistance from another person]
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