**APPENDICES**

**Appendix 1-Hospital In-Patient Enquiry (HIPE) portal search strategy**

Hospital In-Patient Enquiry (HIPE) portal search strategy

1. Basic search
   - Admission date between 01/01/20015 and 31/12/20015, discharge date 01/01/2015-31/12/2018
   - Inpatient
   - Patients age in years between 18 and 110
   - Admission source is not between 3 and 7 (i.e. exclude transfers from other acute hospitals
   - Principal diagnosis is not between F00 and F99 (i.e. exclude psychiatric)
   - Principal diagnosis is not between O29 and O927 (i.e. exclude obstetric)

2. Surgery charts – 200 cases were selected by the below criteria
   - Basic search plus
   - The All Procedures (ICD-10-AM) is between 9251400 and 9251499 (i.e. general anaesthetic)
   - The All Procedures (ICD-10-AM) is between 9250800 and 9250899 (i.e. neuroaxial block)
   - The All Procedures (ICD-10-AM) is between 9250900 and 9250999 (i.e. regional block, nerve of head or neck)
   - The All Procedures (ICD-10-AM) is between 9251000 and 9251099 (i.e. regional block, nerve of trunk)
   - The All Procedures (ICD-10-AM) is between 9251100 and 9251199 (i.e. regional block upper limb)
   - The All Procedures (ICD-10-AM) is between 9251200 and 9251299 (i.e. regional block lower limb)
   - Use the HIPE portal Reporter to randomly select 200 charts. These are the surgery charts for review.

3. Non surgery charts(medical) – 200 charts were selected by the below criteria
   - Basic search plus edit the procedures to 'is not'
   - The All Procedures (ICD-10-AM) is not between 9251400 and 9251499 (i.e. no general anaesthetic)
   - The All Procedures (ICD-10-AM) is not between 9250800 and 9250899 (i.e. no neuroaxial block)
   - The All Procedures (ICD-10-AM) is not between 9250900 and 9250999 (i.e. no regional block, nerve of head or neck)
   - The All Procedures (ICD-10-AM) is not between 9251000 and 9251099 (i.e. no regional block, nerve of trunk)
   - The All Procedures (ICD-10-AM) is not between 9251100 and 9251199 (i.e. no regional block upper limb)
   - The All Procedures (ICD-10-AM) is not between 9251200 and 9251299 (i.e. no regional block lower limb)

- Use the HIPE portal Reporter to randomly select 200 charts. These are the non surgery charts for review.

**Appendix 2 Table List of triggers used by stage-one nurse reviewers**

| Trigger number | Trigger description |
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| 1 | Unplanned admission (including readmission) as a result of any healthcare management within the 12 months prior to the index admission |
| 2 | Unplanned admission to any hospital within the 12 months after discharge from index admission |
| 3 | Hospital-incurred patient injury (including any harm, injury or trauma occurring during the index hospital stay) |
| 4 | Adverse drug reaction |
| 5 | Unplanned transfer from general care to intensive care |
| 6 | Unplanned transfer to another acute care hospital (excluding transfers for tests, procedures, or specialised care not available at referring hospital) |
| 7 | Unplanned return to the operating theatre |
| 8 | Unplanned removal, injury or repair of organ during surgery, invasive procedure or vaginal delivery |
| 9 | Other patient complication e.g. acute myocardial infarction, stroke, pulmonary embolism, etc (includes any unexpected complication that is not a natural progression of disease or unexpected outcome of treatment) |
| 10 | Development of neurological deficit not present on admission but present at the time of discharge from the index hospital stay (includes neurological deficits related to procedures, treatments or investigations) |
| 11 | Unexpected death |
| 12 | Inappropriate discharge to home/ inadequate discharge plan for index admission (excluding "against medical advice") |
| 13 | Cardiac or respiratory arrest (successful) |
| 14 | Injury-related to abortion or labour and delivery |
| 15 | Hospital-acquired infection or sepsis (excluding infections/sepsis occurring less than 72 hours after admission) |
| 16 | Dissatisfaction with care documented in the medical record and/or evidence of complaint lodged (including documented complaint, conflict between patient/family and staff, discharged against medical advice) |
| 17 | Documentation or correspondence indicating litigation, either contemplated or actual |
| 18 | Any other undesirable outcome not covered above |

**Appendix 3 – Table describing (A) the degree of causation, (B) degree of preventability. Where the likelihood is greater than 50/50 the criteria for each was met.**

A

| | Causation – degree of certainty |
|---|---|
| Not caused by healthcare management | No evidence healthcare management causation |
| | Slight to modest evidence of healthcare management causation |
| | Healthcare management causation not likely (less than 50/50, but 'close call ') |
| Caused by healthcare management | Healthcare management causation more likely (more than 50/50, but 'close call') |
| | Moderate to strong evidence of healthcare management causation |
| | Certain evidence of healthcare management causation |

B

| | Preventability – degree of certainty |
|---|---|
| Not preventable | No evidence of preventability |
| | Slight to modest evidence of preventability |
| | Preventability not quite likely (less than 50/50, but 'close call')10 |
| Preventable | Preventability more likely (more than 50/50, but 'close call') |
| | Strong evidence of preventability |
| | Certain evidence preventability |

**Appendix 4 Brief description of clinical details of adverse events occurring in 238 admissions, by corresponding maximum degree of preventability from cases reviewed for 2015***

| ***Virtually certain evidence of preventability*** | |
|---|---|
| 1 | There was a delay in diagnosis of irritable bowel syndrome due to poor access to investigations. |
| 2 | Patient was admitted with an infected cannula site. He was recently discharged with the cannula in situ from the same hospital. |
| 3 | Patient developed a catheter related urinary tract infection at home. The decision of inserting a long term catheter was inappropriate and the patient had normal urodynamic studies |
| 4 | Patient admitted with anaemia and per vaginal (PV) blood loss was discharged with a plan for Gynecology follow-up. Patient readmitted one month later again with anaemia (haemoglobin = 6.5 ) and again had PV bleeding. |
| 5 | A female patient presented with shortness of breath and was diagnosed with an unprovoked pulmonary embolism (PE). At this time the patient was concerned regarding ovarian cancer and screening was likely appropriate given the diagnosis of unprovoked PE. However screening for ovarian cancer was not carried out. She was diagnosed with advanced ovarian cancer one year later. |
| 6 | Patient was admitted with recurrence of cholecystitis having recently presented with same ( 6 months previously). Though there was mention of a planned elective laparoscopic cholecystectomy due six weeks after initial discharge this was not done. |
| 7 | A GP had requested urgent review with colonoscopy on more than one occasion for abdominal symptoms before sending the patient to the emergency department. During the admission metastatic cancer was diagnosed |
| 8 | A patient admitted for back pain was treated with non-steroidal anti-inflammatory drug (NSAID) medication and developed acute kidney injury. Despite advice ( from consultations) on stopping the drug, it was continued and renal function deteriorated. |
| 9 | A patient complaining of ongoing epigastric pain and multiple readmissions waited 2 years for an oesophago-gastroduodenoscopy (OGD) to diagnose H pylori. |

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| 10 | A patient's ulcerative colitis medication was omitted from their drug Kardex. Despite been prompted by the pharmacist, nurses and family the medication was not charted for one week at which time the patient had a flare of ulcerative colitis. |
| 11 | Patient remained fasting for over 48 hours awaiting surgery which was cancelled on two occasions resulting in prolonged pain. |
| 12 | Patient was commenced on an inadequate antibiotic regime for a chest infection, deteriorated and was transferred to the coronary care unit (CCU) for inotropic support. |
| 13 | Failure to deflate balloon when removing catheter resulted in traumatic urethral damage and resultant haematuria |
| 14 | Patient was admitted with dysuria and left flank pain on multiple occasions. On the initial presentation the computed tomography of kidneys, ureters and bladder (CT KUB) showed ureteric stones. |
| 15 | Patient developed a recurrence of urinary tract infection when the initial presentation was not treated as per cultures and sensitivity of the organism grown. |
| 16 | The patient was sent home with a known empyema and was readmitted one week later for shortness of breath. They underwent video-assisted thoracoscopic surgery (VATS ). |
| 17 | The patient was admitted with shortness of breath and treated with steroids and antibiotics. Her symptoms did not improve but was sent home and was readmitted and diagnosed with a PE. |
| 18 | Developed *Vancomycin Resistant Enterococci* in cheek abscess after >6 months of ongoing antibiotics prior to eventual surgical intervention |
| 19 | Delay in diagnosis of urinary tract infection despite urinary symptoms and supportive MSU and biochemistry. |
| ***Strong evidence of preventability*** | |
| 20 | A young patient was readmitted with falls. A diagnosis of multiple sclerosis was missed on initial presentation |
| 21 | Patient presented for umbilical hernia repair and developed apneas during the procedure. The patient was high risk with a high BMI, large neck circumference, abnormal anatomy. The patient was required to stay in hospital overnight for observations. |
| 22 | Hartmann's procedure performed for tumour resection. Patient was readmitted one week later with *PC* bacteremia and anastomotic leak. |
| 23 | Patient presented with a fall. The patient had ongoing deterioration in renal function but they were not seen by the renal specialist due to lack of beds in tertiary hospital (patient was unable to be reviewed by renal physician) |

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| 24 | Multiple admissions for loss of consciousness. Delayed diagnosis of bradycardia requiring a pacemaker. |
| 25 | Patient was readmitted with a deterioration of a respiratory tract infection one month post discharge for respiratory tract infection (consolidation was worse). |
| 26 | Patient presented with multiple admissions of fast atrial fibrillation before being controlled with digoxin. |
| 27 | Distal tibia fracture (post fall) requiring surgical intervention. Several months later patient represented with evidence of wound infection at site of protruding metalwork. *Methicillin-resistant Staphylococcus aureus* diagnosed from wound swab |
| 28 | Patient had a recent patellar repair and presented with a wound infection at the site of exposed wires, wound dehiscence and underwent further washout. |
| 29 | Patient was admitted one day post examination under anaesthesia of large posterior anal fissure complaining of anal pain. She required analgesia |
| 30 | Patient was admitted electively for insertion of JJ stents to relieve calculus on the pelvic ureteric junction (PUJ). During failed attempts there was excavation of contrast from the renal pelvis resulting in prolonged stay |
| 31 | Patient was diagnosed with paravertebral abscesses after multiple admissions for ongoing back pain |
| 32 | Patient was admitted with confusion due to the administration of an opioid drug prescribed during a previous admission. The opioid drug was recently added due to pain after a fall |
| 33 | Patient presented with chest pain and was diagnosed with acute coronary syndrome. Angiogram revealed a right coronary artery (RCA) stenosis requiring stents. Later in the year the patient represented with acute coronary syndrome (ACS) requiring stents in a previously unstented artery. There was no documentation of the degree of disease of this artery in the initial angiogram. |
| 34 | A patient with vascular disease was admitted for persistent ulcer which was slow to heal despite many courses of antibiotics and angioplasties. *Methicillin-resistant Staphylococcus aureus* was diagnosed as an inpatient |
| 35 | Patient was admitted 2 weeks after abdominal surgery with abdominal pain. He was diagnosed with an abdominal abscess post procedure which required drainage. The abscess grew *Extended-Spectrum Betalactamase* |
| 36 | Patient was admitted with a decompensation of congestive heart failure (CHF) and developed a catheter related urinary tract infection |

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| 37 | Patient was readmitted post appendectomy with abdominal pain. Patient was diagnosed with an abscess at the appendix stump. |
| 38 | Patient developed hospital-acquired pneumonia post-surgery for colon cancer the operation, swabs grew *Vancomycin Resistant Enterococci*,(new diagnosis). |
| 39 | Patient developed a perirenal haematoma in contralateral kidney during a nephrectomy for a suspicious mass. The patient became dialysis dependent as a result |
| 40 | Patient was diagnosed with a *Methicillin-resistant Staphylococcus aureus* positive wound infection at the site of K wiring protrusion at the site of an olecranon fracture. |
| 41 | Patient developed incisional hernia at the site of perineal repair. The incisional hernia required surgery |
| 42 | A patient was admitted for elective total hip replacement and developed a wound site infection a few post operatively. |
| 43 | A patient who underwent total abdominal hysterectomy developed a ventilator associated pneumonia as the ventilator only ventilated one lung during the procedure. |
| 44 | An immunocompromised patient developed a cannula site infection post hemi arthroplasty. |
| 45 | A patient who presented with stroke developed *Methicillin-resistant Staphylococcus aureus* bacteraemia due to a cannula site infection resulting in seeding and resultant septic arthritis of the prosthetic hip requiring a redo procedure. |
| 46 | The patient presented with symptoms of renal stones. The team omitted to book the CT scan of the renal tract advised by radiology for one week leading to a delay in diagnosis and treatment. |
| 47 | Patient developed *Extended-Spectrum Betalactamase* during recurrent admissions for recurrent cellulitis |
| 48 | New diagnosis of *Klebsiella pneumoniae carbapenemase* (KPC) colonosation as an inpatient,diagnosed on routine test (swab from groin). |
| 49 | Patient presented with blindness and was diagnosed with giant cell arthritis. The patient had been admitted one week earlier with 3rd nerve palsy, ESR= 90 and a presumed diagnosis of microvascular disease |
| 50 | New diagnosis of *Clostridium difficile* infection as an inpatient. |
| 51 | Patient was admitted for anterior resection of colon cancer and was admitted one month and seven months later due to abdominal abscesses |
| 52 | New diagnosis of *Extended-Spectrum Betalactamase* wound infection post hemicolectomy for ulcerative colitis. |

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| 53 | Patient was on a course of intra venous antibiotics for septic arthritis before developing septic shock. Patient remained febrile throughout the week, the choice of antibiotics was not changed and microbiology advise was not sought. |
| 54 | Patient developed MSSA bacteraemia due to cellulitis at an infected cannula site during admission for gallstone pancreatitis |
| 55 | Patient developed hospital-acquired pneumonia post radical nephrectomy |
| 56 | Patient developed a wound infection at the site of prominent K wire |
| 57 | Patient suffered a traumatic laceration to the hypopharynx during a biopsy of lesion resulting in bleeding and prolonged admission |
| 58 | Patient developed neuropathic pain post total hip replacement |
| 59 | Patient developed reduced range of motion in the hip with poor abductor function due to gluteal nerve injury after a total hip replacement (elective) |
| 60 | Patient developed anaemia due to addition of new anticoagulation drug (already on aspirin) without gastric protection. The indication for the anticoagulation (atrial fibrillation) was possibly due to over treated hypothyroidism resulting in thyrotoxicosis |
| 61 | Patient was readmitted with abdominal symptoms after a recent discharge for the same symptoms. This time a diagnosis of bowel ischaemia was made and the patient underwent coeliac angiography and angioplasty |
| 62 | Patient was admitted with opioid induced constipation due to morphine following a recent fall. No laxatives were prescribed |
| 63 | Patient developed cellulitis at cannula site which was related to extravasation of phenytoin |
| 64 | Patient was readmitted with poorly controlled abdominal pain due to recent diagnosis of bowel ischaemia as pain management on discharge during initial presentation was inadequate. |
| 65 | Patient developed orthostatic hypotension and collapse due to the addition of the drug nifedipine ( the Cardiology team later determined that nifedipine wasnot indicated for this patient ) |
| 66 | The patient was admitted with lower abdominal pain and diagnosed and treated for a ruptured ovarian cyst. On the previous admission ( for the same symptoms) the patient was scanned and the ultrasound report was incorrectly reported as normal |
| 67 | The patient readmitted with abdominal pain and treated for appendicitis had previously been discharged several days earlier with the same symptoms but was given a diagnosis of constipation. |

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| 68 | Patient developed a chest infection prolonging stay after a laparoscopy and salpingoophrectomy |
| 69 | Development of small bowel obstruction days after bilateral hernia repair. Laparoscopy showed the small bowel was kinked in the peritoneum |
| 70 | Patient had an incisional hernia repair and afterwards developed cellulitis of wound |
| 71 | After appendectomy, the patient was followed up in outpatient department (OPD) and found to have a wound infection requiring re-admission, culture grew Klebsiella. |
| 72 | A patient admitted with a pubic rami fracture developed a pressure ulcer as an inpatient. |
| 73 | A patient admitted for a stroke developed a traumatic laceration to the leg while unattended. It is unclear how the laceration occurred exactly as the patient had been unattended. |
| 74 | Patient developed post operative pain after laparoscopic cholecystectomy. Imaging revealed a small haematoma under the liver. This was treated conservatively |
| 75 | Readmitted after laparoscopic cholecystectomy with hospital-acquired pneumonia. |
| 76 | Admission with symptomatic atrial fibrillation while awaiting several months for elective direct current (DC) cardioversion. |
| 77 | Patient developed delirium during an elective admission for treatment of metastatic adenocarcinoma due to untreated urinary tract infection |
| 78 | Patient admitted for amputation of gangrenous foot ,deteriorated while waiting for surgery. Intensive care unit (ICU) bed (for post-operative period ) was not available |
| 79 | Patient presented with traumatic injury to eye and was sent home from hospital. Patient presented several days later and diagnosed with ruptured globe and endoophthalmitis |
| 80 | Patient fell on ward resulting in neck of femur fracture |
| 81 | Patient developed respiratory sepsis after thoracotomy for lung cancer. The *Extended-Spectrum Betalactamase* grown in culture but not treated appropriately. Readmitted a few weeks later with an *Extended-Spectrum Betalactamase* pleural abscess |
| 82 | Patient was readmitted one day post discharge with abdominal pain and diagnosed with appendicitis. |
| 83 | Admitted with confusion on two occasions. A non contrast CT brain scan missed the recurrence of brain tumor on initial presentation. A contrast scan should have been carried out. |
| 84 | Developed cannula site cellulitis. |

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| 85 | Inappropriate cessation of heart failure medications resulting in admission with exacerbation of heart failure. |
| ***Preventability more than likely; more than 50-50 but close call*** | |
| 86 | Patient developed a stroke. The patient had known atrial fibrillation but was inappropriately not anticoagulated |
| 87 | Patient had redo total hip replacement and antibiotics for a post operative wound infection (total hip replacement) after wound oozing and multiple hospital admissions for 6 months |
| 88 | Patient represented one day after discharge post oesophago-gastroduodenoscopy (OGD) which showed hiatus hernia with nausea and vomiting. |
| 89 | Patient developed pneumothorax during an elective laparoscopy . The patient had a history of perioperative pneumothorax and was considered high risk. |
| 90 | Development scrotal haematoma post scrotal hernia repair. This required antibiotic treatment |
| 91 | Patient underwent open reduction and internal fixation to hip fracture and required antibiotics for a catheter associated urinary tract infection. |
| 92 | Patient was readmitted to hospital and diagnosed with pulmonary embolism. The patient had a recent admission to the hospital for respiratory tract infection and was on prophylactic heparin. |
| 93 | Developed hospital-acquired pneumonia after elective para-umbilical hernia repair |
| 94 | Patient presented multiple times with *Extended-Spectrum Betalactamase* bacteraemia due to cholelithiasis and stones in thecommon bile duct (CBD). Eventually received metal biliary stent |
| 95 | Patient was readmitted within one month of discharge with *Clostridium difficile* colitis and treated with Metronidazole. |
| 96 | Patient was admitted with an intracerebral haematoma and developed labial excoriation due to an indwelling urinary catheter |
| 97 | Developed decreased sensation in thumb post open reduction and internal fixation. Normal sensation before procedure |
| 98 | Delayed diagnosis and treatment of perianal abscesses which subsequently required prolonged antibiotics and surgeries. |
| 99 | Patient was admitted with a stroke which required a carotid endarterectomy. In the post-operative phase a hypoglossal neuropraxia was noted. |
| 100 | Patient developed and incision hernia at the site of laparoscopic cholecystectomy requiring repair |

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| 101 | Patient developed a paralytic ileus due to laparoscopic hemicolectomy |
| 102 | The patient presented with a displaced fracture and dislocation of shoulder. A new ulnar sensory deficit and radial motor deficit were noted post procedure. |
| 103 | Patient suffered from persistent kidney stone pain post lithotripsy requiring readmission and further intervention. |
| 104 | The patient had reduced flexion post knee replacement requiring manipulation under anaesthetic |
| 105 | Patient who presented with epigastric pain was diagnosed with diaphragmatic hernia and underwent a repair laparoscopically initially converted to open surgery. A pneumothorax was created due to a misplaced surgical needle |
| 106 | During an elective decompression of the spinal cord the patient's tooth was chipped during intubation |
| 107 | Patient developed cellulitis and a stitch sinus 2 weeks after an elective left total knee replacement |
| 108 | A stroke patient fell from their wheelchair resulting in soft tissue damage. The patient was unattended and of high risk of falls |
| 109 | Patient developed cellulitis at intra venous cannula site and treated with antibiotics |
| 110 | Patient developed an abdominal wall haematoma and pain after a fall on the ward. |
| 111 | Patient developed influenza on the ward while an inpatient. There was an influenza outbreak on the ward |
| 112 | Patient developed post-operative pain which delayed his discharge following inguinal hernia repair. |
| 113 | Patient developed scrotal abscess post vasectomy |
| 114 | Patient presented with haematuria after recently been started on anticoagulation and the patient's aspirin had not been stopped though there was no indication to continue aspirin |
| 115 | Development of hospital-acquired pneumonia as an inpatient while being treated for decompensation of Parkinson's disease |
| 116 | Patient with known lung fibrosis commenced on bleomycin for lymphoma. This resulted in acceleration of fibrosis and death within one year of commencement. |
| 117 | A patient was admitted with a postmenopausal bleed while awaiting hysterectomy for postmenopausal bleeding |
| 118 | Patient developed ileus after operation for small bowel tumour |

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| 119 | Readmission for repeat Evacuation of Retained Products of Conception (ERPC) after incomplete initial procedure. |
| 120 | Multiple admissions for exacerbation of congestive heart failure (CHF). Indications for angiogram and holter monitoring were overlooked. |
| 121 | Development of stitch sinus after total gastrectomy |
| 122 | Developed septicaemia post cystoscopy |
| 123 | Developed groin pseudoaneurysm and fall in haemoglobin after Percutaneous Coronary Intervention (PCI) causing readmission. |
| 124 | Delay in dialysis with resultant tachycardia and palpitations due to hyperkalemia. |
| 125 | High-risk patient developed grade 2 pressure ulcer |
| 126 | Patient admitted with stroke developed new diagnosis of *Methicillin-resistant Staphylococcus aureus* colonisation |
| 127 | Patient developed otitis externa on ward. Swabs from this revealed *Extended-Spectrum Betalactamase* |
| 128 | Wound infection after open reduction and internal fixation of femur fracture |
| 129 | Underwent a CTPA and then developed contrast induced nephropathy. |
| ***Preventability not quite likely; less than 50-50 but close call*** | |
| 130 | Patient was readmitted several days post vagina hysterectomy for post-operative bleeding, received surgical (vaginal) packing,.. |
| 131 | Patient presented with distal radius fracture post fall. They underwent an ulnar osteotomy and ongoing uncontrolled post-operative pain after procedure ( up until 6 month follow up). |
| 132 | Patient presented with the traumatic hip fracture and underwent hemiarthroplasty. They had ongoing neuropathic pain at the site of incision. |
| 133 | Patient underwent surgery for incisional hernia repair post anterior resection. |
| 134 | Patient developed abdominal pain due to post-operative perforation (tumour resection). The patient required emergency surgery and Hartmann's procedure with colostomy |
| 135 | Patient presented electively for a flap breast reconstruction and developed a post-operative pneumonia |
| 136 | Patient had decreased power and sensation in hand after division of flexor digitorum superficialis (FDS) tendon after a traumatic injury to the palm. Procedure was deemed high risk from the outset |
| 137 | Patient was admitted for reversal of jejunostomy and mesh repair. They developed abdominal sepsis due to a collection in the post-operative phase. Furthermore, thesurgical mesh broke down resulting in chronic open wound at the base of the mesh |

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| 138 | Patient was admitted for radiotherapy for squamous cell carcinoma of ear. During admission they developed hospital-acquired pneumonia. |
| 139 | Patient developed respiratory sepsis while on chemotherapy. |
| 140 | Patient underwent left mastectomy. She was admitted two weeks later and diagnosed with a seroma which was drained. She was admitted on multiple further occasions for recurrence and further drainage of this seroma |
| 141 | Patient developed cellulitis at the site of basal cell carcinoma (BCC) excision |
| 142 | Patient developed urosepsis after an elective flexible ureteroscopy. |
| 143 | Development of a para stoma abscess on a background of recent total colectomy (cultures grew Klebsiella pneumoniae) |
| 144 | Patient developed bilateral pneumonia after surgery for a perforated bowel. They also developed an incisional hernia |
| 145 | Deranged liver function test (LFTs) due to antibiotics prolonging length of stay |
| 146 | A patient with a penis fracture underwent surgical repair. He later had to go back to theatre for urethroplasty due to urethral transection |
| 147 | Patient developed post coronary artery bypass grafting (CABG) sternal wound infection which required wound debridement |
| 148 | Readmission for drainage of seroma after wide local excision for breast cancer |
| 149 | Patient developed hospital-acquired pneumonia after segmental resection of liver (history of colorectal cancer) |
| 150 | Patient developedvocal cord paralysis after carotid endarterectomy |
| 151 | The admission was due to osteomyelitis likely due to methicillin-sensitive Staphylococcus aureus (MSSA) infection from previous Peripherally inserted central catheter (PICC) line infection. |
| ***Slight to modest evidence for preventability*** | |
| 152 | Patient developed catheter -related urinary infection after a hysterectomy |
| 153 | Patient required dynamic hip screw post traumatic fall for hip fracture. Due to poor range of motion and shortened leg the patient required revision one year later. |
| 154 | Patient had traumatic ankle fracture requiring cast. Patient presented two weeks later with pain due to swelling and blister formation requiring cast replacement and renewal. |
| 155 | Patient was re-admitted with a hospital-acquired pneumonia post discharge for treatment of acute exacerbation of congestive heart failure (CCF) |

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| 156 | A patient on anticoagulation had a CT brain scan post fall which showed chronic subdural haematoma. |
| 157 | Patient underwent excision of anterior thoracic wall mass with latissimus dorsi flap reconstruction. The patient developed hospital-acquired pneumonia post-operatively |
| 158 | A nursing home resident presented with a hip fracture after a fall. The patient developed haematemesis as an inpatient (on warfarin and had a high International Normalised Ratio (INR)) and required transfusion. |
| 159 | Patient underwent partial bowel resection for a perforation. They developed an ileus post operatively |
| 160 | Patient was admitted with an exacerbation of idiopathic Parkinson's disease due to the addition of a new antipsychotic medication. The antipsychotic was prescribed for a psychiatric condition |
| 161 | Patient presented with a catheter related urinary tract infection a couple of months post discharge. A trial without catheter was due to take place in the interim but this did not occur |
| 162 | Patient was admitted due to an exacerbation of Bahcet's disease requiring steroids. During their stay the patient developed a hospital-acquired pneumonia |
| 163 | Patient presented with confusion and a rash due to the addition of lamotrigine. The symptoms resolved once the lamotrigine was stopped |
| 164 | A patient presented with shortness of breath due to an exacerbation of congestive heart failure (CHF). The CHF was thought to be caused by both a tachyarrhythmia and recent cessation of diuretic medication |
| 165 | Readmitted with cough due to a hospital-acquired pneumonia. |
| 166 | Patient developed a provoked pulmonary embolus (PE) after a recent admission for a MIST procedure ( MIST procedure is the administration of intrapleural streptokinase for treatment of an empyema) |
| 167 | Patient had a post tonsillectomy bleed and was admitted one day after discharge from the hospital for management of this complication. |
| 168 | The patient developed PE a week post discharge after a tibia and fibula fracture requiring internal fixation and rod insertion |
| 169 | A patient with Chronic Obstructive Pulmonary Disease (COPD) was readmitted post-acute exacerbation with a hospital-acquired pneumonia. |
| 170 | A patient developed pelvic collection post total abdominal hysterectomy |
| 171 | Patient developed pulmonary oedema due to fluid rehydration as a treatment for hyponatraemia. |

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| 172 | A patient developed hospital-acquired pneumonia post-surgery for congenital spinal abnormalities |
| 173 | Patient underwent laparotomy and repair of a perforated duodenal ulcer. As an outpatient she developed an incisional wound infection |
| 174 | Patient developed a non-union of a previous ulnar bone fracture which required repeat surgery |
| 175 | Cardiac resynchronisation device resulted in thumping sensation and the device settings were reduced to prevent this |
| 176 | Patient developed gastrointestinal (GI) bleed while on warfarin. The consensus was this risk of stroke outweighed the risk of bleeding |
| 177 | Patient was readmitted post treatment for gallstones with a hospital-acquired pneumonia. |
| 178 | Patient developed hospital-acquired pneumonia after an emergency operation for perforated duodenum |
| 179 | Patient suffered from nausea and vomiting post dilation and curettage (D&C) The patient was kept in overnight for monitoring |
| 180 | Patient developed buttock abscess after colonoscopy and injection of haemorrhoids requiring re-hospitalisation and drainage. |
| 181 | Patient developed small bowel obstruction due to adhesions post abdominal surgery requiring adhenolysis to resolve the obstruction. |
| 182 | Patient developed post-operative tachycardia after varicose vein removal which prolonged their stay while being investigated and monitored |
| 183 | Patient was admitted with hospital-acquired pneumonia one day post discharge from the same hospital with abdominal pain |
| 184 | The patient presented with shortness of breath and was diagnosed with anaemia. The patient was on dual antiplatelet medication (recent acute coronary syndrome). There was no clear source of blood loss but haemoglobin was normal prior to the addition of the antiplatelet medication. |
| 185 | Admitted with neck of femur fracture and dynamic hip screw inserted. Protruding dynamic hip screw required removal. |
| 186 | Patient developed a lower respiratory tract infection after emergency surgery for small bowel obstruction |
| 187 | Patient developed respiratory sepsis after undergoing hemiarthroplasty for neck of femur fracture |
| 188 | Patient developed post lumbar puncture headache delaying discharge by several days. |
| 189 | Admitted with unstable angina and developed hospital acquired pneumonia which delayed discharge by several days |
| 190 | Patient developed severe chest pain during elective angiogram requiring monitoring and prolonging stay in hospital. |

| ***Virtually no evidence of preventability*** | |
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| 191 | Patient was admitted from nursing home with urinary tract infection and haematuria. Investigations for ongoing hip pain revealed an infected hemi arthroplasty prosthesis. Patient underwent redo procedure |
| 192 | Patient developed post-operative sepsis post total hip replacement (source unknown). Patient was treated with antibiotics successfully. |
| 193 | Patient had a redo total hip replacement due to 'clicking sensation' of previous total hip replacement |
| 194 | Patient presented for an elective laparoscopic sterilisation procedure. The patient was nauseated and dizzy,requiring an overnight stay for monitoring. |
| 195 | Patient underwent a bronchoscopy due to cough and bloodstained sputum. Patient developed post bronchoscopy respiratory tract infection |
| 196 | Patient presented with tooth extraction pain after wisdom tooth removal the day before. The patient required readmission for pain control. |
| 197 | Patient developed skin rash due to a penicillin drug. The patient had no previous history of penicillin allergy |
| 198 | Patient admitted from nursing home with the neck of femur fracture developed haematuria at the time of catheterisation. Patient had been on antiplatelet and anticoagulation medication |
| 199 | A multi-morbid patient with recurrent infections (requiring multiple courses of antibiotics for urinary tract infection) developed a Clostridium difficile diarrhoea as an inpatient |
| 200 | Patient required dynamic hip screw for femoral fracture. Patient developed and a myocardial infarction peri-operatively. |
| 201 | Patient was admitted with traumatic injury to the leg resulting in anaemia and developed a transfusion reaction during a transfusion. |
| 202 | Patient presented with acute coronary syndrome and underwent coronary artery bypass graft. Post operatively they developed atrial fibrillation |
| 203 | Patient with a history of colon cancer presented with chest pain and underwent an angiogram. The cardiac vessels showed moderate non-obstructive disease. The chest pain was thought to be due to 5 fluorouracil chemotherapy regime |
| 204 | Patient initially presented with chest pain and had recently undergone coronary artery stenting. During the repeat angiogram an acute dissection of a LIMA graft was diagnosed which was thought to have occured during the initial angiogram. |

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| 205 | Patient developed femoral artery haematoma at the point of insertion of cardiac catheter during cardiac catheterisation. |
| 206 | A patient who underwent transmetatarsal amputation due to osteomyelitis, developed cellulitis of the wound site. |
| 207 | A patient underwent an elective total knee replacement and developed bilateral PEs despite post-operative DVT prophylaxis with heparin |
| 208 | Patient developed a per rectal (PR) bleed as an inpatient due to internal haemorrhoids |
| 209 | Patient developed new neutropenic sepsis due to a chemotherapy drug |
| 210 | Patient developed a post-procedural migraine after dilatation and curettage. |
| 211 | Patient developed allergic reaction to wound dressing resulting in blisters and erythema. |
| 212 | Patient developed neutropenic sepsis due to chemotherapy |
| 213 | Patient developed a radial artery thrombus post angiogram requiring conservative treatment with anticoagulation |
| 214 | Patient developed post-operative (vagina hysterectomy) vomiting and diarrhoea prolonging length of stay |
| 215 | Patient developed post-operative atrial fibrillation after vaginal prolapse repair |
| 216 | Patient developed post-operative shoulder pain after ovarian cystectomy. Resolved without sequelae |
| 217 | Patient developed urinary retention after vagina hysterectomy requiring catheterisation and prolonged length of stay |
| 218 | Patient developed small-bowel obstruction after laparoscopic assisted hemicolectomy due to the distal ileum being adherent to the site of the anastomoses. This required further surgery |
| 219 | Patient developed ongoing pain post haemorrhoidectomy |
| 220 | Patient developed wound infection after laparoscopic ovarian cystectomy. |
| 221 | Patient developed fever post bilateral salpingo-oophorectomy prolonging stay. |
| 222 | Patient developed post operative ( colon cancer resection) hypotension and tachycardia prolonging hospital stay. |
| 223 | Patient developed jejunal injury at surgery (adhesiolysis) due to extensive adhensions. |
| 224 | Patient developed post operative (laparoscopic cholecystectomy) hypotension and tachycardia prolonging hospital stay |
| 225 | Patient developed post-op respiratory depression and nausea secondary to morphine administration prolonging hospital stay |
| 226 | Patient developed urinary symptoms following hysterectomy requiring a readmission. |

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| 227 | Patient developed seroma after repair of an incisional hernia requiring readmission for drainage. |
| 228 | Patient represented with rectal bleeding despite previous admission for same. |
| 229 | There was evidence that lack of physiotherapy during admission resulted in decreased mobility post operation for gastrointestinal stromal tumor (GIST) tumour, prolonging hospital stay. |
| 230 | Patient developed A2 cellular rejection after lung transplant |
| 231 | Patient developed retroperitoneal haemorrhage involving iliopsoas muscles bilaterally following an aortic valve replacement |
| 232 | Patient developed atrial fibrillation after mitral valve replacement |
| 233 | Patient developed low blood pressure and dizziness after wisdom tooth removal prolonging hospital stay. |
| 234 | Patient developed pancytopenia post chemotherapy and developed neutropenic sepsis. |
| 235 | Patient developed catheter related urinary tract infection (UTI) ( longterm catheter in situ) |
| 236 | Patient developed neutropenic sepsis due to chemotherapy. |
| 237 | Patient developed angiodema due to apixaban. |
| 238 | Patient developed chemotherapy induced nausea and vomiting |

* Physician reviewers were asked to judge the evidence of preventability of adverse events using a 6-point scale, where 1 = virtually no evidence of preventability and 6 = virtually no evidence of preventability

Adverse events were defined as events resulting in death, disability at discharge or prolonged hospital stay.

Preventability was determined by the physician reviewer and was done so after reviewing the medical notes in its entirety. Appendix 5 was created to provide a flavour of the AEs encountered in brief summary form. It was not created to describe the entire clinical context from which the decision of preventability was made.