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
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.

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)

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

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.

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.

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.

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

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

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

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)

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.

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	
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.

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.

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.