

Table S1 Patient selection

Diagnosis/procedure	ICD-10 Code
Atlantoaxial rotatory subluxation	S13.120
Cervical fusion	0RG0***, 0RG1***, 0RG2***, 0RG4***

*, All ICD-10 code sub-characters under the diagnosis.

Table S2 Variables analyzed

Diagnosis/procedure	ICD-10 Code
Acute kidney injury	N17**
Pneumonia	J13**, J14**, J15**, J16**, J17**, J18**
Osteomyelitis	M46**
Sepsis	A419**
Deep vein thrombosis	I824**, I826**
Aspiration pneumonitis	J690**
Acute respiratory distress syndrome	J80**
Obesity	E669**
Hyperlipidemia	E785**
Depression	F32**, F329**
Bipolar disorder	F30**, F31**
Anxiety	F419**
Smoker	Z720**, F172**
Alcohol abuse	F10**
Myelopathy	G992**
Plegia	G82**
Bowel bladder dysfunction	N31**

*, All ICD10 code sub-characters under the diagnosis.

Table S3 DRG codes used to define severity of illness

Definition	DRG Code
Craniotomy for Multiple Significant Trauma	955
Limb Reattachment, Hip and Femur Procedures for Multiple Significant Trauma	956
OR Procedures for Multiple Significant Trauma with Major Complication or Comorbidity	957
OR Procedures for Multiple Significant Trauma with Complication or Comorbidity	958
Multiple Significant Trauma with Major Complication or Comorbidity	963
Multiple Significant Trauma with Complication or Comorbidity	964
Multiple Significant Trauma without Complication or Comorbidity	965
Extensive OR Procedure Unrelated to Principal Diagnosis with Major Complication or Comorbidity	981
Extensive OR Procedure Unrelated to Principal Diagnosis with Complication or Comorbidity	982

Table S4 ICD-10 codes used for mechanism of injury

Mechanism of Injury	ICD-10 Code
Pedestrian struck	V00**, V01**, V02**, V03**, V04**, V05**, V06**, V09**,
Pedal cycle related injury	V10**, V11**, V12**, V13**, V14**, V15**, V16**, V17**, V18**, V19**
Motorcycle collision	V20**, V21**, V22**, V23**, V24**, V25**, V26**, V27**, V28**, V29**
Car occupant injury	V40**, V41**, V42**, V43**, V44**, V45**, V46**, V47**, V48**, V49**
Unusual Mechanism of Injury	Y35**, Y36**, Y37**, Y38**, Y6**, Y7**, Y8**, Y9**
Assault	X92**, X93**, X94**, X95**, X96**, X97**, X98**, X99**, Y00**, Y01**, Y02**, Y03**, Y04**, Y05**, Y06**, Y07**, Y08**, Y09**
Self-inflicted injury	X71**, X72**, X73**, X74**, X75**, X76**, X77**, X78**, X79**, X80**, X81**, X82**, X83*
Fall	W01**, W02**, W03**, W04**, W05**, W06**, W07**, W08**, W09**, W11**, W12**, W13**, W14**, W15**, W16**, W17**, W18**, W19**

*, All ICD10 code sub-characters under the diagnosis.